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Pad Print vs Digital UV

If you are a buyer of decorated product or you are directly involved with the decorating of plastics, metals, glass and a variety of other substrates then you will most likely be aware of the pad printing and specialty screen-printing technologies.

Industries such as medical, automotive, electronics, sporting goods, appliances, toys and promotional have widely adopted this technology either as an in-house production centre or through outsourcing to a printing fulfilment service.

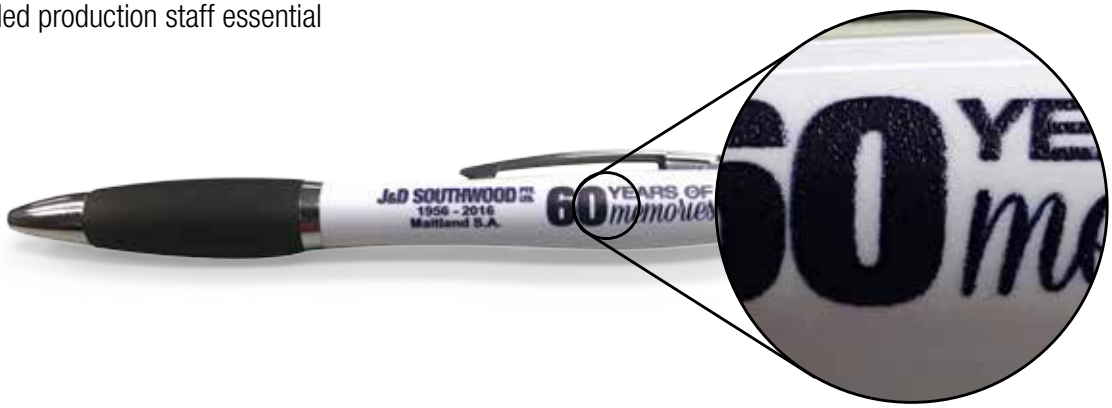
	Padprint	Digital UV
Environment	Static, temperature and humidity	Static, temperature and humidity
Ink Cost/average	$250 per Litre	$250 per Litre
Image Size	Small	Large
Quality	Up to 5 colours	Infinite
Process Print	Specialised (skilled operator)	Novice (semi-skilled)
Speed	Up to 1000 hand fed	Up to 2000 hand fed
Max Print Area	70mm	750 x 1200mm
Print Cost per Piece	Same	Same
Pantone Matching	Colour kitchen	Digital Pantone reference embedded
Adhesion	Good - solvent based	Better - UV based
Primers	Same	Same
Flaming	Same	Same
Corona	Same	Same
Product Curvature	Up to18%	Up to 9%
Setup	Film prep/supplies, Plates, Ink mixing, Thinners, Colour Control, Pad preparation	Direct from PC Nil Required - art preparation
Clean Up	Plate storage, Ink waste, Ink clean/bath	Nil Required

Pad printing (also know as tampography) is an analogue printing process that transfers an image from a printing plate onto a substrate via a silicone pad. Developed post WWII and refined in the late 60's and early 70's, the process in itself requires the generation of artwork, colour separations in case of multicolor printing, printing of artwork onto a film, exposure of the film onto a printing plate by way of a UV light source, mixing of inks with thinners and/or hardeners, machine prepping and alignment and the creation of jigs before production may commence.

Effectively the “make ready” time was a hindering factor for many manufacturing facilities to consider bringing print production in house.

Being an analogue process, **pad printing does have limitations** in today’s fast passed digital world:

- Not viable for short production runs especially in multicolor printing
- Unable to support the “just in time” business model
- Unable to make changes to color output “on the fly”
- Difficult to produce 4 color process prints
- High in chemical waste
- Not suitable for variable data printing
- Not suitable for sample printing and strike offs
- Language changes on product markings are prohibitive
- Skilled production staff essential



The commercial applications for digital UV printing lend itself to the exact same applications and industries as the analogue technologies, but they offer the benefit and simplicity that are synonymous with modern production methods and market expectations.

Simply put, digital UV printing can be considered as a form of digital pad and specialty screen printing.

The “make ready” time for UV printing is far reduced, especially once jigs to hold the products are made. It is simply a matter of artwork creation, often this is submitted by the customer, then simply open the artwork, apply a step and repeat formula that allows you to make use of every square centimeter of available bed space, load product and print.

Traditionally however, UV printing equipment was slow and therefor difficult to integrate into manufacturing facilities. Regardless of the fact that the digital workflow presented an interesting business case, the slow output meant the ROI and subsequent total cost of ownership did not meet people’s expectations. As such, a critical mass was never achieved in adoption of small footprint UV inkjet technologies.

It is in fact this very reason that we embarked on developing digital print technologies that would breach the divide between productivity and market expectations.

Over 35 years of working with, and understanding the pad and screen processes intricately, from make ready to analyzing productivity and workflow of small objects and parts through to safety signage and packaging, we understood the criteria digital technology had to meet for it to be viable and taken seriously. **Compress iUV** does exactly that.

Compress iUV has addressed printing speed/productivity through a series of firmware enabled print modes and dual water cooled LED lamps. Imagine printing 200+ pens or 500+ switch box covers per hour in full colour… and, with less than 5 minutes in make ready time…

Additionally, **Compress iUV** allows a 300mm printable height, add to this the ability to instantly rotary print multicolour images on bottles and consider this the digitalization of all jobs previously decorated on a 2 pillar, single arm screenprinting machine. Compress iUV not merely compliments pad/screen technology, it supplements it.

The digital workflow offers additional benefits to support today's business culture.

- **Inventory control**, print only what you need when you need and don't hold warehouses of preprinted stock
- Greater control over product **cost**
- Respond to **market demands** instantaneously
- **Save time and money** on couriering back and forth to print houses and maintain control over your processes and final product
- **Minimize** your carbon footprint and **waste**
- Offer **printed samples** to enable your sales force

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iUV-600 LNE Series AUTO LOAD/PRINT

Automation, predictable and repetitive workflows are a pre-requisite for the modern day large scale manufacturer. The **Compress iUV LNE** system was designed to meet this exact criteria. Using a multi-platen loading system coupled with step and repeat software integration the operator need only load jigs with blank objects. The platen is then transported on the infeed conveyor into the printer, once completed it will be ejected and the process will repeat with a new platen waiting at the infeed gate. This is true circular production for volume printing of industrial and promotional products.

The divide between digital and analogue production is closing at an exponential rate. Faster printing technologies and workflow automation are bridging that gap to a point where digital production is not merely relevant, rather it is the driving force behind today's market trends. So if you have considered implementing a digital production line, consider how Compress iUV can help in realizing this.

iUV-600s

iUV-1200s

iUV-600LNE

For more information please contact :

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