

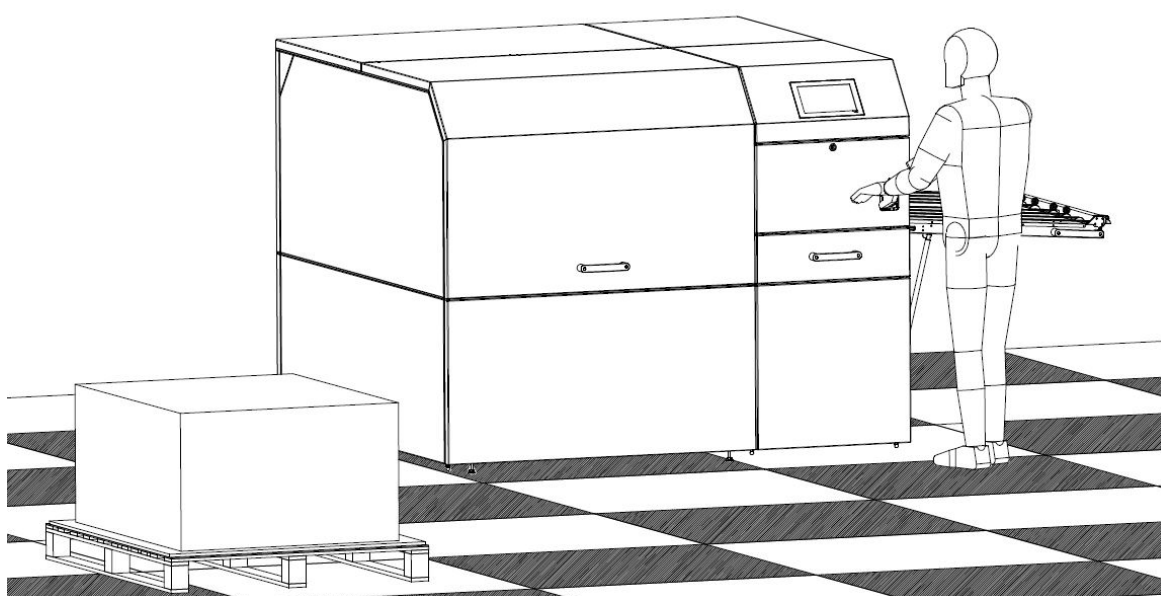
# OPERATING MANUAL

(Original operating manual)

## Automatic Pallet Loader APL-106

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Please keep this manual for future use!

**HEIDELBERG**

Machine / machine line: Automatic Pallet Loader APL 106  
Year of construction: 2018 following

Version 19

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#### Document history

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1	August 2016	First edition, only German.	Richter	Not relased
2	September 2016	Maintance intervals adapted.	Richter	Released
3	February 2017	All Screenshots in English.	Richter	Released
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5	February 2019	Pallet and plate data more detiled.Cassette safety (5,12), extension module and cassette operation (44,46ff).	Richter	Released
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r1	April 2019	Maintenance intervals changed		
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# 1 Introduction

This operating manual provides you with all the information required for problem-free operation of the Automatic Pallet Loader APL-106 (referred to as "machine" hereinafter).

The function of the machine is to separate, align and convey printing plates to the downstream machine line module "Recorder".

This operating manual must be read, understood and applied by all persons instructed to carry out the

- transport,
- installation and assembly,
- first start-up/commissioning,
- operation,
- maintenance and cleaning,
- malfunction remedy,
- de-commissioning and dismantling
- and disposal

of the machine. This applies in particular to the specified safety instructions.

Studying the operating manual will enable you to correctly

- install,
- connect,
- operate,
- maintain
- and dispose of the machine.

Observe the regulations generally valid by law and other binding regulations regarding accident prevention and environmental protection of the country of use in addition to this operating manual.

## 1.1 Means of representation

Statements in this installation manual intended as information on and direct warning of hazards are identified as follows:



### DANGER

This warning describes a hazard with a high degree of risk, which if not avoided, will lead to death or serious injury.



### WARNING

This warning describes a hazard with a medium degree of risk, which if not avoided, may lead to death or serious injury.



### CAUTION

This warning describes a hazard with a low degree of risk, which if not avoided, may lead to minor or moderate injury.

### NOTE

This warning describes a hazard with a low degree of risk, which if not avoided, may lead to damage to assets.



The information symbol marks useful information.

Furthermore, the following text features are used:

- Dashes precede list items.
- Bullets precede instructions describing actions that are to be carried out in the specified order.
- " " Text in inverted commas refers to other chapters or sections.
- [ ] Text in square brackets describes touch buttons to be pressed on the operating panel.

### Symbols used in this manual

Particular hazards are additionally marked in warnings as follows:



#### **Danger to life due to electric shock**

This symbol warns of the life-threatening hazard of electrical current.

Contact with live components causes imminent danger to life.



#### **Warning: suspended load**

This symbol warns of the hazards of standing/working under suspended loads.

## 1.2 Warranty and liability

The obligations agreed to in the delivery contract, the General Terms and Conditions, as well as the machine delivery terms and the legal regulations valid at the time of the conclusion of the contract apply.

All the information and instructions in this operating manual were compiled taking the valid standards and regulations, state of the art and our many years of experience and expertise into consideration.

Warranty and liability claims on the basis of personal injury and damage to assets are excluded if they can be traced back to one or several of the following causes:

- Improper use or use other than that intended of the machine;
- incorrect installation, assembly, operation, maintenance, cleaning, disassembly;
- non-observance of the operating manual and information in the operating manual regarding installation, assembly, operation, maintenance, cleaning, disassembly, disposal;
- use of insufficiently qualified or insufficiently instructed/trained personnel;
- structural changes to the machine (no conversions or any other changes to the machine may be performed without the prior written consent of Krause-Biagosch GmbH. Any infringement will result in loss of the machine's EC conformity);
- incorrectly carried out repairs;
- use of non-approved spare parts and/or use of spare parts that do not meet the technical requirements;
- events of catastrophe caused by foreign objects and force majeure.

We reserve all rights to make technical changes within the framework of improvement of the performance characteristics and further development.

## 1.3 Copyright

This operating manual is protected by copyright and is exclusively intended for internal purposes.

Handing over the operating manual to third parties, making copies of any kind – including excerpts – as well as using and/or disclosing the contents are prohibited unless expressly consented to in writing by Krause-Biagosch GmbH, except for internal purposes.

Any infringement will result in liability for damages. We reserve the right to assert further claims.

## 1.4 Terms of guarantee

The terms of guarantee are contained in the General Business Terms of Krause-Biagosch GmbH.

## 1.5 Service / customer service



In the event of problems please contact the representative in charge.



## 2 Safety



### WARNING

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**Non-observance of the following safety information may have serious consequences:**

- Danger to persons resulting from electrical, pneumatic or mechanical influences;
- failure of important machine functions.

Thoroughly read all the safety and warning information in this section before commencing with the transport, installation, connection and commissioning/start-up of this machine.

In addition to the instructions contained in this operating manual, also observe the universally valid safety and accident prevention regulations.

In addition to the instructions contained in this operating manual, the user/owner must adhere to the existing national work, operating and safety regulations. Also adhere to the existing internal works regulations.

### 2.1 Intended use

The operational safety of the machine is only guaranteed if it is used in accordance with its intended use.

The machine is exclusively intended for automatically loading printing plates into the downstream machine line module "Recorder".

The machine is not intended for any use other than that specified here, any other use is deemed as non-intended use. The following is forbidden in particular:

- To transport persons with the machine;
- to convey products other than those specified;
- to convey products with different weights than those specified.

The intended use also includes:

- Using energy supplies in accordance with the valid safety regulations;
- adhering to the specified operating conditions.
- adhering to the inspection and maintenance intervals;

- using consumables and auxiliary substances in accordance with the valid safety regulations;
- adhering to the specified operating conditions.

The technical specifications specified in the technical data must be adhered to without exception.



Only use the machine in accordance with its intended use, otherwise safe operation will not be guaranteed.

The manufacturer declines any responsibility for injuries and damage to assets resulting from any use other than that intended. The user/owner of the machine line alone is fully liable in this respect!

### **2.1.1 Constructional modifications to the machine**

The design and manufacturer's acceptance are based on the Product Safety Act (ProdSG). No modifications, attachments to or conversions of the machine may be carried out without the prior written permission of Krause-Biagosch GmbH.

Non-compliance will result in loss of the machine's EC conformity. The manufacturer's warranty will become null and void. This also applies to welding work on load-bearing parts.

Immediately replace components that are not in perfect condition.

Only use original spare parts/wear parts/accessory parts. These parts are specifically designed for the machine. If non-original parts/parts procured from other sources are used, it cannot be guaranteed that they are properly designed and manufactured with regard to stress and safety.

Parts and special equipment not supplied by Krause-Biagosch GmbH are not approved for use on the machine.

### 2.1.2 Foreseeable misuse



#### WARNING

---

Any additional use and/or type of use of the machine other than the intended use can lead to serious injuries!

- Only use the machine in accordance with its intended use.
- Only load the machine with the designated printing plates.

## 2.2 Personal requirements



### WARNING

#### **Risk of injury in the event of insufficient qualifications!**

Incorrect handling can cause serious injuries to persons and damage to assets.

- Therefore restrict all work to suitably qualified personnel.

Ensure that the machine is only transported, installed, set up and operated by personnel specifically qualified and/or instructed to do so. These persons must be familiar with the operating manual and act accordingly. The respective duties and responsibilities of the personnel must be clearly defined.

The following qualifications are specified in the operating manual for various areas of activity:

#### **Instructed personnel**

Instructed personnel have been instructed by the user/owner or by qualified personnel regarding the tasks to be performed and the possible hazards caused by incorrect behaviour.

#### **Qualified personnel**

Qualified personnel, due to their specialist training, knowledge and experience, and knowledge of the pertinent regulations, are able to perform the work they are commissioned with and independently recognize and avoid potential hazards.

#### **Electricians**

Electricians, due to their specialist training, knowledge and experience, as well as knowledge of the pertinent standards and regulations, are able to carry out work on the electrical equipment and independently recognise and avoid potential hazards.

Qualified electricians are trained for the specific operating site at which they work, and are familiar with the relevant standards and regulations pertaining to this site.

### Specialist pneumatic personnel

Specialist pneumatic personnel, due to their specialist training, knowledge and experience are able to monitor and maintain pneumatic equipment and systems. They can independently recognise and avoid potential hazards.

Specialist pneumatic personnel are trained for the specific operating site at which they work, and are familiar with the relevant standards and regulations pertaining to this site.

### 2.2.1 Obligations of the personnel

Personnel may only include persons who can be expected to carry out their work reliably. Do not allow persons whose reactions are negatively affected by drugs, alcohol, medication or similar to work on the machine.

All persons instructed to work on the machine undertake, prior to commencing work,

- to observe the basic directives concerning health and safety at work and accident prevention,
- to read the safety instructions and the warnings contained in this operating manual and confirm this with their signature, acknowledging that they have understood the information.

### 2.2.2 Unauthorised persons



#### WARNING

---

##### **Danger for unauthorised persons!**

Unauthorised persons who do not meet the requirements described here with respect to the qualifications are not familiar with the hazards in the work area.

- Keep unauthorised persons away from the work area.
- If in doubt, speak to the unauthorised persons and show them out of the work area.
- Interrupt the work while unauthorised persons are in the work area.

