

Workshop 15

Automated plate production

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INTERNATIONAL
PRINECT USER DAYS

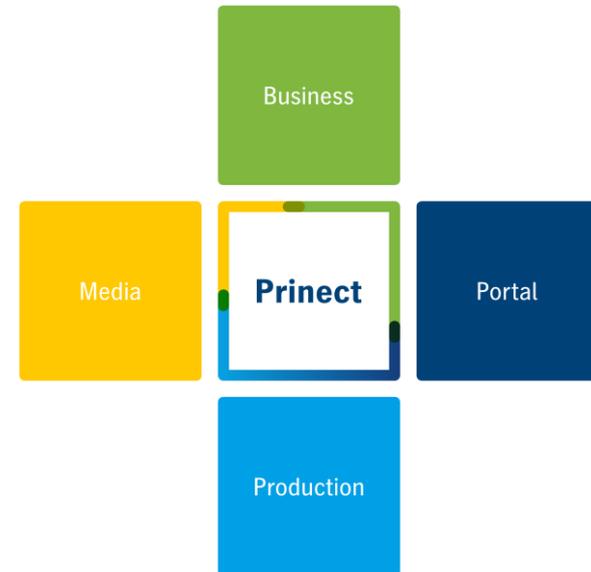
November 15 and 16, 2016





Agenda

1. Advantages of a fully automated plate production
2. Auto Pallet Loader 106 K
3. Auto Pallet Loader 106 G
4. Nela – automated bending, sorting, stacking and storage
5. The integration into Prinect





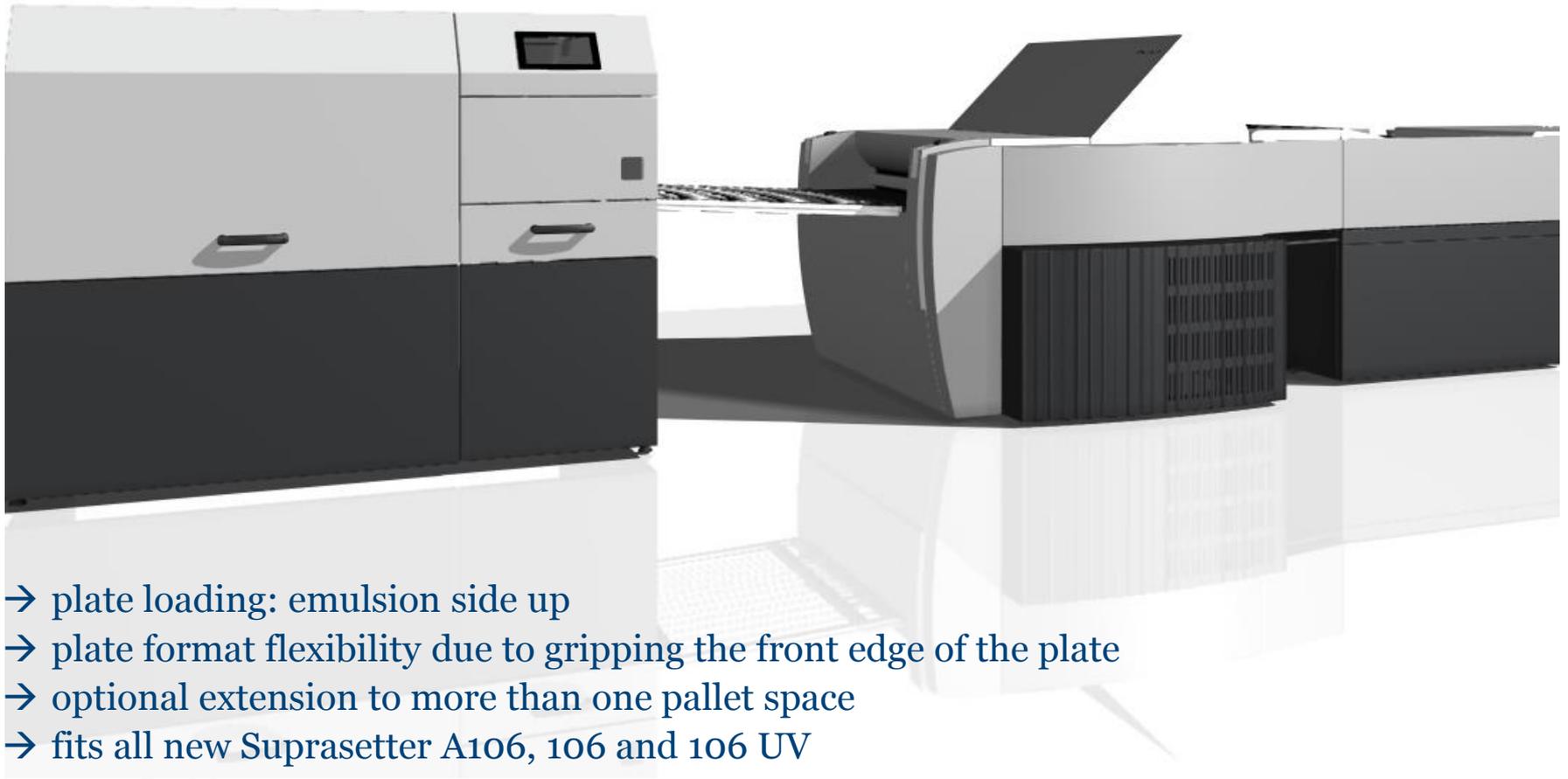
Advantages of a fully automated plate production



- fully automated production of printing plates
- seamless integration into Prinect workflow
- no operator required for > 3 shifts
- ergonomic pallet loading, less waste
- no manual handling of plates, less scratches
- full flexibility with up to 3 different plate formats and add. smart plate handling
- major line components connected with remote service, less service cost
- complete production line serviced by Heidelberg



