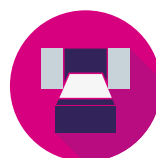




Corrugated packaging and displays

The complete UV inkjet system for sheet-fed corrugated print production





UV inkjet: The power to transform corrugated sheet printing

In today's fiercely competitive retail environment, brands and retailers are creating new ways to differentiate themselves in-store. There is now demand for more frequent campaigns, customisation and versioning. For corrugated printers this means shorter runs and faster job turnarounds which are uneconomical with traditional processes like flexo and offset.

Meet (and drive) demand with digital technology

Rapid advances in inkjet technology continue to change the way print is produced and it is now a viable alternative to traditional processes in many wideformat, packaging and industrial applications. A key factor in the growth of inkjet in these markets has been the ability to print with UV-curing inks, delivering incredible productivity, quality, application range and versatility.

UV inkjet is a technology that was pioneered by Fujifilm and Inca Digital, with the launch of the first dedicated flatbed system in 2001. Today Fujifilm's wide format printing portfolio includes the most powerful inkjet printers in the industry, and it has combined this technology with its experience of supplying screen consumables to the corrugated market to create an inkjet solution for corrugated display and package printing.

Fujifilm's inkjet technology for corrugated display and package production offers many benefits to a print business:

- ▶ The most cost-effective way to print one-off or hundreds of pieces
- ▶ Provides the fastest possible job turnaround and ability to print just in time
- ▶ Enables the production of on-demand short run and bespoke work
- ▶ Enables endless customisation of print campaigns
- ▶ Eliminates pre-press costs, as no plates or pre-coating processes are required
- ▶ Reduces waste in the supply chain

By adopting Fujifilm inkjet technologies, you can meet changing demands from your customers and work with them to create new ways to differentiate themselves by offering a new way to print.





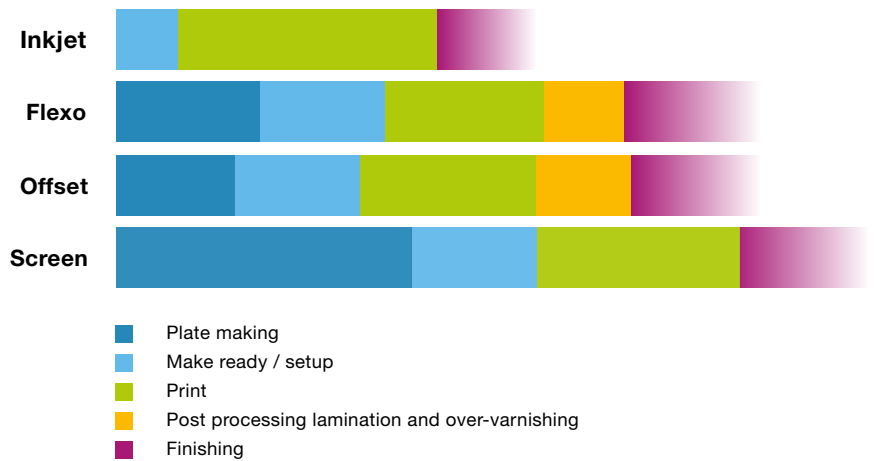
The efficient way to produce short runs

Inkjet technology is ideal to complement flexo or offset processes in that it allows converters and packaging manufacturers to widen their business opportunities and profit from short run jobs and bespoke applications.

The most efficient way to produce short run print is to send a PDF to the press and print. This is how Fujifilm's inkjet system operates, eliminating all the timely and costly preparation and set up parameters of an offset, screen or flexo press. There are no plates to produce, no platesetters or processors to maintain, no make readies, no run up to colour, no waste sheets, and virtually no pressroom consumables.

Printed sheets can be handled immediately and print quality and consistency is guaranteed, with no on-press adjustments necessary.

With Fujifilm's inkjet system for corrugated printing, the turnaround time for short run jobs is much lower than with traditional processes.



