

# iti TX3200DS Direct-to-fabric Printer



# **Evaluation FAQs**

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#### THE BASICS

- 1. Brand name, model?
  ITI TX-3200DS Dual Production Model
- 2. What is the nature of the company behind the brand name? Is this company the manufacturer, distributor, or rebranding?
  - ITI, has a world wide brand and OEM Manufacturer of large format digital inkjet printers for the Sign/Graphics, Textile, and Industrial printing Marketplace; which Dr. Hellmuth has visited.
- 3. Does the machine manufacturer also manufacture inks for textiles? No; probably 90% of printer factories do not manufacture ink.
- 4. Does the machine manufacturer also make textiles to print on with this machine? No; almost no textile printer factory has a factory for printable fabrics.
- 5. What other printers are the same or similar chassis?

  DigiFab StampaJet K8-180, DGI FabriJet HS-FT II, Flora TX 3200DS, Gandy Digital Softjet, Printer Evolution Fos 126DS
- 6. If there are two or three (or more) widths of this printer, what differences exist other than the width?

  1.8m version is potentially available, but 3.2m is the most popular.





- 7. When and where was this model first introduced? ISA 2016, iti booth.
- 8. Is this printer mature technology or still in alpha-stage or beta-stage?

  Mature technology, but since the factory is innovative, you can also count on new features on new models (with printheads other than Ricoh). The NEW TX3200K Model is also available with Kyocera KJ4B heads for Textile printing (Launch October 2016)
- 9. How does this model compare with comparable previous printers?

  The feeding and take-up rollers are sophisticated and this is definitely not an entry-level low-bid printer.
- 10. Is there enough new on this printer to make it worthwhile buying it if I already have another recent model?

  Depends what brand and model you already have. As will be often mentioned, the spreader bars and coarse rollers on this printer are better than on any cheaper brand or model. So you can use a wider diver-
- 11. List price?

  MSRP is \$120,000 for the TX3200Ricoh Gen 5 8 head Model

  MSRP is \$159,995 for the TX3200K Kyocera unit to be shipping 4th Qtr 2016

sity of kinds of fabrics (without needing a sticky belt for some).

- 12. Are discounts available via trade-in? Does the "trade-in" actually require trading in your old printer? Depends on dealer; but trade-in is not common; but dealer may be flexible.
- 13. What accessories are extra charge? Are these same or similar accessories included with other printers at no extra cost?

  RIP is extra cost.



## **♦ FLAAR Reports**

- 14. Does a complete set of full-sized ink cartridges come with the new printer, or merely a "starter set" that is not as full as a regular set?
  - Depends on Dealer, how you negotiate the sale price. Starer Kit's are available and discounted with one-time TX3200 printer purchase. Fluorescent inks are available if requested.
- 15. What other equipment is needed to operate this printer? For example, does this printer include its own power line conditioner? Do you need an uninterruptible power supply (UPS)? Print shop should provide both.
- 16. Do you need to supply a compressed air source? Yes, from tank or compressor. Because the two big rollers need air pressure to get them up and down and to drive vaccuum system if printing paper.





- 17. Do you need a coating machine, steamer, washer, calendering machine? Yes, a calender or infrared heater.
- 18. Is it recommended, or required, to buy a spare parts kit? Or extra printheads? Does the end-user buy the spare parts kit? Or is this held by the distributor?

  Option whether you wish spare parts kit or not. Print heads are not included in 1 year warranty (because issues with print heads are due to lack of cleaning, or dusty humid environment of the print shop.
- 19. How does the total cost compare with other Inkjet printers?

  Dealer tech people are trained; dealer technician will do the training. Factory training is available in Ft.

  Worth Texas HQ Facility

#### **PURCHASING**

20. Where are demo centers located? Inkjet Technology, Inc. 2513 E. Loop 820 North Ft Worth, TX 76118

Within 15 miles southeast of DFW airport.

Your GPS will not show correct exit; use their printout of map, since you need to be off the parallel road of highway (so you are second parallel away from highway; not first parallel).

- 21. What is the procedure to visit a demo center?

