FLAAR Reports

Nicholas Hellmuth

Previews of the FLAAR Reports in the Series

"What Wide Format Inkjet Printers are Best for Signs, Posters, and Banners"

Previews of FLAAR Reports Series on Signs, Banners, and Posters

Printing signs can be a lucrative business. With an inkjet printer you can be more flexible than an older company laden down with screen printers or aging electrostatic equipment.

Every week a shop based on traditional vinyl cutting equipment writes and asks if FLAAR can help them learn about digital wide format inkjet printers. They tell us they are losing business to a new digital print shop across town. Yes, we can assist in learning wide format inkjet printing, indeed this is the goal of our university, to assist individuals and companies enter the digital millennium.

Here is a question we get every day:

> *"We are looking for an all-purpose printer. We need something that has …quality for photographs, but is also capable of doing prints for indoor and outdoor signs ….."*

In today's markets, if you wish to survive printing signs, you also need to learn how to print giclée and lots of other applications. Since FLAAR print facilities at two universities handle signs, posters, banners, and also fine art giclée, you can learn from Nicholas Hellmuth's first-hand experience.

The past several years have witnessed substantial technological advances. However as a savvy buyer, you need to learn the pros and cons of piezo printheads vs thermal printheads.

When BGSU needed a large banner, we found that the ColorSpan was a good choice: fast, and the dye inks hold up an acceptable length even in well-lit situations. Dye inks from other printers fade too quickly.

Point of sale signs get more popular every day. Just go to any mall, car dealership, or grocery store.

Bus wrap, truck side advertising: this is increasingly printed by inkjet printers.

Another question people ask is what printers can also cut? People think there is only one brand of printer-cutter. Actually there is a second brand, and it too can use pigmented ink. Yet there is software readily available that will allow you do print faster if you cut with a separate cutter. That is because one of the popular printer-cutters is terribly slow, and prone to banding defects. We describe these situations in the FLAAR reports on printers for signs.

We recommend a separate printer and a stand-alone cutter. This may be more effective in the long run. Otherwise you are stuck with the downsides of a printer that has a built-in cutter.

FLAAR Reports

Above, ColorSpan DisplayMaker printer. **Below**, Graphtech booth

Choosing a Printer for Signs, Posters, and Banners

Which Wide Format Printers are Best for Signs, Posters, Banners: POP and other indoor signs.

This FLAAR report offers comparative comments of Graphtec, Encad, HP, Roland, ColorSpan, Epson, Mutoh, PrismJet, Mimaki, and others.

This publication is based on piercing analysis of the ad claims of Epson, Roland and other manufacturers relative to speed, longevity, and print quality.

Frankly, it's a public embarrassment what some of these printer companies claim their machines will accomplish. The ad claims are very impressive… for their total twisting of reality, for really clever morphing of two totally unrelated facts in an attempt to make a claim that is not true if you know the printers in real-life.

But every printer tends to do at least one application very well. So the key is to wade through the swamp of festering hype and find the tidbits of what the WonderWidget 200000 will actually accomplish, in your print shop.

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You may also be a little bit surprised to learn that the prints you see at a tradeshow, and in the flashy ads, well, can't really always necessarily be accomplished in your sign shop. We caught one company skillfully and slyly laminating its prints at tradeshows (because their ink would not accept glossy media). We caught another company laminating its prints because if you did not laminate them, the print would decompose.

We can't protect you from all the machinations the clever manufacturers conjure up, but we have spotted most of the glaring half-truths, fictions, and outright exaggerations.

These reports condense Dr Hellmuth's scrutiny of dozens and dozens of makes and models of wide format printers from the following information sources.
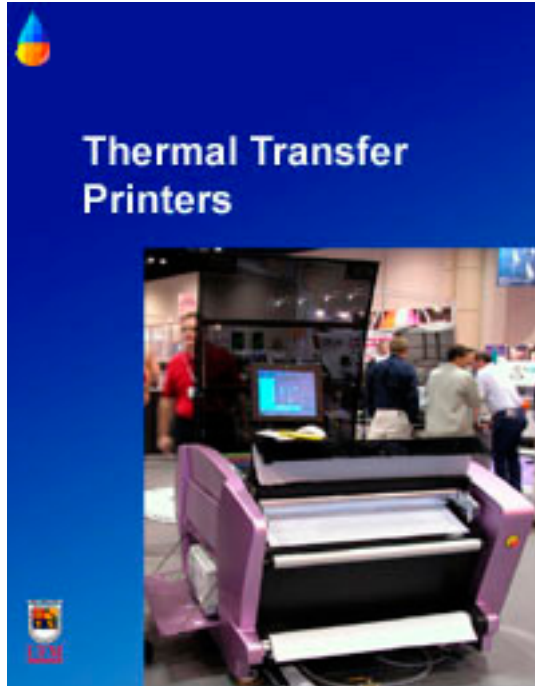
Trade Magazines Recommended by FLAAR Related to Wide Format Inkjet Printing