Auto Pallet Loader 106 K

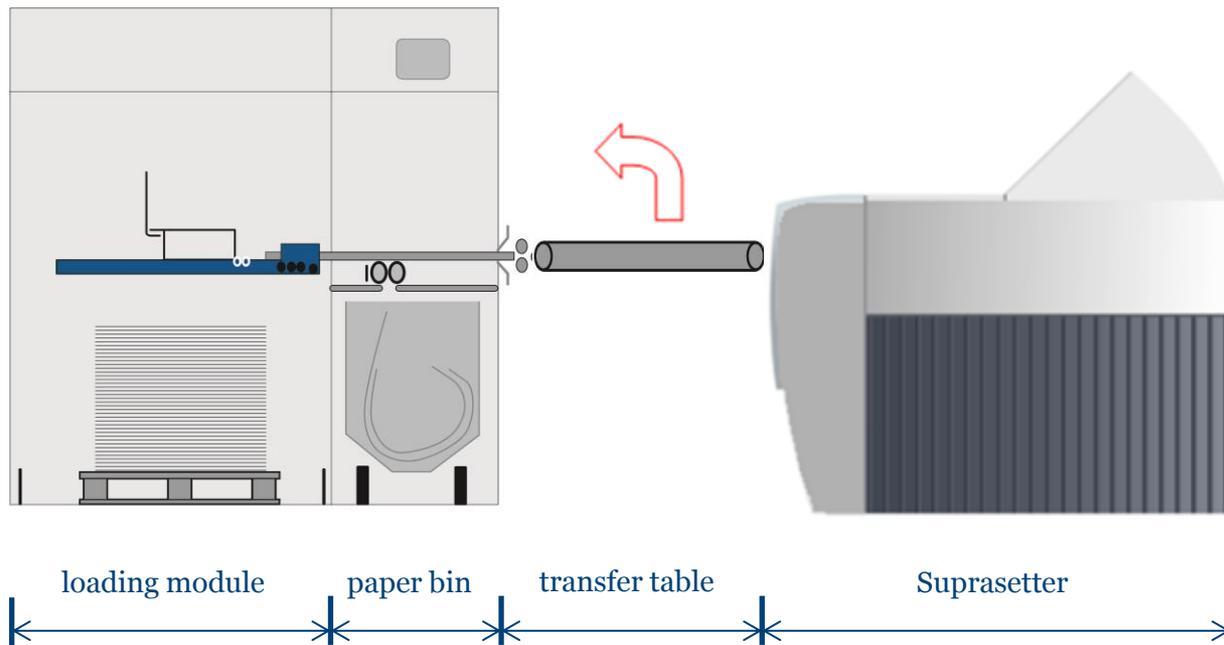


- plate loading: emulsion side up
- plate format flexibility due to gripping the front edge of the plate
- optional extension to more than one pallet space
- fits all new Suprasetter A106, 106 and 106 UV
- retrofitable



Auto Pallet Loader 106 K

Cross view





Auto Pallet Loader 106 K Plate Specification

plate specification	minimum	maximum
plate format	605 x 745 mm	930 x 1.140 mm
plate surface	up	

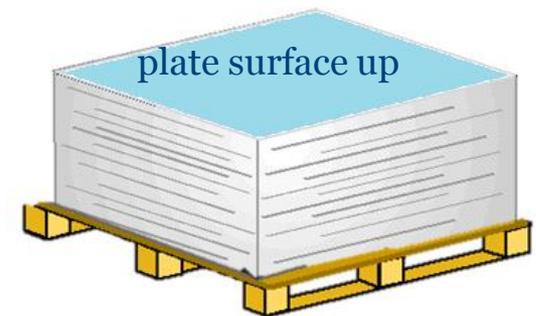
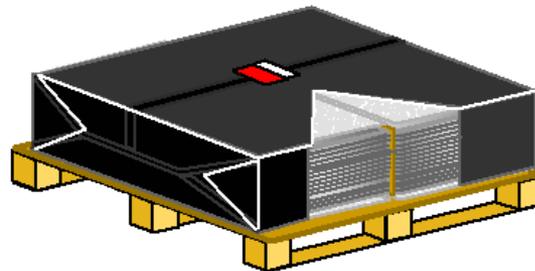


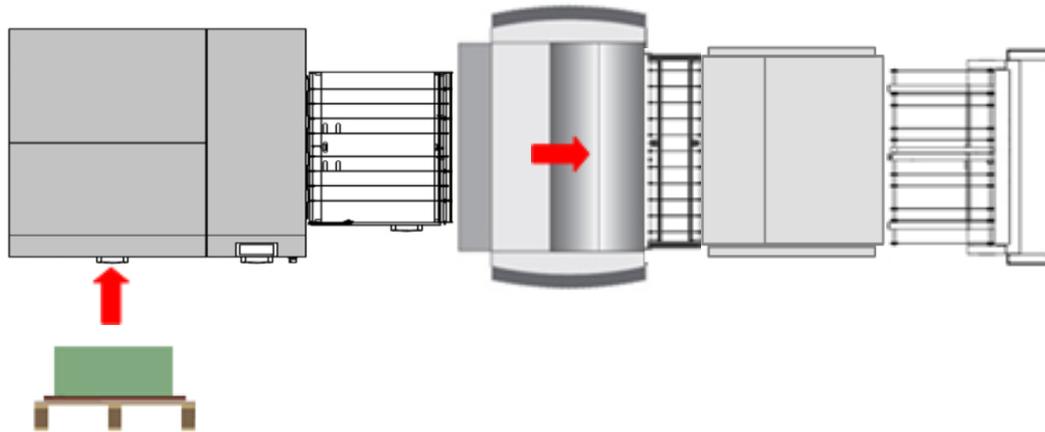
plate thickness	number of plates on the pallet
0,3 mm	1.200



