

digicoat

Coating solutions to prepare substrates for digital printing

COATING SYSTEM

- 700mm unwind with 76mm air expanding mandrel and auto tension control
- Full rotary flexographic printing station
- One coating roller for 320mm coat width
- One high powered hot air dryer with variable temperature control, pressurised air flow & insulated cabinet
- Single spindle rewind (700mm max diameter) with 76mm air expanding mandrel and variable tension control
- Automatic throw off on stop



Above: **digicoat**
Left: Full-rotary flexographic coating station with ceramic anilox roll
Below: Touch screen control panel

OPTIONAL EXTRAS

- Corona discharge unit for conductive/ non conductive materials
- Electronic web guide with ultrasonic sensor
- Additional coating rollers with widths to customers' choice
- Ink pump
- Additional anilox rollers with screens to customers' choice
- Air cooled UV drying system
- Scissor slitting unit including 5 knives
- Razor blade slitting
- Pneumatically adjustable lay on roller for rewinding films
- Overlaminating systems for both self wound laminates and laminates with a carrier.



SPECIFICATION

Maximum web width	330mm (13")
Minimum web width	200mm (8")
Unwind mandrel diameter	76mm (3") air expanding
Maximum unwind roll diameter	700mm (28")
Rewind mandrel diameter	76mm (3") air expanding
Maximum rewind roll diameter	700mm (28")
Maximum mechanical speed	100 metres (328 ft) per minute (coating speed will be dictated by the type of material)

For contact details of all agents and distributors, visit www.abgint.com

DISTRIBUTOR DETAILS



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Due to our policy of continuous improvement and development ABGI reserves the right to modify or update all product specifications and functions

digicon range

*The Worldwide market leader
in label converting solutions
for digitally printed webs*





digicon series

With many years of experience in the digital print market and over 600 machine installations worldwide, A B Graphic International's **digicon** Series 2 machines can provide the solution for specific digital converting requirements. Strong partnerships with world leading digital print providers have allowed A B Graphic International to develop the **digicon** to be the most advanced and diverse machine on the market.

Main advantages of the **digicon** solution

FULLY MODULAR

Minimises initial investment and machine capabilities can be increased as and when required

SEMI ROTARY WEB MOTION

With dial in repeat lengths, only one cylinder size and no gears or shafts to change

FULLY AUTOMATED PRE-POSITIONING OF PRINT AND CONVERTING UNITS

Ensures minimum wastage and quickest make ready times

WIDEST RANGE OF CONVERTING SOLUTIONS

To enable you to meet your customers' needs and demands

SERVO DRIVEN WEB TENSION CONTROL

Capable of handling a very wide range of substrates

ERGONOMICAL DESIGN

Combined with exceptionally high quality engineering and worldwide leading components ensures long life and reliability

folding carton

A B Graphic International can provide a variety of converting solutions for folding carton applications; both semi-rotary and flat bed options are available and both can be integrated into any **digicon** configuration or retrofitted to existing **digicon** Series 2 machines with slight modifications. A B Graphic International's wide range of modular options for finishing include varnishing, screen printing, embossing and hot foiling will expand the capabilities of the **digicon** for finishing digitally printed folding cartons. By combining high end embellishments with low cost tooling, quick job change overs and minimising waste A B Graphic International have the perfect solution for short run folding carton work.

Flat bed folding carton unit

The heavy duty flat bed folding carton unit from A B Graphic International is the finishing solution for digitally printed folding cartons as well as short run conventionally printed carton boxes. The FB folding carton unit allows the operator to change a job in 5 minutes, meaning minimum press down time.

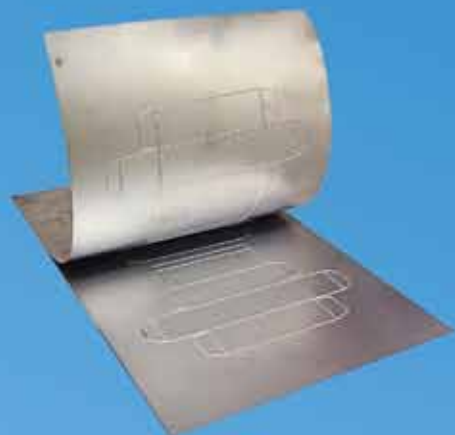
With production speeds of up to 11,000 impressions an hour and low cost tooling the FB unit is the economic solution for short run carton work. With its modular design the FB unit can be run in-line with a Digital press and fully modular **digicon** series 2 machine meaning all embellishments can be added in a single pass.