Fujifilm inkjet system for corrugated printing



No plate production



Zero make readies
Zero waste



No overvarnishing or lamination



Fewer operators



Ready to transform your business

Fujifilm's system for corrugated printing enables you to produce the same broad range of work you might be doing today, but with much faster turnarounds and is a profitable solution for short runs. Even one-off proofs can be made on the same press.

Fujifilm's UV inkjet printing process produces near-offset print quality, but with stronger, more vibrant colours, producing prints with high visual impact.

Instant curing UV

UV inkjet printing uses UV light to instantly cure the ink by polymerisation after it has been jetted onto the material. With Fujifilm's specially designed UV inks for corrugated printing, this offers the following benefits:

- ▶ The print is instantly dry and can be stacked or finished straight away
- ▶ Prints can be cut, creased and folded without cracking
- ▶ UV inkjet is a non-contact printing process, so it doesn't damage the corrugated flutes
- ▶ The finish is fully adjustable from satin to high gloss
- ▶ Standard stock materials can be used - there's no need for expensive digital substrates, and they don't have to be pre-coated
- ▶ Excellent colour coverage over a wide range of materials
- ▶ Excellent colour reproduction, with print-to-print consistency
- ▶ No need for post-print over-varnishing or lamination. The cured UV ink film is a tough, durable polymer film which actually provides a protective layer for the board



**Entertainment
product displays**

Challenge your clients to think differently

With the ability to print on demand, design changes can be made as often as you like without having to factor in overprints, stocks, setup costs or wasted sheets. So you can offer your clients new ways to take their products to market.





FMCG displays



Temporary display graphics



FMCG food and beverage displays



High impact consumer packaging

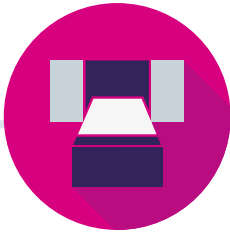


The modular system solution



Not every corrugated print business is the same, so Fujifilm has designed a modular system for corrugated print production, consisting of three parts: printer, ink and media handling. Within each part there are multiple options, so the system can be tailored to meet your specific business needs.

To explore the system options and find a configuration that is suitable for your business, visit www.powerofinkjet.com.



Onset printer platform

Powerful printer series with choice of productivity and image quality

Dedicated flatbed

Direct to media UV printing with powerful vacuum table for printing single or double walled boards

Benchmark productivity

Full-width printhead array for high speed printing

Class-leading image quality

High resolution piezo inkjet

Maximum uptime

Proven Inca Digital technology and robust build quality

Built for the future

Scaleable Architecture and modular design



Uvijet inks

UV inks designed for corrugated printing

High pigment loading

Vibrant colours, accurate colour reproduction

Finishing performance

Excellent cut, crease and folding capability

Finish control

Low-glare satin to high impact gloss

Low odour

Meets DIN standard for odour

Jetting reliability

Inks and printheads are tuned for optimised jetting

Consistency

Quality assured manufacturing process ensures batch-to-batch consistency



Media handling

Powerful handling systems with options for level of operator involvement and material type