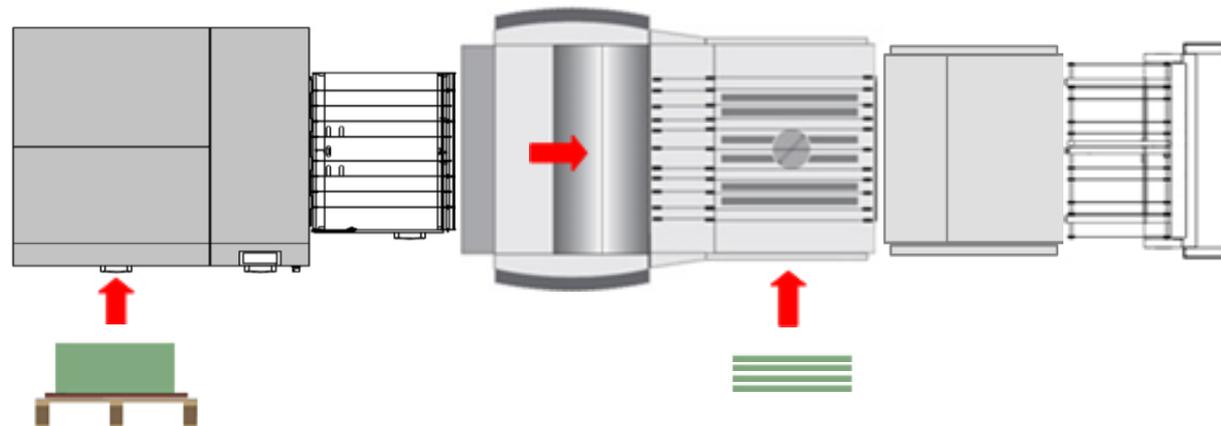
Auto Pallet Loader 106 K

Loading area „right side“

Suprasetter with Auto Pallet Loader 106 K



Suprasetter with ACL/DCL and Auto Pallet Loader 106 K





Auto Pallet Loader 106 G

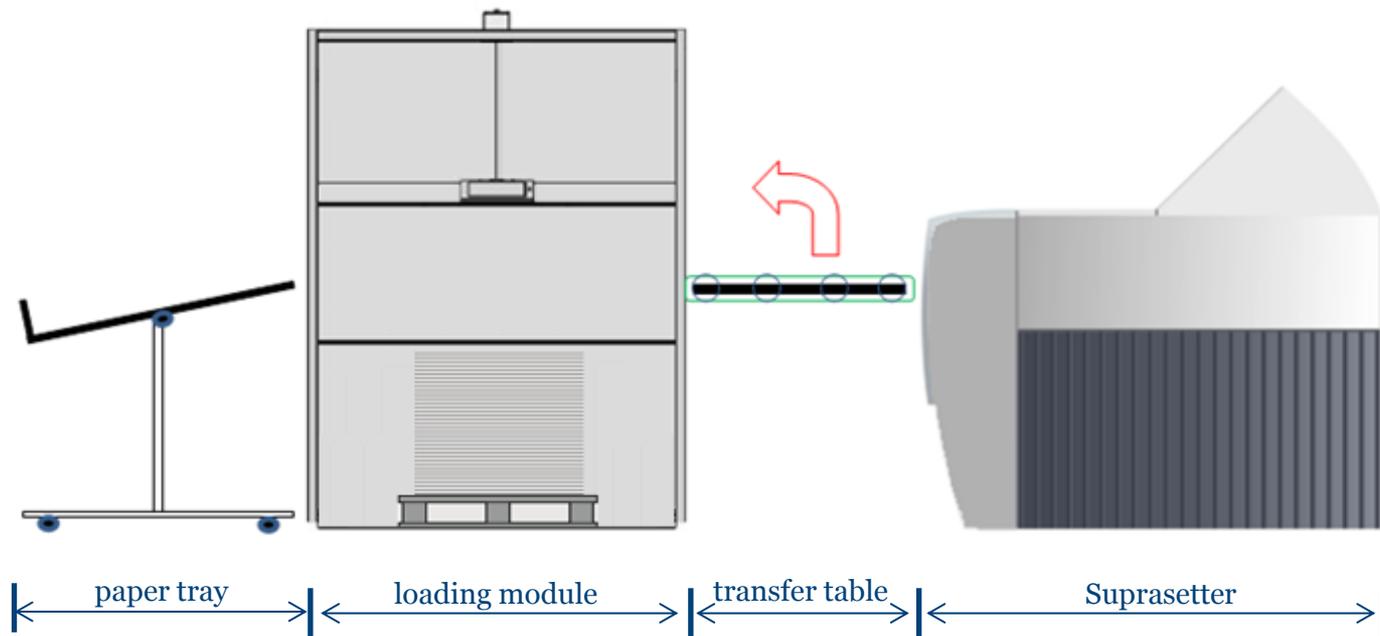


- plate loading: emulsion side down
- absolutely reliable
- perfect price/performance ratio
- fits all new Supra A106, 106 and 106 UV
- retrofitable



Auto Pallet Loader 106 G

Cross View





Auto Pallet Loader 106 G Plate Specification

plate specifications	minimum	maximum
plate format	790 x 1.030 mm	930 x 1.140 mm
plate surface	down	

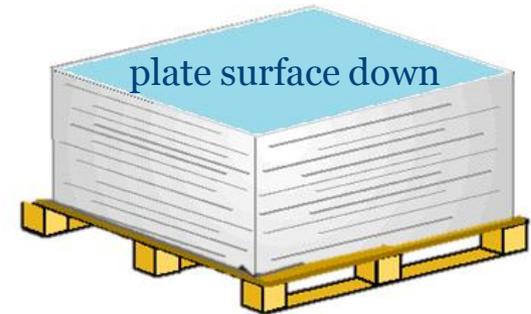
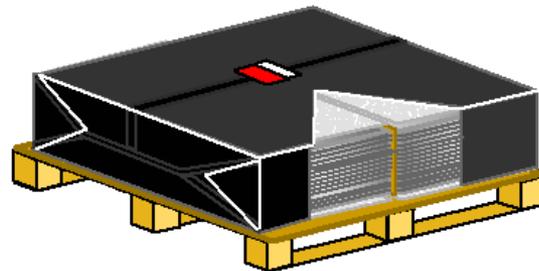
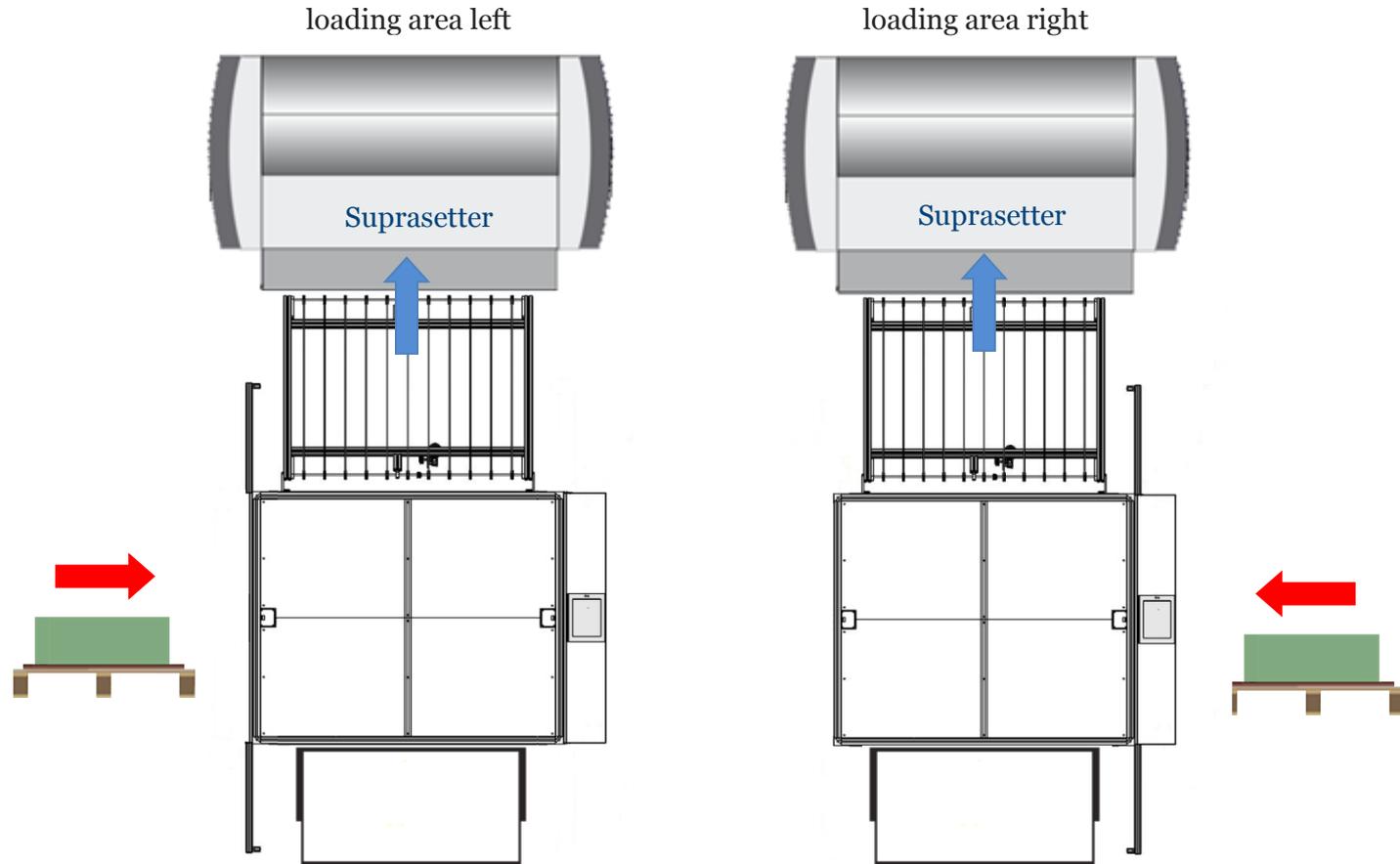


