FLAAR Reports

Nicholas Hellmuth's Helpful Evaluation of the Mutoh Junior and Mutoh Rockhopper 38

FLAAR Reports

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Caption for cover page:
Mutoh Junior at DRUPA trade show 2004

Licensing Information

Introduction

The 37-inch wide Mutoh Outdoor Junior was a new printer as of 2004. In the previous decade solvent ink printers were giants, up to 16 feet or wider even. The Arizona 30 was about the narrowest solvent ink printer around. 54-inches was about the minimum.

Then eco-solvent ink brought the possibility of solvent ink printer ownership to small sign shops. The Encad VinylJet 36 opened up the market for entry level width outdoor signage printers even more. I am guessing that the Roland VersaCAMM was a response to the Encad VinylJet 36[1]. The 37-inch Mutoh printer is their answer to the 29-inch Roland VersaCAMM.

Mutoh was an early leader in eco-solvent printers, with the Falcon Outdoor circa 2002. However the ink was not aggressive enough and did not adhere to most low-cost substrates. Many people who bought the first generation Mutoh (and probably many who bought the first generation Roland SolJet) were unhappy. Some were so discontent they returned the printers and asked for their money back.

The situation was such a mess that the ink chemists went back to their labs and brewed up an ink with more aggressive solvents. The leading vinyl producers worked to produce substrates that would accept this new ink without having to coat the material.

Today you still probably can't print on some low-cost non-coated vinyls; and adhesion and other problems remain. The dream of a low cost, low-VOC, low-smell lite-solvent printer that would require no lamination is still elusive. But evidently the Roland VersaCAMM has sold quite a number of machines. Until we do site-visit case studies we won't know the satisfaction index, but it can't possibly be as disasterous as the first generation of eco-solvent "Sol" ink.

It will remain to be seen whether a 37-inch Mutoh printer is enough additional advantage as to take back lost market share from a 29-inch Roland. I have been told that the eco-solvent ink in the two printers is identical. We will do our best to confirm this. Roland obviously went to great lengths to make their ink stand out as unique. . End-users are almost never told the true facts of where the ink comes from nor which other printers use essentially the same ink. Probably a similar situation exists with gasoline, but at least you have the option of selecting whatever gasoline you want.

Questions that you ought to Frequently Ask When Shopping for an Eco-Solvent Inkjet Printer

THE BASICS

1. Brand name, model?

Mutoh Outdoor Junior. In Europe this printer is called the Rockhopper 38 (a tad enthusiastic since it does not print 37-inchs wide).

2. What is the nature of the company behind the brand name? Is this company the manufacturer, distributor, or rebranding?

Mutoh designs and manufactures their own printers both in Asia and in Belgium. Mutoh-Europe is actually an innovator in printer engineering.

Mutoh Outdoor Junior eco-solvent printer.

[1]The Encad VinylJet was a technology that did not work as hoped. This printer was withdrawn without fanfare. No explanation was offered for what about it did not work adequately. We have a brief FLAAR Report that points out a few of its downsides.

3. What other printers are the same or similar chassis?

Most eco-solvent printers are a water-based printer chassis with a few parts switched out to try to hold up to solvents and with a few heaters added. In 2005 this is changing: the Mutoh Spitfire seems to be a more robust printer with most if not all its parts designed from the beginning to handle eco-solvent inks.

4. When was this model first introduced?

The Junior was introduced at ISA trade show 2004.

5. What accessories are extra charge? Are these same or similar accessories included with other printers at no extra cost? What other costs are involved?

A take up reel was in development in 2004.

6. What is the immediate competition?

The small-size Roland VersaCAMM had become popular very quickly. Since the Roland is a printer-cutter, Mutoh now offers a printer and cutter combo at the same price as the Roland, namely $13,999. The Mutoh cutter can cut 33″. It would appear that the 37-inch Mutoh printer is their answer to the success of the 29-inch Roland VersaCAMM.

So when you buy a Mutoh solution you get two plotters: a cutting plotter and a printing plotter. When you buy the Roland solution both cutting and printing are handled by the same machine. There are advantages to both manners of doing print and cut.