Multi-sheet capability

Work with one full bed sheet, or multiple sheets

No damage to board

Vacuum pickups don't apply pressure which may crush the flute

Excellent print registration

Sheets are positioned accurately on the print bed

Excellent stack registration

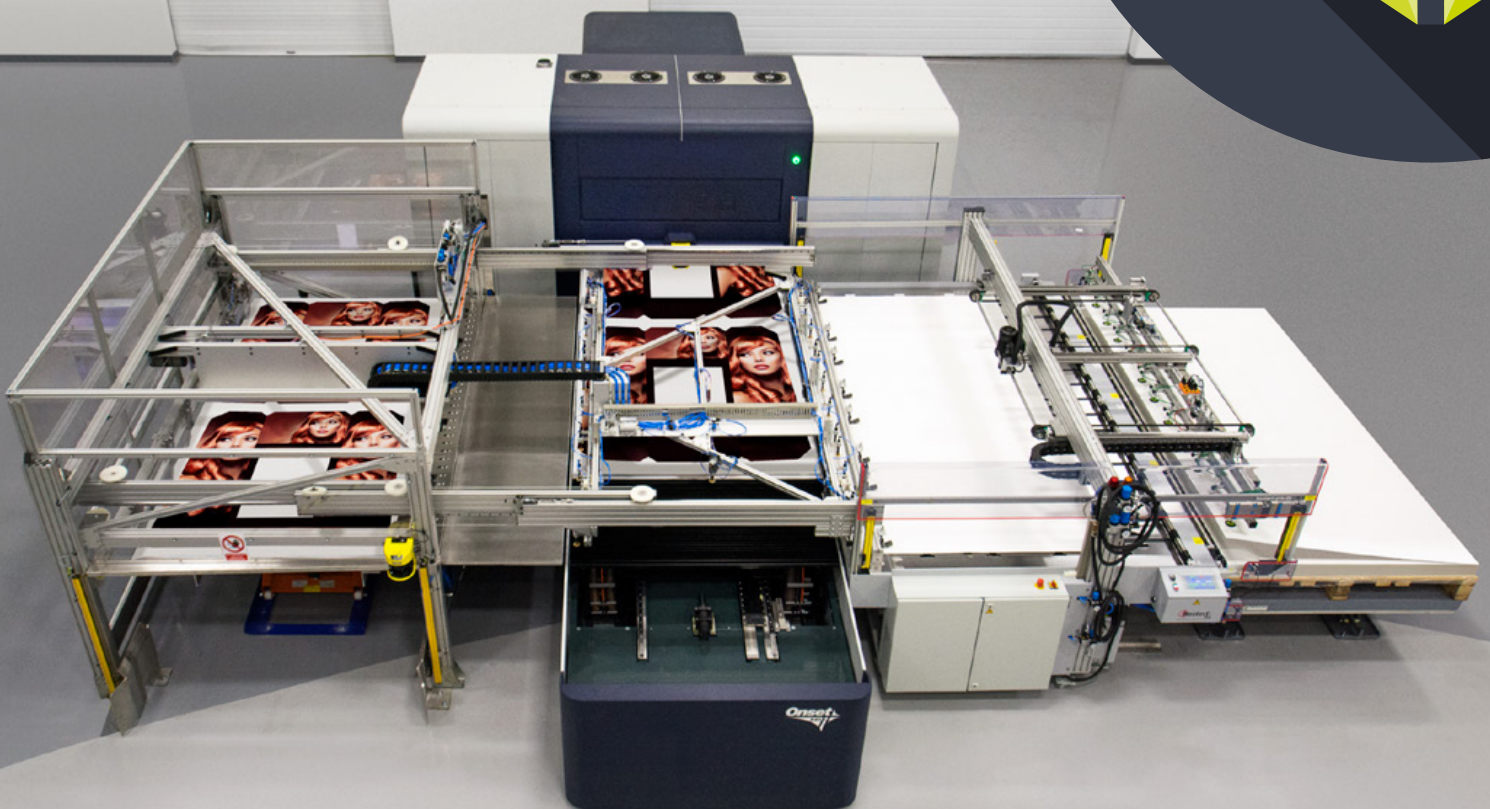
Sheets are stacked perfectly for accurate post-processing eg. die cutting



Powerful inkjet print production

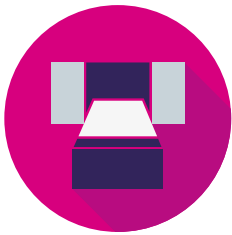
Fujifilm's modular system solution is a simple way to integrate inkjet print production into your business.