### 2.2.3 Instruction

The personnel require regular instruction and training by the owner/user. This instruction and training must be recorded in writing for monitoring purposes.

## 2.3 General safety information

- The machine may only be transported, installed, set up and commissioned/started up after the personnel have familiarised themselves with this operating manual.
- Only use the machine in accordance with its intended use (see section "2.1 Intended use").
- Keep the work area of the machine clean and tidy at all times to avoid hazards caused by dirt and parts lying around.
- Keep all safety and hazard information/signs on the machine in legible condition and replace them when necessary.
- Restrict all work on the machine to qualified or instructed personnel (see Section "2.2 Personal requirements").

## 2.4 Safety measures for environmental protection

Adhere to the regulations for waste avoidance and for correct waste recycling and disposal.

In particular during installation work as well as during decommissioning, disassembly and disposal ensure that substances hazardous to groundwater such as grease, oil, solvent-containing cleaning agents or similar do not contaminate the ground or enter the sewage system. Collect, transport, store and dispose of these substances in suitable containers in accordance with the national regulations.

## 2.5 Special hazard warnings

### 2.5.1 Symbols used on the machine



**Danger to life due to electric shock**

This symbol warns of the life-threatening hazard of electrical current. Contact with live components causes imminent danger to life.



**Warning: danger of hand injury / crushing hazard**

This symbol warns of the danger of hand injuries. Your hands could be crushed, pulled in or otherwise injured.



**Warning: danger of eye damage / laser radiation**

This symbol warns of the danger of eye damage from laser radiation. Laser radiation entering the eye can lead to irreparable damage to the eye.



**Warnung: Maloperation**

This symbol warns of danger due to maloperation for example when loading the cassettes.



Keep all safety and hazard information/signs on the machine in legible condition and replace them when necessary.

## 2.5.2 Safty sticker on the machine

### Overview

There are safety stickers on the covers of the machine:

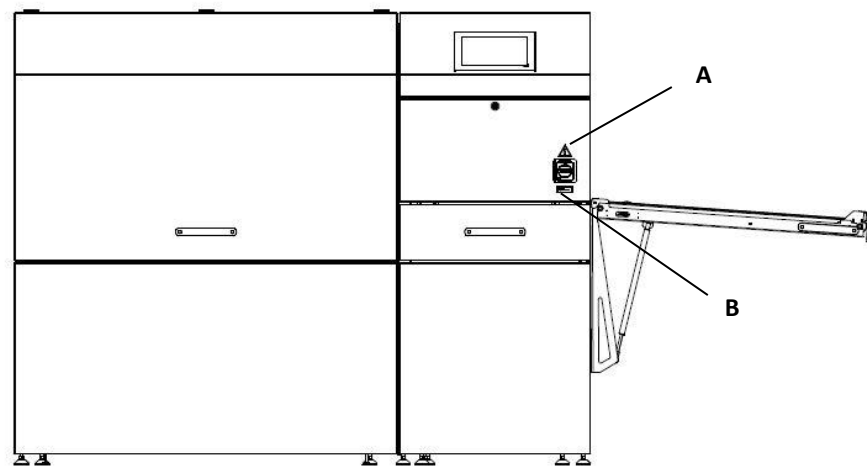




Fig. 2: Safety sticker on the machine

Position	Safety Labels	meaning
A		Danger to life due to electric shock.
B		Class 1 laser product. No dangerous laser radiation outside the machine when all doors and hatches are shut.



### 2.5.3 Hazards due to electrical energy



#### DANGER



**Contact with live parts causes electric shock.**

- Always keep electrical components enclosed.
  - Only allow an electrician who is specifically trained to carry out work on electrical equipment and who is able to detect and avoid the hazards involved to perform work on the electrical equipment.
- 
- Restrict work on the electrical equipment to a designated qualified electrician, e.g. company electrician.
  - Have the electrical equipment inspected/tested by an electrician before installation and set-up of the machine.
  - Any changes made following this inspection must comply with DIN EN 60204-1.
  - Damaged housings/casings and cables must be immediately repaired or replaced before installation and set-up of the machine.

### 2.5.4 Hazards due to pneumatic energy

Air escaping at high pressure can penetrate the skin and cause serious injuries!

- Only allow expert personnel specially trained and experienced in pneumatic engineering to work on the pneumatic installations. Ensure that the machine is switched off and secured against reactivation before commencing work on the pneumatic installations.
- Inspect all pneumatic lines, hoses and connections for externally visible damage prior to installation and set-up of the machine.
- Always keep pneumatic hoses away from your body.
- Protect open air connections against the ingress of dirt.
- Never interchange connections, connectors/plugs or switches. This will inevitably result in malfunctions.

## 2.6 Personal protective equipment

It is necessary to wear personal protective equipment during work on the machine to minimise hazards to health.

- Always wear the personal protective equipment required for each type of work.
- Always follow the instructions regarding personal protective equipment affixed in the work area.

These symbols have the following meaning:



### Protective clothing

Protective clothing consists of tight-fitting work clothing with low tensile strength, with tight-fitting sleeves and without protruding parts. This mainly serves as protection against being caught by moving machine parts.

Do not wear any rings, necklaces, chains or other jewellery.



### Safety footwear

Wear slip resistant safety shoes to protect against heavy falling parts and to prevent slipping on smooth surfaces.



### Protective gloves

Wear protective gloves to protect your hands from friction, abrasion or deeper injuries.

Personal protective equipment is to be provided by the owner/user and must meet the pertinent requirements.

In addition, observe the national regulations and any internal instructions laid down by the owner/user.

## 2.7 Information for emergencies

### Preventive measures

- Be prepared for accidents at any time.
- Keep the first-aid equipment (first-aid boxes, blankets etc.) ready to hand.
- Train personnel so that they are familiar with accident reporting and the first-aid equipment.
- Keep accesses clear for emergency vehicles.

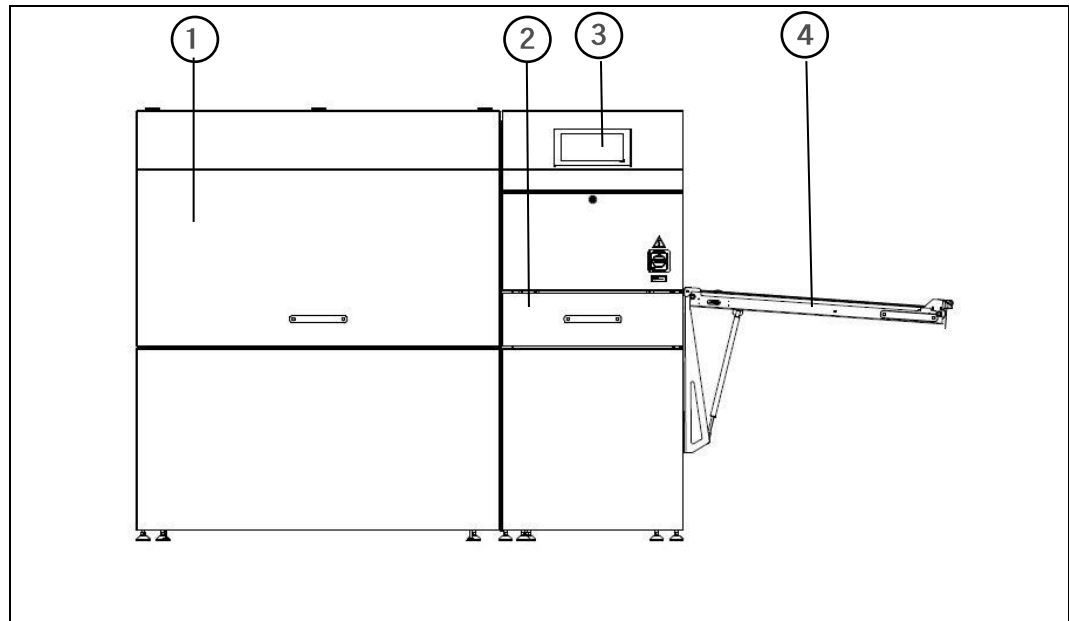
### Measures in the event of accidents

- Rescue persons from the hazardous area.
- Immediately administer first aid in the event of cardiac arrest and/or breathing arrest.
- In the event of injury/damage to health immediately notify the first-aid supervisor and an emergency doctor and the emergency rescue service.
- Clear the accesses for emergency vehicles. Delegate someone to direct the emergency personnel to the site of the accident if necessary.



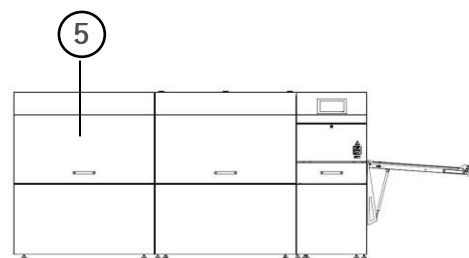
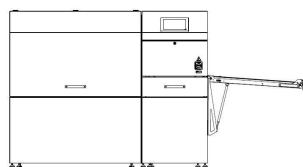
## 3 Machine description

### 3.1 Machine overview

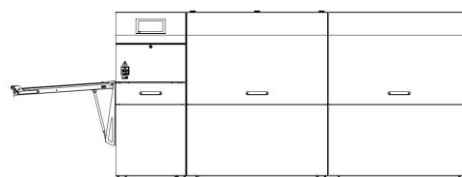
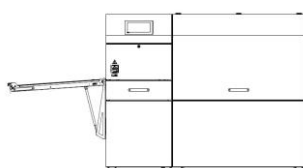


- 1 Pallet compartment
- 2 Paper bin
- 3 Operating panel
- 4 Transfer table
- 5 Extension module

- Printing plate intake
- Paper removal and double sheet detector
- Operation and status display
- Transfer to CTP exposure unit
- Printing plate intake