  Telephone 817 616 5186 or toll free 844 259 0648, www.lnkJetTechInc.com
- 22. Are end-users welcome to visit the factory and the main headquarters demo center? Would need to negotiate such a visit; obviously if you are buying a dozen printers, yes. Dealers obviously can visit the factory (always by previous appointment).
- 23. What kinds of leasing or other financing are available?
  Up to dealer; but major accounts can deal directly with iti (Geneva financing is recommended).



#### SET-UP OF THE PRINTER: PRACTICAL CONSIDERATIONS

- 24. What is the delivery time, between the time I order the printer and it is delivered? 6 to 8 weeks.
- 25. What are the electrical requirements of this printer? 220 single phase 40 to 50amps.
- 26. Are there any special temperature or humidity requirements or preferences of this printing system? Clean, dust free environment is best. Avoid above 65 relative humidity. Setup Guide will help you on these questions.).
- 27. What is the connectivity? Network, SCSI, FireWire, USB, Ethernet, or other? USB 2 and USB 3.
- 28. What air pressure is required to be provided to the printer? Is this for a vacuum table, or other purposes (such as ventilation)?

  3 cfm at 90 psi to move rubber rollers up and down.
- 29. Realistically, how much surrounding and support space will the equipment need in addition to the machine's own footprint.

  The final set heater footprint.
- 30. Does the printer come in one piece? Does this mean you have to remove a wall to get the printer this size into your office?

  Printer has own heater on its front. If you need calender press that is separate, \$20,000, infrared not oildrum.



# **♦ FLAAR Reports**

31. How many boxes arrive?

Three: printer, air scrubber as option, separate sublimation calender press if ordered (for direct fabric, not for paper).



- 32. What is setup of the printer like? 3 days; dealer handles this with a tech person from iti.
- 33. Realistically, what expenses must you incur for the installation, such as a fork-lift truck or crane to lift the printer off the truck?

  Hire a local rigger. Best to avoid trying to jerry-rig unloading by yourself! An 5000 pound forklift with 8'ft

extensions (landscape mode) is needed.

#### **INSTALLATION OF THE PRINTER**

- 34. Can you handle the shipping crate with your team, or is a fork-lift required? Again: Hire a local rigger. Best to avoid trying to jerry-rig unloading by yourself!
- 35. How many people does it take to lift the printer out of the box?

  Driver and two helpers: so total 3 people; 3 hours unload and put in place in your place. They will also unload and remove the pallets. Maybe a giant printshop may have your own equipment, but if a normal printshop, hire a local rigger!
- 36. Does the printer come in one piece? Is the printer already put together? Printer is in one piece in big crate.
- 37. How much assembly is required?

  Attach the computer; comes with computer. 64 bit, SAI, is popular with Mom and Pop sign shops. Onyx RIP is more sophisticated but requires learning. Onyx finally has textile accessories for their RIP. ErgoSoft is professional option, when available. You buy Onyx or ErgoSoft or Caldera (Caldera is Linux-based).
- 38. Is installation included in the purchase price?
  No, the installation is not included; shipment depends on location (FOB from Ft Worth). \$3000 to \$4000 depending on dealer.
- 39. Between the day the printer arrives, how soon is it realistic to achieve full productivity?

Depends on your past experience; this is a sophisticated printer. But by second day after installation.

Printheads are installed at final test, since depends on how many heads you ask for. Best to ask for 8 heads Ricoh Gen 5 heads for speed. TX-3200K (Kyocera unit in a 4 head dual channel configuration -only need Qty: 4 for speed increase)

40. How much of a learning curve is there? Yes, there is a learning curve. Especially because textile inks does some colors better than other colors. Darkish, shadow areas do not look well on most textile printers.





#### **INSTALLATION OF THE PRINTER: INSTRUCTIONS & MANUALS**

- 41. How many manuals are available?
  Site Preparation & Installation, professional quality, 48 pages.
  USER MANUAL, 38 pages
  Printer Manager Instruction, 32 pages
- 42. Which manuals are hard-copy? Which manuals are only on CD? CDs or USB or DropBox, but not WinZip does not work DropBox well.
- 43. Is there a Site Preparation Guide? If so, is it helpful? Yes, and most important, it is in understandable English.
- 44. What is the native language of these guides? Is the translation acceptable? Manuals are written in real, actual English; not computer translated!