plate thickness	pieces
0,3 mm	1.200 pcs



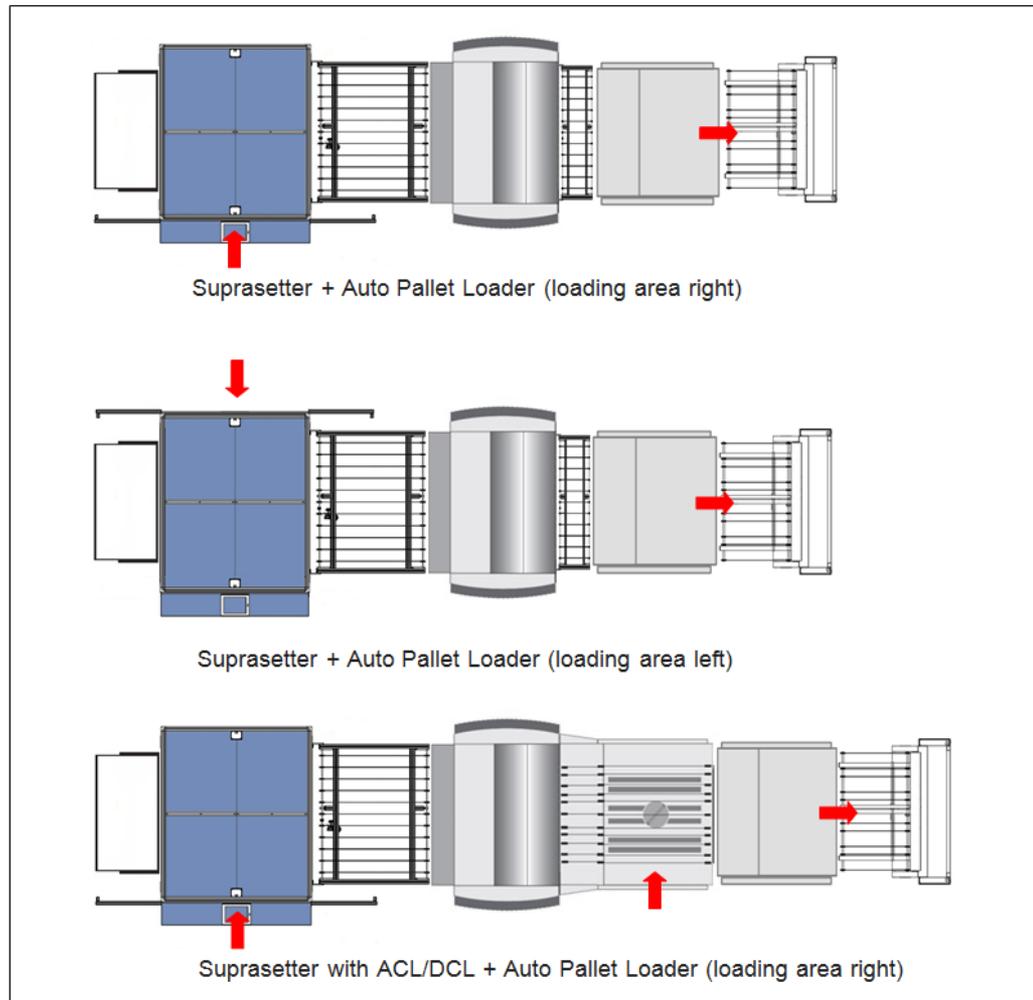
Auto Pallet Loader 106 G

Loading Areas





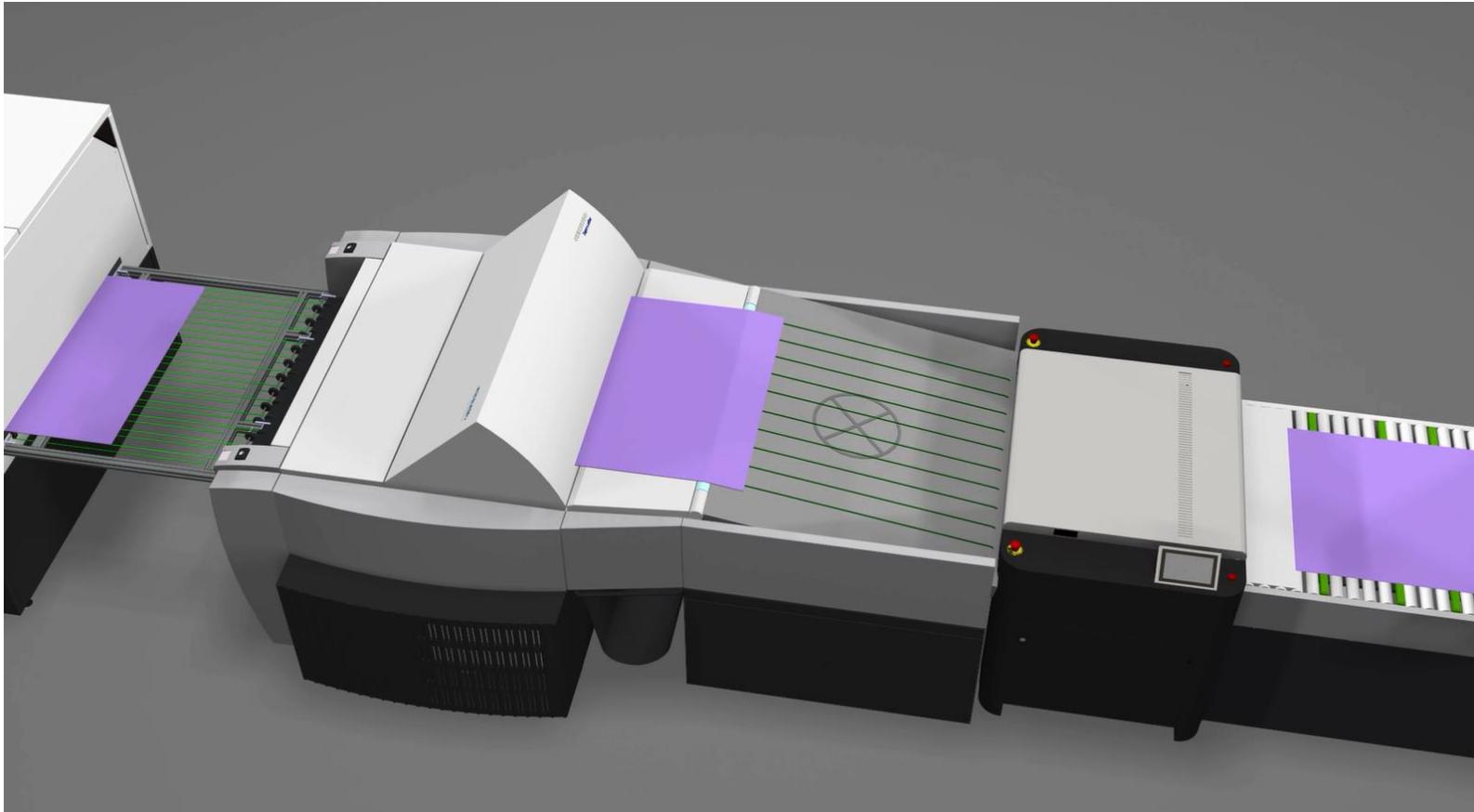
Auto Pallet Loader 106 G with and without ACL/DCL





