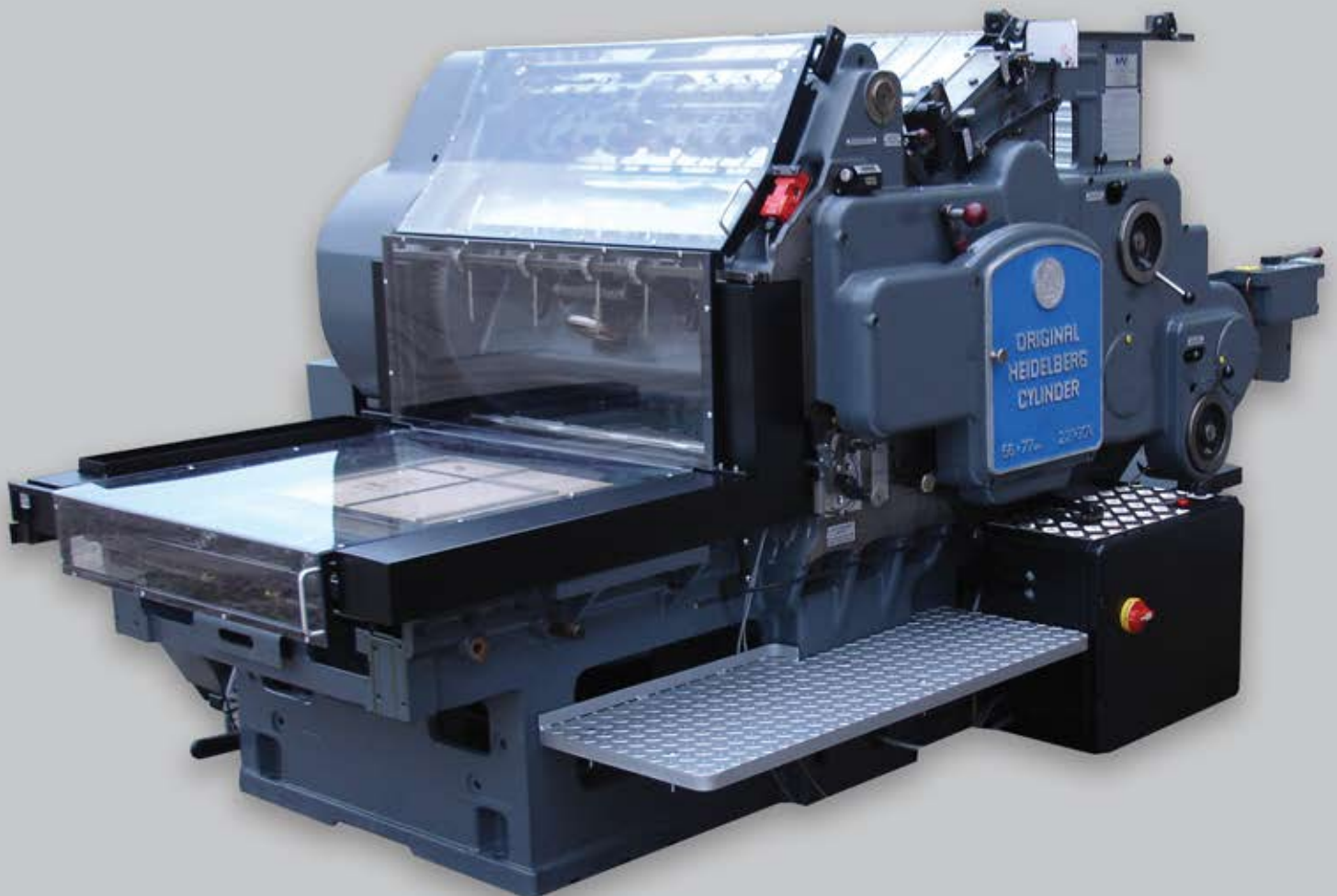
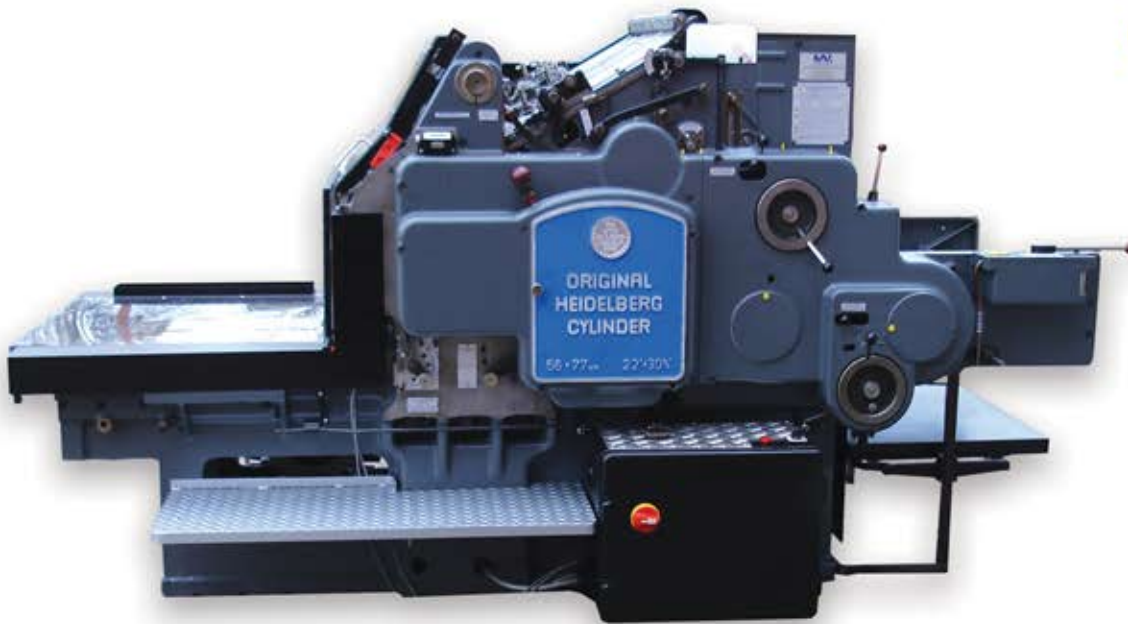