#### **INSTALLATION OF THE PRINTER: TRAINING?**

- 45. Is training included in the purchase price? If so, what kind of training is offered?

  Depends on negotiation with dealer, typically three days, including a combination of class and hands-on training.
- 46. Is training necessary? Is classroom training available? Yes, training is necessary.
- 47. Is factory training available? Factory training can be scheduled with ITI at ITI location or customer's location.
- 48. What on-line training is available?

  Not yet set up. But you can Skype for questions.
- 49. What about follow-up training after you have had the printer a month and know enough to ask better questions?

  Yes, usually through dealer.





#### **TECH SUPPORT & WARRANTY**

- 50. What is the original warranty period?

  1 year, not including printheads. Because usually mis-use is what causes it to fail.
- 51. Does it include parts, labor, printheads?

  Parts and Labor included (excluding printheads for 1st year warranty. Airfare, meals, and accommodations for Tech travel -TBD by Dealer
- 52. Can the manufacturer remotely diagnose the printer? Yes, if program is set up. For example, Teamviewer
- 53. Do the tech support people understand fabrics and textiles? Depends on dealer.
- 54. What is the native language of the tech support person?
  English and Spanish,ITI does have Dealers who handle South/Latin Americas, and the Caribbean and bi-lingual.
- 55. What tech support is available and for how long? What is the wait time on the phone... truthfully? Depends on dealer.
- 56. Can you provide an extended hardware warranty? Yes.
- 57. Who provides the service? The dealer or the manufacturer?

  Dealer does initial Install and service supported & backed by ITI Factory trained techs.
- 58. Who does the repairs?

  Dealer in most cases.
- 59. Do spare parts come from a foreign country? If so, what is the wait time for such parts?

  Most are stored in USA; so normally overnight. But obviously some components would be from factory which would take longer.
- 60. What about the dot pattern of your printer? Is this dot pattern as fine as that of an Epson 10000? On some fabric there is overspray (on stretch fabric, Spandex lycra). You can resolve this by printing ata resolution of 600 x 600 to 1200 x 600. The higher the resolution the better results you get. But profiling and further experience will resolve this to some degree. Also depends whether you do 12 pass uni-directional.



#### **CONSTRUCTION: AESTHETICS**

- 61. How can you describe the design of the printer?

  The printer has an enclosed chassis, media loading system at the back, and media take-up system at the front.
- 62. Can you easily tell which is the "front" and which is the "back"? Yes



## **CONSTRUCTION: BUILD QUALITY**

- 63. What is the solid-ness of the construction of the outer body? Is it plastic? Metal? Heavy gauge? Heavy-gauge
- 64. Is there a front hood and also a back hood? Yes, both
- 65. Does the front hood lift up high enough to allow full access? Yes
- 66. The front hood, is it strong, or cheap plastic? Strong
- 67. What about the back hood? Strong



# **♦ FLAAR Reports**

- 68. What is the solid-ness of the inner parts? Plastic, metal?

  Metal
- 69. Does the printer wobble back and forth when printing?

  No
- 70. How many wheels? On printer? How many on fixation unit?4 wheels for main machine. 4 levelers front take-up rollers; 4 levelers back
- 71. How many leveling devices on printer? Any leveling devices on fixation unit?

  Not on printer.
- 72. Is the wheel and leveling device the same unit, or separate?

  Separate.
- 73. Is there an Igus (e-chain cable carrier system)?





#### **FEATURES: MEDIA: Heaters**

- 74. How many heaters are used?
  One big IR heater across the front.
- 75. What is the purpose of the heater(s)? To dry the ink, or to fix the ink? To Fix the disperse dye ink. If you run paper you keep that heater off.
- 76. Are the heaters before printing, during printing or after printing? After printing.
- 77. Is there an air blower as dryer? Where is it situated?

  No blower or dryer in this system. You would need an air extractor or air scrubber (can be ordered form dealer).
- 78. Do you need to buy a separate additional heater? Sublimation, infra-red heater unit, external, out front, optional. \$20K.



# STRUCTURE OF THE PRINTER: Media Transport Mechanism & Media Path

- 79. Was this printer made originally as a textile ink printer, or is it retrofitted for textiles? If retrofitted, what was the original brand or model?