Nela

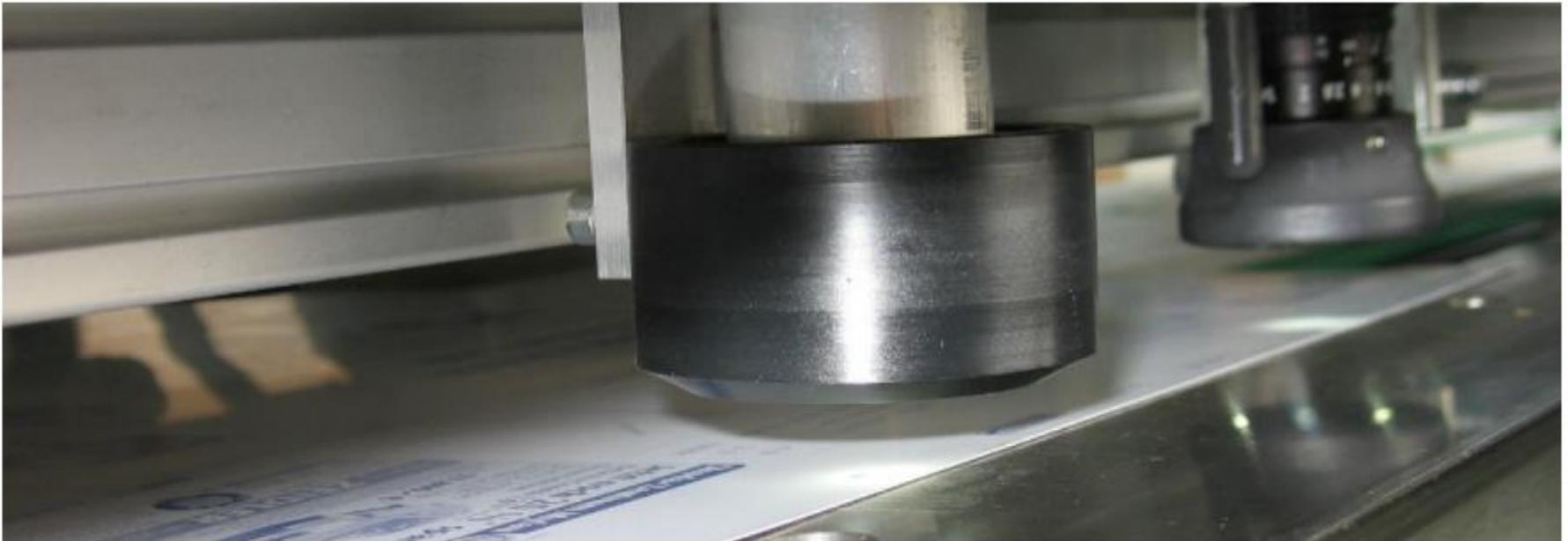
Fully automated plate production



<file:///ceu.corp.heidelberg.com/workgroups-hei/S-CS/S-CS/EasySales/CtP/CtPAutomationNela.mp4>

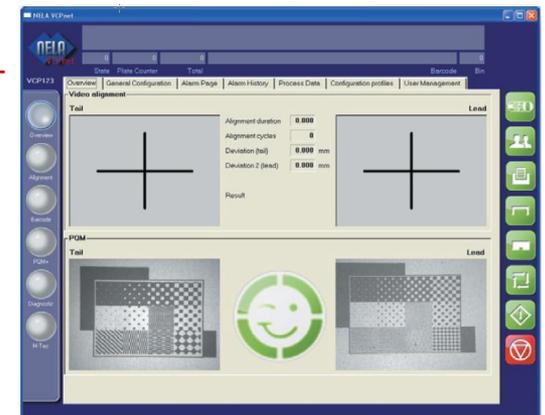


Barcode Reader & PQM+



PQM+ Plate Quality Measurement

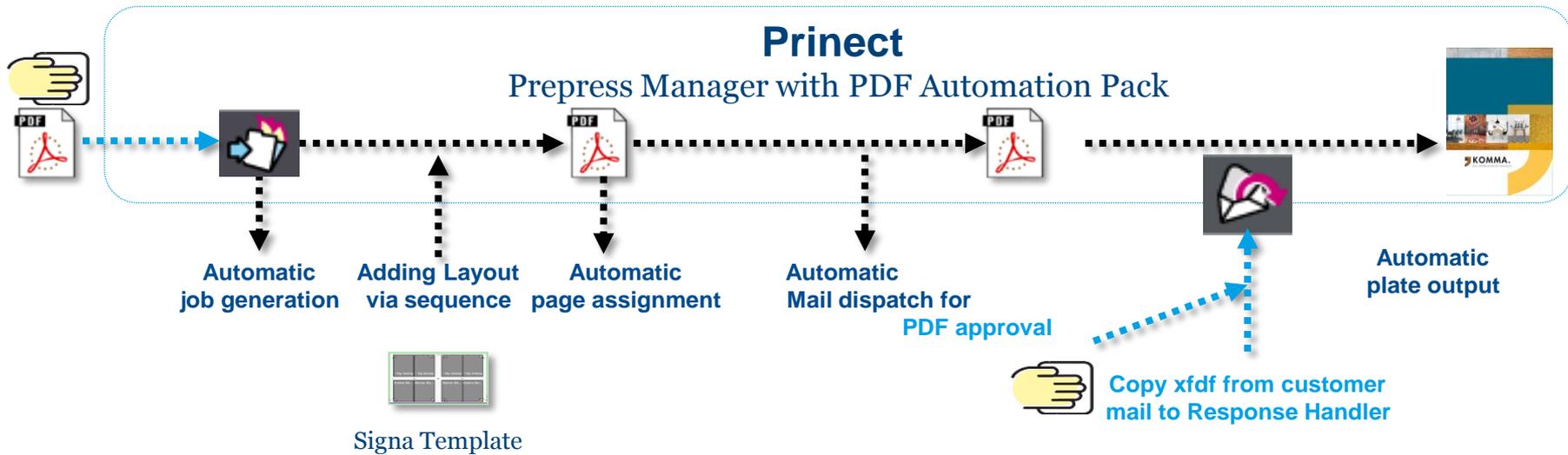
With NELA PQM+ you can check the imaging quality of your printing plates automatically in the bending machines or on the conveyor line. A simple and effective solution that ensures that printing plates with insufficient quality never reach your press. This makes PQM+ another important component of your plate automation system.