- ▶ Compact footprint and easy access to printer
- ▶ Fits into your existing corrugated production workflow
- ▶ Only one operator is required
- ▶ System is factory pre-built, so installation time is minimal
- ▶ Fast and professional installation and training



The system configuration shown includes an Onset R40i printer with Uvijet OL inks and a fully automatic load/unload system for standard board.

Onset: The ultimate production flatbed



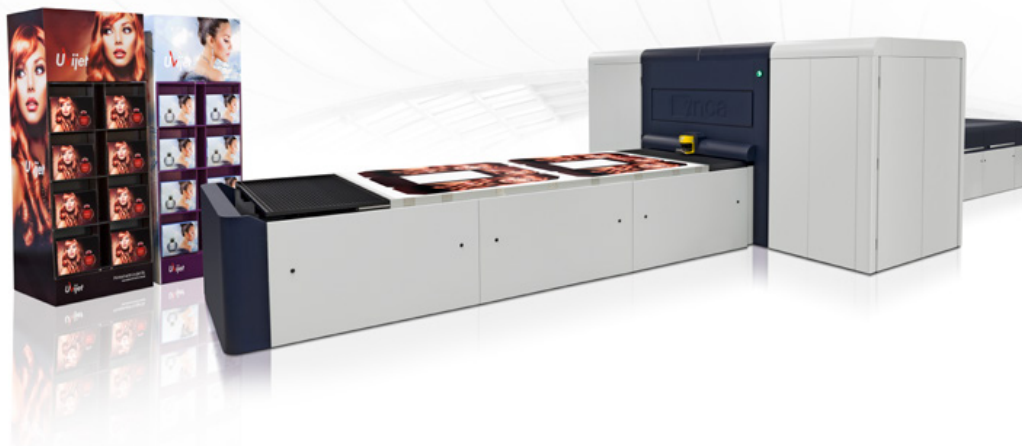
The powerful Inca Onset is the established leading UV flatbed platform for the production of high quality, high impact graphics with outstanding productivity.

Onset printers are built to deliver three things we know are important to print companies:

Business efficiency: Onset offers better efficiency and productivity, producing like-for-like print quality at higher throughput than any other UV inkjet machine.

Business development: Onset enables the production of high run length jobs which until now were not viable using inkjet technologies.

Low investment risk: Onset is powerful enough to pay for itself in six months. As a business model it gives owners the opportunity to plan their business with much more confidence.

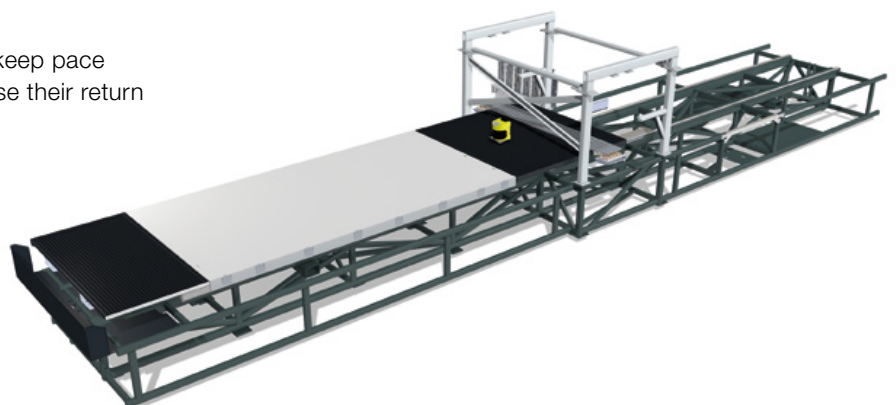
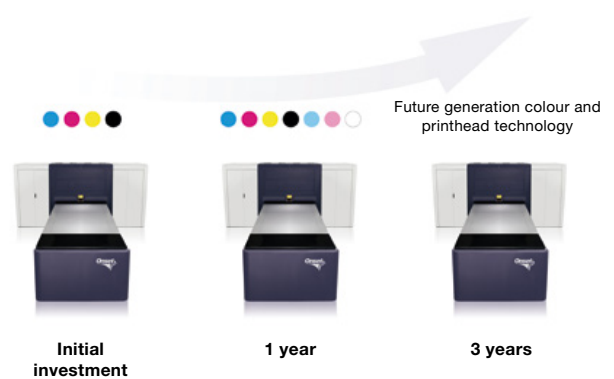


