Diana X 80/115
Packaging means diversity. The times when a folding carton was just a functional protection of goods is long gone. Nowadays, Packaging fulfills many different purposes. To communicate a corporate claim, turning unpacking into an experience and deliver a certain lifestyle can be as important as providing sensitive product information, including QR-codes and braille embossing. Hand in hand with all this requirements goes the need to be as productive as possible without compromising quality.

But how can one piece of equipment combine maximum flexibility with high productivity and flawless quality?

The Masterwork Diana X series has an answer to all this demands. The modular machine design supported by state-of-the-art servo drive technology allows you to adapt your folder gluer exactly to your product portfolio, nothing more, nothing less. High-speed drives and make-ready automation up to highest degrees help you to get the best output out of your Diana, and finally intelligent design from the feeder down to the delivery belt insures a smooth carton transport – even at full speed – and, not least, makes the operators live easier.

May it be a pure straight-line machine with up to 650 m/min belt speed and fully automated infeed and delivery, or a super flexible folder gluer with blank turning module, able to process the fanciest carton designs within one production step – the choice is yours.

The Diana X is available in the working width of 80 or 115 cm and the scope of processible material reaches from 200 to 900 g/m² m solid board and corrugated carton up to B-flute. The range of carton styles includes:

- Straight-line cartons
- Lockbottom cartons
- 4/6-corner collapsible cartons
- Partition cartons
- Conical cartons
- Confectionary cartons
- Double wall cartons
- CD/Record-Sleeves
- Miniature cartons
- Presentation folders and many more...

Latest quality requirements like inline image inspection and ejection of faults are certainly also considered in the Masterwork Diana X concept as well as connectivity with certain solutions for semi- or full automation like the Diana Stack Turner, Diana Feeder, Diana Packer or the Tünkers FAS 480.

The Masterwork Diana X is exclusively distributed by Heidelberg which ensures that the printer gets the best performance from his or her investment though global spare parts logistics and its renowned Systemservice network.
Transfer Section
- Variator drive enables different belt speed of upper and lower section
- Disc ejector and linear ejector applicable if no ejection module is present
- Larger drive pulleys for lower rpm
- Single servo drive
- Electronic speed adjustment
- Combinable with pressing section or Ejection Module

Compression- and Delivery Section
- Available in 5 and 7 m length
- Speed of upper and lower belt can be adjusted separately for optimization of result
- Four pressing sections individually adjustable
- Blank squaring station optionally available (e.g. for corrugated board)
- Improved accessibility at the end of the section
- Soft rubber belt of improved design, 35 mm wide
- Easy height adjustment

Machine Interface and Automation
- Touch screen for machine operation
- Straightforward handling, self-explanatory menu-navigation
- DigiSet for semi-automatic makeready (option)
- AutoSet/AutoSet plus for fully automatic make ready (option)
- Job data and adjustment positions can be stored for repeat jobs
- Ability to add and store additional job information
- HHS glue system control can be integrated
- HEIres connection

The picture shows the Diana X 115 in the Version CC as an example. Some of the equipment features mentioned are optional.
Ejection Module
- Patented ejecting mechanism with deflecting levers
- Servo driven actuation
- Safe ejection up to 650 m/min
- Ejection of all processable carton styles
- Smallest cartons can be ejected
- Even stiff materials and corrugated board can be ejected

Folding Module
- Length: 3.714 mm for high quality folding at max. speed
- Upper carriers shiftable and telescopic
- Lower center carrier tiltable
- Motorized upper center carrier with improved tuck-in function available
- Triple-roller for folding belt guidance without guide ridge
- Left-before-right folding and right-before-left folding as standard
- Different folding belt width available
- Min. open blank width of 45 mm
- Pressing section available with individually adjustable pressure