Above: Heavy duty flat bed die unit for folding carton applications, complete with loop box, de-curl device, infeed draw to mark system, Kama flat bed die unit, accelerator and shingle conveyors and a waste matrix rewind spindle. (Max rewind diameter 700mm)

semi-rotary folding carton module

Semi-rotary carton box die module 25.5" repeat (max 24"x 12" carton) to accept Rotometrics Cut and Crease flexible male/female tooling, including twin high strength magnetic cylinders, delivery system, shingle conveyer, waste/skeleton rewind. Mechanical de curl device. Upgrade package to standard Omega **digicon** 25.5" model including mechanical changes (not available on existing **digicon** Lines).



Expand your digital printing market potential. New semi-rotary male/female cutting and creasing option for **digicon** series. Enter new markets with high quality folding cartons



digicon-lite

Simple, Compact, Economic

- The **digicon-Lite** is the perfect solution where there is a need for a simple, compact, economic system for converting digitally printed webs.
- **digicon-Lite** combines all the basic functions required for varnishing, coating and converting.

STANDARD EQUIPMENT

- 500mm (19.5") Unwind with automatic tension control, 76mm air expanding mandrel & automatic end of roll slow down or stop facility.
- Electronic web guide complete with adjustable splice table, pneumatic interlocked clamps, ultrasonic edge guide sensor and tape dispenser
- Full rotary flexographic coating station

- complete with ceramic anilox roller (screen to customers' choice) and coating roller for 320mm (12.5") coat width
- GEW e-Brick air cooled UV curing unit; 160 w/cm
- Semi rotary die cutting station; 50mm (2") – 457mm (18") max repeat
- Waste matrix stripping tower with 76mm (3") air expanding mandrel (maximum rewind diameter 500mm)

SPECIFICATION

Maximum web width	330mm (13")
Minimum web width	200mm (8")
Unwind mandrel diameter	76mm (3")
Maximum unwind roll diameter	500mm (20")
Matrix rewind spindle diameter	76mm (3")
Maximum matrix rewind diameter	500mm (20")
Rewind mandrel diameter	76mm (3") – other sizes are available on request
Maximum rewind roll diameter	500mm (20")
Maximum running speed when die cutting & varnishing	In standard configuration 38 mtrs/min (124 ft/min) With 25.5" die cylinder 45 mtrs/min (147 ft/min)

NB: Actual running speed will be dependent on the repeat length



Above: **digicon Lite**
Top Right: Semi-rotary die unit
Bottom Right: Full-rotary flexo coating unit

- Single spindle rewind with variable tension control and 76mm (3") air expanding mandrel; max rewind diameter 500mm (19.5")
- HMI complete with all machine controls including label/length and batch counters



OPTIONAL EQUIPMENT

- Corona treater
- Line guide
- Overlaminating; options for both self-wound laminates and laminates with a carrier
- Silencer for self wound laminates
- Hot air dryer
- Ink pump
- Static elimination
- 25.5" repeat die cylinder
- Electronic dispro (die only)
- Venturi trim extraction
- Waste matrix break detector
- Tinting kit with air assistance
- Taper tension control for rewind
- Second rewind spindle
- Rotary scissor knife inc 5 blades
- Razor blade slitting c/w 5 bladeholders
- Crush slitting inc 5 knives
- Backscorer for edge trimming the silicon liner

fully modular digicon range

The **digicon** series 2 machine combines semi-rotary technology with accurate re-registration modules for a variety of digital converting applications. Being fully modular the **digicon** provides a wide range of converting & finishing options, most available in either semi-rotary or flat bed configurations. The modular construction allows the machines capabilities to be increased by retro fitting additional units as your job portfolio increases.

▼ **WEB ADVANCE** including 5 dividers. (available for the upper rewind spindle only)



◀ **LAY ON ROLLER** available for the lower rewind mandrel only and is recommended for winding of unsupported films

◀ **SECOND REWIND SHAFT** (mounted in the lower position) comes complete with 76mm air expanding shaft, variable tension control, taper tension and maximum roll diameter of 700mm



▶ **SEMI-ROTARY EMBOSSING MODULE** suitable for use with Carey tooling, other embossing plate technology can be quoted upon request



◀ **HEAVY DUTY FLAT BED EMBOSSING MODULE** mounted prior to or after semi-rotary section and complete with servo web draw mechanism



▶ **CURING / DRYING OPTIONS** GEW e-Brick air cooled UV curing unit 160 w/cm

◀ **HOT AIR DRYER FOR PRIMERS** (runs in full rotary only), variable temperature control and high powered impinged air flow suitable for handling most heat sensitive materials



▲ **OVERLAMINATING STATION** suitable for super varnish, cold foil, self-wound and lamination with carrier rewind

▼ **HEAVY DUTY FLAT BED HOT FOIL STAMPING UNIT** complete with foil saver and servo driven web draw mechanism



▲ **SEMI-ROTARY HOT FOIL STAMPING MODULE** servo driven auto register / pre-positioning and foil save functions, oil heater for accurate temperature control and complete with options for either a magnetic cylinder or a clamping cylinder, servo driven foil saver, auto pre-positioning