# ORIGINAL HEIDELBERG CYLINDER 22" x 30<sup>1/4</sup>"



 **HEIDELBERG**



## ABOUT LETTERPRESS COMMONS

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In early 2012, two colleagues on opposite coasts—Harold Kyle in Syracuse and Jenny Wilkson in Seattle—decided that an up-to-date manual of letterpress printing was needed, one with the capabilities to expand along with the letterpress community. They agreed that in spite of letterpress printing’s renaissance, many would-be printers were finding it difficult to access reliable information on printing instruction. Some of the best books on printing are out of print, and don’t often suit the needs of contemporary letterpress printing. Jenny and Harold felt that wiki-style website, where the community could contribute information and point to resources in an organized and easily accessible fashion was the answer.

### **Mission**

Letterpress Commons is built by the community, for the community and fosters the exchange of accessible, authoritative, and inspirational letterpress information for letterpress printers by providing a free venue for online articles and multimedia.

### **Features**

Although originally conceived as a wiki, Letterpress Commons is built on the WordPress Content Management System to make editing more intuitive for you. Any logged-in visitor can edit an article or equipment listing on Letterpress Commons by simply hitting the “Edit” button. These revisions are reviewed by volunteer site Editors before being published. In order to help foster the community here and off-line, Letterpress Commons also features an integrated chatroom and Print/Trip, a searchable map of letterpress resources.



## Values

Letterpress Commons will use the following values to guide decision making:

- Foster free and open exchange of letterpress information. Our license allows all published work to remain freely accessible forever.
- Adopt Wikipedia's policies and procedures for editing, conflict resolution, etc. When in doubt, Wikipedia's policies will serve as our model.
- Avoid in-fighting and controversy within our community. The site will not become a forum for confrontation and dispute resolution.
- Avoid endorsements or marketing. Explaining techniques is fine, recommending products is not.

