The ultimate
digitalized flexo press

FLEXO PRINTING

MASTER M5

BOBST

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_Advancing
flexibility

Built for full digitalization of the production workflow, the **MASTER M5** is the ultimate press for converters willing to automate their production line, with systems and solutions that reduce downtime and waste. Configurable with print cylinders or sleeves, the machine is ready to be equipped with one**ECG** technology, delivering repeatable consistency run after run irrespective of the application run length, and minimizing ink consumption and stock.

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Outstanding productivity
oneECG ready

Precision and
quality consistency

More uptime,
top efficiency

_Creating **value**

BOBST innovations are driven by customer and brand owner needs.

> READ MORE

Safety
Food safety and brand protection are major requirements. Anti-counterfeiting and traceability are required across the entire supply chain.

Customization, versioning, personalization
Packaging needs to reach all segments of society taking almost any shape and size across multiple job lengths across the globe.

Color control and brand image
Color consistency and control across all substrates needs to be guaranteed for brands to look good across the globe.

Sustainability
Packaging production needs to reduce its environmental carbon footprint – less waste across the entire supply chain. New and thinner substrates. Recycling and re-use are the new rules.

Faster time-to-market
A growing number of products need to reach consumers faster. Product lifetime is shorter. From product design to the consumer experience, the supply chain has to be more agile.
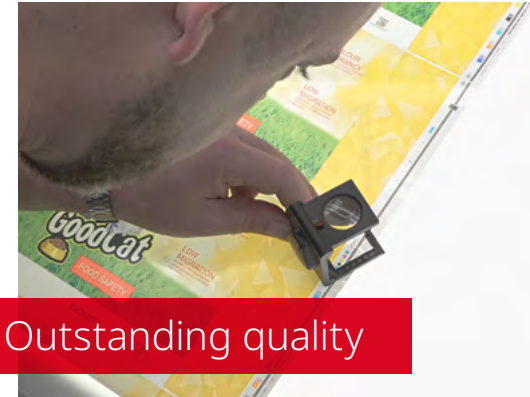
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Exceptionally flexible

– Ideal for short runs compared to a
  digital machine, long runs, profitability,
  quality and product diversification
  all in one press
– Handles all types of substrates
  used for the production of labels,
  flexible packaging and specialties
– Multi-process, product enhancing
  inline finishing applications
– Lamination technologies: solventless,
  solvent-based, water-based
– Cast & cure
– Cold foil and hot foil
– Multi-layer coupon labels
– Multiple printing processes available:
  flexo, silk screen, gravure

Fast and uninterrupted production

– On-the-fly job changeovers
– Very high press uptime, very fast
  time-to-market
– Excellence: special solutions for
  automatic exchange of printing
  cylinders and of die-cutting stations
  without stopping the press
– DigiFlexo for full digital registration
  and printing pressure adjustment
  and DigiGap for digitally automated
  die-cutting pressure control. They
  provide the shortest digital set-up
  time, minimal waste and consistent
  quality during production

Outstanding quality

– Very accurate web-tension control from
  unwinder to rewinder
– Flexo printing units with over-
  dimensioned chilled drums for
  positive web transportation on the most
  critical substrates
– Automatic pre-register setting
– ARC automatic print-to-cylinder
  register control
– Infinite Flower flexo head for controlling
  print density changes at speed
  variations, monitoring ink temperature
– SnowBall Lite and Bambi
  technologies for high speed waste
  matrix rewinding with difficult
  materials and/or label shapes
– Ready: easy drop-in technology for fast
  interchangeability of flexo, silk screen
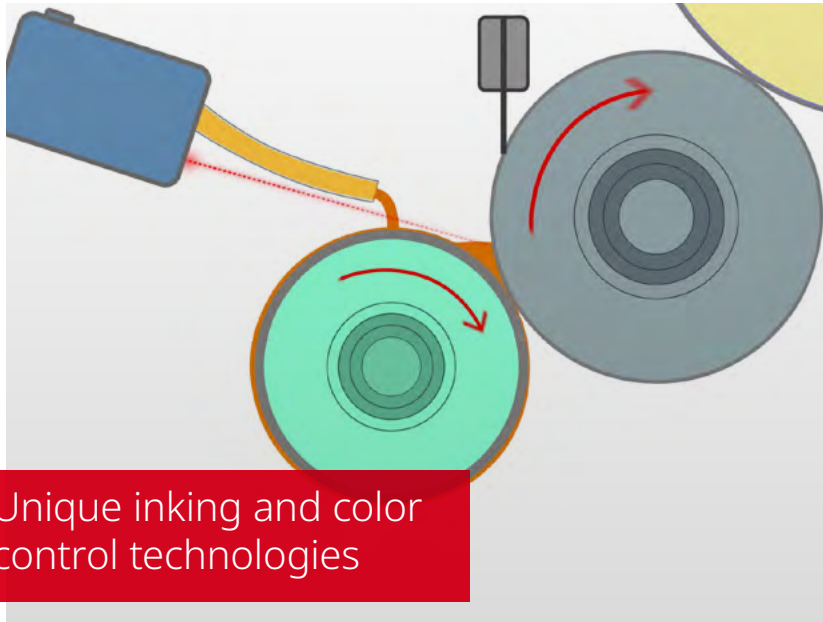 and hot foil. Ready in few minutes

