



## Onset X series

### PRODUCT BROCHURE

The ultimate flatbed production platform

**OnsetX**



ONSET X SERIES

THE ULTIMATE PRODUCTION FLATBED

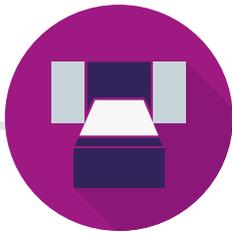




# Redefining flatbed performance

While single pass printing is the potential holy grail in terms of raw printing speeds, current compromises to quality and versatility make it a niche technology. Multi-pass printing, on the other hand, offers higher quality, greater redundancy and greater flexibility in terms of the types of print finishes achievable. And with the addition of the Onset X HS models to the Onset X series, printers can now reap the benefits of much higher productivity, while retaining all the quality and flexibility benefits of multi-pass printing.

The unrivaled performance of the Onset X series has been made possible by bringing together three key elements:



## Onset printer platform

**Powerful production platform with choice of productivity and image quality**

### Dedicated flatbed

Direct to media UV printing with powerful vacuum table for printing a wide variety of media

### Benchmark productivity

Full-width printhead array for high speed printing

### Class-leading image quality

High resolution piezo inkjet Fujiifilm Dimatix printheads

### Maximum uptime

Proven Inca Digital technology and robust build quality

### Built for the future

Scaleable Architecture and modular design



## Uvijet inks

**A range of UV inks for superb application versatility**

### 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

### Specialist applications

Low odour and low migration inks available for specialist applications

### Jetting reliability

Inks and printheads are tuned for optimised jetting

### Consistency

Quality assured manufacturing for 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

### Multiple options available

From manual to full automation, multiple handling systems optimise job productivity

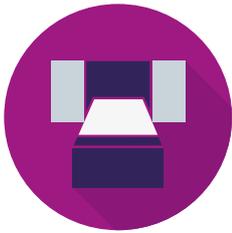
### Excellent print registration

Sheets are positioned accurately on the print bed

### Excellent stack registration

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

## Onset X: The ultimate flatbed production platform



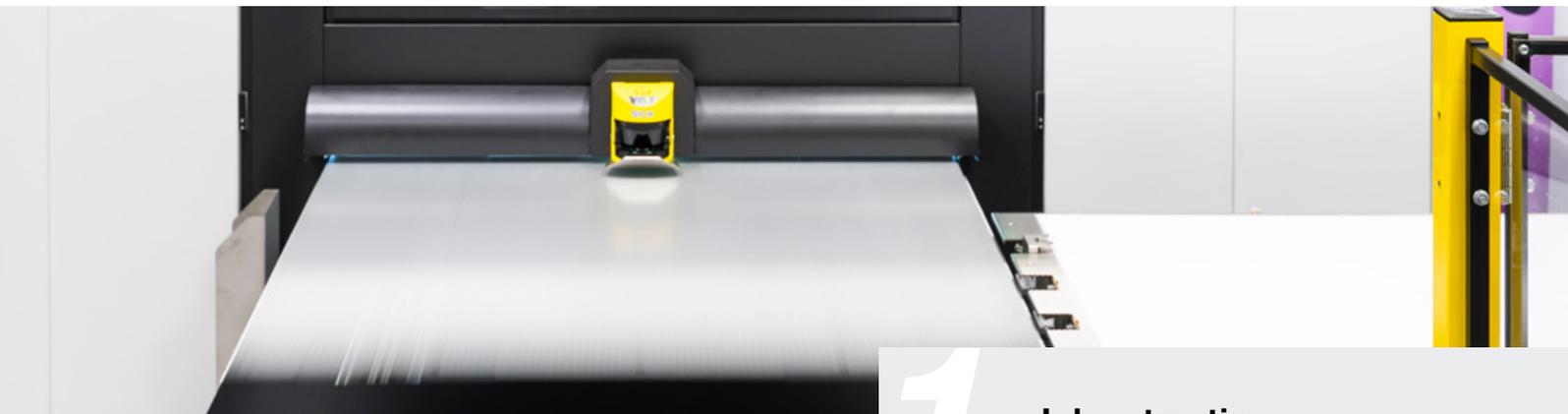
The powerful Inca Onset X series is the established leading UV flatbed platform for the production of high quality, high impact graphics with outstanding productivity, and delivers four key business benefits:

