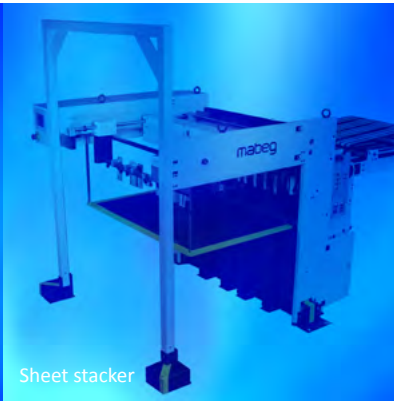
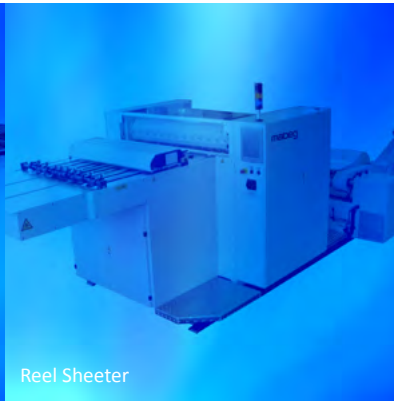




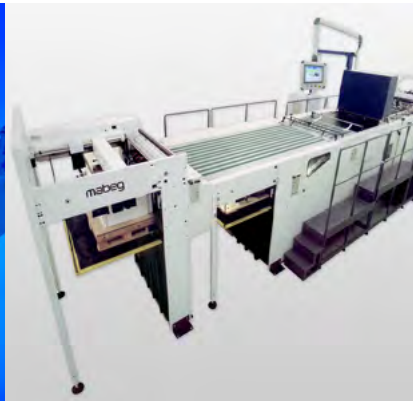
Sheet feeder



Sheet stacker



Reel Sheeter



## Coding, Printing and Inspection Systems

Inspecting & Sorting • Coding & Printing • Track & Trace



Sheet Transportation Technology from MABEG. It simply works.

## Your product: Unique, forgery-proof, traceable and flawless?

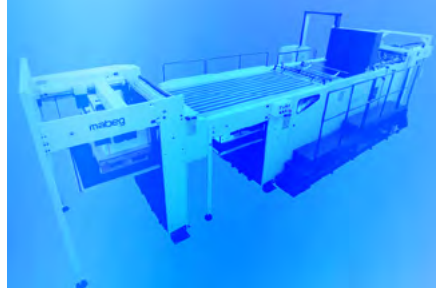
**High-precision sheet transport** forms the quality criterion for Coding, Printing and Inspection Systems – irrespective of the camera or application system used. Any imprecise or even uncontrolled movement of a sheet will cause a distortion of print or image recording. In the context of inspection tasks, the consequences are that the available resolving capacity of the inspection systems cannot be used to full potential or, even worse, that good sheets are wrongly sorted out because of insufficient precision of the sheet transport, causing unnecessary costs.

Being the specialist for sheet transportation technology, MABEG has developed the right solution:

- The **MABEG Sheet Processor MSP 106** for **print sheets** with extraordinarily high sheet transport precision thanks to **unique drive technology** and MABEG quality.

# MSP

Sheets up to format 6



## Our solution: Coding, Printing and Inspection Systems on MABEG MSP

### Inspection and sorting of paper and printed sheets

- Misprints
- Dirt
- Colour defects, over- and underinking
- Register errors
- Cutting errors
- Substrate defects
- Watermarks
- Check for completeness
- Quality check of finishing
- Quality check of braille
- Holograms
- Micro lettering
- UV and IR security features
- ➔ Sorting out defective sheets
- ➔ Sorting by certain features
- ➔ 100 % inspection and sorting  
= 100 % quality for your customers

### Coding and Printing

- Individualization and personalization:
  - » Customer data
  - » Product data, e.g. country-specific texts on packages printed by offset
- Barcodes and matrix codes
- Security features, e.g. UV ink prints
- Batch or serial numbers
- Verification and check against a database
- Braille printing

### Labeling

- Printed labels
- Security labels
- RFID labels
- Optional: Presence monitoring

### Track & Trace Technologies

# MSP 106



## Why MABEG MSP 106?

Being the globally recognized specialist in sheet transport, with the MSP 106 MABEG provides the ideal platform for Coding-, Printing- and Inspection assignments.

Highest accuracy is combined with the reliability for hard industrial conditions that MABEG machinery is valued for. Our MSP 106 customers all over the world, are often highly specialised companies, can confirm this.