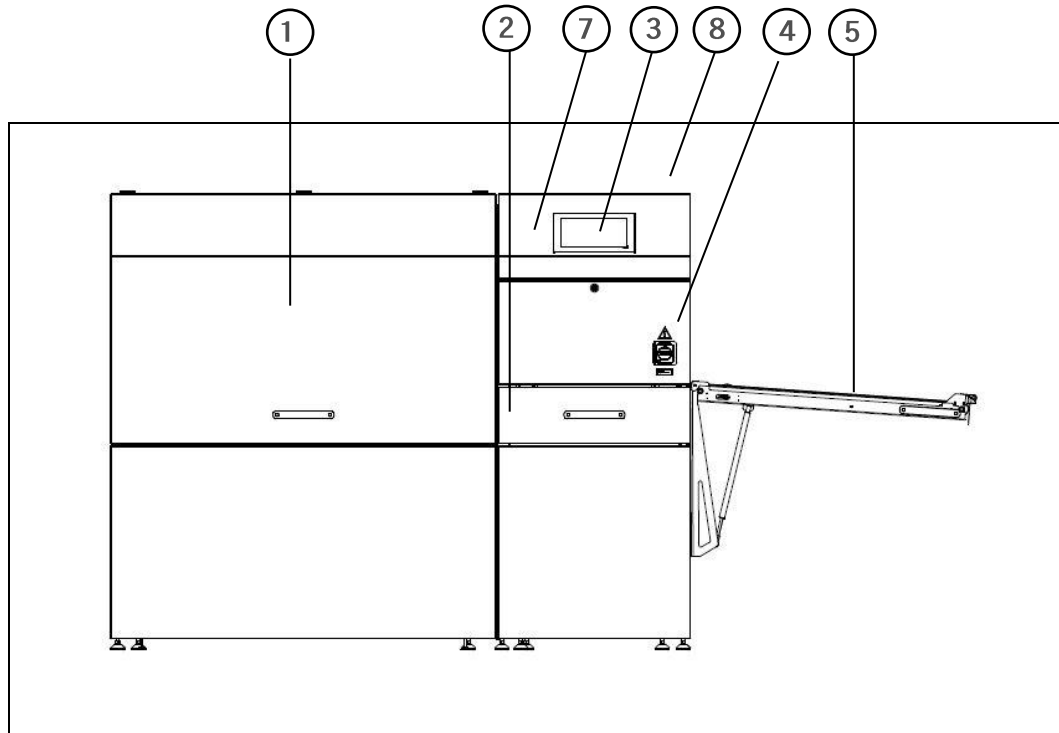


Model right

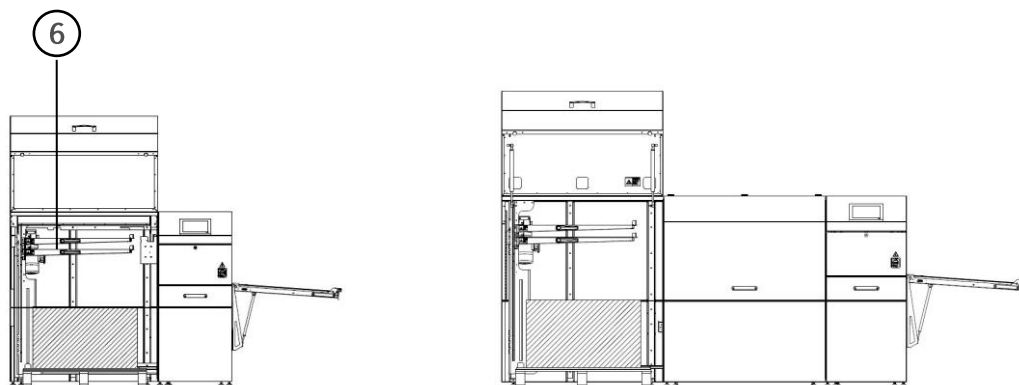


Model left

## 3.2 Function and operating elements

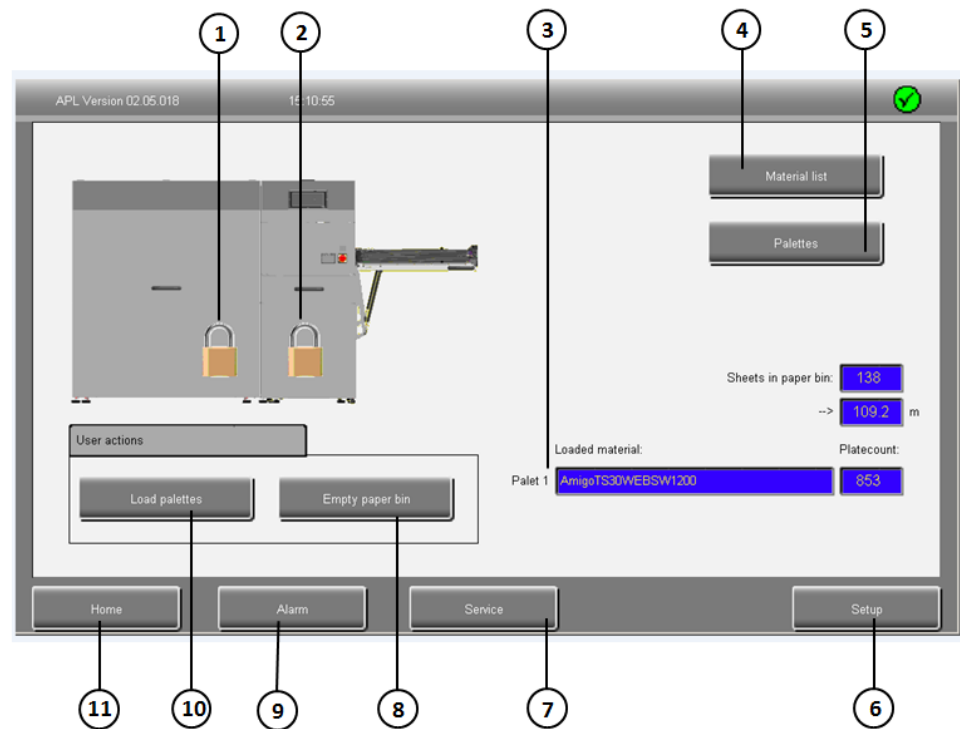


- |                        |   |
|------------------------|---|
| 1 Door element         | Access to the pallet compartment and air servicing unit |
| 2 Door element         | Access to the paper bin                                 |
| 3 Operating panel      | Touch panel for operating the machine                   |
| 4 Main switch          | ON/OFF switch   |
| 5 Folding table        | Transfer table, can be folded up                        |
| 6 Cassette compartment |   |
| 7 Emergency Stop       | OPTIONAL: Push button to trigger the emergency stop     |
| 8 Status light         | OPTIONAL: Status light red, green, yellow               |



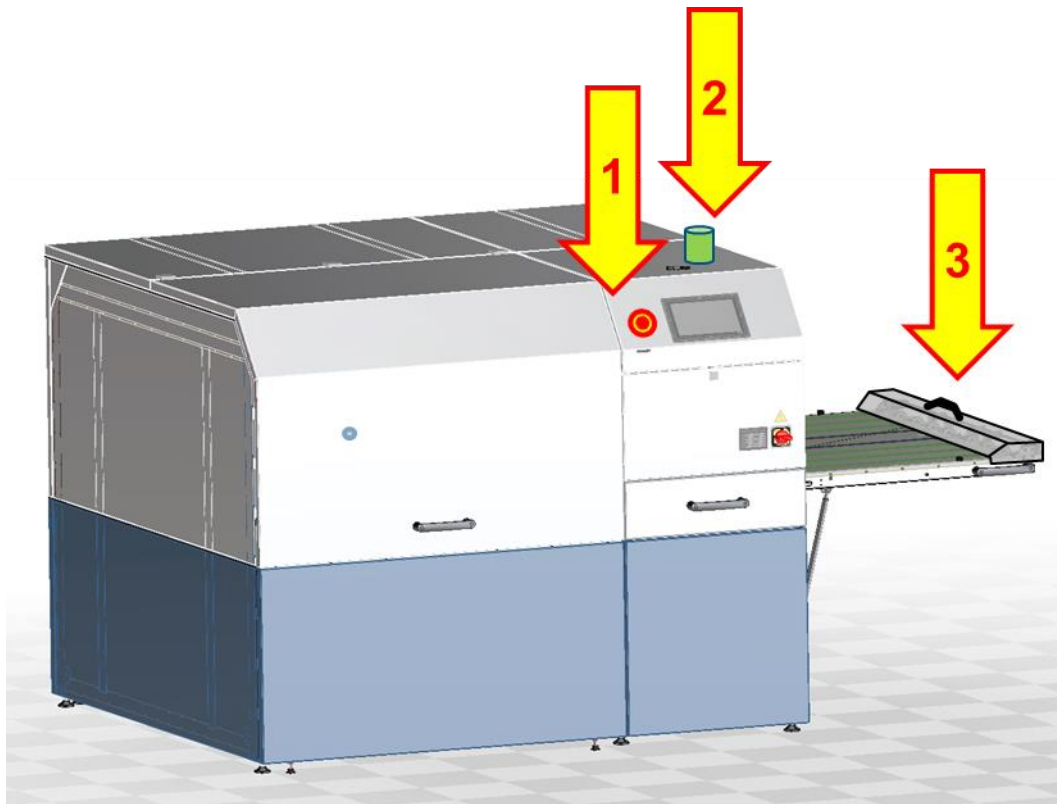
## 3.3 Operating panel

### Main menu



- |                     |  |
|---------------------|--|
| 1 Display           | Locking status (pallet compartment hood)   |
| 2 Display           | Locking status (paper bin door)  |
| 3 Display           | Display of the currently loaded material with the number of plates remaining         |
| 4 [Material list]   | Display of the material list (material database)                                     |
| 6 [Palettes]        | Display/change the loaded pallets/materials  |
| 6 [Setup]           | System settings  |
| 7 [Service]         | Settings   |
| 8 [Empty paper bin] | User prompting for emptying the paper bin (see section "6.2 Emptying the paper bin") |
| 9 [Alarm]           | Display of the alarm list with the malfunctions that have occurred                   |
| 10 [Load pallets]   | User prompting for loading the pallets (see section "6.3 Loading a pallet")          |
| 11 [Home]           | Return to main menu  |

### 3.4 Optional safety and operating elements



1 Emergency stop

2 Status light

3 Cover

Optional Emergency Push button

Status green (ready), red (error), yellow (production)

Safety cover to prevent the access to to the input slot of the CTP device behind it.



## 3.5 Function description

The printing plates are delivered on a pallet which is equipped with a chipboard in the respective format of the printing plate.

### Loading the machine

One pallet each with printing plates can be placed in the receiving area of the pallet compartment.

Fixing brackets are fitted to 2 corners of each pallet to prevent the printing plates from slipping during transport to the receiving area.

A safety belt is supplied for transporting the unpacked printing plates with a lift truck to prevent sliding of the up to 540 mm high plate stack during the movement.

### Alignment in the machine

The pallet is deposited with the aid of a lifting device into the receiving area of the extension module or end module. A marking is located on the floor of the respective receiving area along which the front edge of the respective pallet must be aligned.

The position of the printing plate stack (in the transport direction) is indicated with the aid of a laser marker. The longitudinal edge of the printing plate stack must be aligned with the laser marking.

### Referencing the printing plates

Once the the pallet with the printing plates has been placed in position and aligned, the respective cover hood is closed.

The feeder – initiated by the downstream machine line module "Recorder" – performs a reference run. The position and format of the printing plates are checked. If they correspond to the set point values, the machine is ready for operation and the printing plates can be fed to the recorder.

### **Recorder feeding**

The signal for feeding is given by the recorder control system.

The feeder moves over and is lowered onto the respective printing plate stack.

The separating sheet is gripped by the gripping device, pulled back slightly and then lifted.

The suction device for the printing plate swivels into the suction position and moves vertically onto the printing plate. The printing plate is lifted with the aid of suction cups. The support rollers for the transport of the printing plate are extended and the feeder moves with the printing plate and the gripped separating sheet into the transfer position.

On reaching the transfer position, the separating sheet is pressed between 2 rubber rollers with the aid of a pressure roller. The rubber rollers pull in the separating sheet and convey it into the paper bin. The printing plate is conveyed up to the transfer position of the loader and taken over by the loader of the recorder.

The loading process is completed. The feeder moves back to the printing plate stack and picks up the next printing plate.

## 3.6 Safety device

The APL-106 is an independent machine. It is switched on using the red and yellow main switch. The main switch also serves as an EMERGENCY STOP switch. Optionally the machine is equipped with an additional EMERGENCY STOP PUSH BUTTON

### 3.6.1 MAIN SWITCH and EMERGENCY STOP.

Turn the main switch to its horizontal position to disconnect the machine from all voltage and trigger an EMERGENCY STOP.