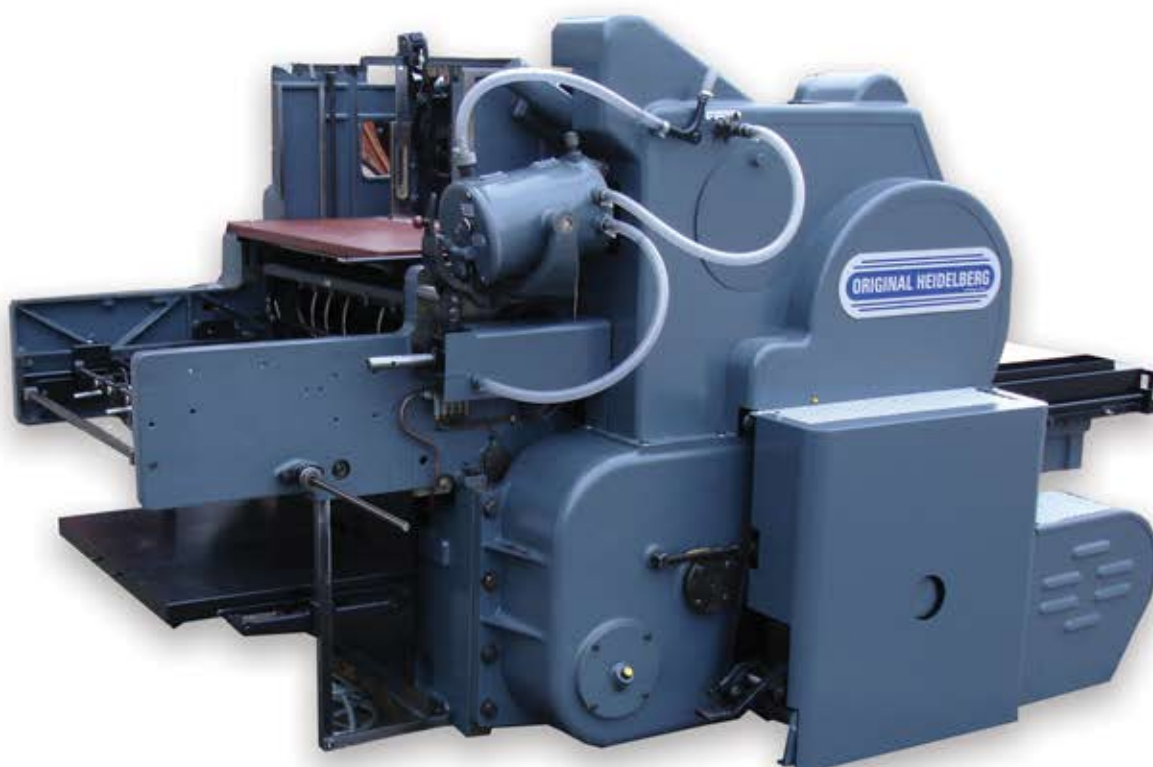
## FAQ

### WHAT IS LETTERPRESS COMMONS, EXACTLY?

Letterpress Commons is a user-created and user-edited WordPress website. All material is licensed under the "copyleft" Creative Commons SA-NC-BY license. This means that all information is freely available for non-commercial use as long as Letterpress Commons is cited as the source.

### WHO CAN CONTRIBUTE TO LETTERPRESS COMMONS?

Anyone! Registered users are free to add or modify existing articles, and even suggest new topics. All contributions are moderated by an Editor with the goal of only publishing objective and substantive material. Registration is free and open to the public.





### WHAT DO CONTRIBUTORS GET FOR THEIR WORK?

To maintain impartiality and in the spirit of free exchange of information, contributors are not compensated for their contributions. They are, however, contributing to preserving letterpress for posterity. They retain ownership of their text.

### WHO IS A CORE CONTRIBUTOR AND HOW DO I BECOME ONE?

Core Contributors are anyone who has contributed several unique articles or provided significant support in editing our content. If a Core Contributor wishes, they will receive a bio page on Letterpress Commons.

### WHO IS BEHIND LETTERPRESS COMMONS?

Everyone in the letterpress community! Please register and share your knowledge. Boxcar Press hosts and administers the website.

### WHY BOXCAR PRESS?

Boxcar Press publishes Letterpress Commons in order to freely share substantive information on letterpress printing. Boxcar Press can not use Letterpress Commons to endorse any of its own products, and has no plans to monetize this site. Boxcar Press has been educating its own customers in letterpress printing for many years, and Letterpress Commons is a natural evolution of Boxcar Press's mission to support and inspire the letterpress community.

### WHERE CAN I GO TO ASK QUESTIONS OR SUGGEST IMPROVEMENTS?

The individual pages of Letterpress Commons do not allow commenting in order to encourage contributions and edits to the actual text. If you would like to brainstorm additional topics or provide other feedback about the website, please visit the Feedback Forum.

## **About the Creative Commons License**

We license all content under the Creative Commons SA-NC-BY license to ensure that everything is free to use forever. You can incorporate content from Letterpress Commons into training manuals, class syllabi, public safety messages, etc. The only stipulations are that you a) cite Letterpress Commons, specifically with the name "Letterpress Commons" and with a URL link (when possible), and that b) you don't charge any money. No one should ever profit off this knowledge, and everyone should feel comfortable sharing here.

# High-Speed Cutter POLAR 115 em

the programmable all-round model  
with a capacitive 18.5" Touch-Screen display



## Description of POLAR N 115 PLUS

The allrounder with 18.5" color display and touch-screen operation is suitable for all standard cutting jobs. Featuring automatic graphic programming it ensures a highly-automated process.

Examples of equipment:

- Highly graphic operator guidance, with various language packages
- Change-over measurement system (metric, inch, shaku)
- Configurable user interface, OptiKnife knife changing system and many other features

The High-Speed Cutter POLAR N 115 is mainly used in the medium-size range. Formats up to a diagonal of 1,150 mm can be easily handled and turned in the high-speed cutter. Cutting material with larger formats can only be turned on the front table. The High-Speed Cutter has extensive features in the standard equipment already which can increase the productivity up to 20%. The High-Speed Cutter can be upgraded with peripheral equipment (lift, jogger, buffer, transport grippers, loading and unloading system) to a cutting system.

