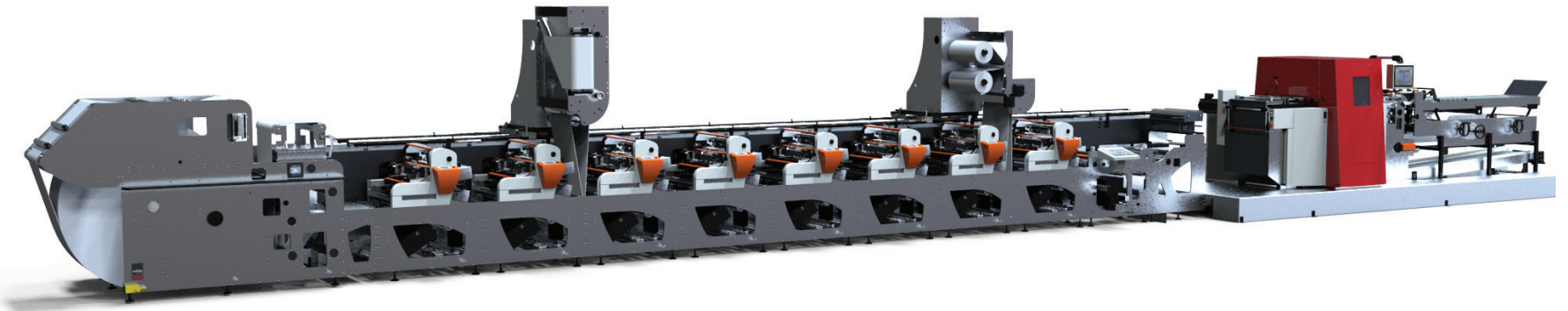# SINGLE PASS PAPER BOARD PRINT & CONVERTING
TOTALLY CONFIGURABLE SOLUTION

FL5

HIGHLY EFFICIENT SINGLE PASS SOLUTION

CARTONS > SCRATCH CARDS > SLEEVES

edale

FL5 - DEDICATED SOLUTION - FULLY CUSTOMISABLE

The FL5 flexographic printing and converting solution has been designed and engineered by Edale, resulting in a versatile printing system that can be configured to produce a wide range of paper board or carton based products and scratch cards.

Advanced tension control, robust construction and technologies dedicated to handling paper board means that the FL5 can handle substrates up to 600micron (24pt) thick and 510mm (20") wide.

Edale's automated inking and impression is included as standard on the FL5 and when combined with the optional AVT camera system it provides fully autonomous control of inking, impression and register also known as AiiR. Bespoke software developed in-house ensures that the 5 additional motors on each print station adjust the print impression, inking and cross register to ensure the highest and most consistent print quality.

WHY EDALE?

15
Mechanical & Software Engineers

60
60 YEARS
Experience

60,000
sq ft. factory

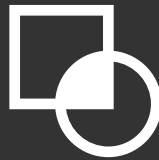**SOFTWARE DEVELOPED IN-HOUSE**
(PLC, Motion control and HMI)

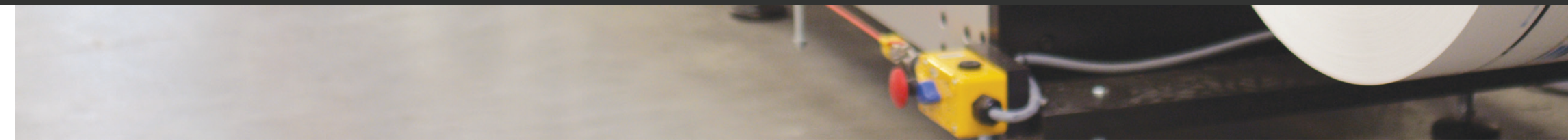**AFTERCARE**
(Service, Support, Spares)

FLEXIBLE APPROACH

HYBRID TECHNOLOGY

PACKAGING EXPERTS

INTEGRATION

FL5 - INNOVATIVE TECHNOLOGY

SHAFTLESS DUAL SERVO

Independent servo motors drive both the print and web transport ensuring high precision, control and quality. The FL5's "Shaftless" technology enables print engineers to optimise press performance to the required application, delivering controlled tension and accurate registration across a wide range of substrates.