Scaleable Architecture

The latest generation of Inca Onset printers use an innovative modular design that gives Onset owners the power to evolve the productivity and colour configuration of their printer to match changing business needs.

By designing Onset with the ability to adapt ink tanks, printheads, UV lamps, automation, speed modes, electronics and software, Inca has set a new versatility standard in high-end flatbed printing.

Onset Scaleable Architecture allows owners to keep pace with new technology developments and maximise their return on investment.



Onset series

The latest generation Onset series is built around one platform that is configurable to meet your business needs.



Onset Q

Ultimate quality at speed

For the production of close-view, high-value images with lower volumes at near-photographic quality. Onset Q is the only UV flatbed of its kind with a 9 picolitre drop size. Available in 4 and 6 colour channel configurations.

Onset R

Super high quality at high speed

For the production of high volume, quality images onto a wide variety of media. Onset R uses a 14 picolitre drop size providing a good balance of quality and volume for corrugated printing. Available in 4 and 6 colour channel configurations.

Onset S

High quality at high speed

For the production of high volumes of high quality print on a wide variety of media. The 27 picolitre drop size provides versatile and productive printing of images where viewing distance is not critical. Available in 4 and 6 colour channel configurations.

Built for long-term performance

Onset printers are the fastest in the world at like for like quality. The technology is world-leading: powerful linear motors and vacuum beds that can hold up to 80kg of media; full width printhead arrays and UV lamp systems allow almost instantly cured print; powerful handling systems ensure phenomenal productivity. Onset's print engine and fast moving vacuum bed are built on a very robust chassis which

enables pin-point drop placement accuracy for billions of drops per second, all day, every day.

Onset is a long term investment. Inca engineering, Fujifilm chemistry and self-monitoring features ensure Onset printers continue to deliver consistent quality and speed for years and Scaleable Architecture enables your investment to evolve.



Build quality

Unbeatable uptime

Onset's concept and design is Inca's 5th generation of moving print bed technology. It takes known and understood systems and makes them better. It is designed to place microscopic ink drops with pin-point precision, at very high speed.

Fujifilm Dimatix printheads

Great definition at high speed

Dimatix heads have proven their reliability in full production for many years. To get the best throughput from Onset, drop size and placement are precisely calculated to give excellent results at top speed.

Full-width printhead array

Textural banding eliminated

The print carriage spans the whole width of the print bed and doesn't scan across the media. Images do not suffer from textural banding and consistent print means the cost of rejected prints is reduced.



Full-width UV lamp system

Lower lamp settings, media doesn't warp

Onset has multiple UV lamps that allow for fast bidirectional print. The system can also vary the UV dosage and produce a range of print finishes from satin to gloss. Only Onset can produce a high speed, high gloss finish.

Zoned vacuum flatbed

Quick set-up and switch between jobs

Onset has an accessible flatbed design for simple loading of rigid materials, with a best-in-class capacity of 80kg and maximum media thickness of 50mm.

The vacuum table is divided into fifteen independent zones minimising the amount of bed masking required. Dual registration points ensure accurate and simple double sided registration.

Simple operation

Get up and running quickly

With a simple front-end interface and straightforward maintenance routine, Onset is designed for maximum uptime. As part of the initial installation, operators receive basic training that enables them to run and maintain the machine efficiently.

Intelligence for peace of mind

Intelligence features enable Onset to monitor its own condition to maintain optimum performance and print quality and minimise printhead deterioration or damage.