▼ **CORONA TREATER** recommended for priming of synthetic substrates prior to coating and advisable for cold foiling. The unit is single sided and can treat conductive and non conductive materials



▶ **BACK SCORER** for edge trimming the silicon carrier, which can then be rewound with the waste matrix



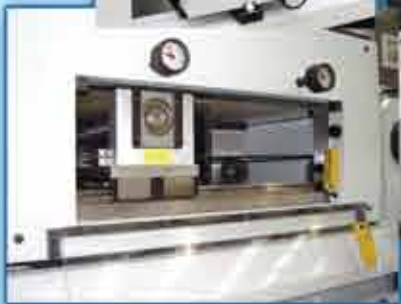
▶ **KOCHER + BECK GAPMASTER** alters the air gap between the anvil and magnetic cylinder to compensate for tool wear and balances unequal cutting



▼ **SEMI-ROTARY DIE CUTTING UNIT** with servo drive re-register; capable in "face cut" or "back cut" configurations



▶ **HEAVY DUTY ROLLING SEGMENT FLAT BED DIE CUTTER** complete with servo drive web feed mechanism



▼ **SEMI-ROTARY SILK SCREEN MODULE** complete with one set of end rings for a repeat range from 50mm (2") up to 388mm (15.3"), auto positioning, servo drive re-register and a GEW e-Brick air cooled UV curing system



▲ **FLAT BED SCREEN PRINTING STATION** with auto pre-positioning step & repeat GEW e-Brick UV curing system, 2 frames and servo drive re-register



▶ **SEMI-ROTARY FLEXOGRAPHIC PRINTING STATION** with servo driven auto pre-positioning and registration system, "quick release" function for removal of the print or coating cylinder, a cartridge assembly comprising of ink pan, anilox roll & doctor blade; the flexo unit can run with a semi-rotary (translative) action, or a full-rotary action with flood coat capabilities. It can be used for back face printing onto the adhesive and the unit is supplied with a single print cylinder to allow for repeat lengths from 50mm (2") up to 457mm (18") as well as a coating roller for flood coating with a face width of 320mm



◀ **WEB GUIDE** with ultrasonic edge sensor/splice table & web clamps



◀ **700MM UNWIND** end of roll slow down/auto tension control, roll lift option available



▶ **1000MM UNWIND** complete with 76mm air expanding fully removable mandrel, electronic web guide with ultrasonic edge guiding sensor, adjustable splice table with interlocked pneumatic web clamps, end of roll slow down or stop facility, adjustable tension control and an integral reel lift mechanism

▲ **KNIFEBOX OPTIONS** all three major slitting techniques are available on the Digicon. Crush slitting against a hardened anvil, scissor slitting with top and bottom blades and razor blade slitting

special modules

A B Graphic International also offer a wide range of optional equipment to complement & enhance its fully modular converting range.



WS4500 OR WS6000 IN-LINE MODULE
Connects the **digicon** to a HP Indigo WS series web fed digital printing press for in-line operation. This module can either include or exclude the 700mm unwind unit



SEMI-AUTOMATIC TURR-ET REWINDER
With single web advance, in-line buffer and web guide, twin spindle 76mm mandrels, manual gluing and waste matrix module.
NB. This unit replaces the standard rewind and a fully automatic hot melt glue system is optional

miscellaneous options

ROLL LIFT
For 700mm unwind unit

WEB CLEANER

SELF-WOUND LAMINATION TOWER MOUNTED ON THE UNWIND SECTION

DELAM/RELAM MODULE
For printing on adhesive in either full or semi-rotary section

SECOND INK CARTRIDGE
Including ink pan, pick up roller, anilox roller and doctor blade assembly



FULLY AUTOMATIC SLITTING UNIT
With servo driven pre-positioning utilising Tidland slitting knives; 5 scissor knives fitted as standard. Additional slitting blades and slitting options available



FLEXPACK
The Flexpack has been specifically designed for laminating narrow web packaging materials. The laminating films used can be either self-wound or thermal laminates; this process eliminates the need of wet coating

INK PUMP

XERIC INFRARED DRYER

TAPER TENSION

AIR ASSIST TURN BAR MODULE

INSPECTION MODULE
Suitable for mounting fully automated FleyeVision inspection system

SEMI-AUTOMATIC DIE LOAD/UNLOAD

STATIC ELIMINATION BAR



THROUGH DIE CUTTING & SHEETING UNIT
Allows roll to sheet capability as well as through die cutting of wet glue and "In-mould" labels



RTS SHEETER
Can run in-line or off-line with the **digicon**; this guillotine style sheeter has automated conveyor speed control, cut options, end of roll detection, missing sensor mark/label detection and can be fitted with a scissor slitting knifebox