## Customer benefits

- Extended operating life of the knife as well as faster knife change thanks to POLAR OptiKnife with knife fine adjustment in the lower dead end
- High productivity by a great number of programmable additional functions
- Shortest make ready times thanks to intuitive cutting program generation via block programming or even Compucut

- Greatest cutting accuracy due to the POLAR-Positioning-System DPS with a mechanical positioning accuracy of 1/100 mm
- Highly reliable in daily use and long lifespan as a result of the stability of the one-piece machine frame, knife drive with worm gear drive and compact closed hydraulic system

## Technical data

|  |                            |
|--|----------------------------|
| Cutting width                                    | 1.150 mm   45.28 in        |
| Feeding depth                                    | 1.150 mm   45.28 in        |
| Loading height max.                              | 165 mm   6.50 in           |
| Safety clamp pressure                            | 30 daN   66 lbs            |
| Clamp pressure, min                              | 150 daN   331 lbs          |
| Clamp pressure, max.                             | 4.500 daN   9,921 lbs      |
| Backgauge speed on return way (0 - ...)          | 300 mm/sec<br>11.81 in/sec |
| Knife speed                                      | 45 cycles/min              |
| Smallest cut, automatically, without false plate | 25 mm   0.98 in            |
| Smallest cut, automatically, with false plate    | 95 mm   3.74 in            |

Further technical data are available for download on our website.



# High-Speed Cutter POLAR 115 em

the programmable high performance model  
with a capacitive 21.5" Touch-Screen display



## Description of POLAR N 115 PRO HD

The programmable high performance model with a capacitive 21.5" Touch-Screen display and real image preview is ideal for high-end applications - thanks to job specific programmable parameter, label and distortion correction as well as an extended range of options.

The High-Speed Cutter POLAR N 115 is mainly used in the medium-size range. Formats up to a diagonal of 1,150 mm can be easily handled and turned in the high-speed cutter. Cutting material with larger formats can only be turned on the front table. The High-Speed Cutter has extensive features in the standard equipment already which can increase the productivity up to 20%. The High-Speed Cutter can be upgraded with peripheral equipment (lift, jogger, buffer, transport grippers, loading and unloading system) to a cutting system.

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## Technical data

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|---|----------------------------|
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| Feeding depth                                       | 1.150 mm<br>45.28 in       |
| Loading height max.                                 | 165 mm<br>6.50 in          |
| Safety clamp pressure                               | 30 daN<br>66 lbs           |
| Clamp pressure, min                                 | 150 daN<br>331 lbs         |
| Clamp pressure, max.                                | 4.500 daN<br>9,921 lbs     |
| Backgauge speed on return way<br>(0 - ...)          | 300 mm/sec<br>11.81 in/sec |
| Knife speed   | 45 cycles/min              |
| Smallest cut, automatically,<br>without false plate | 25 mm<br>0.98 in           |
| Smallest cut, automatically, with<br>false plate    | 95 mm<br>3.74 in           |

Further technical data are available for download on our website.



# High-Speed Cutter POLAR 115 em

with automatic waste disposal and  
a capacitive 21.5" Touch-Screen display



## Description of POLAR N 115 AT HD

Model N 115 AT HD is the most-efficient of this type of high-speed cutter, featuring automatic waste disposal during the cutting process.

The High-Speed Cutter POLAR N 115 is mainly used in the medium-size range. Formats up to a diagonal of 1,150 mm can be easily handled and turned in the high-speed cutter. Cutting material with larger formats can only be turned on the front table. The High-Speed Cutter has extensive features in the standard equipment already which can increase the productivity up to 20%. The High-Speed Cutter can be upgraded with peripheral equipment (lift, jogger, buffer, transport grippers, loading and unloading system) to a cutting system.

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Further technical data are available for download on our website.



# Speedmaster CD 102.





# Universally applicable. **Speedmaster CD 102.**

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The Speedmaster® CD 102 is the universal straight-printing press for commercial, packaging and label printing. Equipped with innovative technology, it provides flexible processing of a large variety of jobs and materials with maximum flexibility.

Its efficiency and cost effectiveness cannot fail to impress. Easy to use, with short makeready times and integration in the Prinect® workflow, the Speedmaster CD 102 achieves constantly high print quality at speeds of up to 15,000 sheets an hour.

An attractive price/performance ratio is not the only advantage of the Speedmaster CD 102. Its strengths are obvious in the production of specialized packaging in up to seven colors, for example, and in UV and coating applications.

Another plus: each Speedmaster CD 102 is backed up by the comprehensive service offering from Heidelberg®. This enables you to get the most from your machine thanks to maintenance, remote functions, perfectly coordinated consumables, and an international service and spare parts network.

Thanks to its modern equipment, its high substrate flexibility and its constant productivity, the established Speedmaster CD 102 offers you enormous added value for your print shop. Benefit from technology proven a thousand times.