Print responsibly

Unique inking and color control technologies

– Exclusive Ink-on-Demand (IoD) configuration working with minimum amount of ink in the print unit. Solution for BOBST inline flexo presses using Pantone Matching System spot colors
– Unique closed-loop color control DigiColor solution for inline DigiFlexo presses using one**ECG** Extended Color Gamut printing.

> **WATCH IOD VIDEO**

> **WATCH DIGICOLOR VIDEO**

Sustainable, easy to run, connected

– Very short set-up time and waste
– Digital automation ensuring productivity and process repeatability
– Very easy to run for less experienced operators
– Minimum and tool-free operator intervention
– Touch panel on each print unit and main touch screen HMI
– Production data accessible from remote devices
– Remote Internet services

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	MASTER M5
1	
2 m	6.56 ft*
2	
3 m	9.84 ft*
3	
11 m	30.09 ft*

*Measurements as per machine configuration featured above: Web width 430 mm - 17 in, 8-colors, 3 die-cutting units. Values may vary according to the configuration.

Specifications – Technical information

Materials handled

Substrates
Self-adhesive stock (paper, PET, BOPP, PVC), glossy paper 60 to 100 gsm, unsupported film from 12 µ (PVC, BOPP, PET, PA), alu-foil from 20 µ, lamitubes, light cardboard up to 300 gsm

Capability

Drive		Full servo
Gear pitch	3.175 mm	1/8 in
Number of printing units		Unlimited
Flexo cylinder repeat, min-max	139.5 - 609.5 mm	5.5 - 24 in
Flexo sleeve print cylinder repeat, min-max	305 - 609.5 mm	12 - 24 in
Web width*	370 mm	14.5 in
	430 mm	17 in
	530 mm	21 in
Speed, max	200 m/min	660 ft/min
Min. web path per unit (print to print)	1395 mm	54.92 in
Unwinding diameter, max	1000 mm	39 in
Rewinding diameter, max	1000 mm	39 in

*Print width: less 10mm

Die-cutting

Number of units		3+
Repeat, min-max (370 mm - 14.5 in)	279.5 - 609.5 mm	11 - 24 in
Repeat, min-max (430 mm - 17 in)	305 - 609.5 mm	12 - 24 in
Repeat, min-max (530 mm - 17 in)	355.5 - 609.5 mm	14 - 24 in
Matrix roll diameter	700 mm	27.5 in
SnowBall Lite		Standard
Bambi		Available
Metronome		Available

Automation

Automatic pre-register	Standard
Automatic register	Standard
DigiFlexo	Available
Excellence	Available
DigiGap	Available

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Dryers

UV on 27 in chilled drum	Standard
UV LED	Available
Hot air/IR dryers	Available
Multiple drying options for UV, water-based and solvent-based inks	UV, IR, hot air

Accessories

Rail	Available
Web turn bars	Available
Delam Relam, up to 3 colors on adhesive	Available
Combo laminator and cold foil	Available
Lamination	Available
Coupon: Combo 2 layers	Available
Coupon: QN3/5 layers	Available

Inking and color control technologies

Ink-on-Demand (IoD)	Available
DigiColor	Available

Printing

Sleeve type print unit version			Available
one**ECG** process			Available
Hot foil stamping print repeat, min-max	305 - 609.5 mm	12 - 24 in	Available
Gravure print unit repeat, min-max	330 - 660 mm	13 - 26 in	Available
Silk screen repeat, min-max	305 - 641 mm	12 - 25 1/4 in	Available

Product types

PSA labels
Wet glue labels
Linerless labels
In-mould labels
Wrap around labels
Shrink sleeves
Multi-layer peel-and-reseal coupon labels
Labels combining all methods
Flexible packaging
Aluminium foil packaging
Laminated tubes
Lottery tickets and security products

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Delam-Relam

Unit that separates the liner from the self-adhesive material to allow printing on the adhesive. The adhesive printed section is dried before being re-laminated. Special low friction bars for surface-sensitive materials.