Automated Plate Production

Prinect with PDF Automation Pack



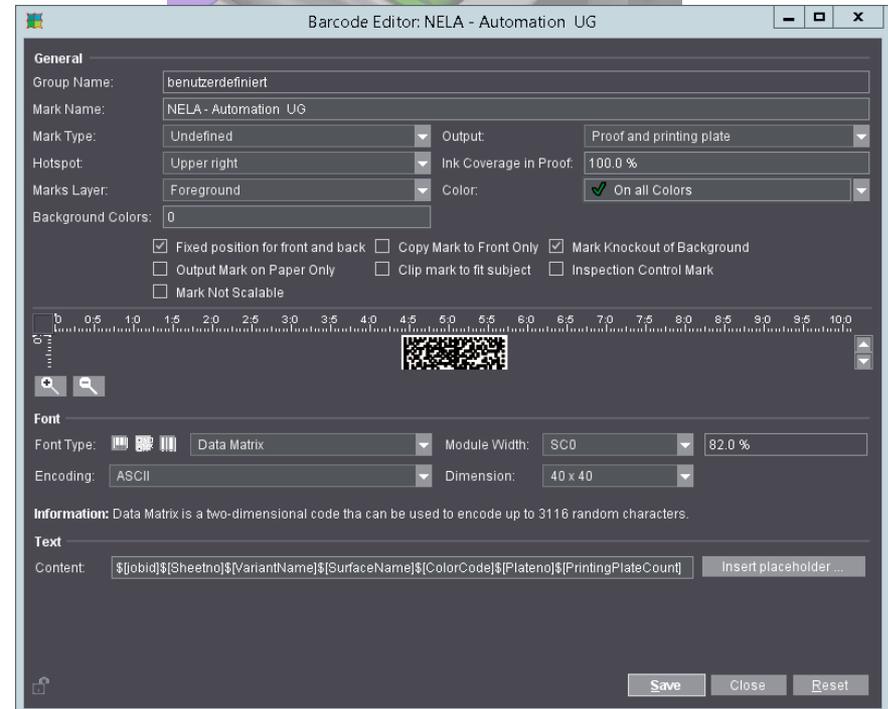
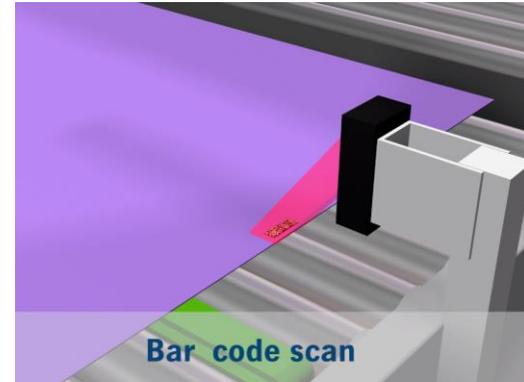


Nela Plate Flow with Barcode from Prinect

→ "PlateFlow" recognizes imaged plates via a Datamatrix code on plate

This code can be built by several variables defined in Signa Station Barcode Editor and replaced by Prinect to automatically generate the QR-Code while imaging

- $[\text{JobID:6}]$ (034567)
- $[\text{Sheetno:4}]$ (0003)
- $[\text{VariantName:2}]$ (01)
- $[\text{SurfaceName:1}]$ (F)
- $[\text{ColorCode:-1}]$ (C)
- $[\text{Plateno:-1}]$ (1)
- $[\text{PrintingPlateCount:1}]$ (4)
- **Beispielergebnis (als Text):**
034567000301FC14





Detail: **Barcode definition** in Prinect Signa Station

- "[JobID:6] (034567)
- "[Sheetno:4] (0003)
- "[VariantName:2] (01)
- "[SurfaceName:1] (F)
- "[ColorCode:-1] (C)
- "[Plateno:-1] (1)
- "[PrintingPlateCount:1] (4)

→ Result of this example (as text): 034567000301FC14

Information: Data Matrix is a two-dimensional code that can be used to encode up to 3116 random characters.

Text

Content:

[Insert placeholder ...](#)

SF-Bender



SF-Bender

The SF-Bender is a device that has been specifically designed for the needs of sheet-fed printers. The plates are registered by means of an electronically controlled stop pin system that matches with the stop system of the Ctp-line, providing perfect print quality.

The SF-Bender bends the plates according to the requirements defined by the press manufacturer, and it is possible to bend several plate formats with the same bending configuration. A second bending configuration can be integrated upon request.

The bending system can be combined with any Ctp-system to create a fully automatic and economic plate processing line. The basic package includes an infeed conveyor and a single position stacker with plate trolley that stacks the plates without scratching. Custom-designed conveyors and additional stackers for automated plate sorting are also available from NELA, making the SF-Bender a solid and flexible choice for the automation of your plate production.

Your advantage: efficient and cost-saving plate production by eliminating manual handling – no more scratching of plates!



Plate Sorting/Stacking



Plate Sorting for Sheet-fed Printers

Fully automatic pre-sorting of plates is a decisive factor when set-up times for sheet-fed presses are constantly reduced. Faster printing presses, shorter print runs, or a combination of presses with different plate formats – given these challenges it is essential for an efficient production process that the printing plates required for the next job are provided as efficiently and as carefully as possible.

Mistakes that occur during the (manual) handling and sorting of plates for the next print jobs are avoided, operators are left with more time for other tasks. Another advantage is the careful and scratch-free handling of the plates, especially for large plate formats. From imaging to transporting complete plate sets to the press - manual handling through operators is eliminated and scratches and other damages become a thing of the past.



Indexer. Plate Storage.



Indexer

The NELA indexer is a high-performance plate storage system for pre-sortation and storage of plate sets for entire print jobs. Thanks to the careful handling and separate storage of the plates there will be absolutely no damage or scratching of plates. When the carts of the Indexer are fully loaded they can be rolled to the press, where the plates can be retrieved easily. The plates are in a horizontal position during transport.

A large screen provides an overview of the status of the plates that are currently produced and of the contents of the plate carts. It is also shown whether a set of plates for one print job is already complete.

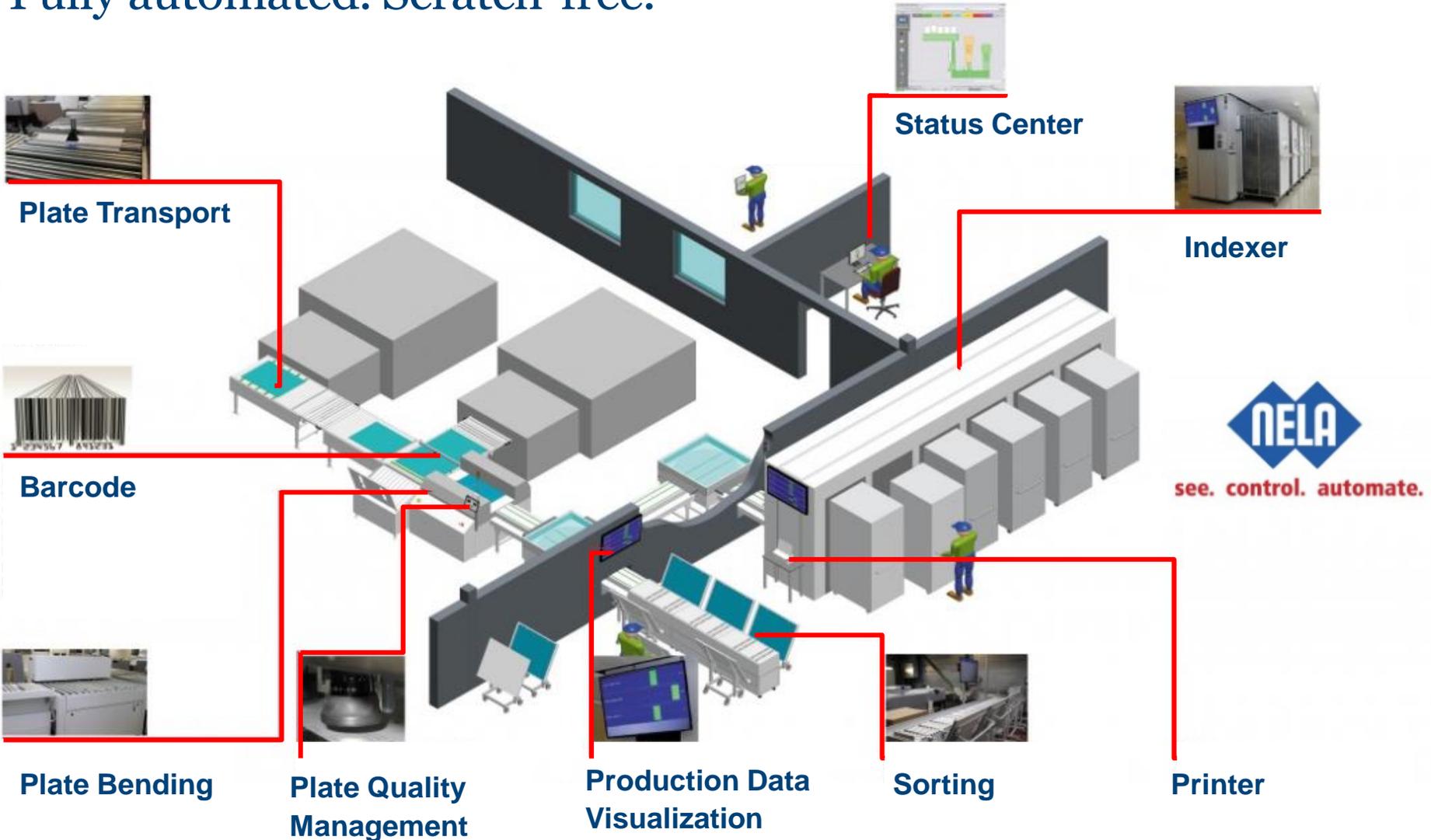
The Indexer will be adapted to your plate size and volume and it can be integrated in existing NELA punch/bender lines.