# Outstanding characteristics. The facts at a glance.

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## Highlights:

- The Heidelberg User Experience at the Speedmaster with the Prinect Press Center® XL 3 sets new standards for the user experience on the press. The unique navigation tool Intellistart® 3 and the assistance systems of the new Speedmaster Operating System ensure predictable results and increased performance
- Preset Plus feeder and delivery for high substrate flexibility and precise pile formation
- Prinect Easy Control and Prinect Axis Control® color measurement systems for reliable, standardized print production
- AirTransfer system for contact-free sheet transport on an air cushion, without marks or scratches
- Alcolor® dampening unit with Vario function prevents hickeys and stabilizes the ink-water balance for optimum print quality

- Stable print quality at a maximum printing speed of up to 15,000 sheets an hour
- Easy accessibility for convenient operation
- High degree of automation ensures short makeready times and reduces paper waste
- Secure investment and stable value retention thanks to a tried and tested platform and pioneering innovations

➔ You can find more about technical data and facts here: [heidelberg.com/cd102/technical-data](https://heidelberg.com/cd102/technical-data)

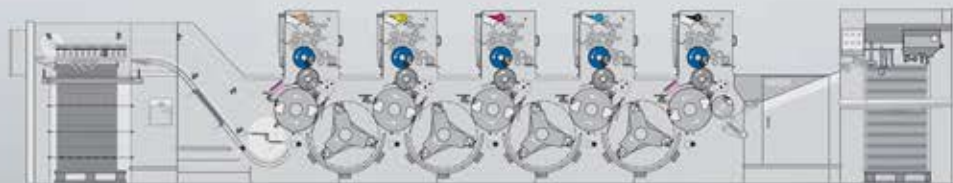
Versatile. Flexible. Efficient. The Speedmaster CD 102 sets standards in the 70 × 100 cm (27.56 × 39.37 in) format. This universal machine processes a huge variety of substrates and is suitable for the cost-effective production of high-quality commercial, packaging and label print jobs.



**Configuration examples:**



Speedmaster CD 102 without extension module



Speedmaster CD 102-5 with two extension modules



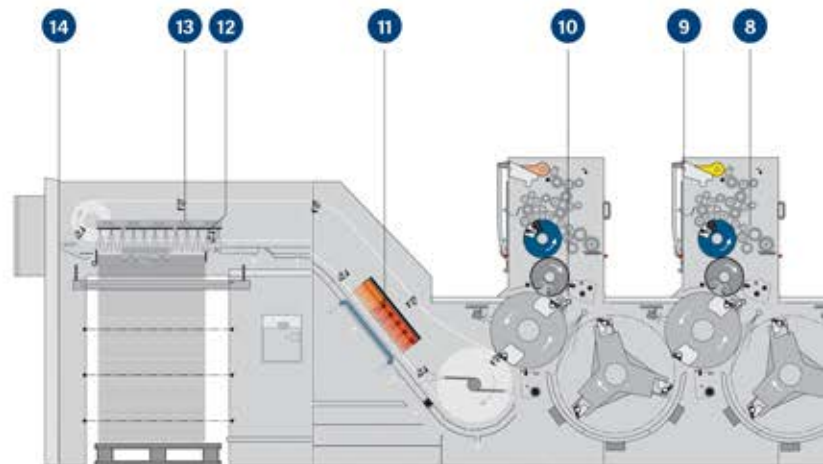
The Prinect Easy Control spectrophotometric color measurement system integrated in the control station ensures economical production with maximum color integrity.



Sheet brakes can be positioned as desired in the delivery, enabling precise pile formation without marks.



Efficient drying thanks to the combination of IR lamps and hot air in a single module.



### 1 Nonstop system

- The features on the feeder and delivery enable pile changes on the fly.

### 2 Feeder

- With preset air settings and material-dependent speed compensation, the Preset Plus feeder separates a huge variety of substrates with great precision.

### 3 Sheet alignment

- Precise sheet alignment is ensured by accurate, remote setting of front lays, automated sheet arrival control and sheet slowdown feature.

### 4 Monitoring

- Sheet monitoring by sensors and four self-calibrating double-sheet detectors support continuous production.

### 5 Printing unit

- Reduced maintenance thanks to cylinder surfaces with a high-quality finish, and special gripper systems. Central remote register adjustment shortens setup times.

### 6 AutoPlate

- The semi-automatic plate changer works quickly and precisely at the touch of a button, and saves valuable makeready time.

### 7 AirTransfer system

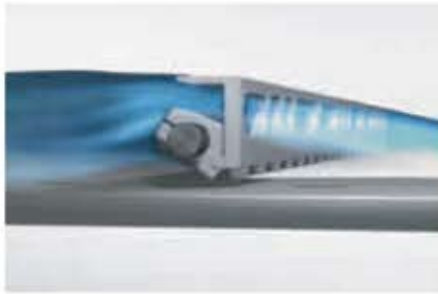
- The AirTransfer system with Venturi nozzles guarantees contact-free, stable sheet transport over the entire printed stock range of substrates 0.03 to 1 mm (0.0012 in – 0.039 in) thick.