To restart the machine,

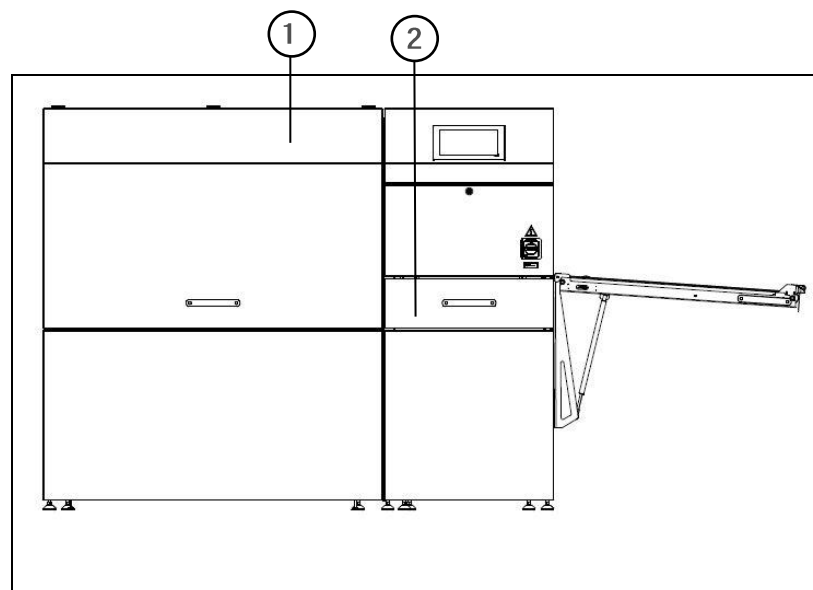
1. Unlock the optional EMERGENCY STOP BUTTON next to the panel
2. Turn the MAIN SWITCH to position 1.

### 3.6.2 Contact switches on the doors and hoods

The door to the set-up area of the paper bin in the basic module is equipped with a door contact switch with guard control.

The cover hoods of the pallet compartment are equipped with contact switches with guard control.

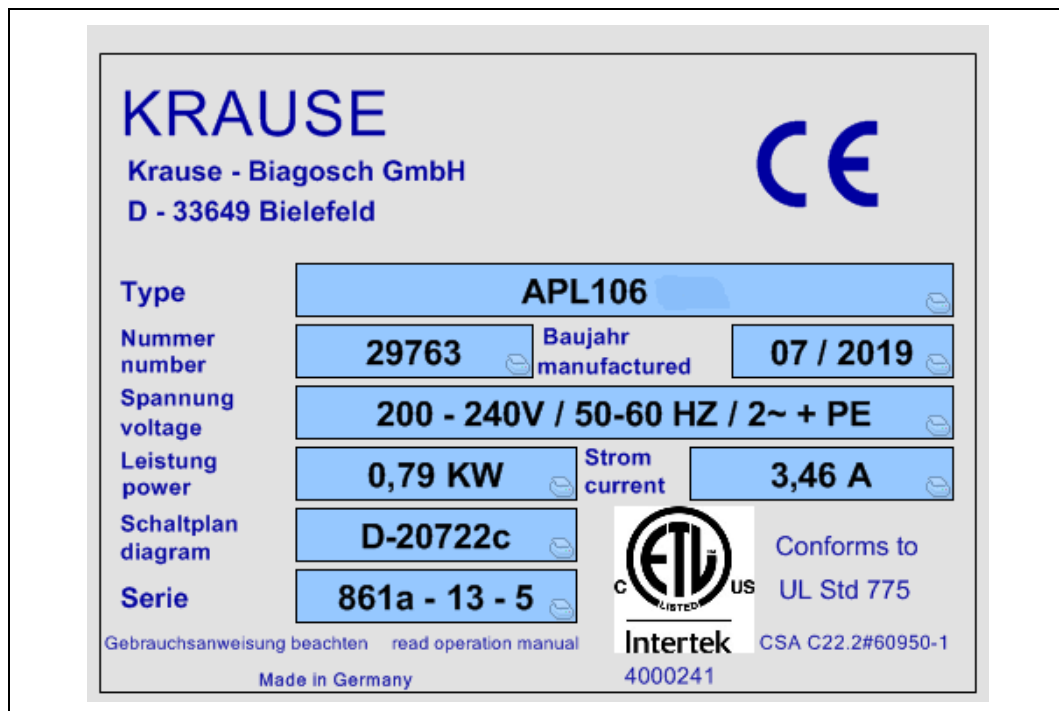
The door and cover hoods can be released on the operating panel.



- |                       |                                     |
|-----------------------|-------------------------------------|
| 1 Contact switch      | (Cover hood, pallet compartment)    |
| 2 Door contact switch | (access to paper bin, basic module) |

## 3.7 Type plate

The type plate is located on the rear of the paper bin or on the back of the machine.



## 4 Transport and installation site

### 4.1 Transport

The machine is delivered to the customer by a transport company authorised by Krause-Biagosch GmbH.

#### **NOTE**

It is important that the personnel provided by the owner/user follow the instructions of the person in charge in order to ensure correct transport and thus the functional reliability and precision of the machine.

The persons in charge are named in the order confirmation.

#### 4.1.1 Inspection on handover to the customer

When the component parts of the machine arrive, the customer must inspect them for visible transport damage and completeness.

- Document any transport damage before releasing the transport units (packages).
- Immediately report any transport damage to Krause-Biagosch GmbH.

#### 4.1.2 Scope of delivery

The machine delivery scope comprises the following components:

- APL 106 with pressure plate transfer module
- One optional extension module
- Transfer tables, folded up for transport
- Paper bin, interior
- Assembly materials

### 4.1.3 Information regarding hazards during transport



#### WARNING



#### Risk of injury due to incorrect handling of the packages!

When transporting the packages, take the following specific hazards into consideration:

- Protruding edges can cause crushing injuries or cuts.
- Use of load suspension devices other than those specified here may lead to serious injuries.

#### NOTE

Handle the packages carefully and take care not to damage the equipment:

- Lift the packages carefully during transport.
- Do not tilt or twist/distort the packages.
- Ensure that the packages are not subjected to moisture or extreme temperatures (see section "12.1.5 Ambient conditions").
- Also read the Chapter "2 Safety".
- The machine and components may only be unloaded from the freight forwarder's vehicle by suitably qualified and instructed personnel (forklift truck operator with certificate of qualification) and in accordance with all safety regulations.
- The machine and components may only be transported with a load suspension device by suitably instructed personnel in accordance with all safety regulations.
- Always wear protective clothing, safety footwear and protective gloves during the work.
- Ensure that the transport path is secured by an additional person.
- Ensure that there are no persons on the transport path.
- Always lift the machine slowly and carefully in order to ensure stability and safety.
- Do not remove the transport securing devices (marked red) until the components have been installed at the installation site.

### 4.1.4 Permissible auxiliary equipment for transport

The APL 106 is supplied on a pallet with a crate or in a box (package). These can be moved using a forklift truck or lift truck.

Ensure that

- the door widths and load-bearing capacity of the transport paths to the installation site are sufficient (see section "4.1.5 Dimensions and weights ");
- the load-bearing capacity of the forklift truck or lift truck is designed for the weights of the packages (see section "4.1.5 Dimensions and weights ") and
- the length of the load suspension fork of the forklift truck or lift truck is sufficiently dimensioned for the packages (see section "4.1.5 Dimensions and weights ").



The attachment points for secure transport to the installation site are marked red on the respective packages.

### 4.1.5 Dimensions and weights of the packages

Package	Table of contents	Length (mm)	Width (mm)	Height (mm)	Weight (kg)	Type
1	APL 106 incl. transfer table and paper bin	2500	2300	2200	750	Crate

- \* Weight incl. pallet weight (approx. 270 kg)  
Interior dimensions of the packaging: 2100 x 2300 x 1900 mm

### 4.1.6 Recommended transport equipment

Transport equipment	Type (quantity)	Fork length (mm)	Perm. load-bearing capacity (kg)
Transport equipment 1 (for unloading the lorry and lifting the machine off the pallet)	Forklift truck	2000	3000
Transport equipment 2 (for transport of the packages on the ground)	2 lift trucks	2000	2000
Transport equipment 3 (for transport of the modules to the installation site)	4 dollies		

### 4.1.7 Intermediate storage

If the machine is not installed immediately after delivery, the components must be carefully stored in a protected location. The components must be temporarily stored such that they are protected from cold temperatures, humidity, dirt and mechanical influences.

For the recommended storage conditions for the components please refer to the section "12.1.5 Ambient conditions".



The manufacturer shall not assume any liability for damage resulting from incorrect storage.

### 4.1.8 Transport packing

The machine components are to be unpacked under the supervision of authorised personnel from Krause-Biagosch GmbH.



The packing used for transport and protection of the machine predominantly consists of recyclable materials.

- Dispose of the packing material in an environmentally friendly manner in accordance with the applicable country-specific regulations.



## 4.2 Installation site

### 4.2.1 Load-bearing capacity of the installation surface

The load-bearing capacity of the installation surface must be sufficiently dimensioned such that it can withstand the loads during installation and production. Also take into consideration short-term point loads during transport by lift truck and during installation.

Use the weight specifications in the section "4.1.5 Dimensions and weights " as a basis for calculation.

### 4.2.2 Flatness of the installation surface

The flatness of the installation surface must meet the following specifications:

Height difference (mm)	over a length of (m)
0.5	0.1
4	1
10	4
12	10

### 4.2.3 Safety lighting

The CTP room should be equipped with safety lighting as defined by the plate manufacturer.

### 4.2.4 Air conditioning

Krause-Biagosch GmbH recommends installing the machine in an air-conditioned room so that the ambient conditions for the equipment and the materials to be processed can be kept constant throughout the year (see section "12.1.5 Ambient conditions").

For the design of the air conditioning system please take into consideration the thermal output values of the installed devices as defined for the recorder.

#### 4.2.5 Regulation of the humidity

The relative humidity should remain within defined tolerances. Too high or too low humidity can have a negative influence on the exposure quality and on the production stability of the system.

## 5 Installation and commissioning/first start-up



Please refer to the separate installation manual for information on installation and commissioning/first start-up.

(see "Installation manual, automatic pallet loader APL 106")



## 6 Operation



### WARNING

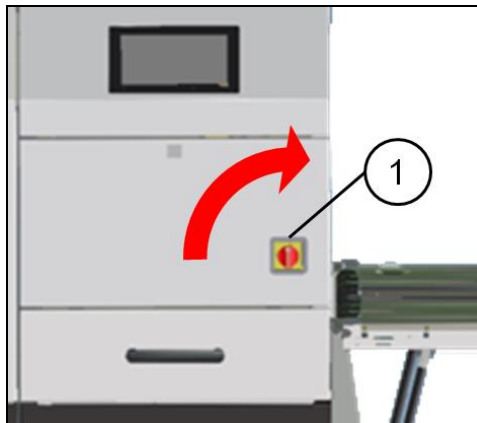
#### Risk of injury in the event of insufficient qualifications!

Incorrect operation of the machine can cause serious injuries to persons and damage to assets.

- Therefore restrict all activities for operating the machine to suitably qualified personnel.

### 6.1 Switching on the machine

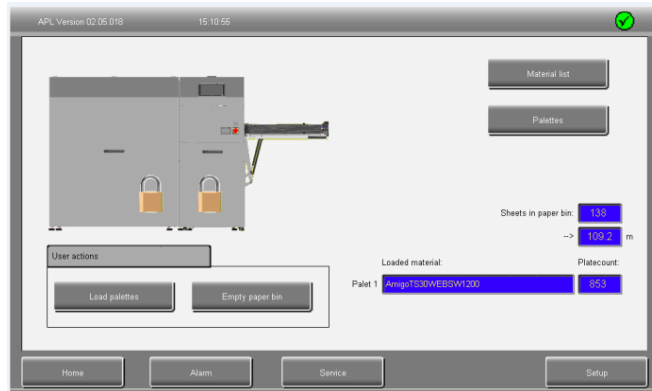
- Switch on the higher-ranking machine line module if applicable (see the "Recorder" operating manual).