GEARLESS IMPRESSION

Edale's "Gearless Impression" technology means the FL5 delivers unrivalled substrate flexibility without the need for any adjustment. The technology ensures the same optimal print quality and performance is achieved across the range of board thicknesses.

FLAT BED DIE CUTTING

The web fed flatbed die cutter runs in-line with the flexographic printing press and combines low tooling costs with cut, crease, braille, waste stripping and diverging delivery all in a single pass.

UNiPRINT

Edale's unique UniPrint technology ensures optimal and consistent geometry whatever the print repeat. Maintaining an optimal relationship between the anilox, plate and impression roll means the FL5 delivers consistent high quality whatever the print repeat.

ROTARY DIE CUTTING

Rotary die cutting cassettes specified in fixed position or as quick change cassettes offer a longer run and higher speed alternative to flatbed die cutting.

SHEETING & STACKING

Rotary dies run at a differing speed to the web allowing sheeting to the desired size regardless of the cylinder size. Stack printed substrate with the option to remove small or large quantities without affecting the print cycle.

AiiR

Fully automated inking and print impression and camera linear and cross registration controlled by AVT. Bespoke software developed in-house ensures that 5 additional motors, positioned on each print station adjust the print impression, inking and cross register to ensure the highest print quality.

SHORT WEB PATH

An ultra-short web path of 1.85m between print stations ensures minimal waste and maximum efficiency during print setup and on the run.

AiiR
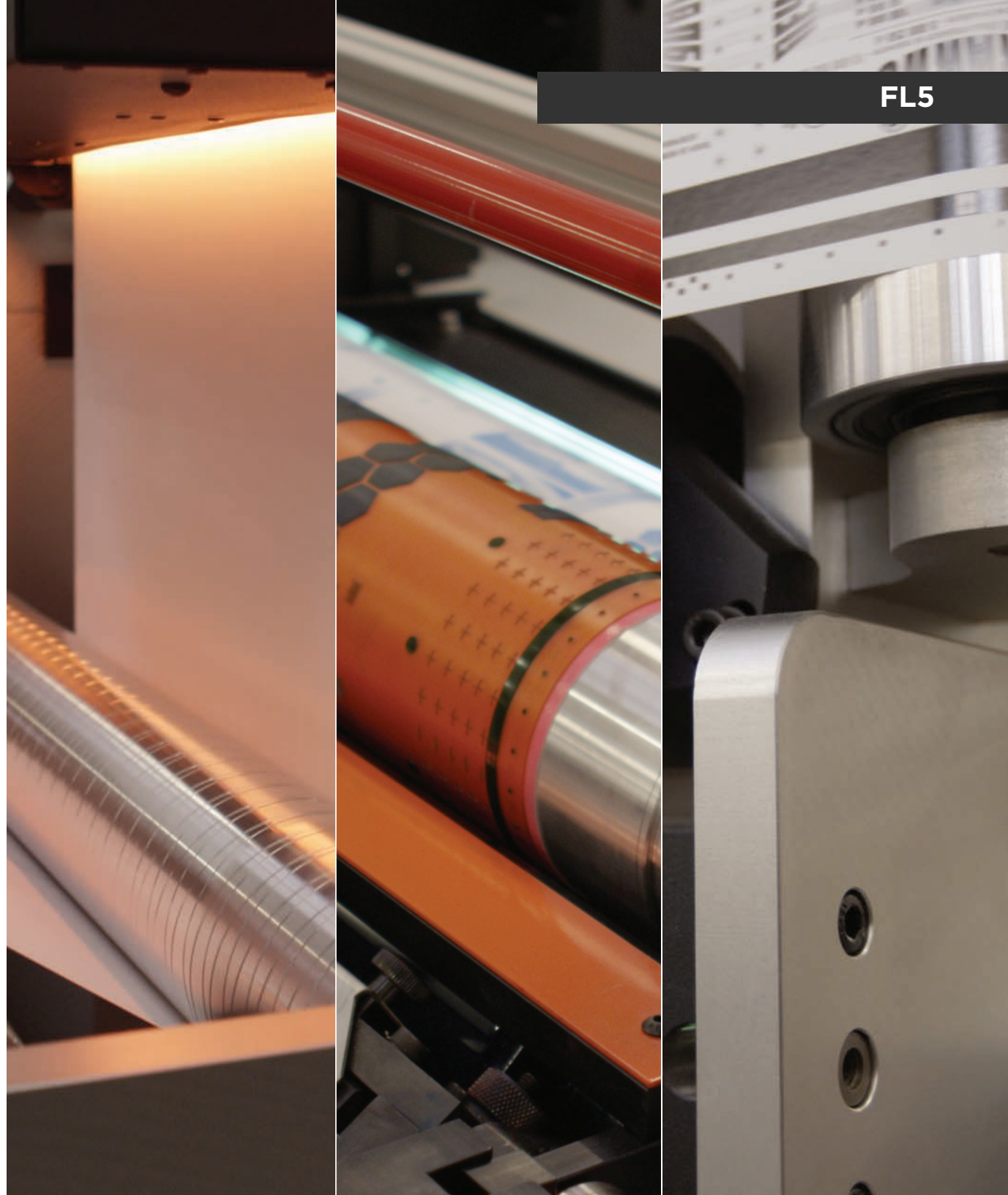
Autonomous Inking, Impression & Registration