  Made from Day One to be textile; not a modified solvent printer.
- 80. Is there a moving transport belt or a stationary platen? Stationary platen



81. Are their edge guards at each side (end) of the platen? At left, or at right, or both?

Yes, there are edge guards.

There are no edge guards on either side needed because the media take-up system is developed in a way that ensures the media won't skew as it is fed onto the printer, so no need for edge guards. But the edge guards do exist (but they were pulled aside)



## FEATURES: MEDIA: Roll-to-roll feeding

- 82. How is roll media fed? Pinch roller against grit roller?
  - Pinch rollers and grit rollers are not recommended for proper movement of fabric. On paper it presses down and leaves thin "track". 75 gram, 105 gram paper are best. Thinner is too thin. Coldenhove has good reputation: cellulose (similar to hair spray!). Beaver uses absorbent clay (thin coating that absorbs ink). Leave paper in bag until you use it because it absorbs moisture from room air conditioning. Clay may absorb this.
- 83. How many drive rollers are there?
  On front has pull roller, textured pull roller. Newer model with Kyocera heads will not have this due to high speed. Completely different feed system for Kyocera speed. Kyocera printer is very different: interesting



84. How is the roll held at the feeding position? On a spindle? On a saddle? The roll is held by a spindle.



85. How is the roll media handled at feeding position? For example, is there a dancer bar? Yes, there is a dancer bar.



86. After the feed roller (or spindle) is there a set of two fixed bars, one above either other (a tension set)? Yes, there is asset of bars, one above and one below.

#### 87. Does the feeder roller have an air core?

At the back, is there an extra roller bar(s) near the platen or transport belt? Is it a bar to roll under the media, or over the media, or are there both (in addition to pinch roller/grit roller arrangement). There is an extra roller bar near the platen, under the media.

At the front, is there an extra roller bar(s) near the platen or transport belt? Is it a bar to roll under the media, or over the media, or are there both (in addition to pinch roller/grit roller arrangement). There is an extra roller bar near the platen, under the media.



# **♦ FLAAR Reports**

- 88. Does the roll-fed material feed evenly? Yes it does
- 89. What about the take-up reel? Does it work unattended? Does media skew when it is wound up? Yes it works unattended and does not skew the media when it is wound up.
- 90. Does material roll up evenly on the take-up reel? Yes, the material rolls up evenly





#### **OPERATING THE PRINTER**

- 91. Can you manage print jobs via the Internet with your printer?

  PC is hooked up all the time, so can be used as a node. But most people will operate the printer in-person in the print shop.
- 92. What sensors does the printer have?
  Safety detection; motion sensors; optical sensor on the rail, door safety hatch sensors.
- 93. Which materials are pre-established in the software, or do you have to create the settings for each class of material yourself?

  Profile each media.
- 94. In the main area for operation, is the machine software based (touch screen), or with physical control buttons? Or Both?

  Physical controls.



# **♦ FLAAR Reports**

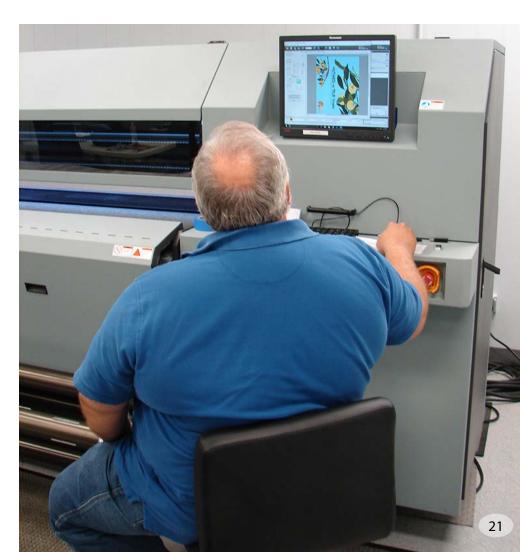
- 95. Can you operate this printer from your iPad?