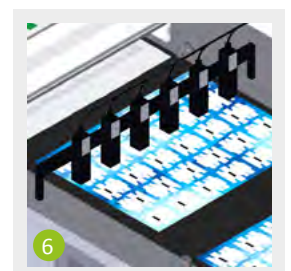
The MSP has a **modular design**. Each line is individually configured according to the needs of our customers. On the right side a variety of configuration examples with typical applications is shown. In addition to automation and NONSTOP functions more precision tables for applications and sheet stacker can be integrated. High-resolution inspection and coding assignments can be combined in any way: for example, inspection tasks in different wavelength ranges on the upper side of the sheet, the underside of the sheet and in transmitted light, followed by an ink-jet coding.

The precision application table forms the heart of the MABEG MSP 106. It has been developed and optimized for perfect sheet travel. The result is an application table which boasts **unique precision** which can be used in particular for all inspection tasks as well as for coding, ink-jet printing and labeling.



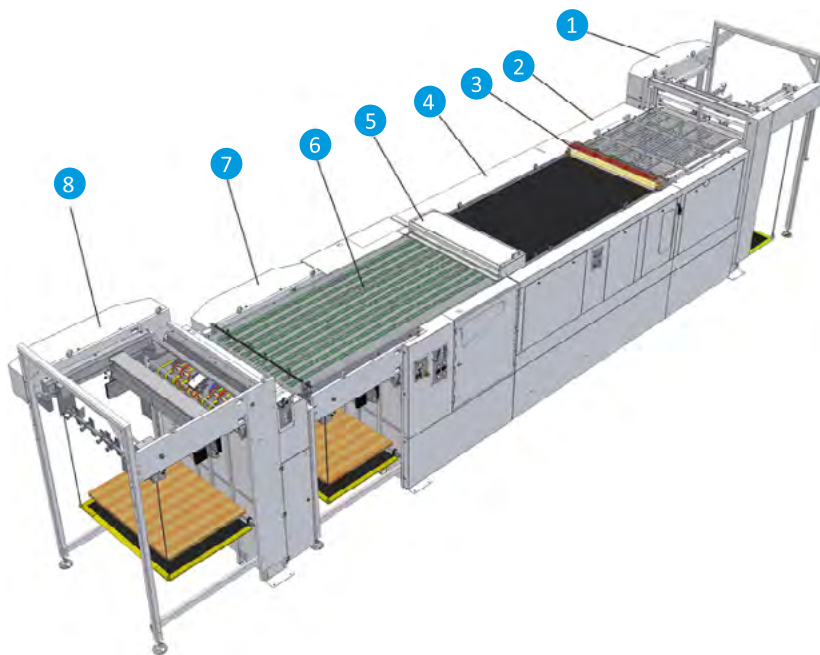
# MSP 106

- 1 Coding
- 2 Sorting
- 3 Inspecting
- 4 Track & Trace
- 5 Labeling
- 6 Ink-Jet Printing



# MSP 106

- Coding
- Sorting
- Inspecting
- Track & Trace
- Labeling
- Ink-Jet Printing



## Description MABEG MSP 106

Thanks to its modular design, the MSP 106 can be realised in a large number of different configurations, ranging from single-sided applications, to transmitted light inspection, and up to multiple applications on either side. Various options from simple wastage boxes to models with 4 sheet stackers are available to meet complex sorting and NONSTOP operation needs.

As an example, a machine configuration for one-sided applications fitted with a transmitted light inspection unit TLI and 2 sheet stackers is shown here.

- 1 MABEG sheet feeder with ClassicFeed precision suction head for gentle but reliable sheet separation
- 2 Alignment table (oblique belt conveyor) for precise sheet alignment
- 3 Transmitted light inspection unit, e.g. for checking inclusions or watermarks
- 4 Precision application table, the heart of the MSP 106: The basis for all applications
- 5 Highly dynamic sheet diverter gate
- 6 Transfer table
- 7 Integrated sheet stacker, e.g. for sorting
- 8 Main sheet stacker

### Technical Data:

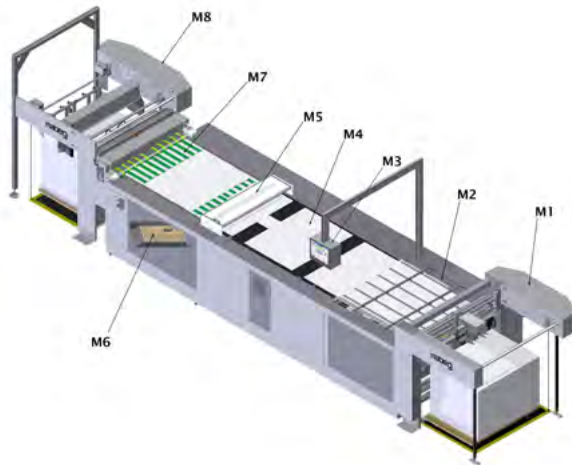
Sheet capacity:	12.000 s/h or 206 m/min <sup>1.)</sup>
Size min (WxL):	300 x 300 mm
Size max (WxL):	1060 x 830 mm
Option FO1:	1060 x 1200 mm
Option FO2:	1060 x 1450 mm
Materials:	Paper, cardboard, sheet metal, plastic, foil
Material weight:	40 - 800 g/m <sup>2</sup> <sup>2.)</sup>
Pile height:	900 mm
Option:	1.500 mm

1.) mechanically, production speed depending on application  
If using waste box: max. 10.000 s/h or 90 m/min  
2.) 40 - 60 g/m<sup>2</sup> after test run

### MABEG MSP 106 - 1B1S - 1100

Line for single-sided printing with waste box.