Printers are constantly seeking ways to increase superior output whilst minimising costs. By fully automating print and registration processes, the level of operator intervention can be reduced leading to fewer errors and a higher quality final product. Edale have teamed up with press control system specialist AVT, to integrate their camera based technology, guaranteeing a level of registration not yet seen in a single pass.

Registration marks are printed on each station which is then fed through the AVT Helios S camera which analyses the relative positions of the marks and sends necessary corrections to the respective print stations. Sophisticated tracking software developed by Edale ensures that no additional corrections are made until the initial corrections have passed the camera, overcoming the common problem of an over enthusiastic operator.

The fully automatic image based pressure control technology analyses all the print stations during make ready and adjusts the plate and anilox rollers automatically to bring the press to perfect print pressure which further reduces the reliance on operator input by automating the initial setting of inking and print pressure at the start of each new job.
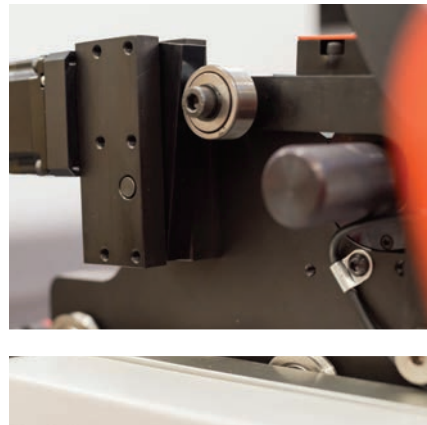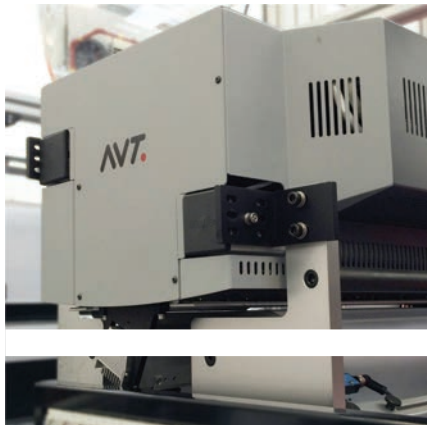
FL5

SERVO DRIVEN

Fully servo driven to maintain accurate and measurable control over registration over the full range of sustrate thicknesses

PRE-REGISTER

The pre-register function positions the print cylinders in register before any material is used

RAIL SYSTEM

The rail system allows for additional options such as laminating, turnbar, foiling and screen to be easily moved between print units.