  To some degree that switches iPad to Windows (BootCamp).
- 96. Can the firmware of this printer send a message to your telephone, iPad, or computer if a serious issue occurs?
  Not yet.
- 97. How many operators or operator assistants does this printer require?
  3.2m it may help to have two people to lift up the roll. Or get a KeenCut system, to lift it up (recommended).
- 98. What can you control as operator? Power, heater, everything.
- 99. What is the level of ease of use? Can anyone use this printer or do they have to be trained and certified? It's a big machine; so be patient for media loading since 3.2 media can be bulky.
- 100. Can you do unattended printing? For how long? How about overnight? Not overnight due to heater
- 101. Where does the operator stand or sit?

  At right front.
- 102. What aspects of the printer can you operate from behind (the loading area)?

  Just loading; power is back there. But operation is from the front.
- 103. What controls are at either end of the printer?

  Just doors, access to pumps, motors.



# **♦ FLAAR Reports**

#### **SAFETY & HEALTH CONSIDERATIONS**

- 104. How many emergency stop buttons are there, and where are they located?

  Four emergency buttons: two on front, two on back.
- 105. Is there auto-shut down? If so, what triggers it?
  Software or manual; no auto-shut down. But you can request a laser accessory as additional option.
- 106. Is there auto-shut down if the operator sticks their hand into the system while it's operating?

  Not unless you ask to have this option.
- 107. How much odor is emitted by the ink or heat sublimation process? How much subsequent outgassing is there, and for how long does the stuff smell?

  All sublimation processes result in a cloud of "moisture." This is why the exhaust system is absolutely essential.
- 108. Is the machine enclosed, or exposed? The printer is enclosed
- 109. What system of ventilation or exhaust system is built into the printer? Or if not required, what would common sense dictate? Is it adequate to clear the work area of gasses and fumes?

Pure Air Fume extractor

- 110. What is the noise level, primarily of the fans for the vacuum?

  Not very noisy.
- 111. What moving parts might hit a person if they are standing near the printer?

  None, but you don't want to stick your hands into between the rollers...!
- 112. Are any other safety or health issues involved? Does the operator need to be concerned with any other safety precautions?

  Be sure to have exhaust also in your print shop.
- 113. How easy is it to obtain the MSDS of the ink? Readily available.







#### PRINTHEAD TECHNOLOGY

- 114. What is the brand of the printhead, and model? Ricoh GEN5
- 115. Is the brand and model of printhead clearly identified in the published specifications? Yes
- 116. Why does the manufacturer not use the other options? Dimatix Spectra? Konica-Minolta? Kyocera? Ricoh? Epson?

Ricoh is stainless steel to handle water-based inks; too many other heads corrode due to interior materials. New unit ITI TX3200K to be introduced October 2016 has 4 Kyocera KJ4B heads for faster speed/production.

#### PRINTHEAD DPI & FEATURES

- 117. How many printheads are used? 4 to 8 Ricoh Gen 5 heads and 4 on the newer model Kyocera based unit. Same design, build, and manufactured TX3200 unit for both print head types.
- 118. How many nozzles per printhead? 4 x 320 channels
- 119. How many printheads per color?
  One or two
- 120. What is the drop size in picoliters? 7-21 pl
- 121. Is there variable droplet size capability?
  Yes



- 122. Is printing bi-directional or uni-directional? What are the different results in speed; in quality? You decide which you want.
- 123. Which materials really ought to be printed at the uni-directional mode?

  So many different materials; yes, uni-directional is better. Pure solid colors may be better with uni-directional to be sure not to get banding. Algorithm sinewave (waveform algorithm) helps.
- 124. How many print modes are there? Speed of the carriage The resolution The number of passes?
- 125. Can you vary the material feed rate?

  Absolutely. You have tensioner due to professional rollers.



#### PRINTHEAD LIFE EXPECTANCY

126. How long do your printheads really last? Do you have that written in a warranty? If your longevity specs are in drops, please translate that into liters of ink or square footage of media.

Depends on how you handle them; depends on dirt and dust (print shop environment).

If piezo heads fail, who is responsible for paying for replacement heads? If thermal heads, who replaces the heads if they fail before their rated lifespan? What does each printhead cost to replace? Distinguish price for the printhead and also price for the service technician to come and do the installation if it is not user-replaceable? If a piezo head fails it is usually considered the fault of the end-user—unless the head is DOA (Dead On Arrival).