The Mutoh Junior is also targeted for people who have a Gerber Edge.

MutohSpitfirer eco-solvent printer.

Printer	Printing width	cost	Ink technology	printhead
Encad VinylJet (this printer self-destructed in the marketplace)	34.8″, 88.39 cm	$ 9,995, show special; not sure if this is regular price.	Atypical, water-based, IR cured (not UV-curable)	Previous generation Lexmark thermal
Mutoh Junior, available with separate printer	37.56″	List $10,995, bundled with cutter, $13,995	Eco-solvent	Previous generation Epson piezo
Roland VersaCAMM, on-board cutter, so a dual-use printer-cutters	29 ″, 73.60 cm	$ 13,995	Reportedly the identical ink as Mutoh but we do not have independent conformation of this	Current Epson piezo printhead

SPECIFICATIONS: Size, shape, technology, mechanical, construction (build quality)

7. Is this printer made originally as a solvent ink printer, or is it retrofitted with solvent ink? If retrofitted, what was the original brand?

This is a retrofitted Mutoh Falcon 4100.

8. Is width enough for target applications?

Although this entry-level model is 37″ only, the end user can select from other Mutoh printers in widths up to 87″, so you get what you need in width. But merely having an 87″ width is no guarantee for success in the sign business. You may do quite well with less.

9. What are the electrical requirements of this printer? This means, will the building have to be rewired.

100 to 120 V or 220 to 240 V. The way it is written suggests you get either American or European current; that the system is not self-sensing.

10. What heat and humidity limits should be noted?

18 to 35 degrees C.

20-60% RH.

11. Connectivity? Parallel, serial, SCSI, USB, FireWire?

Ethernet is included.

12. What is the size and weight of the printer?

Height 1.264 m, length 1.52 m, depth (width) 58 cm.

The printer weighs a light 57 kg. I would have guessed twice that.

13. What is the solid-ness of the construction of the outer body? Is it plastic? Metal? Heavy gauge?

Although the printer is rather light weight, we can assume that build quality is acceptable for the entry-level level of usage expected for this kind of printer.

HEATER, DRYER(S)

14. When is heating required?

Heating is required to open the "pores" of vinyl and other substrates to make them ready to receive the ink.

15. What about heater or dryer? Is there a pre-heater and post-heater both, or just one? How many heaters does this printer have?

There is no pre-heater. The reason is probably the same as why retrofitted Roland printers don't have a complete set of heaters: the original structure of all these printers was not designed to handle solvent ink.

Instead the Junior has a heater under the printhead's working area, and a post-heater to dry the solvents so the print can be used without smearing.

16. Where are the heaters located? Is heater on top of, or under, the media?

The "fixer" is under the printhead. The dryer is the post heater. This means there is no pre-heater and no fan (to assist in drying).

17. Can you turn them on and off? Can you vary their temperature? What is average monthly electric bill?

You can adjust the "direct heater / fixer" and the "post heater / dryer" individually and vary their temperatures. There is an unspecified wait time for the unit to come up to the set temperature. A thermometer icon shows the current status.

18. What about fans?

No fans; this is an entry-level printer and it has a post-heater.

19. Will you need to buy an auxiliary heater or fan system?

You tend to need an auxiliary heater or fan system when the printer goes so fast that the substrate can't dry fast enough. But it is unlikely that the Epson printheads are fast enough to need an extra dryer.

OPERATING THE PRINTER

20. Can the operator manage print jobs via the Internet with this printer?

Unlikely.

21. What is the level of ease of use? Can anyone use this printer or do they have to be trained and certified? What about daily and periodical routine maintenance?

We have never used a Mutoh printer (hard to when you don't have one) but we assume it is not overly difficult to use.

22. Can you do unattended printing? For how long? How about overnight?

Since there is not yet a take-up reel you would not want to have the printer working unattended for long periods, especially not at night.

INSTALLATION OF THE PRINTER

23. Realistically, how much surrounding and support space will the equipment need in addition to the machine's own footprint. What space is needed to accommodate not only the printer but everything else to make the printer fit into your workflow?