- Switch the machine on at the main switch (1).



The system controls start up.



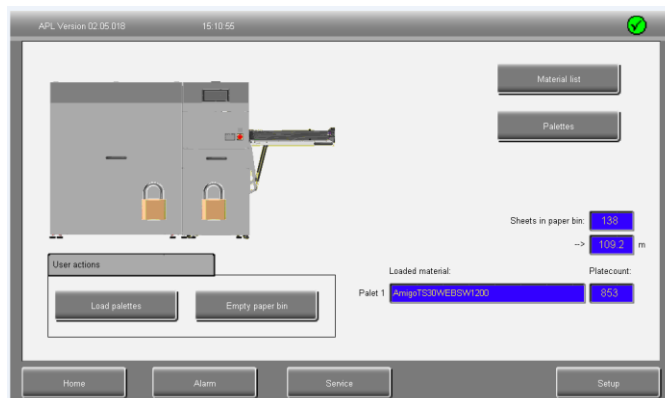
The machine carries out a reference run. The machine is ready for operation when the user mask is displayed and the green dot at the top right is visible.



The reference run is started automatically by the plate setting system. The APL106 itself starts a reference run after the actions pallet loading and emptying the paper bin have been completed.

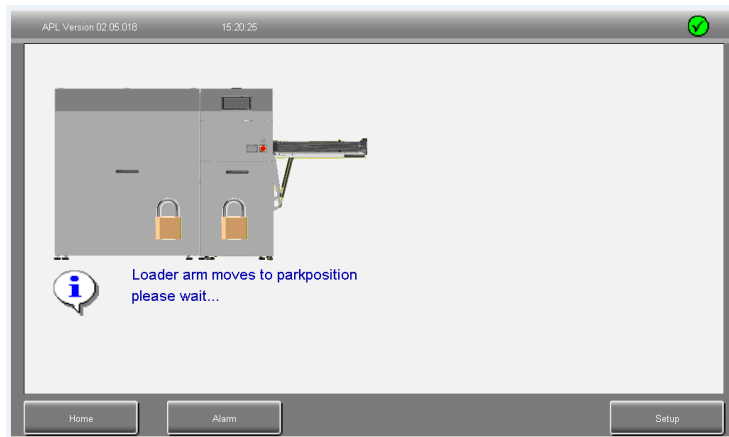
## 6.2 Emptying the paper bin

### 6.2.1 Emptying the wastebasket without paper slide

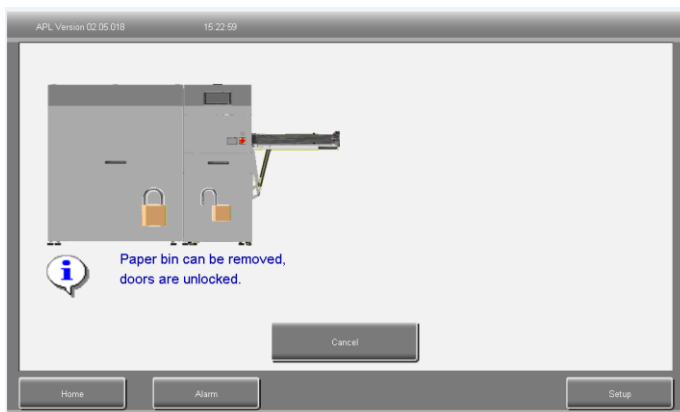


• Touch [Empty paper bin] (1).

## 6.2 Emptying the paper bin



The machine moves into the safe position (park position).



The door to the set-up area of the paper bin is unlocked.

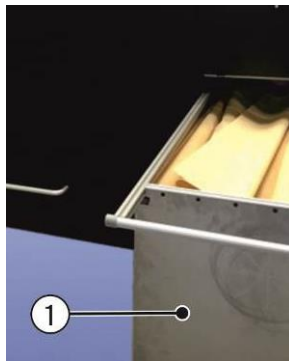
- Open the door to the set-up area of the paper bin.

Note: The process can be aborted by pressing the button [Cancel].



Display after opening the door to the set-up area of the paper bin

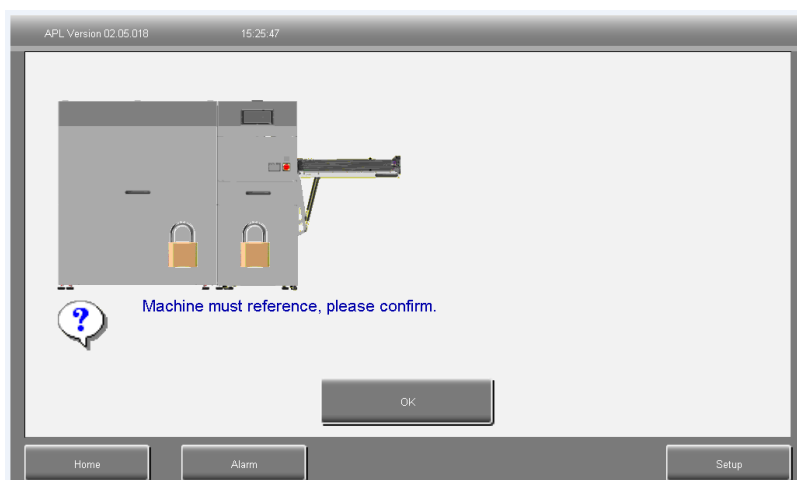
Note: If the door is opened for longer than 10 seconds, the internal paper counter will be set to 0.0 m.



- Pull the paper bin (1) out of the set-up area.

- Empty the paper bin.
- Push the paper bin back into the set-up area and close the door. The door is automatically locked.

The machine has to carry out a reference run.



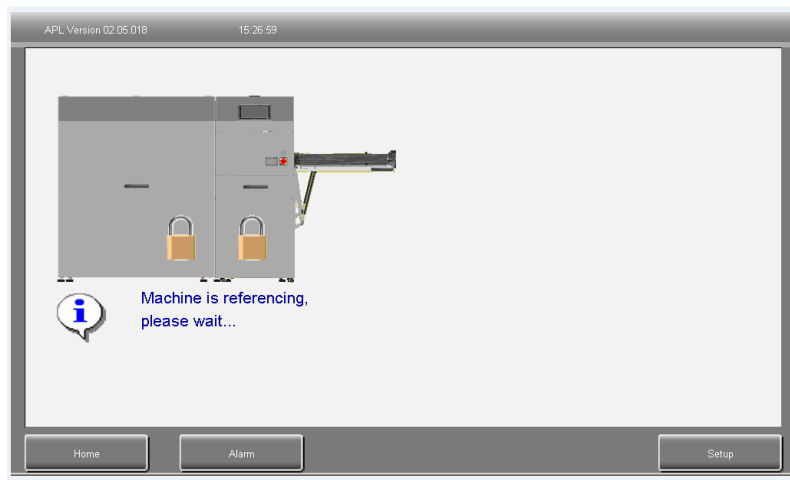
- Confirm the start of the reference run with [OK].

Note: If no reference run is carried out after 10 seconds, the door will be unlocked again.



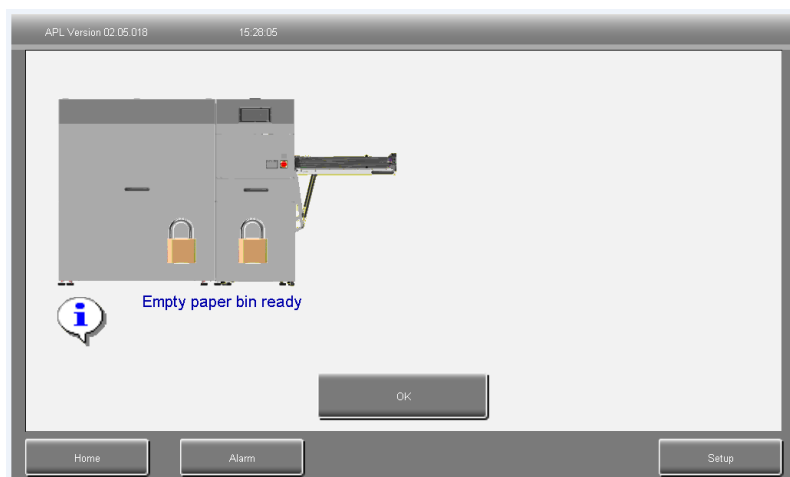
## 6.2 Emptying the paper bin

The machine carries out a reference run.

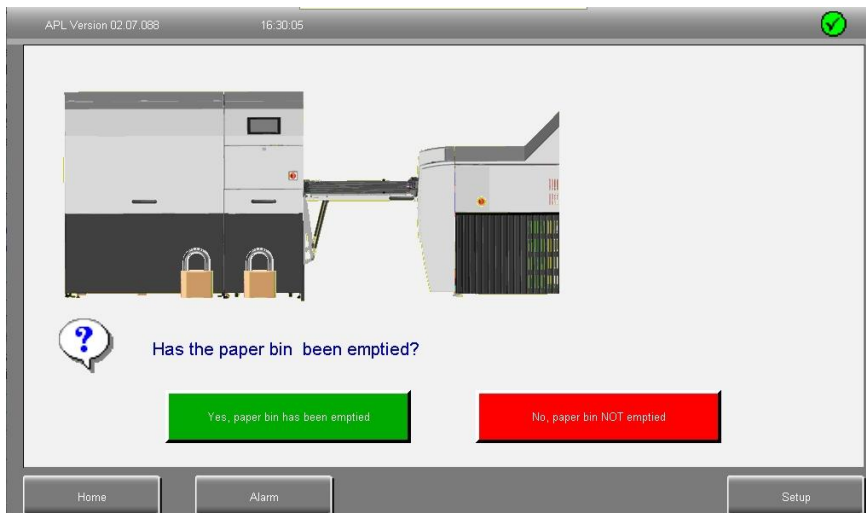


- Confirm the message with [OK] when the reference run has been carried out.

Note: The message disappears automatically after 10 seconds. The machine is then ready for operation again.



## 6.2.2 Emptying the wastebasket with paper slide



Since an external recycle bin is available when the paper chute is installed, it can be emptied at any time during operation.

After pressing the "Empty recycle bin" button, a query appears asking whether the recycle bin has really been emptied.