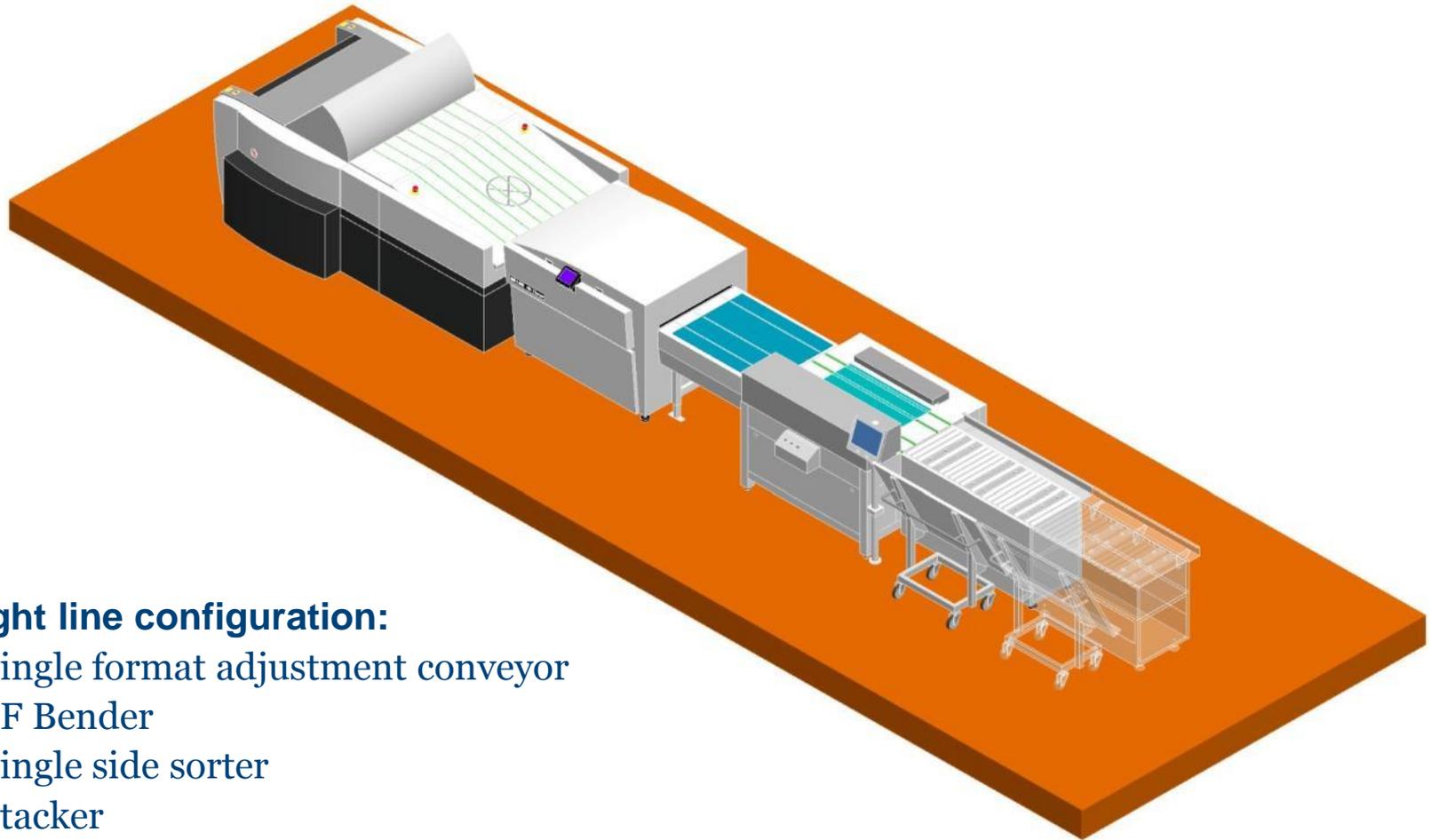
Plate bending, sorting and stacking/storing

Fully automated. Scratch-free.