We comment on trade magazines from the US, Germany, and Europe. It is crucial to know which trade magazines are best because most people don't have time to read unessential magazines.
New, October 2005, Updated March 2006.

Thermal Transfer Printers.

This report covers a useful technology featuring wax and resin ribbons to print continuous tone. You cannot get continuous tone with an inkjet printer; only from thermal transfer or laser light RGB imagers. So if you or your clients need true continuous tone, you better read this report. We discuss the Matan Sprinter and comparable printers.

Dye Sublimation

Which large format printers can accept dye sublimation inks for subsequent heat transfer onto T-shirts, textiles, curtains, table cloths, hats, coffee mugs, ceramic tiles, even metal (aluminum with prepared surface). Please note: we review only, and exclusively, 24" and above. We do not cover desktop printers.
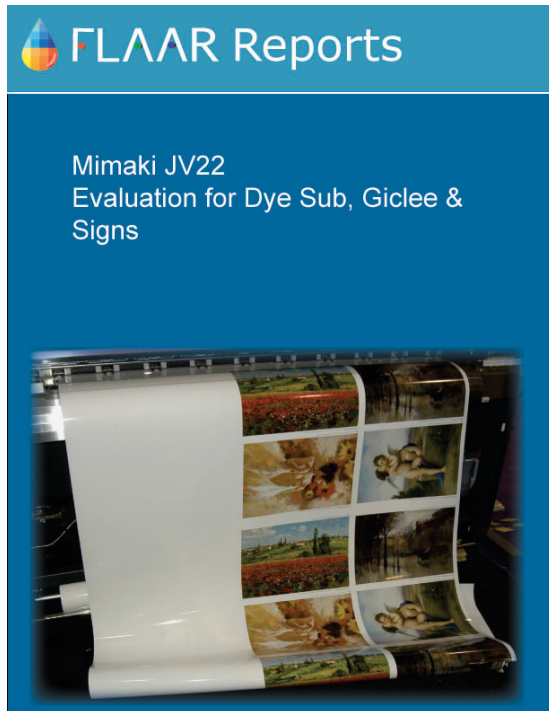
Mimaki JV22: Evaluation for Dye Sub, Giclee & Signs
New September 2005.

Comprehensive discussion of features with scrutiny of specifications and what the printer can really do, or not.

Buyer's Guide to Wide Format Inkjet Printers for Fabrics, Textiles, T-Shirts: Equipment, Inks, Fabrics Exhibited at FESPA Trade Show, Summer 2005
New September 2005

Annotated description of all the impressive new printers for inkjet textiles that were presented at FESPA trade show. You don't see all these printers at SGIA, ISA, PMA, GraphExpo, or Graphics of the Americas, so this is a unique list.

Direct Digital Printing on Fabrics with Wide Format Inkjets

An easy to read introduction to wide format printing on inkjet textiles such as silk, polyester, nylon, cotton and canvas.

This report on inkjet printing of textiles is in the process of being updated (October 2005). If you obtain the earlier version just e-mail CustomerSupport@FLAAR.org and we will send you the updated version as soon as it is finished. If you have bought the textile report at the updated price we will send you the September update if by mistake the system delivered only the year 2003 edition.

RIP Software for Textile Printing with Inkjet Printers

New January 2006. FLAAR Fast Facts.

Laminating Wide Format Inkjet Prints: Glossary of Glossary of Terms

Sooner or later you will need to know at least the basic facts about lamination and the difference between cold lamination and hot lamination. Whether you are a sign shop, photo lab, screen printer switching to inkjet, or in-plant print facility in a corporation, this comprehensive glossary will be helpful to understand lamination equipment, supplies, and techniques. This informative report also provides tips on where to go for free manuals which will explain whatever else your heart desires to learn about laminating inkjet prints.