### 8 Inking unit and film dampening system

- The speed-compensated Alcolor film dampening unit with Vario function ensures a stable ink-water balance and prevents hickeys. The inking unit with high storage capacity promises stable coloring over the entire production run.

### 9 Ink fountain

- The calibration-free ink fountain with 500 increments per color zone achieves superior quality and can be cleaned quickly and easily thanks to an ink fountain liner.



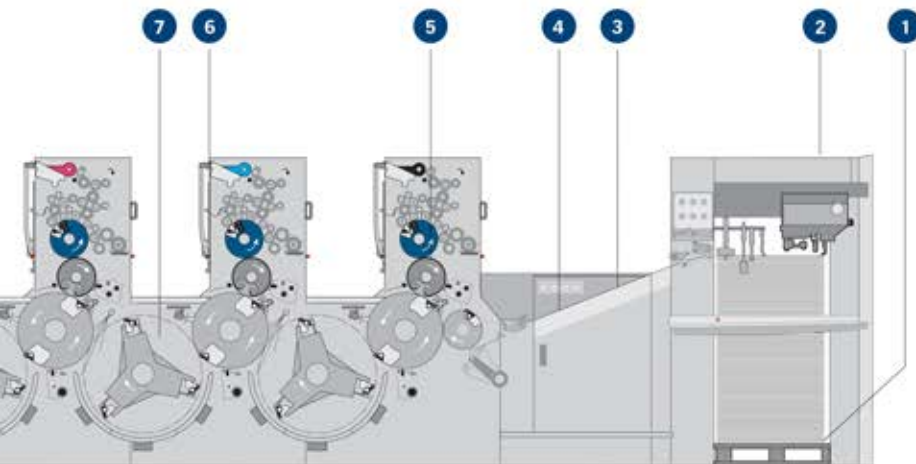
The aerodynamic gripper bar enables high speeds thanks to optimized flow conditions.



The coating unit with chamber blade system ensures a homogeneous coating application.



Super-fast ink changes thanks to ink fountain liner.



**Push to Stop.**  
The key to the  
Smart Print Shop.

#### 10 Coating unit

- A chamber blade system in the coating unit ensures homogeneous coating application. Combination clamps enable rapid changes between spot and full area coating.

#### 11 Dryer

- Various dryer systems are available, depending on the equipment of the Speedmaster CD 102. Short distances between dryer and sheet optimize energy consumption.

#### 12 Sheet brake

- The sheet brakes can be positioned as desired, preventing marks on the sheet. They ensure rapid work-and-turn and short throughput times.

#### 13 StaticStar

- Antistatic equipment minimizes electrostatic charging of sheets and ensures uniform sheet separation and stable sheet travel, even with static materials.

#### 14 Delivery

- The Preset Plus delivery with intuitive navigation via touch-display and jogwheel ensures precise pile formation. It enables problem-free second print runs and postpress.

#### + Prinect Press Center XL 3

- The controlstation Prinect Press Center XL 3 with the intuitive Intellistart 3 operator navigation system for a fast, process-oriented setup and high usability.

#### + Maintenance

- Fully automated central lubrication of the entire machine on the drive and operator sides considerably cuts maintenance times.

→ You can find more about the details of your Speedmaster here: [heidelberg.com/en/cd102](http://heidelberg.com/en/cd102)



WUPA MASCHINEN

## TECHNICAL MANUAL



## CUTTING, CREASING AND EMBOSSING SYSTEM MAGNATOP® PS 3.4 E

## General description of the machine

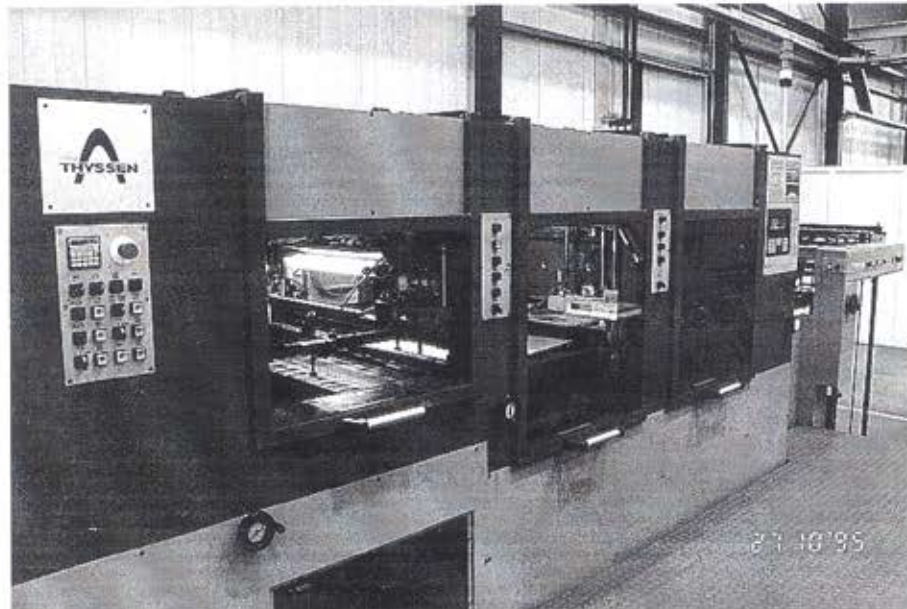
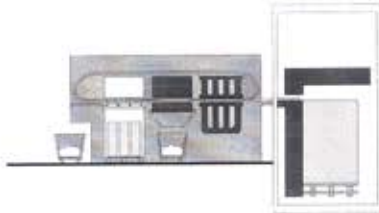