Cold foil stamping

Cold stamping of glossy metallic effects with lower plate costs and higher speeds, using a Flower flexo head.

– Highly accurate control of foil tension on unwind and rewind shaft
– High precision adjustment of laminating pressure
– Multiple foils on the same shafts
– Movable on each print unit

Hot foil stamping

Hot foil stamping enables to create graphics that are visually compelling and have a huge impact in improving brand recognition and the perceived quality of a product. The DigiGold digitally automated hot foil stamping solution delivers very fast, easy and repeatable set-ups, with digital pre-setting of job pressures. The unit is movable on each Flower print head.
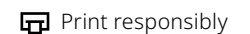

Multiple web-handling expertise

BOBST technologies for multiple web handling allow a wide range of possible multi-layer label configurations.

– Combo: 2-layer coupon labels
– Coupon QN3/5: 3 to 5 layer booklet labels

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Silk screen
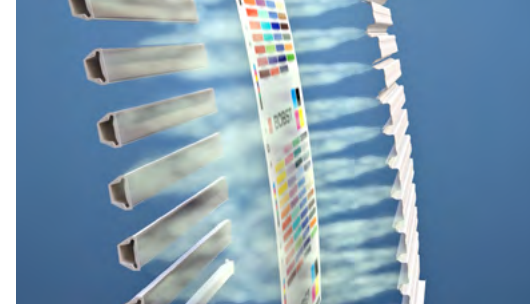
Exclusive screen security and decoration effects.
– High opacity white
– Special high gloss varnish
– Unique 3D effects
– Braille and tactile effects

Gravure unit

Heavy-duty high speed gravure unit developed in synergy with the BOBST Gravure Center of Excellence's team. Slide-in/Slide-out system for fast change of all elements of the print units
– Cold seal and heat seal lacquers
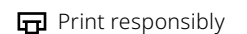– Metallic inks
– Security applications

Choice of dryers

Different type of dryers are available for water and solvent-based applications. Modular design to adapt to specific requirements according to ink systems, coverage, and production speed. The corrosion-resistant components make all dryers suitable for water-based applications.
– Dryer's lengths from 0.5 to 8.0 m
– Multiple heat sources according to customer requirements
– Exclusive drying technology for higher speed and efficiency

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Related products

Smart DigiMount

- Fully automated flexo plate mounting operations with digital quality and consistency for print sleeve presses
- Automated quality control, with HD cameras and servo assisted plate mounting adjustment
- Plate mounting accuracy up to 0.05 +/- mm, repeatable and consistent at each mounting
- Suitable for sleeve print cylinders. Repeat 254 - 813 mm - 10 - 32 in
- Fully chambered workspace for ambient light variation isolation and consistent plate recognition

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The digital world
of printing

A BOBST exclusive technology program, DigiFlexo Automation uses a wide range of new digital technologies to make printing and converting operations repeatable, quality-driven, consistent and highly efficient. Various levels of customizable DigiFlexo Automation are available.

DigiFlexo Automation features:

– Minimum waste at start-up
– The most consistent printing and converting quality - digitally controlled and adjusted at any speed
– Very low cost per job using analog plates - half of the print and flexible die plate cost for most jobs
– User-friendly operation does not require highly skilled operators thanks to DigiFlexo Automation
– Consistency in quality and performance. Independence from operator skill
– Comparable costs with digital printing in very short runs
– Comparable flexibility with digital printing: one minute for a full job change

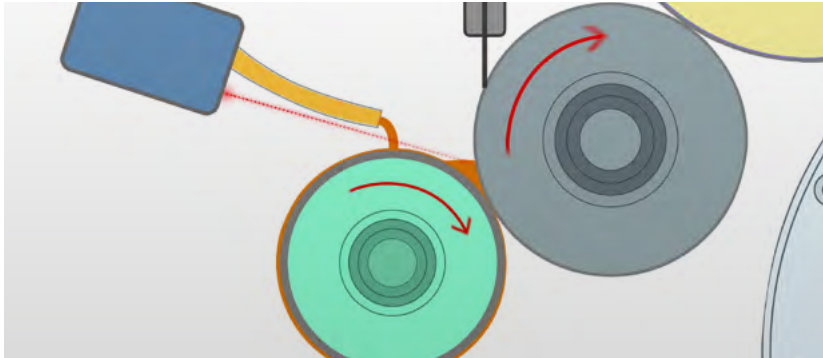| Product	Benefit
DigiFlexo	
PrintTutor	Full digital registration control
PrintTutor PLUS	Automated digital printing pressure pre-set and adjustment during production
DigiGap	
DigiGap	Digital gap and pressure control for accurate die-cutting pressure
Excellence	
ExcelPrint	Automatic exchange of print cylinders, without stopping the press
ExcelDie	Automatic die-cutting exchange between two die-cutting sections
ExcelCut	Automatic flexible die exchange (only for semi-rotary die-cutting)
QuickCut	Automatic non-stop on-the-fly waste stripping path change