Buyer's Guide for Laminators for Inkjet Prints: Questions to Ask to Help You Decide Which Brand & Model of Laminator is Best for Your Specific Needs

Completely rewritten, updated, and revised September 2005. If you receive the older June 2003 version by mistake, simply write CustomerSupport@FLAAR.org and ask for the September 2005 update. We will send it as soon as it is finished. This is based on our Frequently Asked Questionnaire format.

This is one of the FLAAR Reports which serves to assist the owner or operator to save their hard earned money by becoming a savvy buyer.

FLAAR Reports

Tips on How to Select Which Wide Format Printer to Buy for Printing Signs: ColorSpan DisplayMaker XII, New June 2003

This report is the start of an entire new series, "***Site-Visit Case Studies.***" A team of FLAAR staff go to visit actual sign shops who are using printers in real-life situations. We check things out, ask pointed questions, and write down what you can expect this printer to accomplish. We list point blank what the printer is good at, and what it is incapable of doing. So this is an unparalleled opportunity to save yourself time by learning from all the work of FLAAR to provide public education through the university where FLAAR is headquartered.
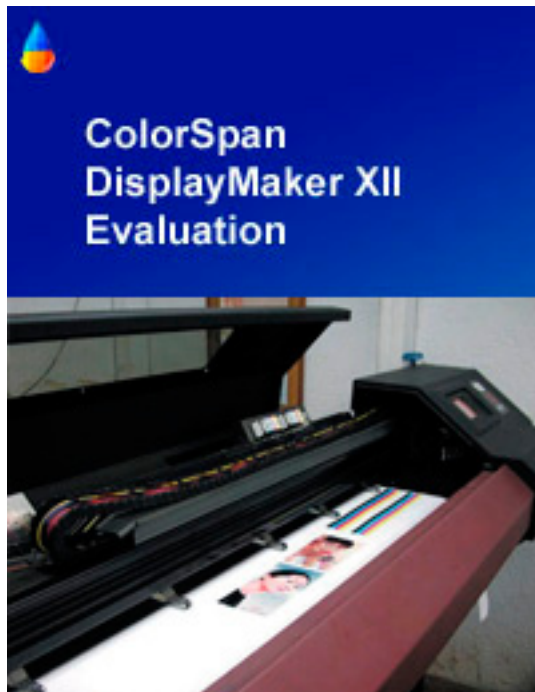
Evaluation of a ColorSpan DisplayMaker XII Based on Interview and Inspection of this Printer in a Successful Sign Shop
New August 2003

We found two different sign shops which each had a ColorSpan for printing posters, signs, and photographs. Both shops were a few miles from our university so we visited them. These reports provide an opportunity to learn what it is like to have a ColorSpan printer in your office.

FLAAR Reports

Site-Visit Case Study of Epson 9600 Based on the Evolving FLAAR Standards for Evaluating Wide Format Inkjet Printers
New June 2003

Most sign shops are trying to figure out whether to buy a Mutoh, Roland, Mimaki, Hewlett-Packard, Encad, or ColorSpan. Few sign shops would seriously consider an Epson due to ink costs and slow speed. Yet we found a sign shop that had two Epson printers alongside their solvent ink billboard printer. Were they content with the Epson 9600 and 7600? Or did they wish to jump to a more traditional sign printer?

We were very surprised to learn what this print shop had found out about the Epson. This report is an eye-opener and definitely worth reading, especially if you are an in-house department, work group, graphics design, university, or museum. Obviously sign shops and in-plant print shops will find the unexpected documentation useful as well, for the simple reason that the Epson is the lowest cost printer of its size in the world. We know it does great on photographs? But can it really print signs? And the biggest question is, is the return on investment acceptable?

Professor Hellmuth accomplished here what he is infamous for: going straight to a real-life situation (in this case to a sign shop), and obtaining independent, pithy facts, tips, and help for individuals and companies who are trying to figure out which printer to buy.

Site-Visit for the Epson 9600

Agfa GrandSherpa a Version of the Mutoh Falcon II for Proofing and POP Signs

Site-Visit Case Study Review based on FLAAR Standards for evaluating wide format inkjet printers. New August 2003.

This evaluation covers Onyx PosterShop RIP for proofing and signs as well as a thorough discussion of what its like to have a piezo printhead system in a sign shop. The printheads in the Mutoh Falcon II and Agfa printer are more or less the same as in an Epson 10000. This review is based on detailed comments by the owner-operator of a successful prepress and sign printing company. However where as "success stories" blissfully omit the downsides and disappointments, this FLAAR report tells the entire truth of what you can expect in your own facility.