Fig. 1



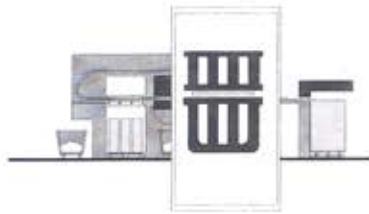
In the **sheet feeder** the sheets are removed by suction air from the feeder pile, checked for double sheets and conveyed over the feed board to the feeder of the cutting system.

Double sheets are registered by an indicator light and the feeder is switched off. After removal of the double sheets the feeder can be switched on again.

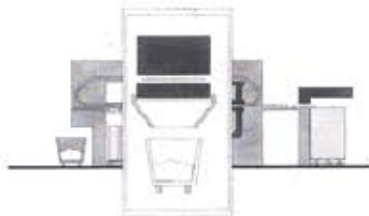


On the **feeding table** the sheet is aligned with front lays in the direction of running. The sheet is aligned with a side lay at right angles to the running direction. This lay can function as a push or pull lay. The position of the sheet is checked at the front lays and side lay by electric sensors and registered by dedicated indicator lights. In the event of a misfed sheet the relevant indicator light does not come on and the feeder is switched off. As the gripper tongues remain open in the event of misfeeding, the sheet cannot enter the machine.

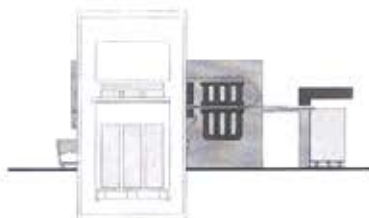
The ingress of foreign matter into the machine is prevented by a deflector roll on the feed board. If the feeder does not supply any sheets, the lay check is switched off by a sheet sensor in order to prevent an unnecessary plant fault.



The properly aligned sheet is removed from the feeding table by an exactly positioned gripper bar and fed into the **cutting station**. After the gripper bar with the sheet stops precisely here, the cutting stroke is executed.



After cutting, the sheet is conveyed into the **stripping station**. The cut sheet then lies on the stripping board. The stripping board is provided with recesses which have the same shape as the waste. The waste is pushed out of the sheet down through these recesses by stripping tools and it falls into a waste container.



Then the sheet passes into the delivery station. Here, the sheets are piled on a pallet. A pile sensor or a light barrier scans the pile surface and automatically lowers the growing pile by means of a pile lift gearbox so that the upper surface of the pile always remains at the same level. A second switch on the pile sensor prevents the pile from entering the gripper path when the downwards control fails. The machine is then switched off immediately.