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Inking and color control technologies

Always at the leading edge of innovation, BOBST has developed revolutionary breakthrough solutions relating to flexo inking and color matching that help converters and brand owners to transform packaging production.
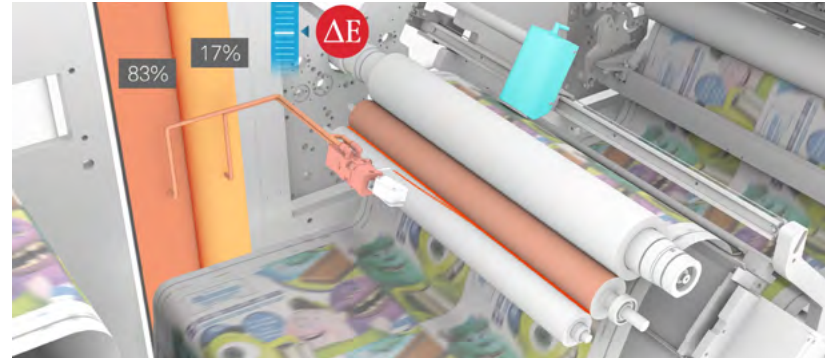
Ink-on-Demand (IoD)

IoD is a clean and smart inking system operating with minimum amount of ink per color. It eliminates ink trays and chambered doctor blades. The IoD technology is suitable and effective for all applications and run lengths. Its performance makes IoD print units the most efficient in the market. It is the breakthrough solution for BOBST inline flexo presses using Pantone Matching System spot colors.

– Optimal anilox cell ink refill preventing the ghosting effect
– Ink stability at high speed
– No ink leakage or flying ink droplets
– Minimum amount of ink in the print unit and full washout allow performing color matching pre-tests in a few minutes
– No ink contact with the hands of the operator
– Easy and fast color matching

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DigiColor

DigiColor is the first ever inline "closed loop" color system that enables digital color adjustment to the target Delta E values during printing, at any speed, on any substrate, with any operator. DigiColor is the solution for BOBST inline DigiFlexo presses using one**ECG** Extended Color Gamut printing.

– Inline closed loop color control avoids waste, non-conformities, and increases press uptime
– Consistent quality at any speed, on any substrate
– Ink quantity on demand, no ink pan, and no ink waste
– Color Delta E is consistent irrespective of the substrate type and physical properties
– Instant automatic correction of new color targets while the press is running
– A "digital twin" of the printed packaging is created for on-line remote validation. Full traceability and very fast time-to-market

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Fixed configuration variant - MASTER M5X

Best in class productivity

The **MASTER M5X** is a fixed configuration press optimized in terms of efficiency and output quality with the added benefits of short delivery time and competitive cost.

– 370 or 430 mm (14.5 - 17 in) web width
– 8, 10 or 12 print units
– 2 die-cutting units
– Short delivery time

Unique technology made affordable

– Automatic pre-register system
– ARC register control
– Rail system for accessories
– Combo laminator and cold foil kit on rail
– SnowBall Lite high speed waste stripping
– DigiFlexo ready
– one**ECG** ready

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Driving the
industry transformation

Bobst Firenze's Competence Center is one of BOBST's facilities worldwide dedicated to web-fed printing and converting technologies. Each is a center of excellence and all work in synergy to benefit from the multi-disciplinary know-how and experience derived within the Group.

Expertise and knowledge environment fully dedicated to customers' live and virtual demonstrations, operators' training and joint R&D new process development.