127. How often can you expect head strikes? What causes them? Who will replace the printheads and at whose cost?

A head strikes is the most common cause of premature head failure (another cause is constant flushing; the flushing seemingly wears out the nozzle system). A single head strike may wipe out only a few nozzles, or may kill the entire printhead. Head strikes may be occasioned by a diverse variety of situations:

- Improper loading of the media, which make cause buckling, because the media is caught, or not going through the printer properly.
- Thin media can curl, thereby causing a head strike on the curled part
- Edge guards, which work on thin materials may be raised too high.
- If media is absorbent, too much ink can make the material bubble up
- If media is curled or bubbled by heat; the head can hit the raised part
- If media is defective to begin with, or uneven, the head can hit the raised part
- If adhesive pulls off the material the adhesive may get stuck on the nozzle plate of the head.
- For a textile printer, an additional cause of printhead failure is the fuzz of the threads which may stick up and rub the nozzle plate.
- Some material is like sandpaper to the nozzle plate, some papers, and metal (and the metal edge is another danger to the printhead nozzle plate).

#### PRINTHEAD POSITIONING

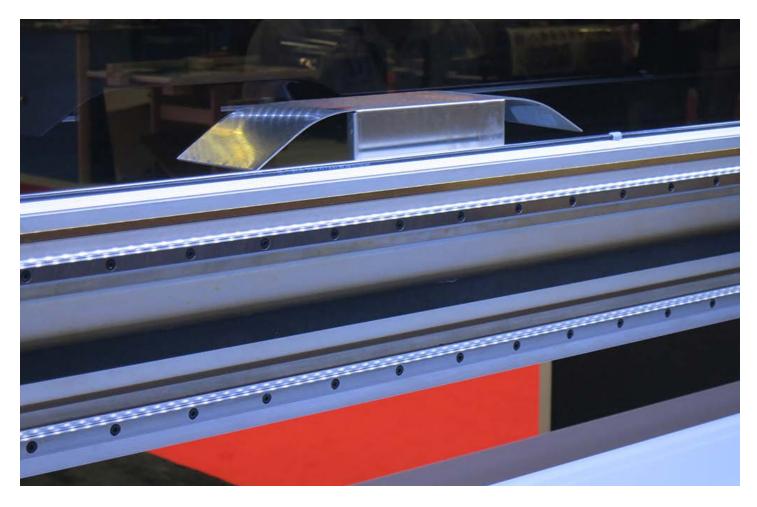
- 128. Are printheads at an angle, or in a row? Two rows
- 129. Are the printheads at an angle to the movement of the carriage, or at 90-degrees? 90 degrees
- 130. How complex is it to align the printheads?

  Test patterns; you align heads at set-up. Takes about 20 minutes.

#### PRINTHEAD CARRIAGE

131. What brand of guide is used to pull the printhead carriage?

"Rolls Royce of rails;" (laser-tested accuracy) Renishaw brand. Most big players use these rails for a 3.2 size. Top optical rail.





# CLEANING & MAINTENANCE

- 132. How is head cleaning accomplished? Spray, vacuum, suck, manual, other?

  Push or spray, vacuum controlled, then wipe.
- 133. How many levels (strengths) of printhead cleaning (purging and/ or sucking) can be accomplished via the firmware (software?

  One sequential cleaning system.
- 134. Can you purge an individual printhead, or do you need to purge all at once? Individually (manually)
- 135. Where is the service station? *Left.*
- 136. Is the service area the same as the parking area?

  Same as parking area.
- 137. Is there a capping station? That is capping station.
- 138. Does the manufacturer provide any special cleaning tools? Buy Kimwipe brand. Lint free.
- 139. Does this printer spit, or "weep" at regular intervals?

  Not usual on textile printer. Also, that slows down and wastes ink.
- 140. How long can the printer sit unused? How should a printer be prepared for sitting unused for a long time?

  Capped water-based ink, one week.
- 141. Do you need to have a band of printable colors along the edge, outside the main printed area, to keep all printheads and their colored inks fresh and ready to print (so as not to dry out when not be used by the colors in the design)?

Operator selectable.



#### **CLEANING & MAINTENANCE: ROUTINE MAINTENANCE**

- 142. What daily maintenance is required at start up in the morning?