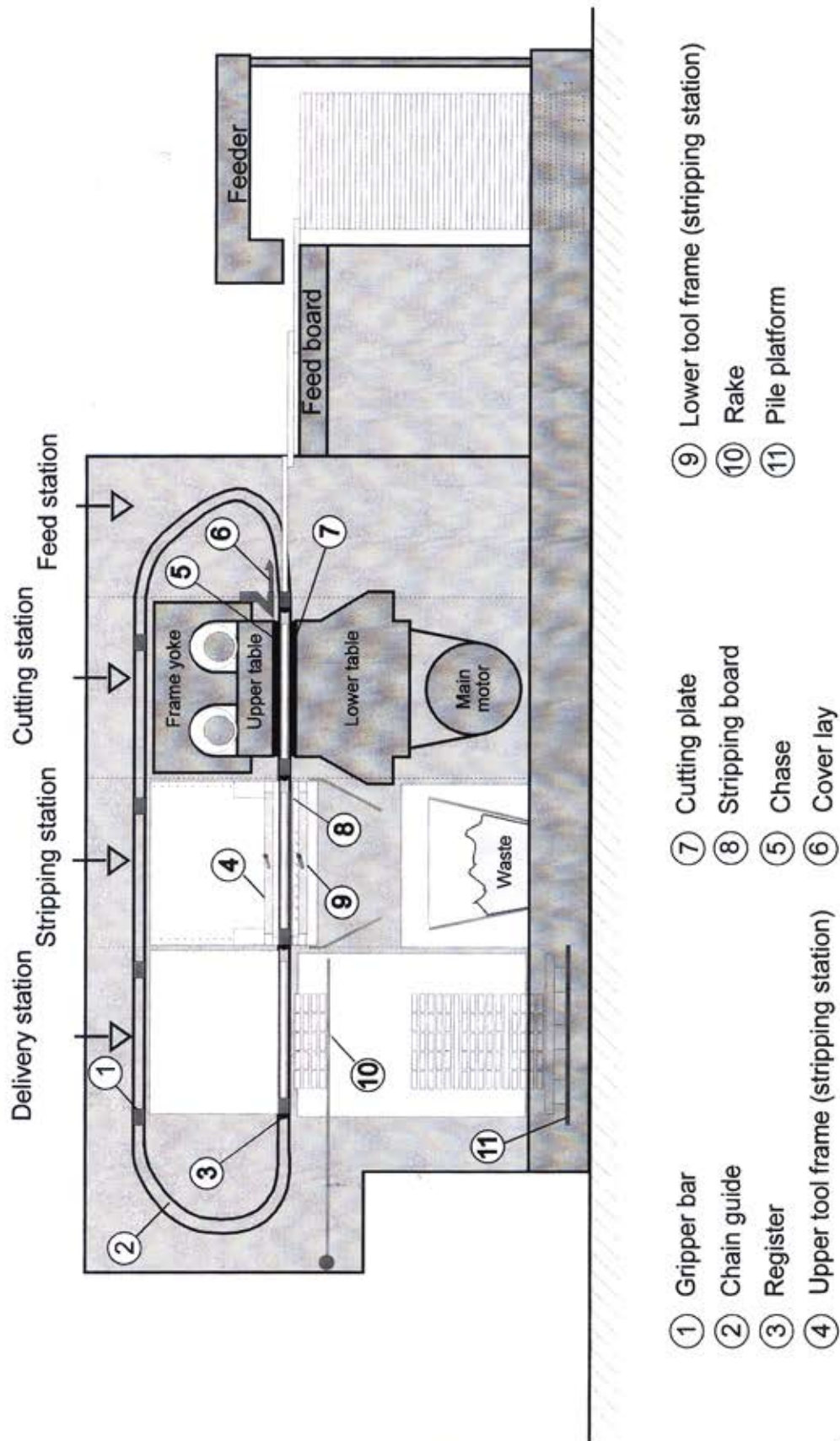
With the machines **NON-STOP pile changes** can be carried out. Depending on the type of machine, there are different possibilities.

#### **Version E with rake:**

The rake is introduced into the delivery area. The following sheets are deposited on the rake as an auxiliary pile. The pile platform is then moved downwards and the full pile removed. An empty pallet is moved under the rake and it is retracted. The auxiliary pile as well as the following sheets are then deposited on the pallet again.



General plan of the machine



- ① Gripper bar
- ② Chain guide
- ③ Register
- ④ Upper tool frame (stripping station)
- ⑤ Chaise
- ⑥ Cover lay
- ⑦ Cutting plate
- ⑧ Stripping board
- ⑨ Lower tool frame (stripping station)
- ⑩ Rake
- ⑪ Pile platform

## Technical specifications

### Dimensions and weights

|   |                  |
|---|------------------|
| Maximum sheet size                            | 740 x 1050 mm    |
| Minimum sheet size                            | 350 x 400 mm     |
| Cutting pressure when running max. sheet size | 2.6 MN           |
| Max. strokes per hour                         | 9000 strokes/h   |
| Length without feeder                         | approx. 4060 mm  |
| Length with feeder                            | approx. 6178 mm  |
| Width   | approx. 2300 mm  |
| Height  | approx. 2470 mm  |
| Weight of machine without feeder              | approx. 19000 kg |
| Weight of feeder                              | 1350 kg          |
| Inside chase dimensions                       | 750 x 1076 mm    |
| Max. cutting form                             | 740 x 1060 mm    |
| Max. cutting surface                          | 727 x 1050 mm    |
| Gripper edge adjustable from                  | 8 - 14 mm        |
| Normal cutting rule height                    | 23.8 mm          |
| Max. height of feeder pile incl. pallet       | 1500 mm          |
| Max. weight of feeder pile incl. pallet       | 1200 kg          |
| Max. height of delivery pile incl. pallet     | 1000 mm          |
| Max. weight of delivery pile incl. pallet     | 1000 kg          |
| Max. height of remaining feeder pile          | 450 mm           |
| Max. weight of remaining feeder pile          | 450 kg           |
| Max. length x width of the delivery pallets   | 800 x 1050 mm    |
| Max. height of the delivery pallets           | 140 mm           |