Nela/HDM standard configurations

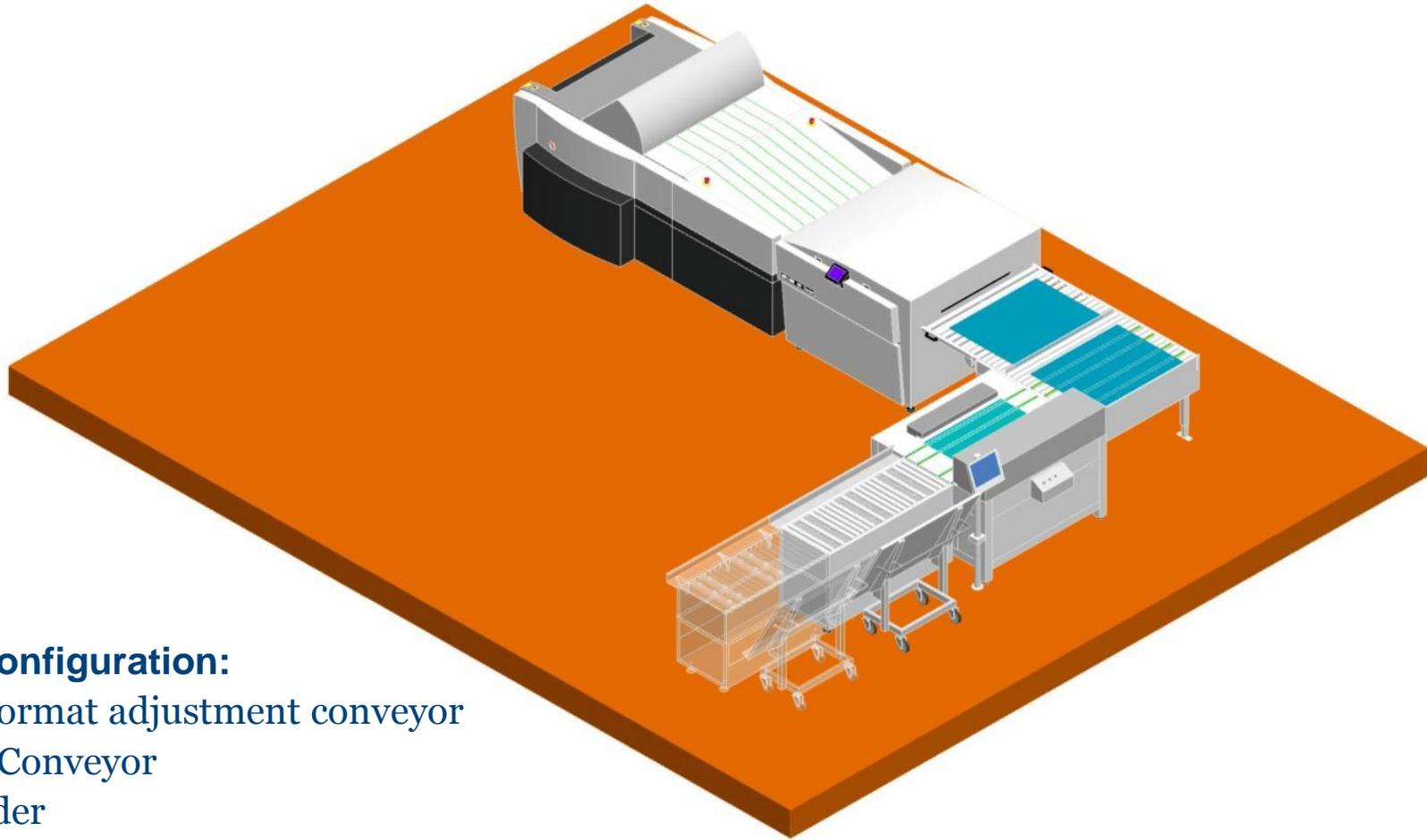


Straight line configuration:

- 1 Single format adjustment conveyor
- 1 SF Bender
- 1 Single side sorter
- 1 Stacker



Nela/HDM standard configurations

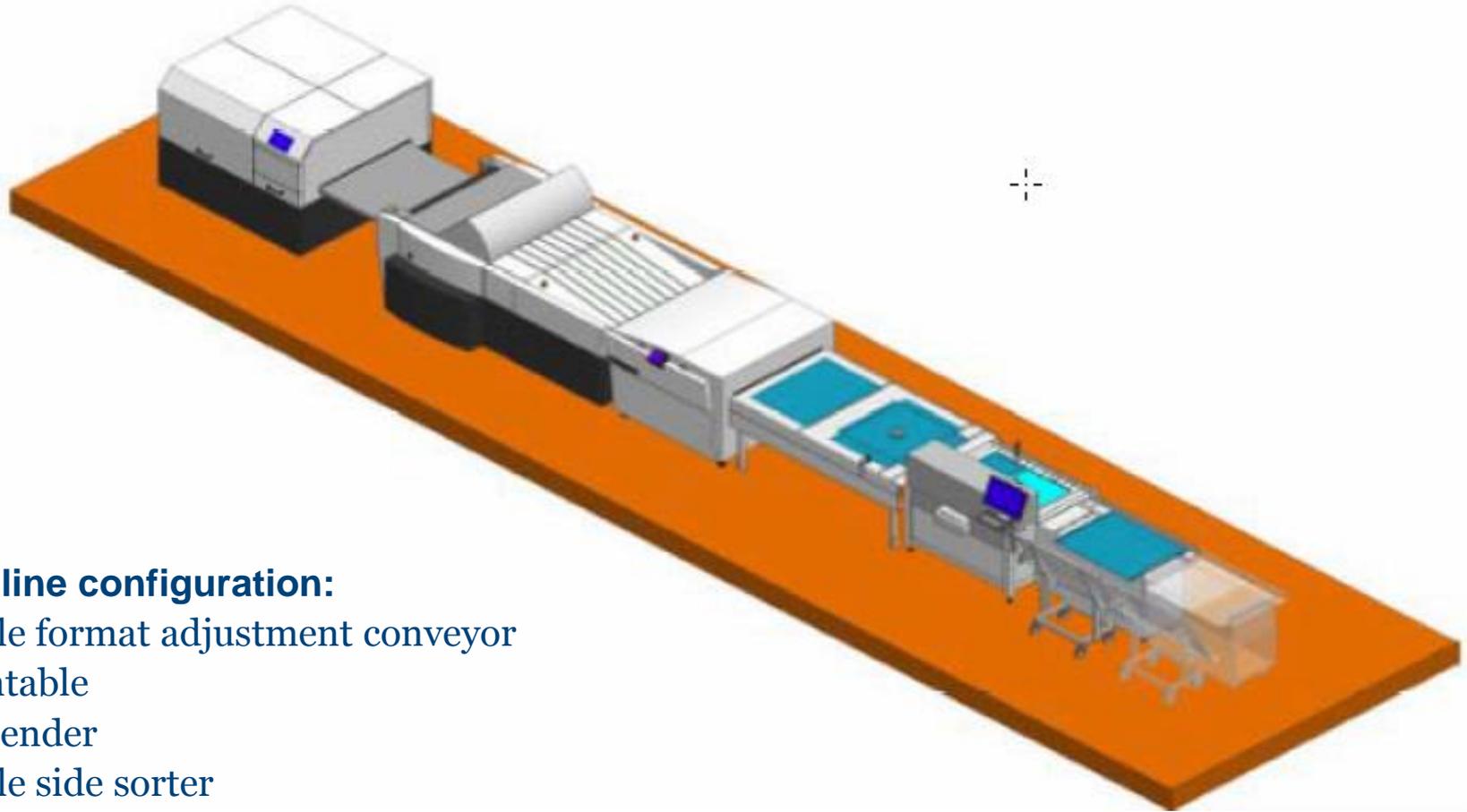


L-shaped configuration:

- 1 Single format adjustment conveyor
- 1 Corner Conveyor
- 1 SF Bender
- 1 Single side sorter
- 1 Stacker



Nela/HDM standard configurations



Straight line configuration:

- 1 Single format adjustment conveyor
- 1 Turntable
- 1 SF Bender
- 1 Single side sorter
- 1 Stacker



Nela vs. HDM Design





Does investment in CtP automation pay itself off?

ROI calculation CtP Automation

HEIDELBERG

328 plates / day

manual handling with ACL/DCL	
imaging plates	inside CtP
punching plates	inside CtP (optional)
placing plates	on Stacker
load ACL/DCL 1,5 x day	313 sec.
bending	60 sec.
underlay papier	15 sec.
write and stick process slip	15 sec.
sort plate for print jobs	20 sec.
load trolley	10 sec.
carry trolley to printing machine	unchanged

Heidelberg CtP Automation with APL	
imaging plates	inside CtP
punching plates	inside CtP
placing plates	not required
load APL 0,3 x day	82 sec.
bending	automatic
underlay papier	not necessary
write and stick process slip	automatic
sort plate for print jobs	automatic
load trolley	automatic
carry trolley to printing machine	unchanged

Comparison man. handling with CtP Automation	
time saving	660 min/day 11,0 h/day
cost saving	2,18 EUR per plate
Heidelberg CtP Automation	715 EUR per day 214.506 EUR per year
Investment	450.000 EUR
ROI after	2,1 years