UNiPRINT

The unique print head geometry ensures consistent high quality print across a range of repeats with minimal adjustments

JOB STORAGE

Job storage function stores detailed job data to minimise set-up times and repeatability of repeat jobs
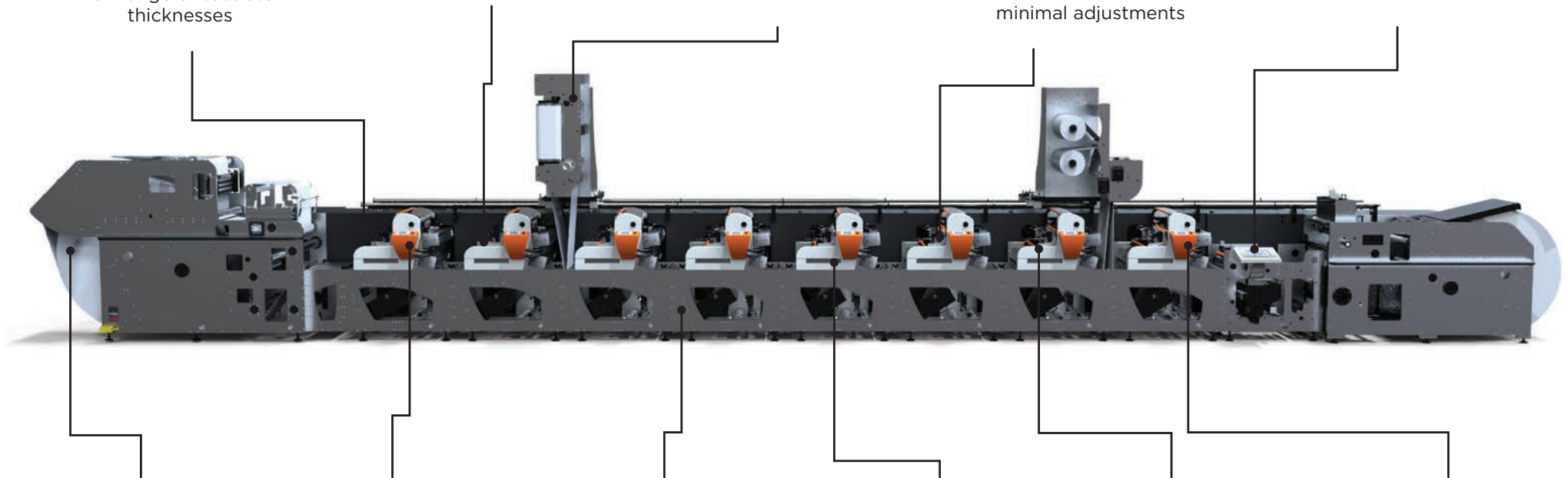
JUMBO UNWIND

Jumbo 1500mm (60") fixed unwind or continuous unwind options

PRINT HEAD AUTOMATION

Motorised control of inking, impression and cross register as standard. Add AVT inspection to fully automate (AiiR)

MINIMAL WASTE

Ultra short web path of 1.85m between prints ensures minimum waste and maximum efficiency

QUICK COLOUR CHANGE

Full print station colour change achieved in under 70 seconds due to the ergonomic design of the print head

ERGONOMIC DESIGN

The open architecture of the print head permits quick removal and replacement of ink without any adjustment to inking and impression

AUTO REGISTER

Automatic print to mark register as standard maintains accurate register with movemement controlled

FL5+FDC510

RAIL SYSTEM

The rail system allows for additional options such as turnbar, foiling and cast & cure to be easily moved between print units

UNiPRINT

The unique print head geometry ensures consistent high quality print across a range of repeats with minimal adjustment