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

**Low investment risk:** The Onset X is powerful enough to pay for itself in six months, giving owners the opportunity to plan their business with much more confidence.

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

**Environmental benefits:** With an expanding ink range, the Onset X now supports the use of more environmentally friendly plastics like polystyrene and polypropylene at the fastest print speeds.



### Ultra-high productivity

The Onset X series now includes a range of enhancements that result in much higher print speeds and machine utilisation, and therefore higher productivity. These enhancements are available in the Onset X HS models within the range.

The Onset X HS models are capable of ultra-high productivity and fast turnaround times with no compromise to quality. This means you can take on and turn around more work and improve the service you offer your customers to enhance your competitive edge.

The amazing productivity of the Onset X HS models is due to a combination of the following:

# 1

**Job setup time**

# 2

**Press uptime and reliability**

# 3

**Raw print speeds**

# 4

**On the floor productivity**



## Onset X HS: Fast just got faster



Up to **50%** faster than other models



Up to **1450** m<sup>2</sup>/hr



Superb **ink adhesion** at high speeds



Faster **4** pass mode



**Single cycle** mode



**30** second job setup

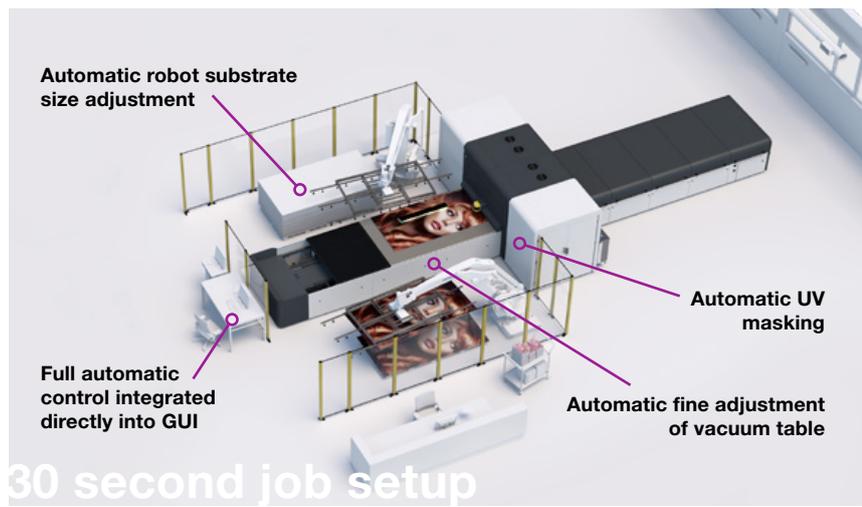


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# 1 Job setup time

The time to change jobs is one of the biggest causes of machine downtime, due to the setup changes often required. These can include robotic automation adjustments, the alignment of UV shutters and the adjustment of the table skins. In the Onset X HS, these setup procedures have now been fully automated, taking the job setup time from around 10 minutes down to around 30 seconds, resulting in far less operator intervention and a substantial boost to printer uptime & utilisation.