Site-Visit for the AGFA GrandSherpa Mutoh Falcon II

Encad NovaJet 1000i and Kodak 1200i First Look, First Questions

First issued March 2004. Fourth edition, updated March 2006.

We first saw the Encad NovaJet 1000i over a several day period at PMA trade show. Two machines were present in the Kodak booth. The purpose of this brief commentary is to ask the key questions to really find out the status of this brand new printer. This FLAAR Report is the only independent outside commentary available. All other stuff on the Internet is PR releases from Kodak Inc or from Encad Inc. If you wish to learn how to evaluate a printer yourself, by evaluating the ad claims, this report may enlighten you.


Encad NovaJet 1000i: Site-Visit Case Study

New October 2004. Updated March 2006.

Nicholas Hellmuth and Tim Brown visited a large prepress, sign, and giclee printing company in Toledo, Ohio, and got the true story of what it is really like to have an Encad NovaJet 1000i. The report has the further advantage that this print shop had two Encad 1000i printers: one for dye ink the other for pigmented ink.

So if you are about to decide among ColorSpan, Encad, HP, Mimaki, Mutoh, Roland or other printers, the FLAAR Reports provide you, and your company, with information not available anywhere else. Plus, Nicholas is legendary for tracking down the details of pros and cons of each printer.
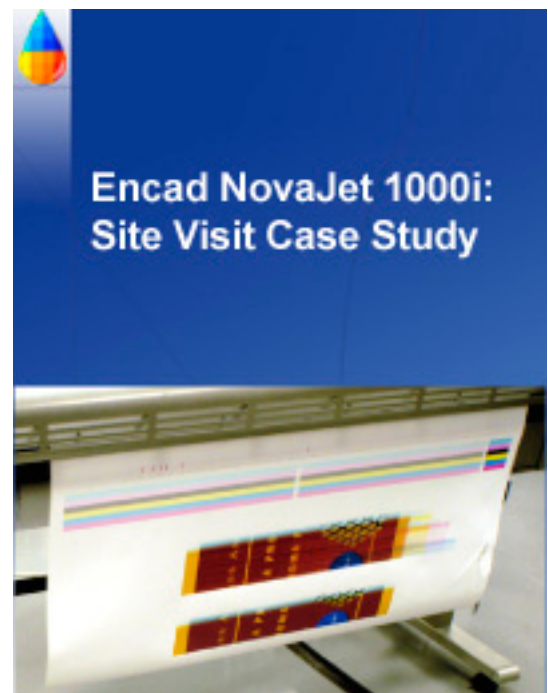
Xerox 8160, Xerox 8142, First Look Evaluation & Review
New September 2005, updated March 2006.

These Xerox printers are the same chassis as the Encad 1000i and Kodak 1200i.

Digital Photography and Scanning for Sign Shop Operators: Scanning Images for Using on a Large Format Printer

If you are moving from being a screen printer or vinyl cutter into inkjet printers, it may help to have some tips on scanners, digital cameras, and digital imaging. This report discusses which scanner is best to handle your negatives and transparencies? How to Digitize objects that are too large for a flatbed scanner? (scanner vs digital camera).
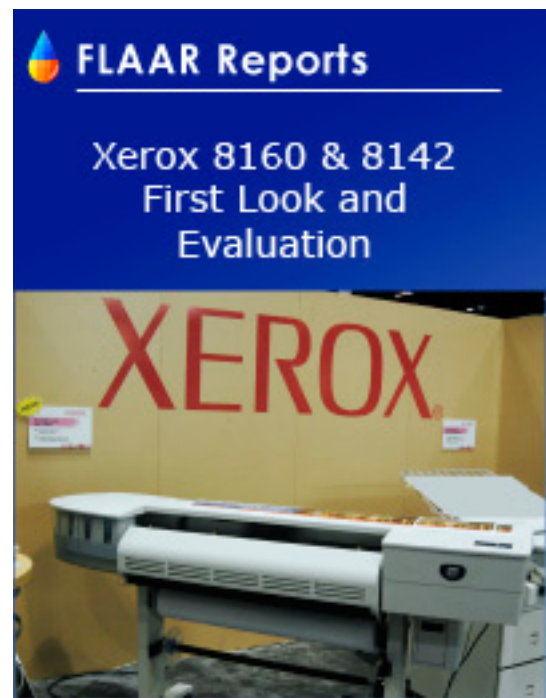
Additional Reports on Scanners

We are adding several groups of FLAAR Reports on scanners so that sign shops can generate better digital originals. Your signs will look so much better if the original scan is done with a better quality scanner.