Intelligent cleaning

Sensors monitor the amount of UV light exposure around the print carriage and control the cleaning cycles in the daily schedule to maintain optimum performance and printhead life.

Intelligent print quality management

Inca's iNozzle intelligent nozzle mapping system maintains print quality even if printhead nozzles are missing or deviating which would otherwise be seen as very visible print defects.

Vacuum bed monitoring

Vacuum level monitoring will stop printing if the pressure is too low to hold the material securely. This helps to prevent possible damage to the print carriage when printing porous materials.

Intelligent material height detection

The material height detection system detects lift across the material and ignores small defects in the surface which do not pose a risk to the print carriage, reducing unnecessary stoppages and downtime.

Intelligent software

Inca software helps users increase the efficiency and productivity of Onset, enabling access to key management data.

inca[vision]



Service and support network

Your business depends on maximum uptime from your digital equipment. Inca Digital and Fujifilm recognise that your investment in cutting-edge technology needs to be matched by a support service that is customer focused, responsive and reliable.

Onset installations are supported by warranty, parts and service package options, tailored to best suit your business. Front-line support is available in every region using engineers certified by Inca's training facility in the UK, and Fujifilm and Inca continue to invest to expand their support base to maximise printer uptime.

Inca Vision is a remote system that monitors Inca printers for enhanced customer support. It enables a machine condition to be diagnosed and, in many cases, catch issues before you need to call an engineer for service.

Uvijet ink: The technology that fuels the machine



Smooth, high definition, vibrant prints

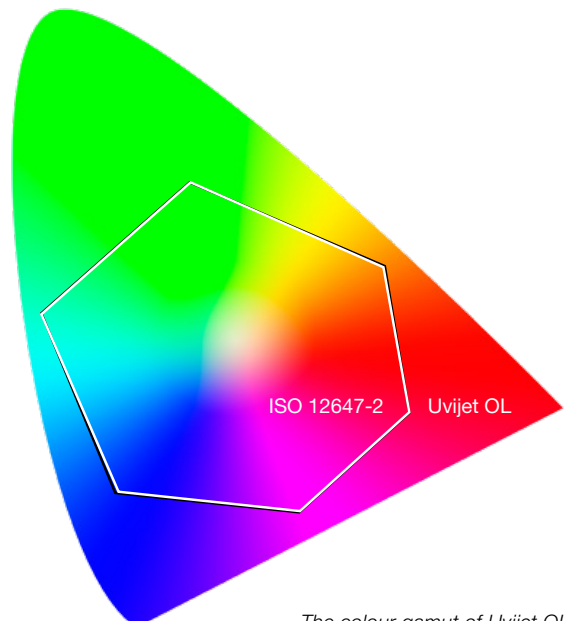
Fujifilm's Uvijet OL 'low odour' inkjet inks are specially formulated for corrugated printing. They are manufactured with Fujifilm's proprietary Micro-V dispersion technology which enables high pigment concentrations at the right viscosity for jetting. The result is visibly stronger, more vibrant colours that deliver excellent mileage and reliability. With a wide colour gamut, Uvijet inks have excellent tonal and spot colour reproduction.

Together with Onset's UV lamp control it is possible to control the finish of a print from low glare satin to high impact gloss.

Uvijet OL inks are designed to meet the performance requirements of corrugated prints, including excellent cut, crease and folding capability, and finished prints meet the DIN EN1230-1: 2010-12 standard for odour, which is comparable to flexo and offset.

Match ISO standards

With Uvijet OL inks, it is possible to produce prints that match the ISO 12647-2 offset standard, so colour matching across print processes can be possible. The Fujifilm inkjet system can run alongside existing analogue printing equipment so you can use the most cost-effective technology to print a job.



The colour gamut of Uvijet OL is bigger than ISO 12647-2, enabling the printing of corrugated sheets that match the standard.