Typical application: Application of codes with directly following verification by a camera system and ejection of flawed codes in waste box.

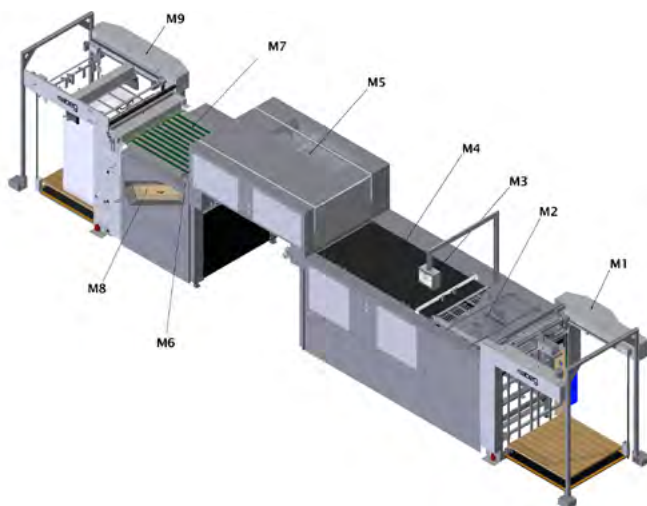


- M1:** Sheet feeder with MABEG ClassicFeed suction head
- M2:** Alignment table
- M3:** HMI Touch Screen Operator panel
- M4:** MABEG precision application table
- M5:** Highly dynamic diverter gate
- M6:** Waste box for rejected sheets
- M7:** Transfer table
- M8:** Main-Sheet stacker for accepted sheets (Pile height: 900 mm incl. pallet)

### MABEG MSP 106 - ↓↑ - 1B1S - 1700

Line for coding and printing on top and reverse side in one pass.

Typical application: Coding and Track & Trace of folding cartons and packagings.

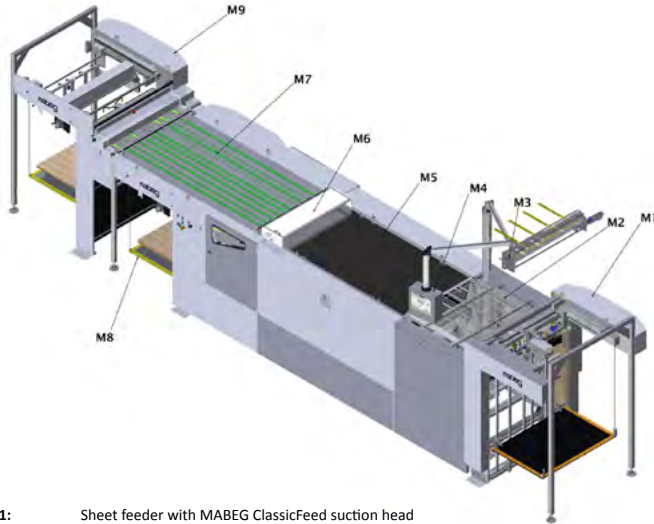


- M1:** Sheet feeder with MABEG ClassicFeed suction head
- M2:** Alignment table
- M3:** HMI Touch Screen operator panel
- M4:** MABEG precision application table
- M5:** Second MABEG precision application table for reverse side application
- M6:** Highly dynamic diverter gate
- M7:** Transfer table
- M8:** Waste box for rejected sheets
- M9:** Main Sheet stacker for accepted sheets (Pile height: 1.500 mm incl. pallet)

Four examples of possible configurations

### MABEG MSP 106 - TLI - 2S - 1700

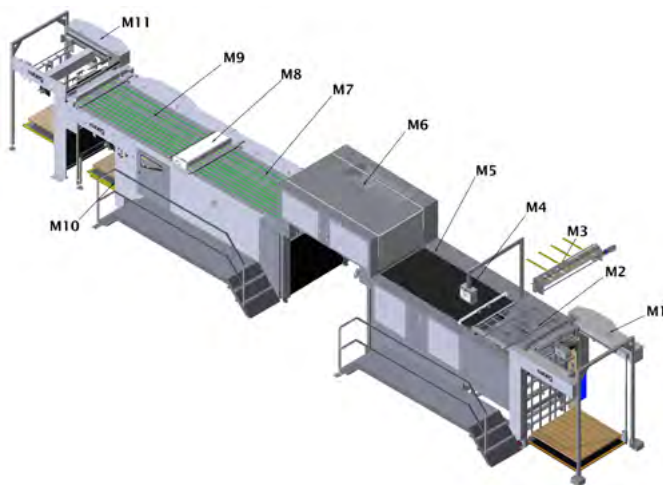
Inspection line for one-sided inspection tasks with two sheet stackers to sort out waste sheets and optional transmitted light unit TLI for watermark control.