Accurate, Reliable, Trusted

The popularity of FLAAR evaluations is based on multiple factors:

1. Our staff undertakes our own evaluations in our own facilities at two universities.

2. We have both piezo and thermal printhead technologies available to compare and contrast.

3. We have 18 inkjet printers, from leading competing companies, plus about 9 RIPs. So we can speak from personal first-hand actual experience.

4. FLAAR added truth-in-advertising standards for evaluating wide format printers. FLAAR is about the only evaluator of wide format inkjet printers who compares the ad claims with the actual real-life output.

5. We have set up fresh truthful standards of excellence for testing inkjet media-ink-color management solutions.

6. This last summer we established standards for evaluating RIP software. The result is accurate, reliable, trusted recommendations.

7. We analyze inkjet hardware and software, inks, media, and color management solutions at the leading trade shows in Germany, England and the USA such as DRUPA, CeBIT, Photokina,

Comdex, PMA, PhotoPlus Expo, ISA, SGIA, Seybold San Francisco, FESPA, IPEX, and others. But we rely on our own experiences or our site-visit Case Studies for reliable facts about a printer's true performance in real life situations.

8. We have received thirty-one thousand e-mails from end users. Some of these end-user reports discuss every detail of what their equipment does well, as well as where the few glitches are. This means we have end-user reports from other photographers as well as from architects, quick print shops, sign shops, pre-press, in-house corporate reprographic facilities, and fine art studios.

9. We do dedicated surveys of end-users to learn what features they like, and dislike, about specific items of hardware, software, cameras, etc.

10. We have correspondents in Europe and Asia to obtain information for us worldwide. We attend leading industry conferences and interview all sides of the spectrum to learn about which print-ers actually work best. It is impressive how much research by FLAAR staff goes into learning about the insides of the printheads, inks, media, and RIP software.

11. Dr Nicholas Hellmuth is beta tester for BetterLight tri-linear large format photography backs (48-megapixels), we are testing several 22-megapixel medium format backs, and also have in-house the remarkable Cruse digital photography system, an 80-megapixel, $97,000 repro-graphic camera system from Germany. Thus we have first-hand practical experience in original photography which is used for subsequent inkjet printing. FLAAR is currently testing large format photography equipment in two museums on campus so we understand what a professional photographer seeks when they look for a digital printer. Professor Hellmuth's textbook with 30 chapters covers how to create input for large format printers through digital photography.

12. FLAAR covers the entire spectrum, from computers (to run RIP software), to monitors (LCD and CRT). We emphasize need for dual monitors in many applications from CAD to graphics. We review digital imaging software such as Nik.

So people who need to buy entire systems can come to FLAAR and recognize they get evaluations on everything, from PC vs Mac, and in practical format (not fanatical pro one and irrational negative to the other). FLAAR is balanced, honest, and realistic in its recommendations for what equipment corporations and individuals should purchase.

If you order any any complete Series you get one Bonus Report free. A complete series is defined as being any 8 reports within the same theme with a total value of over $124; or any actual com-plete series of any value over $124. If you buy individual reports rather than a series, you can earn 1 Bonus Report for every purchase of $150.

If you buy any two Series you get two bonus reports free. Simply send an e-mail to FLAARtest@aol.com stating that we owe you such-and-such Bonus Reports because you already purchased such-and-such Series. We will immediately send you whichever free Bonus Reports that you ask for.

Combo photo-giclee Set counts as two series. Enterprise Set counts as three series. If you buy individual reports instead of an actual series, for every $300 in miscellaneous purchases you are entitled to one Bonus Report. These are sent only when you ask for them, since we have no way to know whether you want one, or which title, unless you let us know specifically.
If you ordered three series you get three bonus reports free.

FLAAR Reports

If you order four series you get four bonus reports free.

If you order five FLAAR Report Series you get all bonus reports.

If you order four or more Series, you can consult directly with Dr Hellmuth by telephone. See the information on consulting on any FLAAR web site, or at the end of this report in the section on consulting.