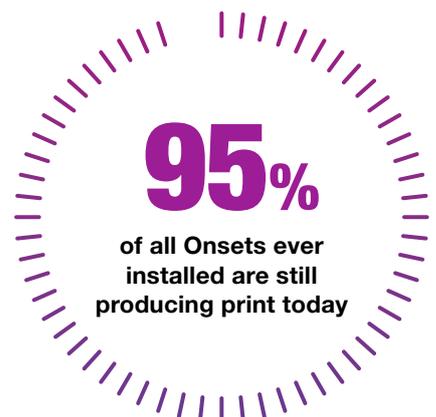
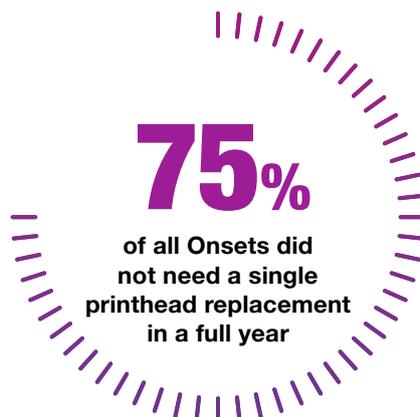


# 2 Press up-time and reliability



rely on Onset to deliver consistent print all day, every day

Onset printers have a justified reputation for extraordinary reliability, achieving 90% uptime. Intelligent features enable all Onset X printers to achieve optimum performance. In addition, support software can monitor and diagnose potential problems remotely before they occur.



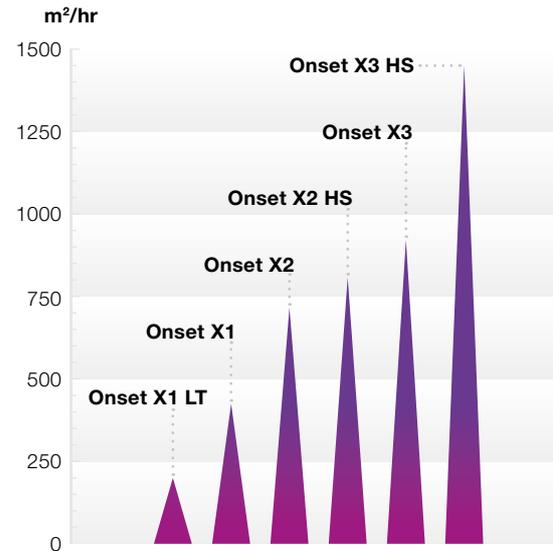


# 3

## Raw print speeds

Up to  
**1450**  
m<sup>2</sup>/hr

The Onset X HS offers headline speed increases of over 50%. This is because of the introduction of a new 'single cycle' print mode, together with a new high performance Uvijet OX ink. The single cycle mode features optimised print and jetting profiles that allows speeds of up to 1450 m<sup>2</sup> per hour to be achieved. Combined with the introduction of Uvijet OX, adhesion can be achieved across a wider range of media at the highest possible speeds. This means high speed, high quality, single cycle printing is suitable for a much wider range of applications.



# 4

## On the floor productivity

The productivity of the Onset X HS is further enhanced due to the automation options available. With ¾ and full automation for standard display and point of sale applications, along with a specific fully automated solution for corrugated board, the ultra-fast productivity of the Onset is matched with superb media handling systems.





## 6 ways to begin your investment

### Onset X1 LT

Delivers a maximum throughput of 200m<sup>2</sup>/hr. (40 beds per hour).



### Onset X2

Delivers a maximum throughput of 707m<sup>2</sup>/hr (138 beds per hour).



### Onset X3

Delivers a maximum throughput of 922m<sup>2</sup>/hr (180 beds per hour).



### Onset X1

Delivers a maximum throughput of 420m<sup>2</sup>/hr. (82 beds per hour).



### Onset X2 HS

Delivers a maximum throughput of 814m<sup>2</sup>/hr (159 beds per hour).



### Onset X3 HS – The fastest Onset ever

Delivers up to 1450m<sup>2</sup>/hr (283 beds per hour).