- M1:** Sheet feeder with MABEG ClassicFeed suction head
- M2:** Alignment table
- M3:** Transmitted light unit TLI
- M4:** HMI Touch Screen operator panel
- M5:** MABEG precision application table
- M6:** Highly dynamic diverter gate
- M7:** Transfer table
- M8:** Sheet stacker for rejected sheets (Pile height: 1.100 mm incl. pallet)
- M9:** Main-Sheet stacker for accepted sheets (Pile height: 1.500 mm incl. pallet)

### MABEG MSP 106 - TLI - ↓↑ - L - 2S - 1700

Inspection line for two-sided inspection tasks. Optionally expandable with a third precision table for coding tasks, such as numbering.



- M1:** Sheet feeder with MABEG ClassicFeed suction head
- M2:** Alignment table
- M3:** Transmitted light unit TLI
- M4:** HMI Touch Screen operator panel
- M5:** MABEG precision application table
- M6:** Second MABEG precision application table for reverse side application
- M7:** Additional transfer table
- M8:** Highly dynamic diverter gate
- M9:** Transfer table
- M10:** Sheet stacker for rejected sheets (Pile height: 1.100 mm incl. pallet)
- M11:** Main-Sheet stacker for accepted sheets (Pile height: 1.500 mm incl. pallet)

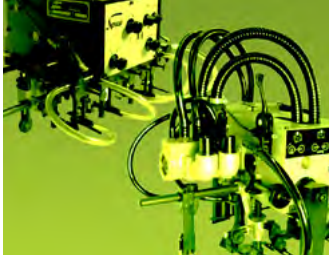
Four examples of possible configurations



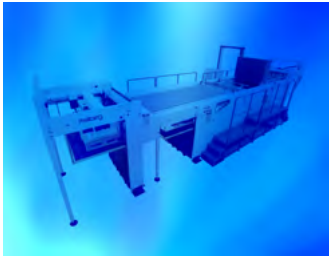


# Coding, Printing and Inspection Systems

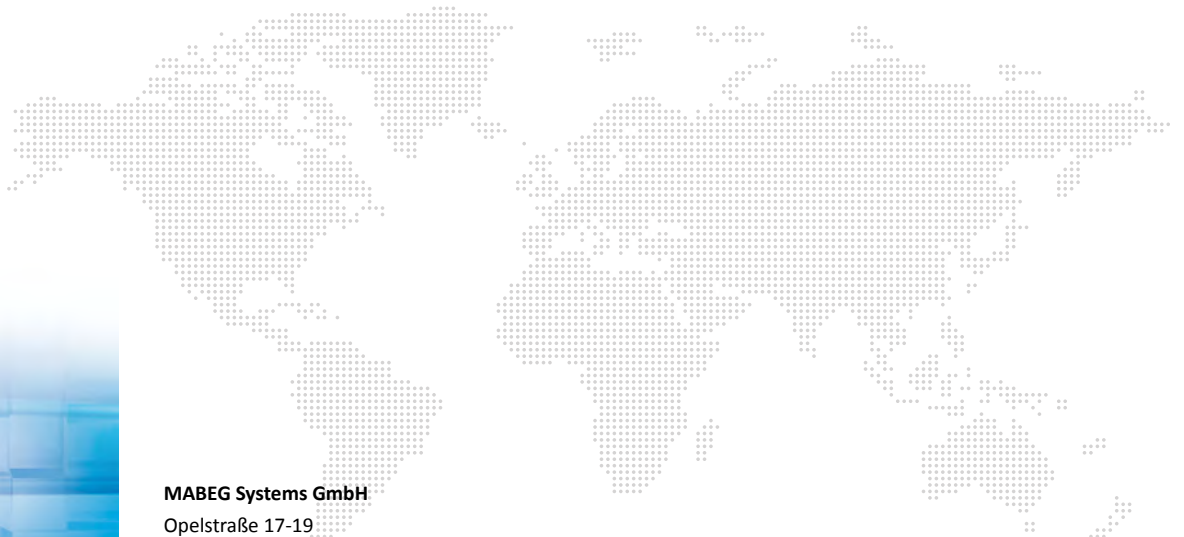
Inspecting & Sorting Coding & Printing Track & Trace



Worldwide service for all **mabeg** and *Spiess* products.



Sheet Transportation Technology from MABEG. It simply works.



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