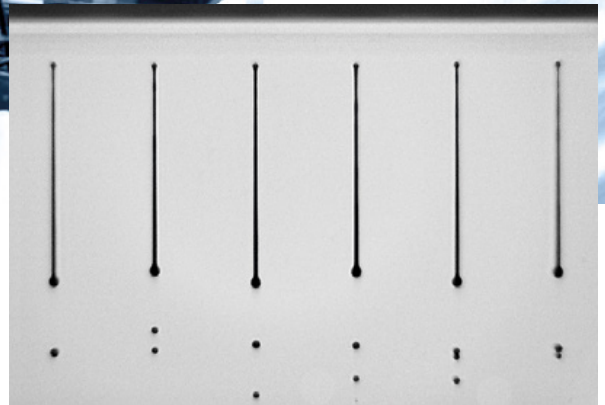


Every drop matters

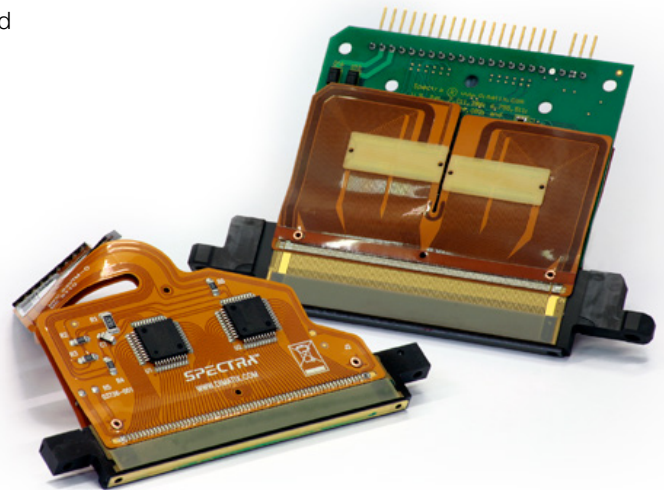
Onset's full-width printhead array jets billions of drops per second, each directed to a precise location, producing hundreds of square metres of high-resolution print per hour.

The demands on printheads and ink performance are very high, but to jet well and reliably they must be designed for each other.

Onset's Uvijet inks are developed by Fujifilm Speciality Ink Systems in the UK, working in partnership with sister company printhead manufacturer, Fujifilm Dimatix, to develop optimum ink chemistry for the printheads. As part of the design process, printhead jetting patterns are tailored to the ink to achieve the best performance and reliability.



Ink drop formation on the journey from printhead to substrate. To achieve the best image quality Onset must fire a drop at the print surface to land with pinpoint accuracy and in perfect shape. Only good ink design, tuned to the printhead, makes reliable jetting possible.



Part of Onset's full-width printhead array.

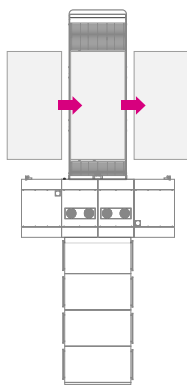


Powerful handling systems

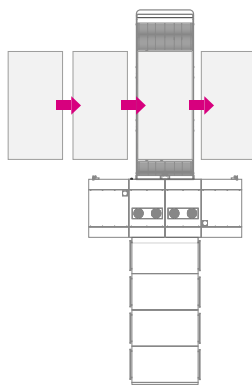


Very short runs and one-off jobs can be printed with manual loading and take-off, but a fast and powerful handling system is vital for Onset to perform to its full capacity for longer runs.

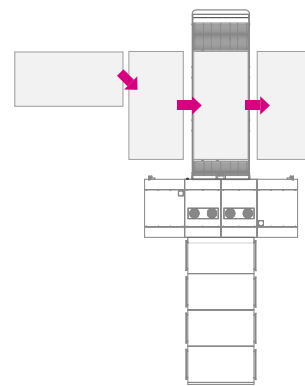
There are three automation options for Onset, from a semi-automatic (manual load and automatic take-off) configuration, to a fully automatic loading, take-off and stacking system designed specifically to handle difficult materials like unconditioned corrugated board.