  Power on, turn on print manager; goes through 4 checks; vacuum, rails adjusts, etc. 1 or 2 minutes.
- 143. What daily maintenance is required at night?

  Shut down print manager; so it auto-caps; you walk away.
- 144. What daily maintenance is required if you print the entire day long? Printer is happy running all day.
- 145. What other periodic maintenance is required by the operator?

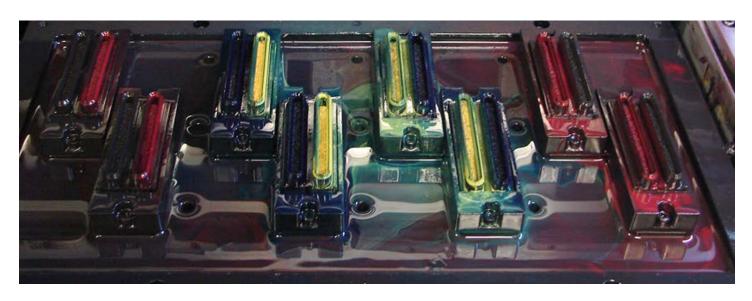
  Scheduled maintenance by operator; every 3 months replace filters, etc.
- 146. What self-maintenance does the printer do on its own?

  Operator has to decide that to maintain. Just push a button.
- 147. Other than ink filters, are there any other filters? How often do any non-ink filters have to be checked? Cleaned? Changed?

  Pall brand filters. Change inks then change filters; 90 days perhaps. Degassing filters (Sepperal, just bought out by another company in North Carolina: Liqui-Cel). Membrana-Charlotte, Celgard LLC

#### **CLEANING & MAINTENANCE: WASTE**

- 148. Where is the waste bottle situated? How much waste ink does it hold? 5 liters.
- 149. Is a liquid flush cleaning solvent available as a separate on-board system? Separate.



#### **PRINTER DRIVERS & SOFTWARE**

150. Are the controls mainly manual or are most actions handled in the software?

Old fashioned printers had most of the controls manually (as switches or buttons) on the printer (front, sides, and back). Nowadays most of the controls for a printer made in a factory which has advanced past the previous generation, the controls are in the firmware and in the RIP software.

#### **RIP SOFTWARE: FEATURES**

- 151. Is a RIP included in the original price?
  Yes, PhotoSmart. These add ons can be purchased from dealer: Onyx, Caldera, Ergo-Soft is coming.
- 152. Is this a full-featured RIP or only a lite RIP? Depends on which level you select to buy.
- 153. Which RIP software is supported? Onyx, Caldera, Ergo-Soft

#### **COLOR MANAGEMENT FEATURES**

154. What color management software is included? Barbieri for back-lit. X-Rite is most common.



#### INK

- 161. How many different kinds of ink are available? Disperse dye and dye sublimation inks
- 162. If there are several kinds of ink available, can you switch from one to another? *Yes.*
- 163. How much ink is wasted in switching from one ink to another?

  Flush is available; half a day; positive pressure helps save printheads from wear-and-tear. Change filters and de-gassing filters.
- 164. During the process of switching ink, does this damage or wear out the heads? That's why dual purpose ink is benefit.
- 165. Does the printer itself have a means to keep track of ink usage? Is this a guestimate, or an actual count of droplets fired?

  Job report can tell how many cc's it took.
- 166. How much ink does the ink container in the printer hold?
  5 liters

#### **INK: COST**

- 155. Does ink come in cartridges or bulk? How large are the ink containers for replacement ink? Five liter bottles, into 5-liter system on board. Because of degassing filters and everything is inside the system.
- 156. What is the cost per container? What is this cost translated to liters? Check with dealer; depends on how much you buy per month or year.
- 157. What is the cost, in ink, per square unit?

  Variable. But cheaper than printing with UV-curable.

#### **INK: LONGEVITY**

- 158. What is the longevity of your dye ink outside in the sun? No lamination, no glass.