Bobst Firenze's Competence Center is also home to the oneECG Academy

REQUEST A DEMONSTRATION

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_What is **oneECG?**

one**ECG** is BOBST contribution to the pioneering project set up in 2013 by a team of leading industry suppliers in the label and packaging industry with a view to digitalize the flexo process. Together they developed the DigiFlexo printing technology and a turnkey process named REVO that closes the gap between digital inkjet and traditional flexo, offering very productive process and presses that combine non-stop and versatile production at the very low operational costs.
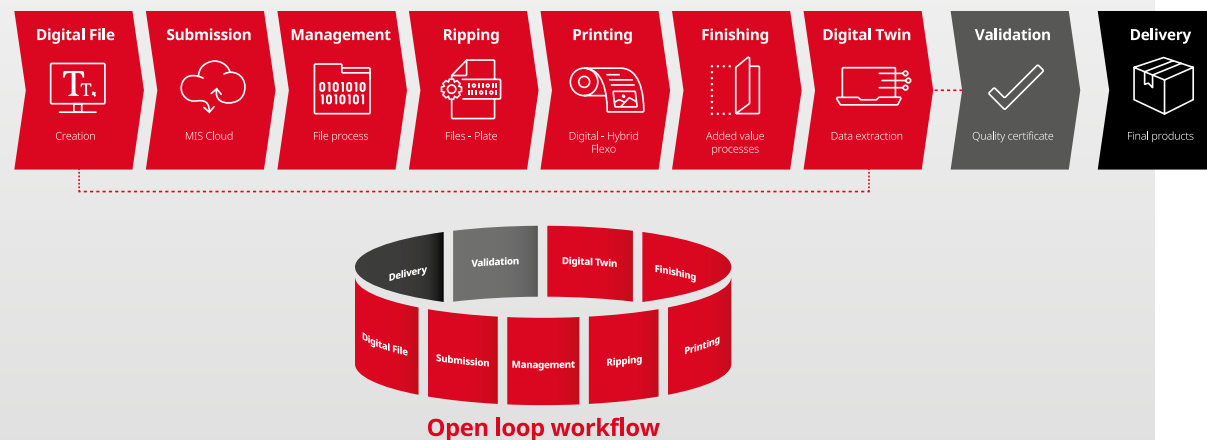
oneECG Academy
Bobst Firenze is BOBST Center of Excellence for inline flexo printing. Its Competence Center is also home to the one**ECG** Academy where printers can experience and test end-to-end turnkey solutions that flow from pre-press through to printing, converting and data storage. The pre-press facility is equipped with state-of-the-art of ESKO and DuPont equipment including the Kongsberg Cutting Table and the ESKO and X-Rite software for color management.

WWW.BOBST.COM/ONEECG

Open loop workflow
From job creation to final delivery, we collaborate in a full circle DigiFlexo architecture with our REVO partners for a smooth workflow deployment into your environment.

Digital File	Submission	Management	Ripping	Printing	Finishing	Digital Twin	Validation	Delivery
Creation	MIS Cloud	File process	Files - Plate	Digital - Hybrid Flexo	Added value processes	Data extraction	Quality certificate	Final products

Open loop workflow

The REVO partners:

apex International	AVT.	BOBST	DUPONT	ESKO	Flint Group Narrow Web	SAICAFLEX	storaenso	UPM RAFLATAC	x-rite PANTONE
Anilox rollers	Quality inspection systems	Printing and converting presses	Flexographic printing plates	Prepress system for packaging	UV, solvent and water-based inks	Packaging, printing and converting	Paper and board substrates	Self-adhesive label material	Color measurement and standardization system

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_Maintaining
excellence

Expert services for all your equipment.
Improve your processes, boost your productivity and enhance your expertise with a complete range of services from BOBST.

Maintenance Plus
– Scheduled maintenance with BOBST certified technicians
– Preventative intervention, maximizing machine uptime
– Optimum performance over the equipment lifetime

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Approved parts and logistics
– BOBST Original and Certified parts, and consumables
– Quality assurance, and extended maintenance intervals
– Worldwide distribution, and full availability where and when you need it

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Machine upgrades
– Additional features, configured for your machine
– Enhanced functionality, connectivity and capability
– Future-proofing your investment, maintaining competitive advantage

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Switch on
digital transformation

BOBST Connected Services ensures your business is ready for the changing world of digital manufacturing. Our range of apps and technical support brings full connectivity to your equipment and processes – providing you with a wealth of real-time data, analytical tools and expertise – helping you work smarter and more productively.

Helpline Plus & Premium*

– Remote access intervention, with BOBST technicians
– Expert support, eight hours a day, five days a week
– Maintain production, reduce callouts by 80%

Helpline Plus & Premium* AR

– Visual detail right in front of you, via headset display
– Machine data, CAD, and step-by-step troubleshooting
– In real time, guided by BOBST technician

*24/7 support in selected areas.

Connect Portal

– Easy-to-access portal to data, reports and analysis
– User-friendly interface
– Full connectivity and accessibility
– Access insights on the go with **Mobile Portal** from your smartphone

Remote Monitoring

– Real-time production and operating data
– Alerts and notifications when something happens
– Enabling instant intervention

Downtime Tracking

– Detailed analysis on machine performance
– Understand the root causes of downtime
– Enabling preventative intervention and improved productivity

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