**Onset** X1 X2 X2 HS X3 X3 HS

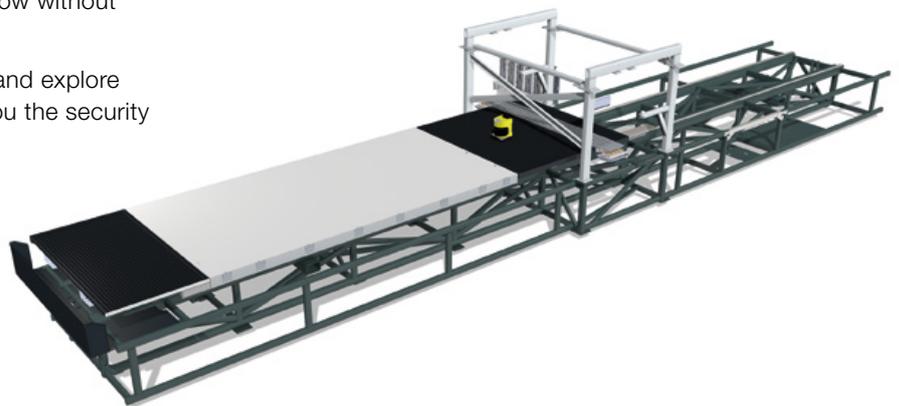


## Future-proof Scalable Architecture

The Onset X series incorporates the concept of Scalable Architecture, which allows a machine to be tailored to meet individual business needs at the time of initial investment, and then allows for future expansion.

The Onset X takes Scalable Architecture to the ultimate level to give you an investment that is future-proof. It is built to allow printhead configurations to change and grow without having to change other parts of the machine.

This gives you the freedom to adapt to change and explore potential business opportunities, whilst giving you the security to respond to your business needs today.



## One platform, ultimate flexibility

Key to its flexibility is the unique 14 channel capacity built into every Onset X.

**Every Onset X can be built with up to 14 colour channels**



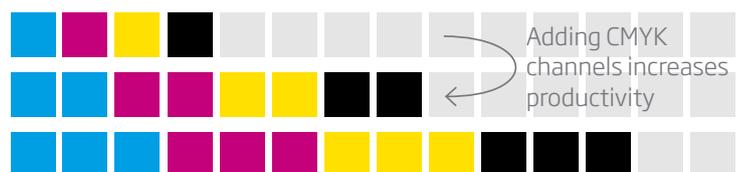
**Choose a printhead drop size to meet your quality needs**

Every Onset X uses high-performance Fujifilm Dimatix printheads, with the option of 9, 14 or 27 picolitre fixed drop sizes. A small drop size is right for you if you produce a lot of very high quality work intended for close viewing.



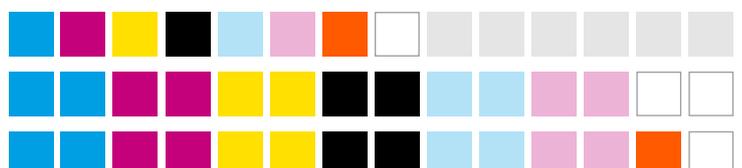
**Choose CMYK modules to meet your productivity needs**

The starting point is four populated channels with a CMYK configuration using your choice of printhead.

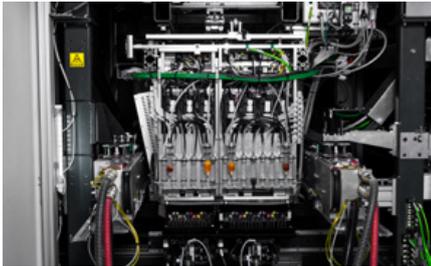


**Choose additional colours to meet your application needs**

Then there is the possibility to add light colours to increase image quality, in combination with extra sets of CMYK to increase productivity.



## Built for long-term performance



### Outstanding build quality

6th generation moving print bed technology from Inca Digital delivers unbeatable uptime.