Use common sense to recognize how much work space you need around the printer, both for safety, and efficiency, storing material, and storing finished prints.

24. 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?

One box holds the printer. The printer stand is "packed separately" but this container is not adequately pictured in the Operation Instructions.

25. Is installation included in the purchase price?

The printer is usually dealer installed. But you need to be sure that installation is included in your purchase price.

Mutoh Rockhopper 38 eco-solvent printer.

26. What is the rating of the usefulness of the Setup Instructions?

Setup instructions look okay. We can tell for sure only by testing them by setting up a printer. We have done that precise evaluation for more than 18 printers so far.

27. What is the rating of usefulness of the User's Manual and other associated materials?

The operator's manual is minimalistic, but touches on hopefully everything that is needed to make the printer work.

28. What other guides, white papers, or other useful publications come with the printer?

Since a Mutoh printer has never rolled in the door, we do not know what other written goodies come with one.

PRINTHEAD TECHNOLOGY

29. What printheads are used? Xaar, Spectra, Epson, or other? Explain the pros and cons of Epson, Spectra, or Xaar heads relative to their ability to handle solvent inks.

This printer uses Epson DX3 printheads. I am guessing this is an early generation printhead, not as fine as used in the Epson 10000 printer. The Roland VersaCAMM has the Epson 10000 printhead. But at viewing distances for signage you can't tell the difference anyway. Billboards have been printed at 50 and 75 dpi for years. For most signs 300 to 360 dpi is more than enough.

30. Is the brand and model of printhead clearly identified in the published specifications?

Printer spec sheets rarely provide the facts about what printhead is used. This is like selling a car but not explaining what kind of engine it has.

31. How many printheads per color?

Two heads, 1 head for black ink; the other head for CMY.

32. What is the true dpi of this printhead? How is this dpi calculated? No tricks or jargon. No interpolation, no software maneuvers. What is the actual base dpi of your printhead, period.

Note to readers: there is no such thing as a 2880 dpi printhead; there is not even a 1440 dpi printhead either. There are also no 2400 dpi or even 1200 dpi printheads either, though we would need to check on that.

180 dpi is traditionally been considered the true dpi of this generation of printhead. Epson claimed 1440, but that was running the 180 dpi back and forth multiple times until it added up to 1440. However there are not enough technical papers that explain how to ascertain the true dpi.

33. 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?

Epson printheads cost an average of perhaps $500. What is expensive is the service call; average cost is $1000 for the technician. In instances where both printheads are damaged (or wear our) at the same time the average cost is reported to be $2000. However it is unlikely most people will print enough on an entry-level machine to wear the heads out.

34. 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?

There is a one year warranty upon purchase. But most warranties do not cover head strikes. An extended warranty will cover head replacement.

35. How often can you expect head strikes? What causes them? Who will replace the printheads and at whose cost? Is the failure of a printhead from a head strike covered by the warranty?

If you heat the media too hot, it may buckle. Or if the media is the wrong thickness, you may get a head strike. This will ruin the print but will not usually kill the head. A printhead failure due to a head strike is considered user error and is not usually covered by a warranty.

MAINTENANCE NEEDS

36. How is head cleaning accomplished? Spray, vacuum, manual, other? What if one purge does not work? How many purges does it take? If your printer cleans its heads with liquid money (in other words if it uses costly ink to push impurities through the heads), how does this affect total cost of ownership.

Cleaning is spray, purge & wipe. It is push-button manual. The user's manual explains how to dust off and wipe down the printer itself, but does not say much about attending to the printheads. But on cleaning the wiper blade, that is where the instructions are more detailed.

37. What daily maintenance is required at start up in the morning? How long does this take? How messy is it?

There is no facility for any start-up cleaning routine.

"Use a soft cloth" for cleaning stains. If the stains are large you will need the special Mutoh cleaning liquid.

Do not utilize thinner or benzene. And almost all printer manuals warn you not to use an air blower to try to get rid of paper dust. An air blower just blows the dust deeper into the printer. The area of the paper cutter is where paper debris tends to collect.