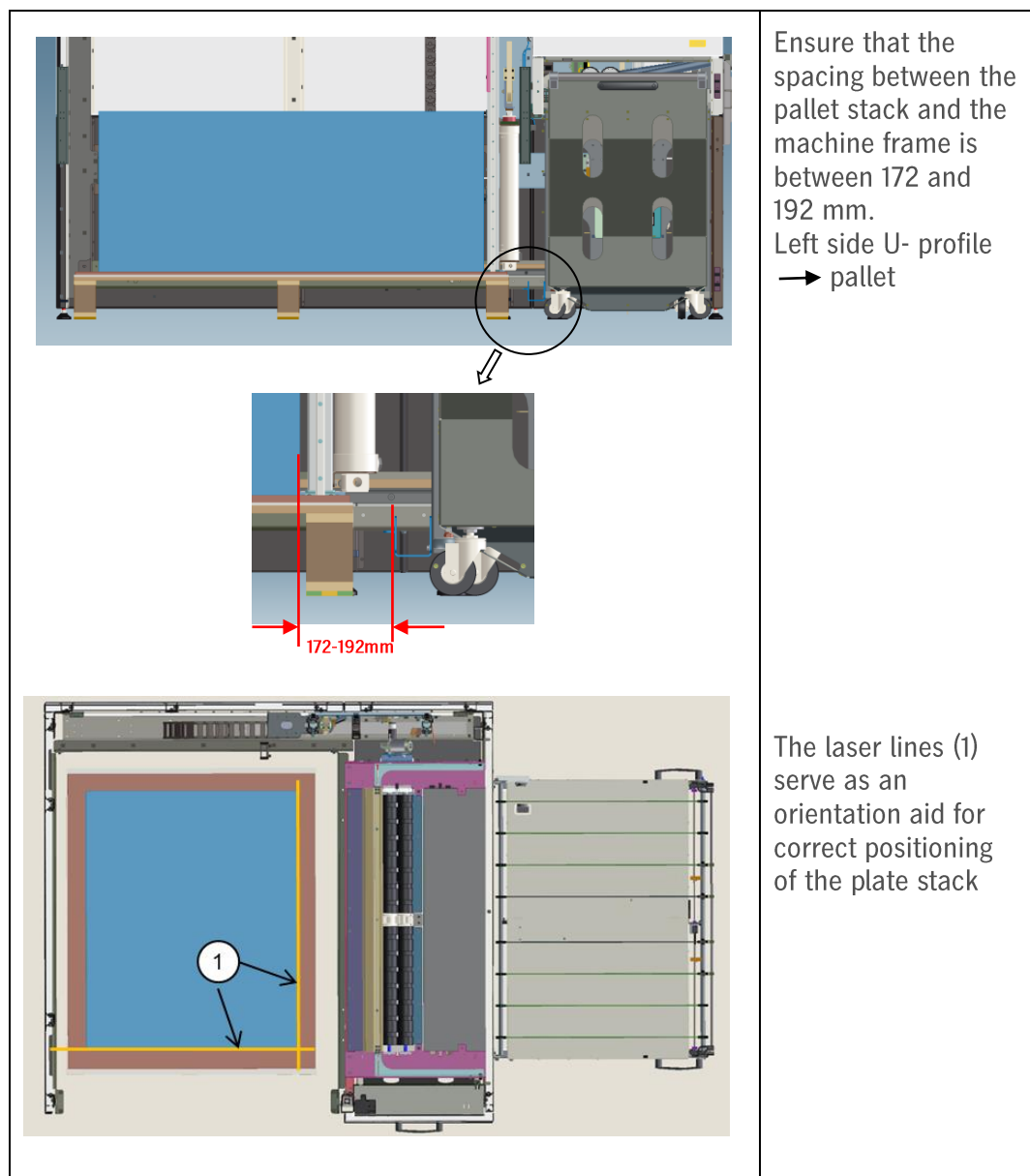
If you confirm this with "yes", the paper counter is reset.

## 6.3 Loading a pallet

A pallet with printing plates can be set up in the set-up area.

### Pallet positions

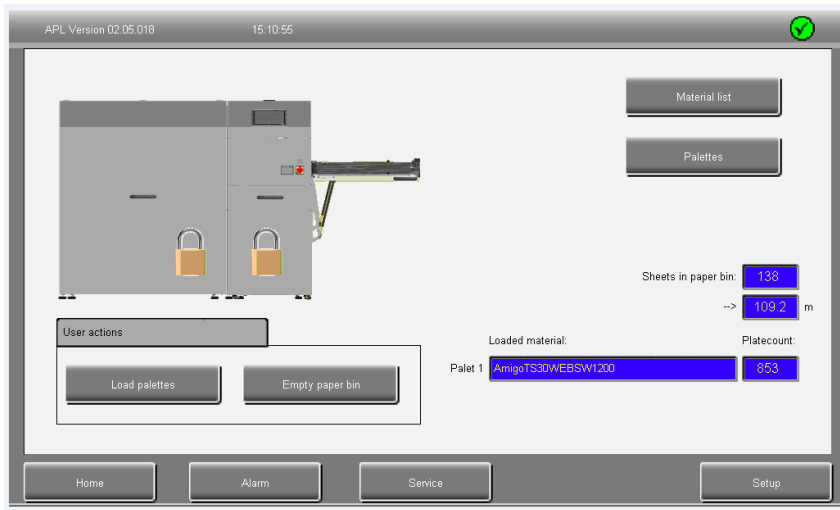
The pallet has to be positioned accurately in the set-up area so that the printing plate stacks can be detected by the stack detection system. The following figure shows the area in which the pallet has to be set up.



## Loading

The loading of a pallet is described in the following operating steps

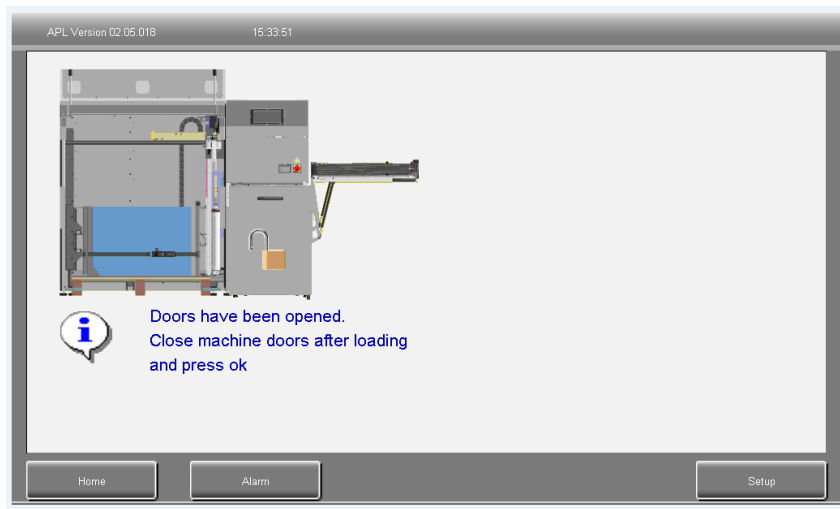
- Touch [Load pallets] (1).
- The machine moves into the safe position (home position).



The hoods and the door are unlocked. The set-up area of the machine can be loaded.

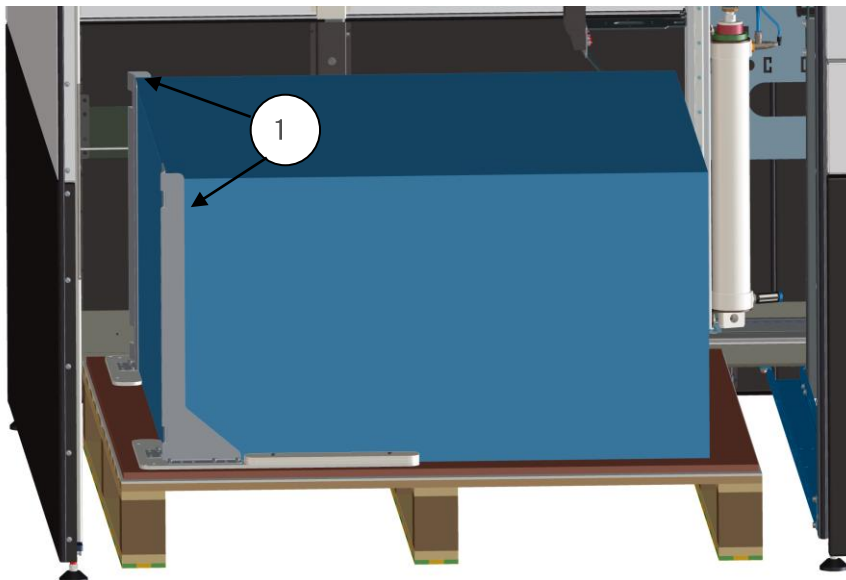
- Open the hoods.
- Note: If the hoods are not opened after 30 seconds, they are automatically locked again and the machine is ready for operation again.

## 6.3 Loading a pallet



The open and closed hoods/door are displayed in the user mask.

- Move the pallet with the printing plates into the set-up area with the aid of a lift truck.
- Align the pallets such that
  - the front plate stack is flush with the laser marking,
  - the longitudinal edge of the printing plate stack is flush with the second laser marking.



Result:  
The pallet is in position  
The LH securing brackets (1) remain on the pallet



We recommend that you also empty the paper bin during loading.  
The paper bin door is therefore unlocked during loading.

- Close the hoods and the paper bin door.



For safety reasons it is necessary to acknowledge the locking of the hoods; the hoods are locked by confirming with [OK].



- Confirm with [OK] to lock the hoods.

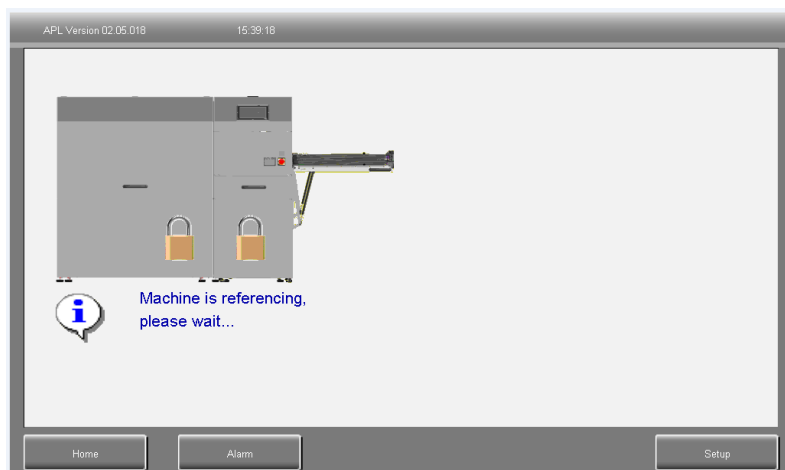
The machine has to carry out a reference run and pallet detection.



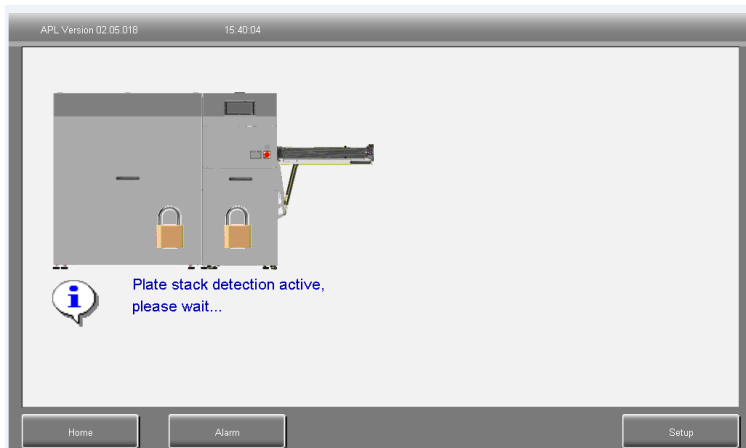
If no changes to the loading have been made (e.g. if you only checked the storage compartment) and the set pallet(s) hasn't(haven't) been moved, pallet detection can be skipped.

## 6.3 Loading a pallet

- If pallets have been loaded, removed or moved, start the detection with [Start detection] (1).
- Otherwise detection can be skipped with [Skip detection] (2).