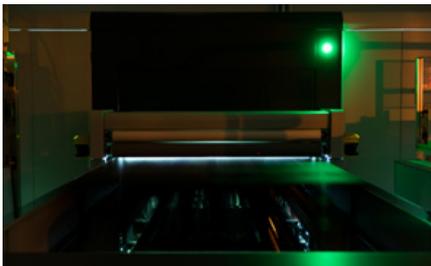
### Fujifilm Dimatix printheads

Industrial printheads with proven reliability in production over many years.



### Full-width printhead array

Spans the width of the print bed, for consistent print without textural banding.



### Full-width UV lamp system

Multiple UV lamps that allow for fast bidirectional print.



### 25 zone vacuum table

Independently controlled vacuum zones reduce the need for bed-masking.



### Simple operation

The simple graphical user interface provides powerful but simple-to-use printer and job management.



### Uvijet ink

Fuelled by Fujifilm's Uvijet inks which produce strong, vibrant colours.



### Accessible bed design

Simple loading of rigid materials, with 80kg capacity and maximum media thickness of 50mm.



### Intelligent features

All Onset X models monitor their own condition to maintain optimum performance, print quality and protect printheads.



## IncaConnect

The IncaConnect software tool is broken into two sections: Out of the box web tools (Inca Access and Inca Viewer) and Inca Customisation (Script and API).



### Inca Access

This remote management and scheduling tool enables machine status monitoring but also remote job, substrate, finish and print queue management, to improve machine utilisation.



### Inca Viewer

Inca Viewer is a reporting tool supporting printer Key Performance Indicators which are organised and viewed to show detailed live statistics on print productivity and consumable usage, with the option to filter over user-defined time periods.



### Inca Script

Offers custom workflow integration so data can be fed back into MIS and workflow system(s), enabling more accurate job quotations once customisation and consultation requirements are developed with each customer.



### Inca API

Inca API is a third party software integration with all functionality exposed via the Web Browser Interface, such as viewing and manipulating job queues, viewing machine settings and status, submitting, re-ordering and deleting jobs and viewing print history.

## Intelligence for peace of mind

Intelligent features enable the Onset X 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.



### Intelligent 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 the Onset X, enabling access to key management data.

## Uvijet ink: the technology that fuels the machine



### Smooth, high definition, vibrant prints

At Fujifilm, one of the core skills is ink design, with an unmatched understanding of ink chemistry, print applications, media, printheads and UV curing. Fujifilm's design capability encompasses R&D resources, a legacy of ink formulation and vast manufacturing experience, allowing the company to produce inks of the highest quality and reliability, with superb tonal reproduction and a wide colour gamut.

For the Onset X series, Fujifilm is able to offer a number of different ink sets to allow this ultra-high productivity platform to be used for a wide range of applications.

Core inkjet technology

**OX**

#### Uvijet - High adhesion

UV ink developed for printing rigid plastics at the highest print speeds

**OW**

#### Uvijet - High versatility

Multi-purpose UV ink for the display POP and signage markets

**OL**

#### Uvijet - Low odour

UV ink developed for corrugated & display board POP applications

**LM**

#### Uvijet - Low migration

UV ink developed for corrugated & display board secondary food container packaging

Micro-V technology

Over 60 years pioneering ink development

Quality assured manufacturing

### Uvijet OX: High adhesion for rigid plastics

Fujifilm's Uvijet OX ink is able to print on an extensive range of rigid plastic media at high speed with maximum adhesion, cure speed and quality, helping to open up new markets. The enhanced adhesion properties support the trend to phase out the use of PVC and the move towards materials considered safer and more environmentally friendly or 'environmentally-neutral' such as polypropylene and polystyrene.

### Uvijet OL: Low odour for corrugated

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.

### Uvijet OW: High versatility for POP & signage

The Uvijet OW ink range is a high quality, UV curable inkjet system developed for the display, POP and signage markets, providing superior resistance to post print processes such as cutting, creasing and routing. The OW ink delivers vibrant, lightfast colours that last, and offers superb dot reproduction and adhesion to a wide range of rigid and flexible uncoated materials.