JUMBO UNWIND

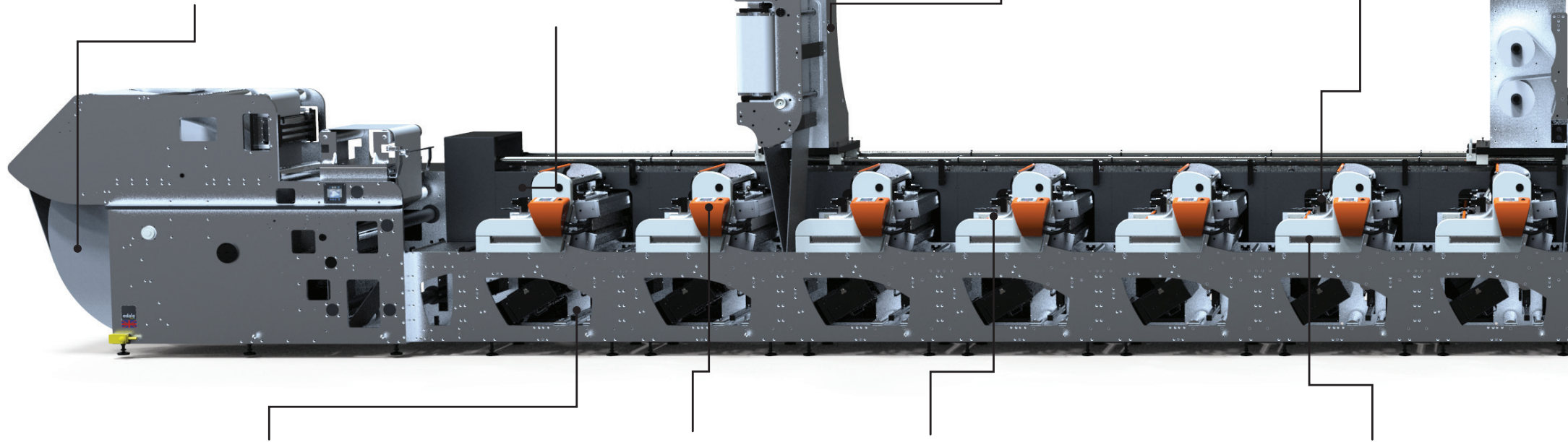Jumbo 1500mm (60") fixed unwind or continuous unwind options

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QUICK COLOUR CHANGE

Innovative inking system enables accurate on-press colour matching as well as complete colour changes in 70 seconds

ERGONOMIC DESIGN

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FLATBED DIE CUTTER

In-line flatbed die cutter provides traditional cut and crease quality with minimal setup waste and low tooling costs

MINIMAL WASTE

Diverging delivery system enables nesting of cartons to minimise waste
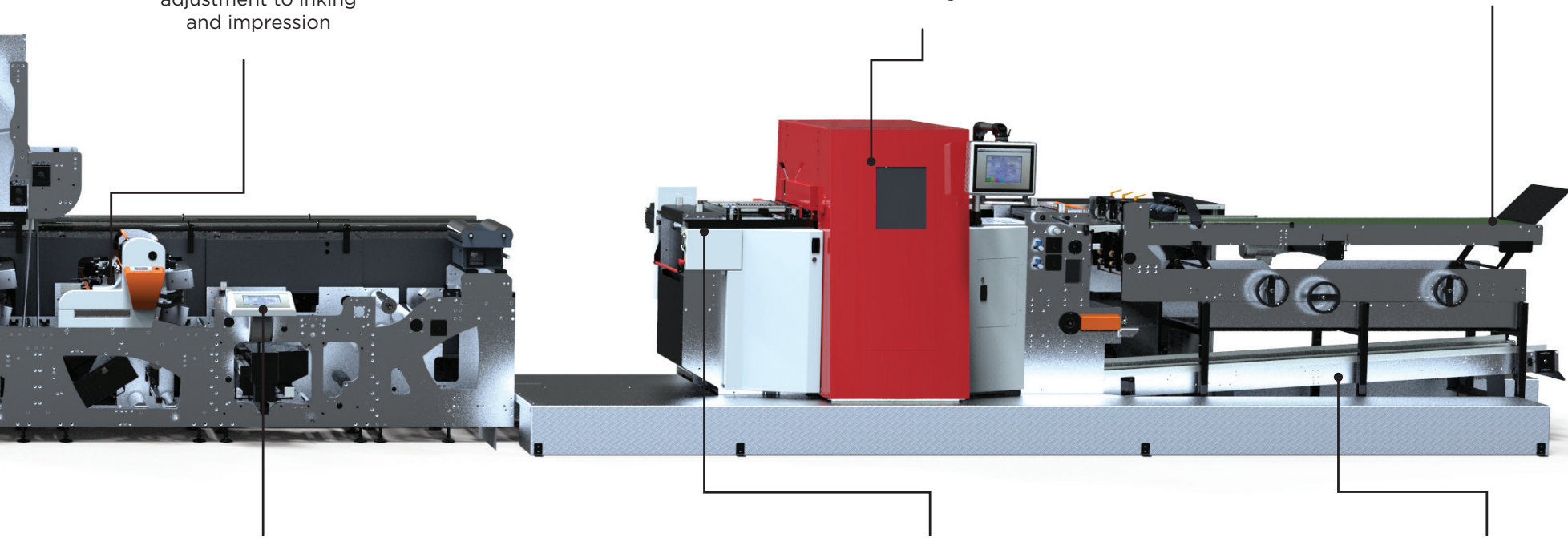
JOB STORAGE