3/4 semi-automatic handling

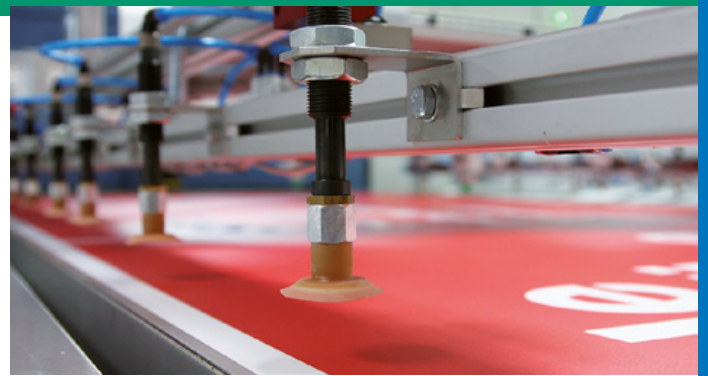


Fully automatic handling



Fully automatic handling for unconditioned corrugated board





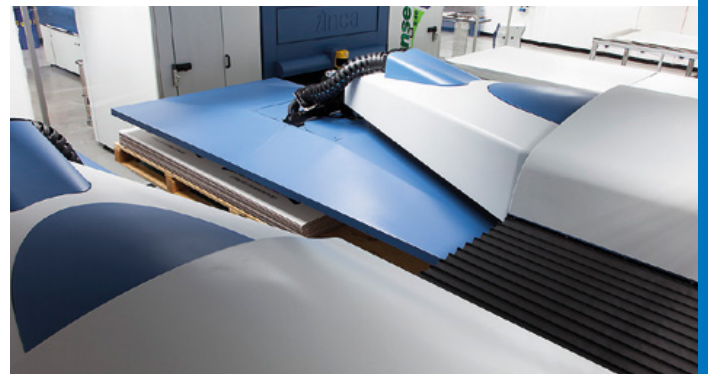
3/4 semi-automatic handling

The 3/4 automation system lets you print single sheet, multiple sheet or double sided print in registration. The operator loads sheets onto a preload table and the system takes over the rest, stacking it on a pallet for easy removal of the printed stack. Best of all, the system allows the operator immediate, direct access to the bed and registration points for quick switch between manual and semi-automatic work.



Fully automatic handling

This fully automatic material loading system is designed to handle conditioned and dimensionally stable sheets. It works in conjunction with the 3/4 handling unit to provide full automation, handling multiple sheets with highly accurate registration. The loader can be moved away from the machine to allow access to the print bed.



Fully automatic handling for unconditioned corrugated board

This fully automatic handling system is designed for difficult materials like unconditioned corrugated board. Vacuum-to-vacuum transfer ensures precision handling, from the robotic arm pickup, to placement on the print bed and stacking of printed board.

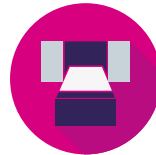


The right partner for inkjet

FUJIFILM

Fujifilm is committed to the development of print solutions that meet the changing needs of the entire printing industry. As an established leading supplier in wide format inkjet printing, it is well positioned to meet the evolving needs of the corrugated printing industry with cutting-edge inkjet technologies:

- ▶ Fujifilm is the number one global patent holder for UV inkjet ink, and owns core printhead, ink and integration technology.
- ▶ Hundreds of Inca Onset printers have been installed globally since the launch of the first generation machine in 2007. Over 95% are still in operation today, proving the platform's reliability for hundreds of print businesses.
- ▶ Fujifilm has a global distribution and support network with a massive installation base of products across the printing industry.



Please contact your local Fujifilm partner or visit www.powerofinkjet.com/corrugated

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