38. What other maintenance is required by the operator?

You have to occasionally empty the waste bottle. This waste is not stuff you want to touch with your hands or in any way get on your skin.

You have to change absorbents in the spitting box.

All other service has to be done by an authorized Mutoh technician.

39. How hard is it to cap the system and turn it off, for overnight, over weekend, while you go on vacation?

When you dock the printheads at the cleaning station you can cap the heads, similar as to on an Epson 9000.

40. How long can this printer sit unused without the heads clogging?

The printer can be parked for up to two weeks; does not have to spit the whole time. This is also because, being a retrofitted printer, there is no spit gutter or other facility for constant automatic spit-cleaning.

41. Does this printer stay on the entire time once it is turned on? Is there a sleep mode? Should the machine ever be turned off? Does not entail having a UPS unit to guarantee it is on all the time?

Unlike a full-scale production printer, the Junior can be turned off and on when needed (within reason). The printer is not outfitted to spit automatically. The spitting that is evidently automatic is just while printing; every printhead spits at the end of each pass to make sure that the ink delivery system, especially the nozzles, are functional for all four colors (and not clogged from lack of use by one color or another).

TECH SUPPORT

42. Is training necessary? Is classroom training available? Is factory training available?

The dealers have to have training; they then train the end-user. So it is crucial to have a good dealer.

There is no classroom training other than through GIA. No factory training by Mutoh itself.

43. What on-line training is available?

No on-line training is available.

44. Where are spare parts warehoused?

Arizona.

45. Are dealers national (most companies) or regional (Roland allows a dealer to operate only within a limited regional area)? Do I have any choice in dealers? (How many dealers actually exist in my country?

Dealers may be national or regional.

INK

46. What kind(s) of ink does this printer accept? How many kinds of ink are available? Is this a lite-solvent or eco-solvent?

Only one kind of ink is available, reportedly the same ink that is used by Roland SolJet. To know for sure is easy enough: look at the MSDS and look at the ink cartridges.

47. What is the chemical composition of the ink? How readily available is the MSDS for this ink?

We have not yet noticed any really nasty stuff in the ink, but it is hardly benign either. No ink with solvents is ecologically pure. It is merely less nasty than full solvent.

48. How many colors?

CMYK

49. Does ink come in cartridges or bulk? How large are the ink containers? What is ink cost per liter (not just per cartridge, but per liter)?

Ink comes in 220 ml Epson cartridges; by summer 440 ml size ink containers will be available. But this is not a bulk ink system. Epson does not want to encourage you to use after-market ink.

Cost per 220 ml cartridge is $75.

Nicholas Hellmuth speaking with Mark, a technically knowledgeable Mutoh representative.

50. What kind of protective devices are on the ink system to keep you from using after-market ink?

The ink system has a chip in it.

51. How much ink is used up during installation of the printer? If a piezo printer, does that mean I have to buy a complete set of ink within a few days of paying off the cost of my printer?

About 25% of the ink gets used up during installation. It is on the larger Falcon II Outdoor that over 50% of the first batch of ink may be used up during installation: not that it disappears or is jetted out on prints, but just that the overall ink delivery system and printheads seem to soak up close to 150 ml of ink on all Epson-related printers.

This is not the fault of Mutoh, this is one downside of the piezo printer ink system that you get whether a Roland, Epson, Mimaki, or Mutoh.

52. What is ink consumption at full coverage (no unrealistic 5% coverage)?

The Encad web site claims the following costs for Mutoh and Roland, their main competition in the 30-36 inch vinyl printing market. In fairness to Mutoh and Roland, we will check with them to see whether these figures are realistic, and update these portions of the reports in the coming months. Keep in mind that Encad's comparison is with wider printers, not with their direct competition, probably because the Versa CAMM and definitely the Mutoh Junior did not exist when the Encad VinylJet was born several years ago.