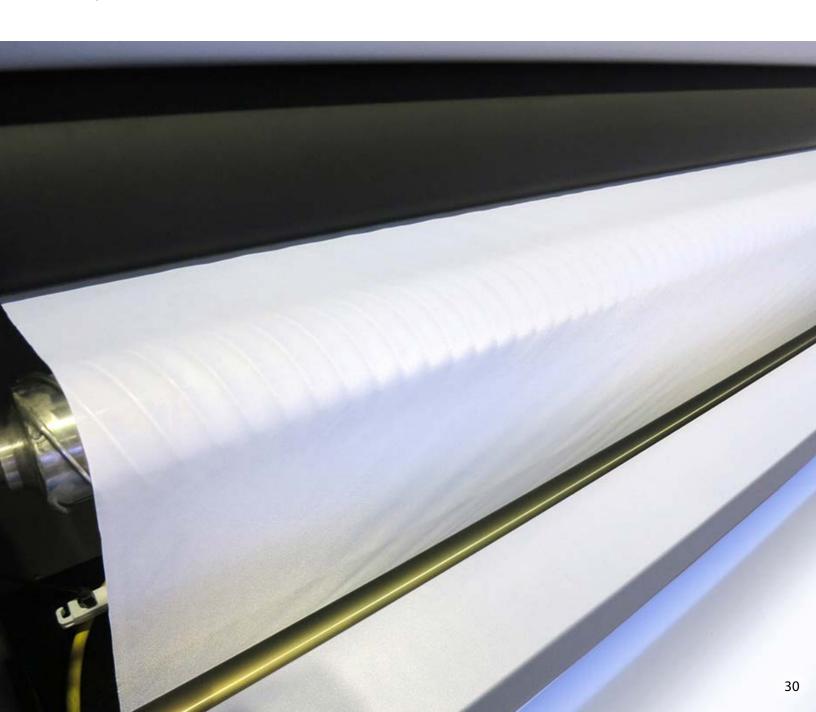
  Dye sub, about a year with some sunlight; 3 years with not as much sunlight. Depends on environment.
- 159. What is the shelf life of the ink? One year.

## **INK: COLOR GAMUT**

160. How many colors are used in the ink-set being evaluated here? Four colors: CMYK

## **MEDIA: Size**

- 167. What widths can be printed? 126 inches (3.2 meters)
- 168. Can the printer print edge-to-edge? No, but you can print 10-feet.
- 169. Can the machine handle two different rolls of media side by side at the same time? No



#### **MEDIA:** what materials

- 170. Can this printer accept non-coated fabrics?

  Coated polyester or polyester blend is better than non-coated fabrics.
- 171. Can this printer accept fabrics with no paper backing?
  Yes
- 172. What textiles does the manufacturer list? Polyester fabrics.
- 173. What textiles can this printer print on perfectly? Polyester fabrics prepared for digital printing.
- 174. What textiles are a problem but can be handled, more or less? Nylon, abrasive textile; non-woven (paper towels!).
- 175. What fabrics are best not to try at all? Fabrics without polyester base.
- 176. What about thin or stretchable fabrics? Within reason, because of professional rollers.
- 177. What about rugs and comparable thick materials?
- 178. Does the printer manufacturer also make coatings?
- 179. Is there a trough to catch the ink that goes through the weave of the fabric? Yes. Removeable grates. 3' sections. Enamel.





#### **MEDIA: ISSUES**

- 180. Some printers advertise "two rolls of media" but in fact it is only one roll that can actually be feed. The other bar is merely a storage device. Yet a few printers can switch media from one roll to another with the touch of a button. What does your printer offer?

  In theory; but not recommended.
- 181. Can the media feed without skew? Yes

## **FIXATION UNIT: Calendering System**

- 182. Where is the fixation unit located: physically attached, out in front, separate? Separate, independent calender
- 183. How many IR units?
  One



## Pros in general:

De-gassing filters

Does not use rinky-dink print heads; uses serious professional printhead brand(s)

Entry-level (cheap, low-bid) printers have a teeny weeny LCD "screen" a few centimeters "small." This has a complete computer monitor. Presence of a teeny weeny LCD screen stuck to the front of any printer is indicating that its heritage is 15 years old and probably with Epson printheads a decade ago.

## Pros for the printer portion

Dual purpose ink is innovative solution.

Dual purpose unit to print on both paper transfer and direct to fabric with one ink. No need to swap out inks or get another printer.



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