First a reference run is carried out, then it is followed by the pallet detection if applicable.

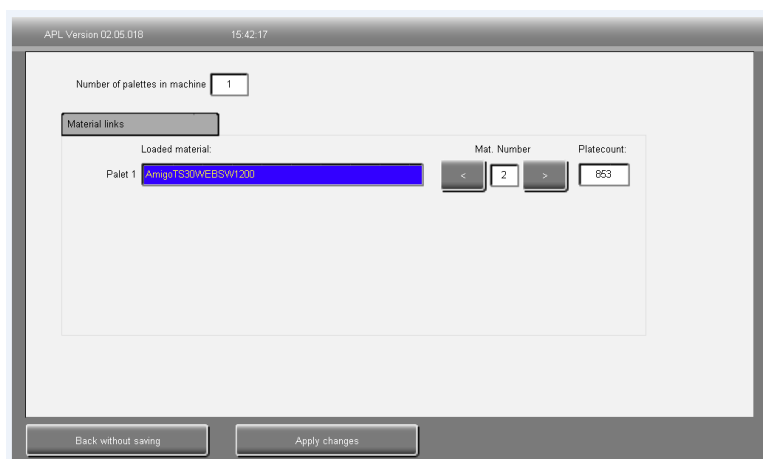


Following the reference run, the stack detection is active and the position of the pallets with the printing plate stacks is detected.



After completion of the reference run and stack detection, the allocation of the pallet(s) in the set-up area has to be checked .

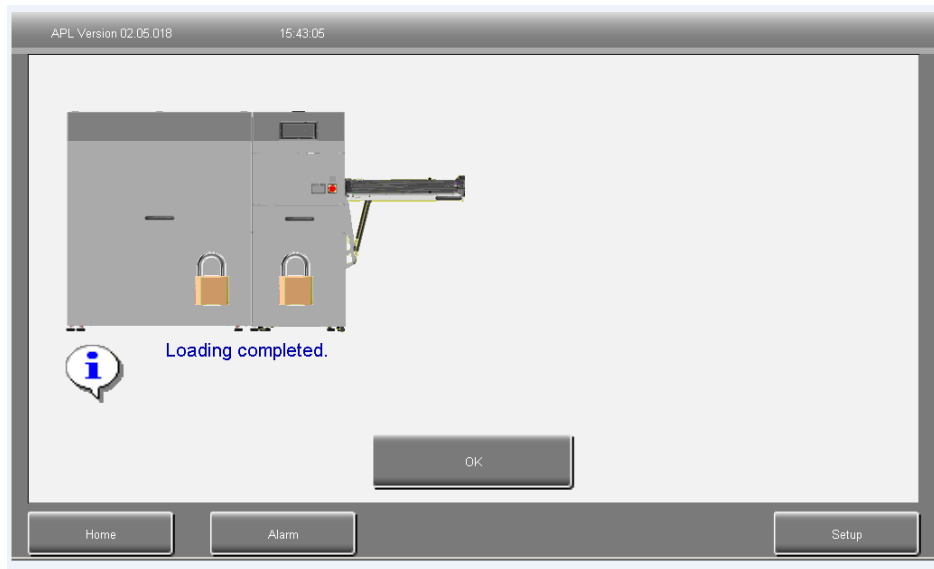
- Touch [OK] to display the operating mask with the printing plate parameters.



- Check the allocation and number of loaded printing plates in the set-up area.
- If you have made any changes, touch [Apply changes] after completion of the inspection.



### 6.3 Loading a pallet



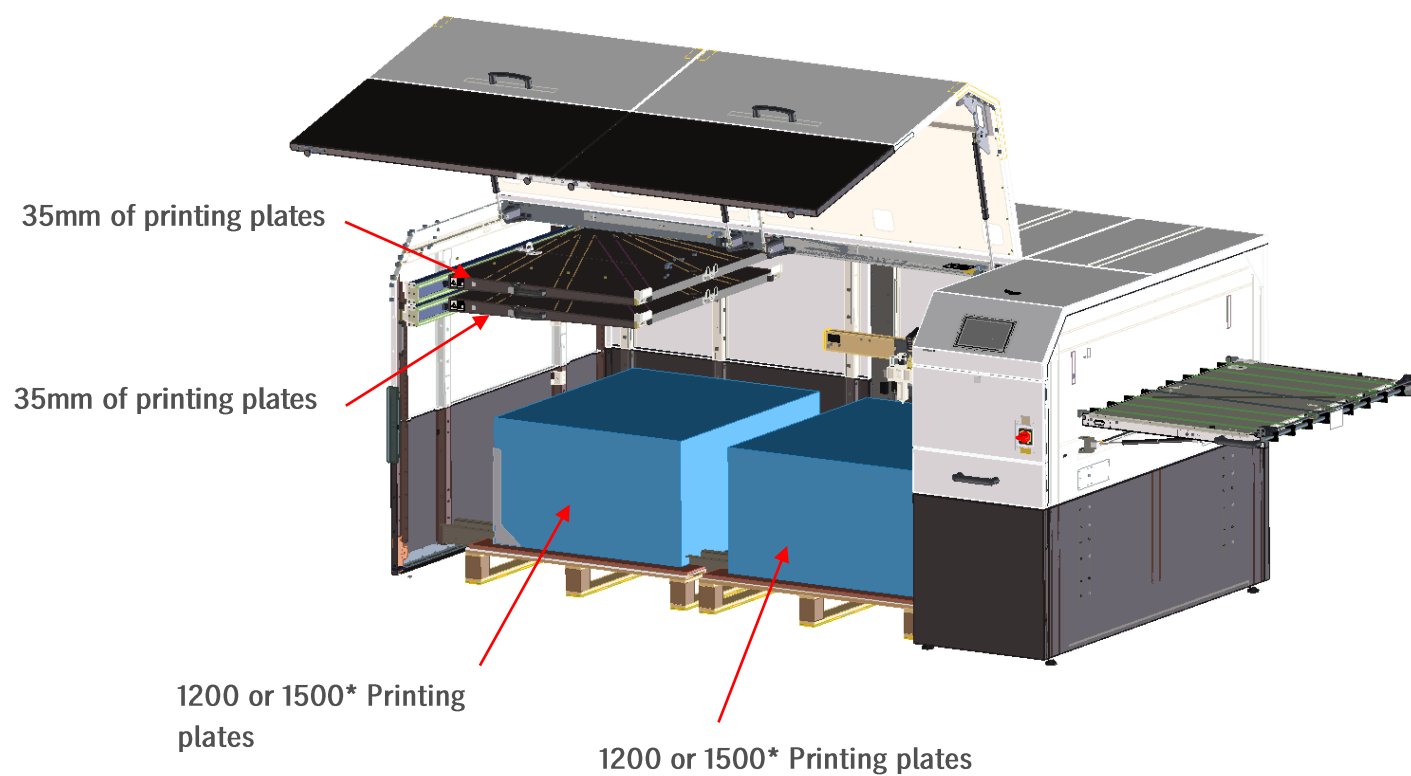
- To complete the loading process touch [OK].

Note: The message disappears automatically after 10 seconds.

The machine is then ready for operation again.

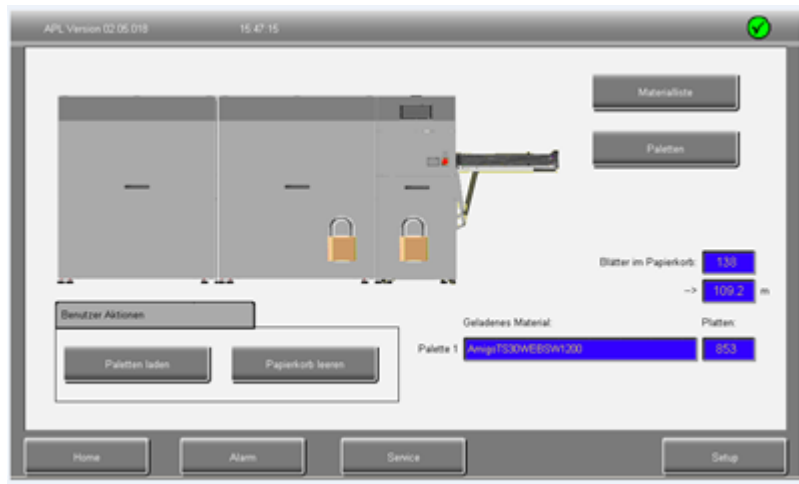
The machine is ready for production. The machine receives the control commands from the higher ranking machine line module "Recorder".

### 6.3.1 Loading options

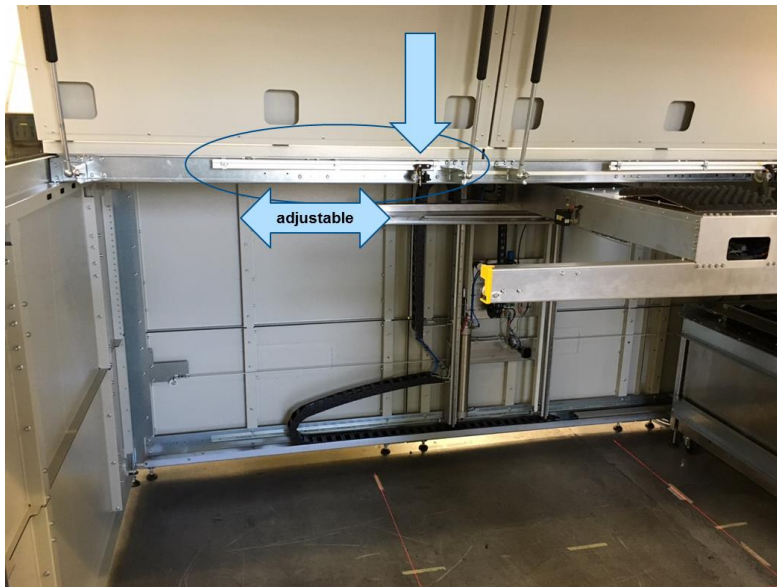


\*Option

### 6.4 Loading a machine with 2nd pallet space



- The machine with 2 pallet spaces (extension module, EXT) is loaded in the same way as described in chapter Kapitel 6.3.
- Start from the main window with “Load pallet”



- For the second pallet position another laser line mounted optionally.
- The machine measures both positions in any case and displays the found pallets and plates.

#### NOTE

The machine is stopped before loading and moves to a safe position. The second pallet cannot be loaded during production.

## 6.5 Removing a pallet

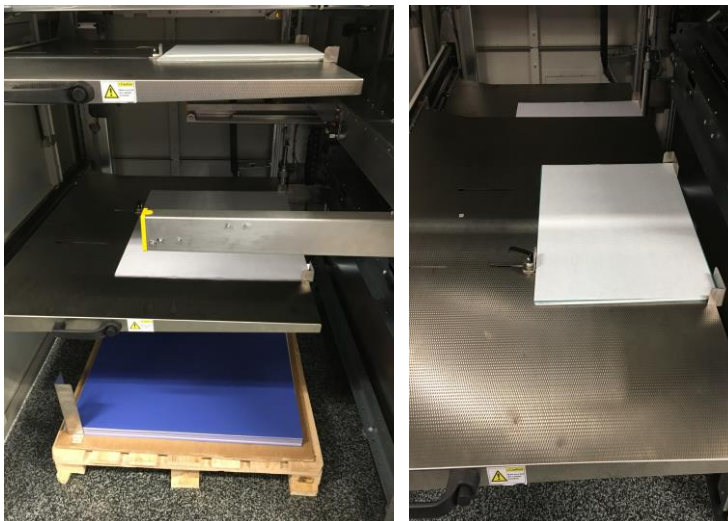
Once the last printing plate has been removed from the feeder, a message appears on the operating panel of the Recorder.