Encad claims
- VinylJet, average cost per print in ink and media is $ 0.78.
- Mutoh Falcon is $1.93 (the Junior did not exist when Encad made these estimates)
- Roland SolJet at $1.10

We assume that Mutoh and Roland will offer other, lower, figures. So how can the end user possibly trust any manufacturer's figures? This is why FLAAR now does benchmarking. We benchmarked the Apple Mac G5, supposedly the fastest computer on the planet. We also benchmarked five models of Dell computer. We found that Apple was either possibly cheating, potentially misleading, and for sure exaggerating. You can obtain the full version of our benchmarking in the Survival Series, on www.wide-format-printers.NET.

The Encad VinylJet failed technologically and in the marketplace; it was quietly withdrawn about a year ago.

53. What about printing on backlit? Is your printer as good as, better than, or not quite up to par with, other major printers? Is backlit saturated enough with one print, or do you have to print two and mount them together?

The ink reportedly does an acceptable job; black is supposed to be particularly good. However as soon as we can find an installation we prefer to do a site visit case study to find out for sure.

54. Is output splotchy?

The output had mild banding. I could not judge overall quality because there were not enough sample images.

55. Can you hot-swap ink?

You can hot swap ink with no delay marks on the print if you can switch the ink fast enough. Otherwise the printed portion dries out and then the fresh ink from the new batch may not match the recently dried ink next to it.

56. What ink-out alarm system exists?

Yes, an ink low notification and then an "ink out STOP."

57. Some printers now have "counters" which report how much ink has been expended for each print. Most printer manufacturers admit that these counters are generic estimates: they do not really count how much ink is actually squirted out the heads. So how about your printer? Does it even have a counter and if so, what is it really counting?

No.

58. 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)?

The Arizona solvent ink printers needed a printed band because they had no spit gutter. The Mutoh Junior evidently has a spit area and spits at every pass.

Mutoh Arizona II eco-solvent printer.

SAFETY CONCERNS

59. What claims does the manufacturer have for health or ventilation? Is the printer enclosed? How is the enclosure vented?

An entry-level printer would not be expected to have an enclosure or vent. That does not mean that you won't wish to have one.

60. 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?

Note that even trade magazines comment, "Venting—Flatbeds, both solvent and UV-curable, may require the addition of equipment for venting fumes, odors, and particulates." (Nov/Dec 2004, p. 38, The BIGPICTURE Magazine).

SUBSTRATES & MEDIA

61. What width material does the printer hold?

The machine holds media of 37.55 inches (95.4 cm). Printing width is 36.77 in (93.4 cm).

62. Is borderless printing possible?

No, printing is not borderless.

63. Is printhead height adjustment available? Is it manual, automatic, how much?

It seems there are two positions: low, 1.4mm, and high, 1.7mm. There is no intermediate option. The Operation Instructions provide clear instructions on how to adjust the head height.

64. Can you manually sheet-feed media? Does it feed easily?

Yes.

65. Is there self-detection of media width?

Yes.

66. Does material have to be coated?

This is the unanswered question that you only find out once you have one. But in general, some uncoated vinyl works okay. For other kinds of material, coated media are better (see answer to the next question).

67. Precisely how many kinds and types of substrates will work in this printer?

The million dollar question is precisely what substrates will, and what won't, work in this printer. The minute you have to use coated media you may price yourself out of the market. If your competition has a true-solvent ink printer, you can't compete if you are paying for a vinyl that works with eco-solvent inks.

The operator instructions suggest you should consider:
- Uncoated PVC and banner
- Coated paper, Tyvek, backlit/frontlit film

Be aware that with any printer which uses heaters you will have to get used to what temperature to use at which speed settings of your printer and all this will vary by the materials used. So anticipate a period of trial and error. Be sure to take notes on what works and what not.

68. What media will not work well with your printer? What media will not work at all with your printer?

This kind of information is not in the spec sheet and not in the operator's manual either.

69. Front loading, back loading? Paper path?

Most Mutoh, Epson, and Roland printers tend to be back loading and have a straight-through paper path.

70. Do you get roller marks or any marks from media feeding on some media? Which media? How bad are the marks?

If the media is sitting unused in the printer; if the media is adhesive backed, you will get marks. You can just feed out the media and cut it off to get rid of the marks. Once you start printing there are no more marks generated.