ADDITIONAL SPECIAL PURPOSE FLEXO AND DIE MODULES

VENTURI TRIM EXTRACTION

ELECTRONIC DISPRO

UP-CHARGE FOR 25½" REPEAT UNIT
Only available for the semi rotary units and increases the repeat range from 50mm (2") up to 610mm (24").
NB – This option must be specified if you wish to run in-line with the HP Indigo WS6000 series digital presses

flat bed options



Above: **digicon** FB, complete with 700mm unwind, web guide, heavy duty flat bed hot foil stamping unit, flexo, GEW e-Brick UV curing unit, overlamine, flat bed screen printing station, mid press dancer, die cut unit, waste matrix stripping, backscorer, knifebox, web advance, and dual rewind

The **digicon** Series 2 range from A B Graphic International offers a wide variety of flat bed converting & finishing solutions. These are compatible with all the **digicon** machines and, like the standard **digicon** machines, offer multiple options, allowing bespoke equipment and retrofitable possibilities. A B Graphic International have developed a wide range of technologically advanced solutions for digitally printed webs, with unique servo driven technology.

HEAVY DUTY FLAT BED HOT FOIL STAMPING UNIT

Flat bed hot foil stamping allows the use of low cost and readily available tooling. The servo driven technology allows a dwell time that is irrespective of machine speed as well as giving multiple options for the foil save function to ensure minimum foil waste. Maximum foiling area 320mm (13") across the web x 305mm (12") along the web.



FLAT BED SCREEN PRINTING UNIT

The screen printing unit has a maximum image area of 320mm (13") across the web x 305mm (12") along the web. The unit comes complete with auto pre-positioning, GEW e-Brick air cooled UV curing system, 2 screen printing frames and servo drive re-register.

HEAVY DUTY FLAT BED EMBOSSING UNIT

Allowing the use of low cost emboss tooling, this unit has a maximum embossing area of 320mm (13") across the web x 305mm (12") along the web.



HEAVY DUTY ROLLING SEGMENT FLAT BED DIE CUTTER

Eliminates the need for "make ready" therefore reducing the amount of set-up waste. Maximum cutting area of 320mm (13") across the web x 305mm (12") along the web. Complete with servo driven web feed mechanism



SPECIFICATION	
Max web width	330mm (13")
Minimum web width	200mm (8")
Unwind mandrel diameter	76mm (3")
Maximum unwind roll diameter	700mm (28")
Matrix rewind spindle diameter	76mm (3")
Matrix rewind maximum roll diameter	600mm (24")
Rewind mandrel diameter	76mm (3") – other sizes available on request
Rewound roll maximum diameter	600mm (24")
Maximum running speed when die cutting & varnishing	In standard configuration 55 mtrs/min (180 ft/min) With 25.5" die & print cylinders 62 mtrs/min (203 ft/min)
NB: Actual running speed will be dependent on the repeat length.	

Left: **digicon** series 2, shown with: 700mm unwind, web guide, infeed nip, semi-rotary hot foil, semi-rotary flexographic printing station, GEW e-Brick UV curing unit, overlaminating with carrier rewind, mid press dancer, semi-rotary die cut, outfeed nip, sliding console, waste matrix stripping, backscorer, scissor slitting knifebox and dual rewind

Standard Equipment

The **digicon** Series 2 machine combines semi-rotary technology with accurate re-registration modules for a variety of digital converting applications.

UNWIND UNIT
With 700mm diameter maximum roll capacity, 76mm diameter air inflating unwind mandrel, end of roll slow down or stop facility, variable tension control.

ELECTRONIC WEB GUIDE
Complete with ultrasonic edge guiding sensor, interlocked pneumatic web clamps, adjustable splicing table & tape dispenser.

a full-rotary action with flood coat capabilities. The unit is supplied with a single print cylinder to allow for repeat lengths from 50mm (2") up to 457mm (18") as well as a coating roller for flood coating with a face width of 320mm.

GEW e-BRICK AIR COOLED UV CURING SYSTEM

MID PRESS DANCER
Situated before the die unit to allow the flexo unit to operate in either semi-rotary mode for spot varnishing or full-rotary mode for flood varnishing and coating.

SERVO DRIVEN SEMI-ROTARY DIE CUTTING UNIT
With single size magnetic cylinder to cover a repeat range from 50mm (2") up to 457mm (18") and complete with auto lift and pressure down function.

WASTE MATRIX STRIPPING STATION
With 76mm air expanding rewind shaft (maximum matrix rewind diameter of 600mm).

REWIND MODULE
Complete with single 76mm air expanding rewind shaft capable of rewinding up to 600mm diameter, variable tension control and capable of winding labels in and labels out; the rewind module can be fitted with various slitting systems – see "Knifebox Options".

HMI
The touch screen interface is mounted on a sliding rail for easy operation.