### Uvijet LM: Low migration

Fujifilm's Uvijet LM 'low migration' ink has been developed to decorate sheet-fed paper and corrugated display boards, and is flexible and fast curing for high production output complying with both Swiss Ordinance and EUPIA standards. Using Fujifilm's unique Micro-V dispersion technology to maximise pigment loading, Uvijet LM inks deliver vibrant, solid colours.

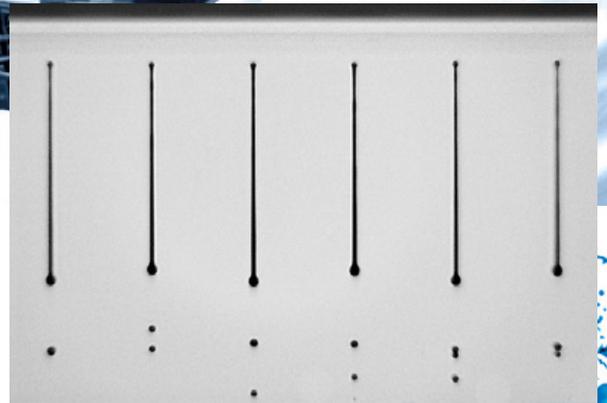


### Every drop matters

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.

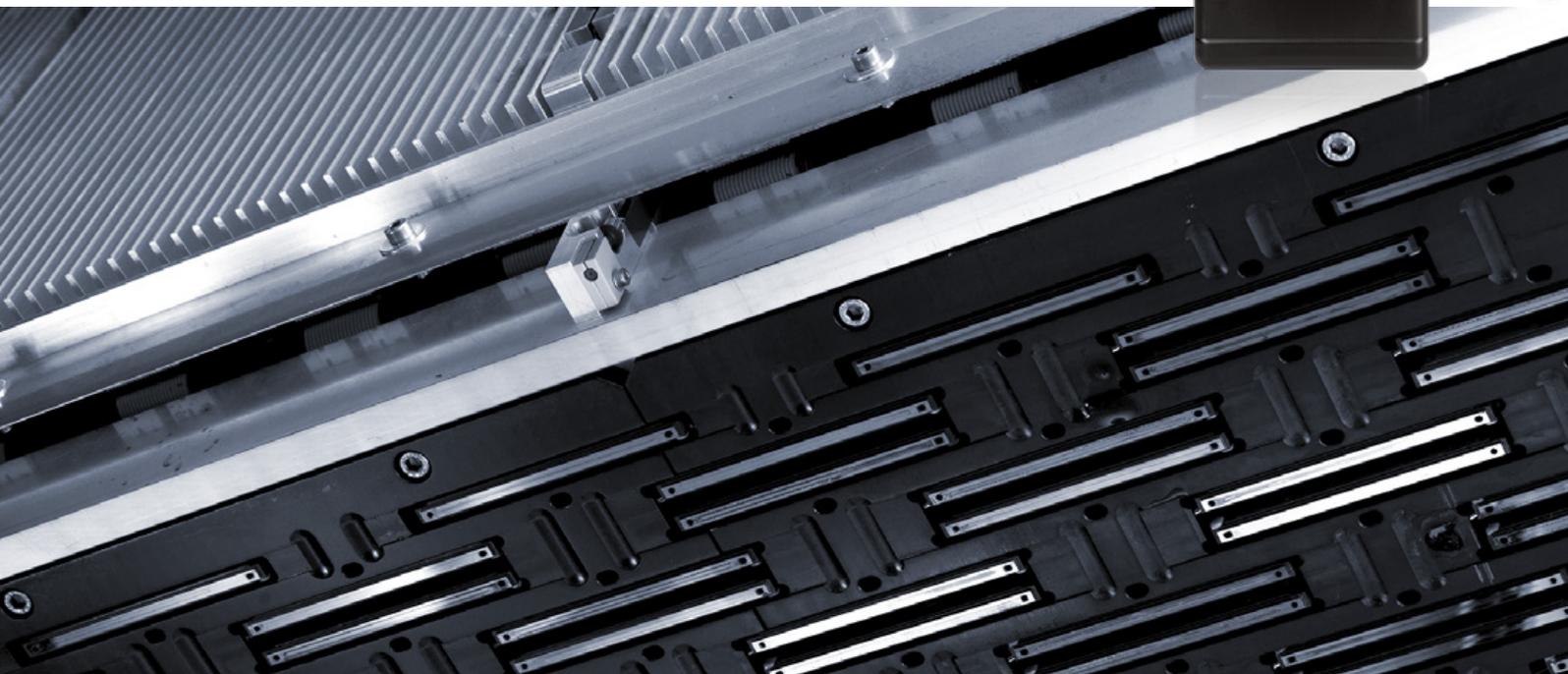
The Uvijet inks used in the Onset X are developed by Fujifilm Speciality Ink Systems in the UK, working in partnership with sister company printhead manufacturer, Fujifilm Dimatix. As part of the design process, printhead jetting patterns are tailored to the ink to achieve the best performance and reliability.