71. What about the take-up reel? Does it work unattended? Does media skew when it is wound up?

A take-up reel system is being designed. For an entry level printer it was probably not expected that most users would be running this much unattended production through such a printer.

72. How much acclimatization time is needed for the media?

The operator manual points out that plenty of acclimitazation time is essential, and repeats that you should strive for a room temperature between 22 and 30 degrees C (which is rather warm) and humidity between 40 and 60%.

Mutoh goes as far as recommending 24 hours to bring the material into the room that houses the printer so the substrate will be at the same temperature and humidity as the working situation.

73. What about adhesion? Are their substrates you can print on, but then have adhesion problems?

Adhesion on first-generation eco-solvent printers was probably poor. We do not yet have feedback on adhesion issues with the second generation inks. Mutoh has excellent test results on adhesion and solvent resistance. We discuss these results more in the report on the Falcon II Outdoor printer.

74. Is 3M warranty available? Is Avery warranty available? What are the full added costs in ink, media, and lamination for such a warranty?

Both 3M and Avery warranties are available.

PRINTER DRIVERS & RIP SOFTWARE

75. Does the price of your printer include a RIP? If a RIP is included or part of a package, is it a lite RIP or a full-featured RIP? Can this RIP be updated or run any other printer?

Yes, Scanvec-Amiable RIP is included. I did not take notes on whether it is a lite or full version.

76. Can your printer function realistically with no RIP whatsoever? If so, what features are missing or slow down without the use of RIP? Is the driver just for PC? What about using this printer with a Mac?

The printer device driver is for PC only.

COLOR MANAGEMENT FEATURES

77. What color management sensors or measuring tools are on-board?

ColorSpan 72s and 72si are the only solvent ink printers I know that have color measurement tools built into the printer.

ColorSpan 72si solvent ink printer.

ADVERTISING CLAIMS: Anything Misleading? Any Hype? Slight Exaggeration?

78. Please look at the ad claims for this printer in magazines and on the Internet. What aspects of these ads will a buyer of that model soon find out that are perhaps slightly exaggerated? In some ads it seems to be the goal to list the places where the printer is weak as outstanding features. After all, once we buy your printer, we are going to find out about these discrepancies relatively quickly: metamerism on some models; slowness on most models; banding defects; inability to print on after-market media; small ink cartridges combined with high cost of consumables, etc.

Mutoh does not tend to make outrageous claims. In part this is because Mutoh does not advertise as heavily as Roland and Epson.

At the NBM graphics and sign trade show the information from interviewing Mutoh personnel was the most forthright, open, and thorough of any manufacturer. The Tekgraf manager for Tiara Opal II did a good job as well, as did a reseller for the Encad VinylJet, but still Mutoh was the most realistic of all.

In at least one booth the manager of another brand (not Mutoh) politely did not want to talk about any features of his printer that were not perfect. So I simply stopped the interview. I can find out the truth about most any printer one way or another. The more someone tries to cover over a printer the more interest I have in finding out what they are trying to keep me from finding out. Honesty and full disclosure is by far what impresses me the quickest.

In another booth the manager did not want anyone in his booth wasting time with a person who was clearly not going to buy one of their printers. He was quite blunt. This was a shame, since one of his sales reps has spent an hour patiently explaining the nice features of one of their printers. The manager went on the offensive when I was visiting with another person in his booth, an industry figure I have seen at countless trade shows worldwide. We were both so surprised at that manager's immature attitude that for once I reacted politely rather than reacting in kind.

The banding on the Roland VersaCAMM was so blatant that I did not have the heart to interview the staff. Frankly I was very disappointed to see such poor quality. On VersaCAMM printers in other booths the

banding was not as bad and I can understand that not every Roland produces low quality. But when a printer misbehaves in the manufacturer's own booth, how are we supposed to imagine it will behave in a print shop after you have paid your hard earned dollars to buy it?

I would also add that the manager at the Splash of Color booth made a favorable impression. He also made it clear his company was working hard to restore user confidence after one of their partners in an earlier venture evidently left a trail of unhappy clients (with their first generation printer). I rate their new generation SolventJet as an improvement in every aspect, and most definitely in public relations.