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DIE CUTTING

Die Cutting pre-register system and easy tool keeps setup and waste to a minimum

WASTE CHOPPING

In-line stripping and waste chopping system completes the single pass process

FL5 CARD LINE

FLEXOGRAPHIC PRINTING

Graphics can be printed on the top and bottom of the card

PRINT HIGH OPACITY

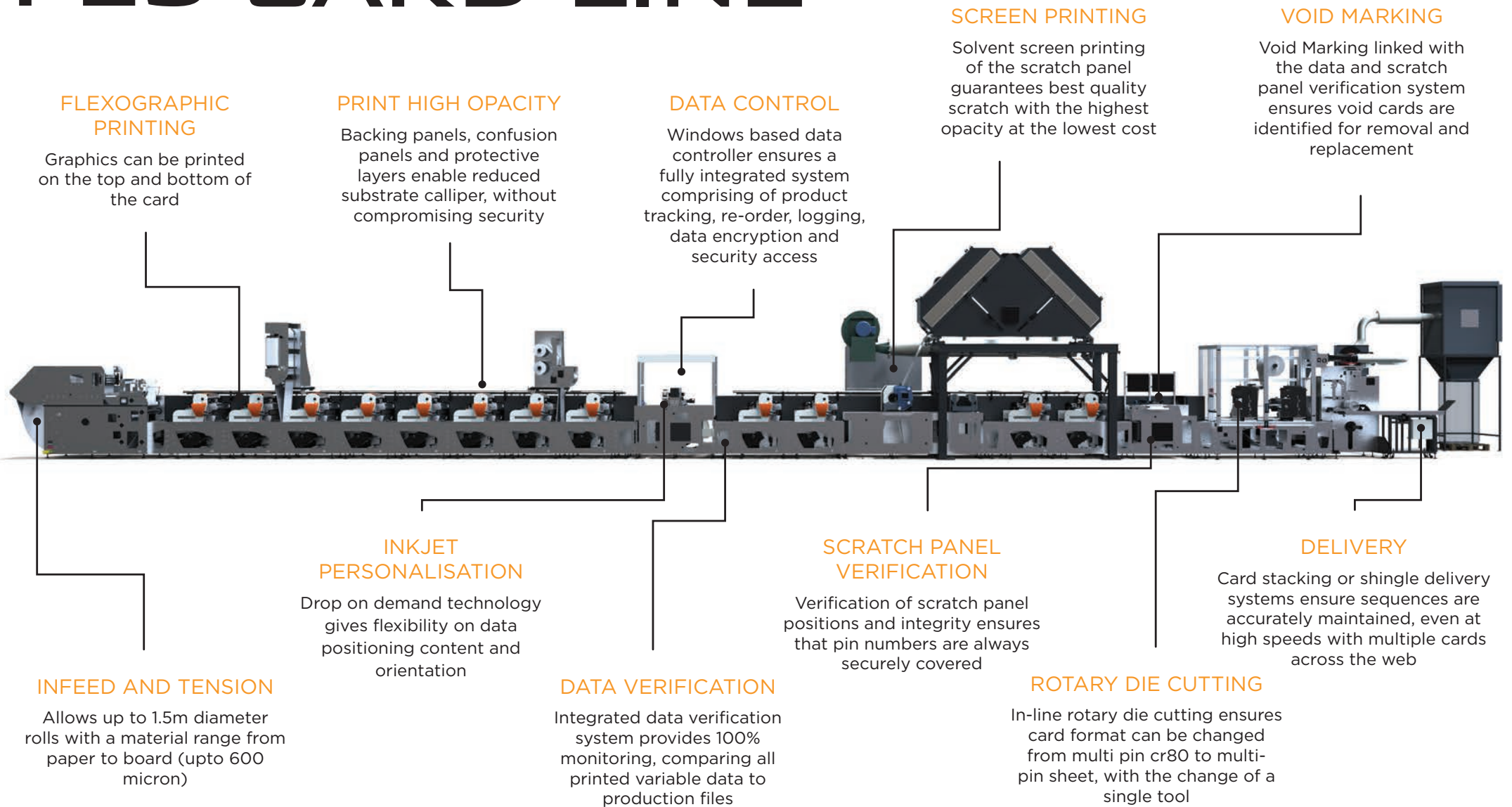Backing panels, confusion panels and protective layers enable reduced substrate calliper, without compromising security