Lockbottom Module
- For processing lockbottom cartons
- One additional backfolding hook-shaft available
- Telescopic roller bars
- With three lower and five upper carrier sections
- Upper Center carriers on hinged frame
- Belt folding devices or rigid folding devices available for operation side and drive side
- Lowered side walls for good accessibility
Collapsible Box Module
- For processing 4/6-corner, lockbottom-, and other carton styles
- Light gate concept for highest safety standard without drawbacks in accessibility
- Two backfolding hook-shafts available
- Three-way hooks available for faster processing of 4/6-corner cartons
- Telescopic roller bars
- Center carrier on hinged frame (standard in rear section, option in front section)
- Rigid folding devices can be arranged on operation side and drive side in each two positions

Prefolder
- Length: 3.5 m for best folding quality
- Divided carrier sections on operation side
- Optional center carrier on hinged frames available
- Belt folding devices available for final folding in the Prefolder
- Good accessibility by lowered side walls
- Additional carrier on drive side available
- Rigid folding devices can be arranged on operation side and drive side in each two positions

Feeder with Blank Aligning Module
- Short set-up times
- Friction feeder with adjustable belt guides
- Belt replacement in less than 60 seconds without pulling the shaft
- Individual drive for precise speed control
- Transport carriers are adjustable in lengths
- Suction feeder (option)
- Alignment can be done either to the left or to the right
- Aligning linear is adjustable sidewise in order to skip window cut-outs
- Optional upper/lower center carrier
Further Modules that can be combined with the Diana X:

**Braille Module**

The Diana Braille Module can take up two Braille embossing tools in parallel so two panels can be embossed at the same time in only one module. The positioning of the tools can be done freely across the entire machine width. Telescopic upper carriers ensure the safe transport even of short cartons. At a maximum speed of up to 100,000 ct./h with one braille tool, the Diana Braille module is the smart solution for inline braille embossing.

**Inspection Control Module**

Our answer to the crowing market demand for total quality control: The second generation of the Diana Inspection Control module enables full image inspection at a competitive speed of up to 300 m/min with a 2K Color Camera or even up to 400 m/min with a 4K color camera (optional). With a length of only 834 mm, the module keeps the additional floor space to a minimum. The software eases up the set-up process but doesn’t compromise the flexibility of use. Certain different levels of inspection sensitivity can be set up for one image. As optional functions color comparison, Code reading and the OCR-function for variable codes are available.

**Blank Turning Module**

(only for Diana X 115):

Make a wish! A double-wall confectionary carton, a multi-panel CD-cover or a liquor carton with a twisted upper lid – all folded and glued in one path? No problem with the Diana turning module. While the carton is supported with suction air from below, it is passing a roller track and turned safely up to 90° by a different speed ratio of the rollers – precalculated with AutoSet and realigned after the turning. In combination with the widely flexible arrangement of further modules, this turns the Diana X into your tailor-made solution for special requirements.

**More efficiency:**
The Diana X 80 and 115 can be combined with the Diana Stack Turner, Diana Feeder and Diana Packer or the Semi-automatic packer FAS 480.
Versions of the Diana X

Version A

Version B

Version C

Version C Comfort

Version X

A, B and C: Diana X 80 and X 115
CC and X: Only Diana X 115
Sample configuration. The modules in the Diana X Version X can be arranged flexible according to your needs.

Prinect.

The integration of postpress:
- Automation and control of the entire manufacturing process for printed products.
- Fast and transparent processes thanks to the accurate collection of production data.
- Automatic calculation of folding programs on the basis of digital prepress data for the reliable setup of folding machines.
- Conversions and downtimes are greatly reduced.
- Clear evaluation of machine efficiency in charts and tables.

For value retention and maximum performance:
- Service agreements offer security and peace of mind, while at the same time providing you with the benefits of full cost control and simple administration
- Servicing by highly trained technicians
- Exclusive use of original service parts
- Protection of your machine investment
- Retention of a high resale value

For details on the emissions of the Diana X, please visit us at heidelberg.com/emissiondetails

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