*Ink drop formation on the journey from printhead to substrate. To achieve the best image quality the Onset X 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.



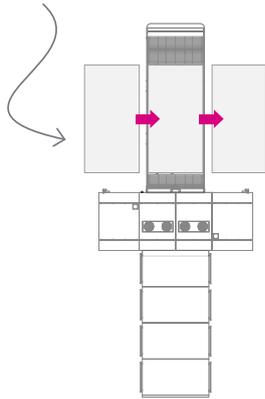
## Powerful handling systems



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 the Onset X to perform to its full capacity for longer runs.

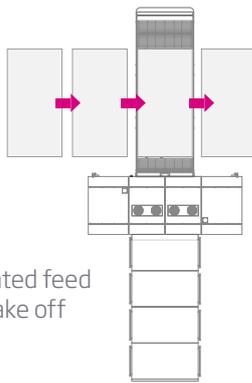
There are three automation options for the Onset X, from a semi-automatic (manual load and automatic take-off) configuration, to a fully automatic loading, take-off and stacking system designed specifically to handle difficult materials like unconditioned corrugated board.

Manual feed and robotic take off



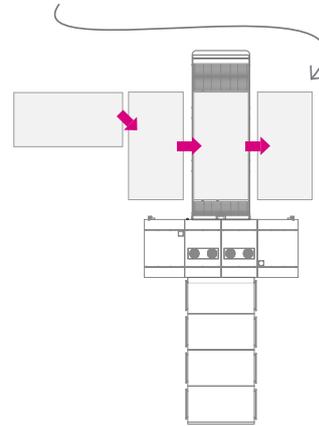
3/4 semi-automatic handling

Hostert automated feed and robotic take off



Fully automatic handling

Robotic feed and robotic take off



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

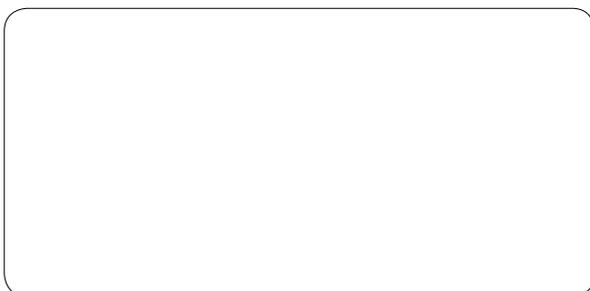


Fujifilm is committed to the development of print solutions that meet the changing needs of the entire printing industry. As an established leading supplier in wide format inkjet printing, it is well positioned to meet the evolving needs of the printing industry with cutting-edge inkjet technologies:

- ▶ 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.onsetxhs.com](http://www.onsetxhs.com)



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