DATA CONTROL

Windows based data controller ensures a fully integrated system comprising of product tracking, re-order, logging, data encryption and security access

SCREEN PRINTING

Solvent screen printing of the scratch panel guarantees best quality scratch with the highest opacity at the lowest cost

VOID MARKING

Void Marking linked with the data and scratch panel verification system ensures void cards are identified for removal and replacement

INKJET PERSONALISATION

Drop on demand technology gives flexibility on data positioning content and orientation

SCRATCH PANEL VERIFICATION

Verification of scratch panel positions and integrity ensures that pin numbers are always securely covered

DELIVERY

Card stacking or shingle delivery systems ensure sequences are accurately maintained, even at high speeds with multiple cards across the web

INFEED AND TENSION

Allows up to 1.5m diameter rolls with a material range from paper to board (upto 600 micron)

DATA VERIFICATION

Integrated data verification system provides 100% monitoring, comparing all printed variable data to production files

ROTARY DIE CUTTING

In-line rotary die cutting ensures card format can be changed from multi pin cr80 to multi-pin sheet, with the change of a single tool

FL5 - TECHNICAL SPECIFICATIONS

Web Width	430 mm (17") | 510mm (20")
Printing width flexo:	420 mm (16.5") | 500mm (19.7")
Printing width screen:	406mm (15.9")| 508mm (20")
Repeat length flexo & die cutting:	8" - 24" (203.2 - 609.6mm) at 1/8" increments
Repeat length screen (406mm width): Repeat length screen (508mm width):	12"-24" (304.8-609.6mm) at 1/8" 16"-24" (406.4-609.6mm) at 1/8"
Mechanical speed flexo:	5-200 m/min | 16.4-200 ft/min
Mechanical speed screen:	5-100 m/min | 16.4-100 ft/min
Print speed short run trays:	<130 m/min | < 426.5ft/min
Print speed long run trays + chambers:	<200 m/min | < 656.1ft/min
Print speed with in-line flatbed die cutting: **Note! Actual print speeds are subject to substrate, application and consumables.**	<90 m/min | < 295.2ft/min
Substrate thickness: **Note! Thin and heat sensitive substrates require chill rolls and soft rewind tension.**	upto 600 microns (24pt)
Max roll capacity jumbo unwind | rewind:	1500mm | 800 KG / 59" | 1763.7lb
Max roll capacity standard unwind | rewind:	1250mm | 450 KG / 49" | 995.08lb
Max roll capacity waste matrix:	800mm | 40KG / 31" | 88.1lb
Max roll capacity rail mounted winders:	400mm | 40KG / 15.7" | 88.1lb
Max roll diameters hot foiling:	400mm | 40KG / 15.7" | 88.1lb
Standard unwind / rewind mandrel diameters:	76mm | 0.2ft
Web path between prints UV:	1.85m | 6.0ft
Web path between prints water-based:	3.50m | 11.4ft
Electrical Supply:	415V 3 Phase + N + E, 50 Hz
Air Supply:	5.5 bar | 180psi
Voltage & frequency stability: **Note! In regions with unstable power supply it is highly recommended to install a voltage stabaliser.**	+/- 10%

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Manufactured in the UK