I give Mutoh personnel a high rating; and their brochures a good rating: except for one brochure that is misleading in the extreme. This single page blemishes an otherwise excellent record. Ref LITPOO52E – 03/05, handed out at FESPA 2005.

The headline of this brochure claim, in a typeface probably 30 to 40 pts in size:
- no coated media
- no lamination
- no ventilation

If I can find a site-visit case study that accepts any or all of this I will retract this advisory. But owners of a Roland eco-solvent said the odor was objectionable to his staff. So the claim that no ventilation is needed may turn out to be misleading to the extreme and if so could be potentially actionable. If the Mutoh managers will put this printer in their home, in their own living room, and in their children's bedroom, then I will accept "no ventilation" claim.

Coated media is listed in Mutoh's own brochures and information. I can't believe that these printers use only raw uncoated substrates.

And "no lamination" is a dubious claim even with full solvent ink. What about vehicle wrap or floor graphics?

ADDITIONAL QUESTIONS THAT YOU MAY WANT TO CONSIDER

79. How many of your printer of this model are in use in your country? Not how many are in dealer showrooms, not how many have been "sold" on paper, but how many are functioning in actual use printing signs, posters, banners, textiles, or whatever in commercial establishments.

Reportedly 60 of the Mutoh Junior printers have already been sold in the US within a short period after the printer was announced. Considering the printer has not been available very long, that is a respectable quantity.

80. What will the resale value of your printer be in three to five years? Will either the brand name or model specifications cause a knowing buyer three years from now to shy away from your printer or cause a knowing buyer to only want to pay a very low price as compared to the other printers our company is considering? A company which is no longer in business may cause printers of that brand to lose value in the used market. Or is there some major technological breakthrough in your brand that will result in less value for your current model?

Resale value will be acceptable but be sure to allow for the fact that this is a rather simple printer. Mutoh is a known name and this chassis has been around long enough to show that it is stable.

Please add your own suggestions

If you know of any questions we overlooked, please let us know by fax, 419 372 8283

Become a Savvy Buyer

The FLAAR Reports are a useful first step to deciding whether to buy, or not buy, one brand over another. But it is essentially that you reach your own decision. Utilize the FLAAR Reports to learn how to see through over enthusiastic ads, and to recognize an honest description when you find one.

The best way to understand whether a printer will actually produce what the ads so loudly claim is to find this printer at work in a sign shop. If the printer operator says the machine operates just fine, and if the owner says he is making a profit and recommends this brand, then you can seriously consider this printer.

Bibliography

The operator's manual was Rev 1.2 dated 24/1/05, Jan 24, 2005.

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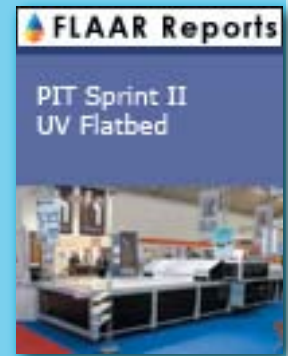
Serious Production Machines

Durst Rho 205

Vutek PressVu
UV 200/600
With comments on
the Vutek PressVu
UV 180/600

FLAAR Reports
DuPont
ChromaPrint 22UV

Gandinnovations
JETi 3150
UV Flatbed

Zund 250-Combi
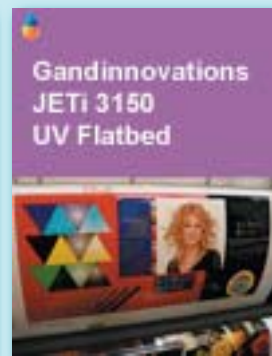
Miscellaneous UV Evaluations

ColorSpan 72UVR

Raster Printers Inc,
RP-720 UV

FLAAR Reports
Agfa Anapurna 100
Mutoh Cobra 100

Zünd UVjet
215-Plus

What about Roland,
and Mutoh?
Why no UV-curable
Ink Flatbed Printers?