FLAAR will provide you with Nicholas's telephone number and suggested times he is available. You can fax or e-mail your questions in advance if you wish. You then get 30 minutes consultation via telephone. Or you can visit in person for an hour in Ohio or when Dr Hellmuth is in Guatemala.

If you wish additional hours, you can pre-pay at the rate of $300 per hour for consulting.

Some Bonus Reports are also included in pertinent Series. In that case they do not use up your quota of still more Bonus Reports from the rest of the Bonus list.

Titles of the Bonus Reports

Evaluation of Setup and Installation of the HP DesignJet 5500ps.
New, September 2003.
Comprehensive report by Tim Brown, BGSU+FLAAR on the recent arrival of the HP 5500ps.
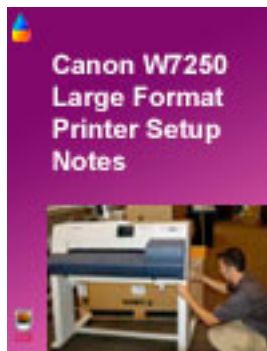
Canon W7250 Large Format Printer Setup Notes
A detailed explanation of what it is like to receive this dye-based ink 24" Canon printer into your home or company. Shows that you too could unpack and set up this printer on your own.

Evaluation of the CANON imagePROGRAF W7250 24" Large Format Printer
This printer can be used for proofs, comps, graphic design, CAD, GIS, and does outstanding color with any short term photographic display or signage.

Note that each full-scale evaluation has two parts: part 1 is set-up and installation; part 2 is usage, practicality, suitability, and comparisons with other printers.
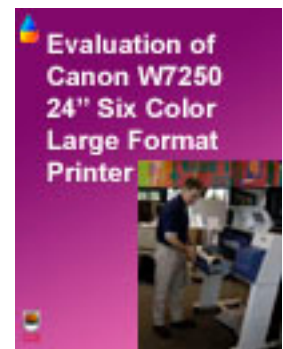
FLAAR Reports

Canon W8200 Setup and Installation

Complete discussion of what you can expect if you order a pigmented ink 44" Canon printer, whether for signs, giclee, photography, or in-house corporate use. This FLAAR Report covers the initial reality of what it's like to have these printers actually available.

The evaluation of each printer after installation is a separate report in the appropriate Series or Bonus Reports.
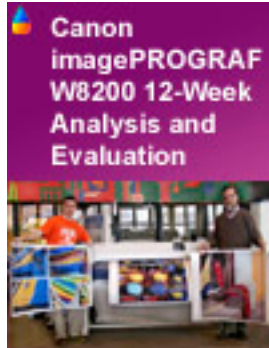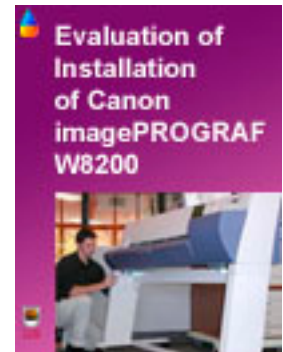
Canon imagePROGRAF W8200

New, January 2004.

This is Canon's first pigmented ink wide format printer. It only became available in the USA in October, and FLAAR already has a report available on it. The printhead technology is phenomenal. This printer is appropriate for signage, photos, giclee and fine art: it is multi-talented and fast, as well as easy to use.

Determining Input Needs: Large Format Printing.

This is a comprehensive discussion of how many pixels and what dpi each class of wide format printer actually needs. This is a PDF version of a published magazine article by Nicholas Hellmuth.
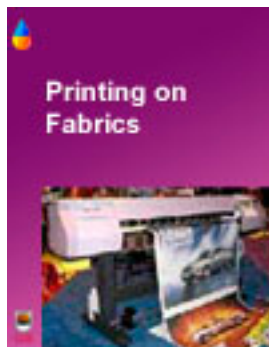
Direct Digital Printing on Fabrics with Wide Format Inkjets. An easy to read introduction to wide format printing on inkjet textiles such as silk, polyester, nylon, cotton and canvas.

Large Format Printing: Everything your Inkjet Printer can do. This is a PDF version of an article by Nicholas Hellmuth published in a magazine.

FLAAR Reports

Seybold San Francisco 2002, report on all the new wide format printers introduced at this trade show: HP 5500, three Roland Pro II printers and lots more.

Seybold San
Francisco
2002 Tradeshow

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