- Start a loading sequence as described in section "6.3 Loading a pallet".
- First remove the empty pallet and then load a new pallet with printing plates into the set-up area (see section "6.3 Loading a pallet").

### 6.6 Loading plates to the cassettes (optional)



- If the machine is equipped with one or two cassettes these are loaded in a similar procedure as the pallet loading
- In the main window press „load cassettes)



- Follow the instructions on the screen step by step
- The cassette moves downwards to the loading position.
- Unlock the cassette with the push-button at the handle and pull it out for loading the plates.
- The maximal loading of one cassette is 35mm of printing plates or 80kg.
- Make sure the cassette is locked correctly after loading and inserting.

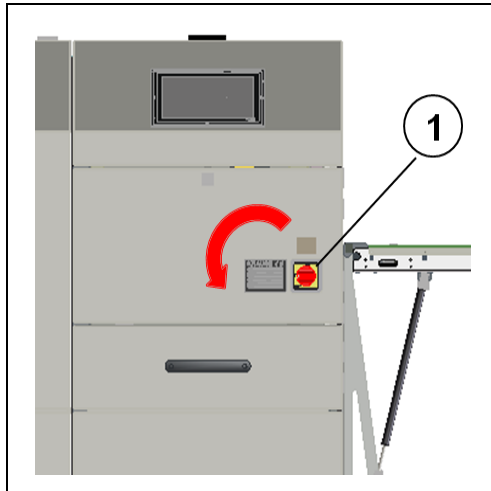


## 6.7 Removing faulty printing plates

Faulty printing plates or printing plates with paper or cardboard are transported to the transfer table. Then the machine stops with the prompt to remove the plate from the transfer table.

Afterwards, restart the machine with Start.

### 6.8 Switching off the machine



- Switch the machine off at the main switch (1).





## 7 Malfunctions



### DANGER



#### **Danger to life due to electrical voltage!**

Contact with live parts causes electric shock, which can lead to serious injuries or even death.

- Always turn off the main switch and secure it against being switched on again prior to accessing the inside of the machine/reaching into the machine.



### CAUTION

#### **Risk of injury due to stored pneumatic energy**

Unexpected movements of the machine due to the release of stored energy can lead to moderately severe injuries.

- Always depressurise the machine prior to carrying out any work on the pneumatics when there is a malfunction in the pneumatic system.



Always adhere to the local safety regulations when remedying malfunctions.

This chapter explains how to localise and remedy malfunctions and faults/errors. Troubleshooting is assisted by the display of error numbers and error descriptions in the operating mask.

### 7.1 Display of malfunction messages

If a malfunction message occurs, an alarm message window appears on the operating panel with the following information regarding the occurred malfunction:

- Type of malfunction:
  - System error
  - Warning
  - Sequence error
- Error number
- Error message

## 7.1.1 System error

Error number	Error message
8200	No compressed air
8201	Motor 1 (X axis): no communication
8202	Motor 2 (Z axis): No communication
8203	Motor 3 (roller 2):no communication
8204	Motor 4 (roller 4):no communication
8205	Motor 5 (roller rotation):no communication
8206	Suction cup adjustment (Y axis): no pulse
8207	Suction cup adjustment (Y axis): Positioning time-out
8208	Suction cup adjustment (Y axis): Reference time-out
8209	Flaps not closed
8210	Flaps not locked
8211	Flap locking error
8212	Paper bin door not closed
8213	Paper bin door not locked
8214	Motor voltage switched off
8215	Motor 6 (Conveyorbelt): No communication
8216	Fuse 1F6 tripped
8217	Cassetteloader timeout up
8218	Cassetteloader timeout down
8219	Cassettesupport left not in endposition
8220	Cassettesupport left both endpositions active
8221	Cassettesupport left timeout
8222	Cassettesupport right not in endposition
8223	Cassettesupport right both endpositions active
8224	Cassettesupport right timeout
8225	Cassetteloader both endswitches active
8226	Possibly collision between cassette and arm

## 7.1.2 Warnings

Error number	Error message
8301	Motor 1 (X axis): No reference
8302	Motor 2 (Z axis): No reference
8303	Motor 3 (roller 2): No reference
8304	Motor 4 (roller 4): No reference
8305	Motor 5 (roller rotation): No reference
8306	Suction cup adjustment (Y axis): No reference
8307	Paper bin door open
8308	Segment 1 door open
8309	Paper bin not in position
8310	Stack height cannot be calculated
8311	No paper before gripping
8312	Paper detected during suction
8313	Motor 1 (X axis): Excessive temperature
8314	Motor 1 (X axis): Overcurrent
8315	Motor 1 (X axis): Undervoltage
8316	Motor 1 (X axis): Overvoltage
8317	Motor 2 (Z axis): Excessive temperature
8318	Motor 2 (Z axis): Overcurrent
8319	Motor 2 (Z axis): Undervoltage
8320	Motor 2 (Z axis): Overvoltage
8321	Motor 3 (roller 2): Excessive temperature
8322	Motor 3 (roller 2): Overcurrent
8323	Motor 3 (roller 2): Undervoltage
8324	Motor 3 (roller 2): Overvoltage
8325	Motor 4 (roller 4): Excessive temperature
8326	Motor 4 (roller 4): Overcurrent
8327	Motor 4 (roller 4): Undervoltage
8328	Motor 4 (roller 4): Overvoltage
8329	Motor 5 (roller rotation): Excessive temperature
8330	Motor 5 (roller rotation): Overcurrent

Error number	Error message
8331	Motor 5 (roller rotation): Undervoltage
8332	Motor 5 (roller rotation): Overvoltage
8333	Motor 6 (Conveyorbelt): Overtemperature
8334	Motor 6 (Conveyorbelt): Overcurrent
8335	Motor 6 (Conveyorbelt): Undervoltage
8336	Motor 6 (Conveyorbelt): Overvoltage
8337	Conveyorbelt folded up

### 7.1.3 Sequence error

Error number	Error message
8230	Double plate or paper detected 3 times
8231	Outfeed: no plate detected
8232	Paper jam in the paper pull-in
8233	Plate in the outfeed during initialisation
8234	Double plate or paper in the outfeed during initialisation
8235	Paper removal failed 3 times
8236	Double plate/paper during transfer
8237	Vacuum fault during plate pick-up
8238	Vacuum lost during plate pick-up
8239	Plate not pulled in by Recorder
8240	Cardboard detected 3 times in a row
8241	Plate on the rollers during initialisation
8242	Conveyorbelt: Plate didn't reach sensor
8243	Plate did not leave the rollers
8244	Cardboard on conveyorbelt
8245	Doubleplate/paper on conveyorbelt
8246	Palette empty
8247	Cassette empty
8248	Unexpected plate on conveyor



## 8 Maintenance and cleaning



### DANGER



#### **Danger to life due to electrical voltage!**

Contact with live parts causes electric shock, which can lead to serious injuries or even death.

- Always turn off the main switch and secure it against being switched on again prior to accessing the inside of the machine/reaching into the machine.
- Restrict maintenance work on the machine to suitably qualified personnel.



### CAUTION

#### **Risk of injury due to stored pneumatic energy**

Unexpected movements of the machine due to the release of stored energy can lead to moderately severe injuries.

- Always depressurise the machine prior to carrying out any maintenance work on the pneumatics.



### CAUTION

#### **Risk of injury due to bursting pneumatic hoses**

Pneumatic hoses with an expired service life may burst and cause slight or moderately severe injuries.

- Check the condition of the pneumatic hoses at regular intervals and replace them if visible wear is detected.
- Do not reuse old pneumatic hoses.
- Only use original spare parts.

Proper maintenance and cleaning are crucial for the operational safety and long service life of the machine. For this reason it is particularly important

- to precisely adhere to the maintenance intervals;
- to observe the maintenance chapters of the supplier's documentation.

Complying with the intended use includes adhering to the maintenance intervals specified in the following.

## 8.1 Maintenance intervals and maintenance work

The maintenance work is divided into tasks for the user and tasks for customer service.

Assembly group	Maintenance interval	Maintenance work	Duties and responsibilities	
			Customer	Service
Entire machine	Every 6 months	<ul style="list-style-type: none"> <li>– Clean the outside of the machine, check the visual inspection on the conveyor belt.</li> <li>– Clean work area with pallet space and paper removal.</li> </ul>	X	
Entire machine	Every 6 months or 50.000 plates	<ul style="list-style-type: none"> <li>– Professional maintenance according to the maintenance checklist for the areas x, y and z-axes, paper removal, plate holder, outfeed conveyor, optional cassettes as well as cladding and control with function test</li> </ul>		X

### Maintenance work by the service

The maintenance work for the service may only be carried out by qualified personnel with service level 1 or higher in accordance with the professional maintenance work recommended by Krause. Professional maintenance work should be done every 6 months or 50,000 printing plates.



## 8.2 Cleaning agents and lubricants

### NOTE

Risk of damage to the machine!

The machine can be damaged by the use of incorrect cleaning agents and lubricants.

Only use the recommended cleaning agents and lubricants.

Krause-Biagosch GmbH recommends the following cleaning agents and lubricants:

Use	Application	Product
Cleaning agent	Entire machine	Water/soapy water(e.g. Indumaster universal IR55 from Buzil) together with a microfiber cloth
Lubricant	Guide rails	Silicone spray, e.g. Caramba 619902 or Weicon
Grease	Cassettes chains, x-axis	Grease e.g. Klüber CentroPlex 2EP



## 9 De-commissioning



### DANGER



#### **Danger to life due to electric shock!**

Danger to life when working on the electrical installation.

- Work on the electrical installation must be restricted to a qualified electrician.



### CAUTION

#### **Risk of injury during work on the pneumatic system if it is carried out by insufficiently qualified personnel!**

There is a risk of injury during de-commissioning and dismantling work on the pneumatic system for insufficiently qualified personnel.

- Only allow qualified expert personnel to carry out work on the pneumatics.

- Switch off the machine  
(see figure in section "3.2 Function and operating elements").
- Switch off the downstream machine line module (see operating manual of the higher ranking machine).
- Have the supply energies (electricity, compressed air) disconnected by the respective expert personnel.
- Disconnect all supply lines from the machine.



## 10 Dismantling

### 10.1 Information regarding hazards during dismantling



#### WARNING

When dismantling the machine component parts, take the following specific hazards into consideration:

Lifting of the component parts using attachment points not designed for this purpose can lead to the component parts falling and causing injury.

- Only lift the component parts at the specified attachment points marked red.

If the transport securing devices and stabilising elements are not attached, this can lead to the component parts falling and causing injury.

- Fit the transport securing devices and stabilising elements before dismantling the component parts.

Incorrectly dismantled lines/cables can be damaged and cause smouldering fires and cable fires when reused.

- Restrict all work on the electrical installation to a qualified electrician.

Incorrectly dismantled pressure lines and connections can be damaged, causing injuries when reused.

- Restrict all work on the pneumatics to specialist pneumatic personnel.

As a general rule:

- Wear your personal protective equipment for all work.

#### NOTE

Unsuitable dismantling tools can cause damage to the component parts.

- Use suitable tools only.
- Restrict all work to suitably trained and instructed personnel and respective expert personnel.

## 10.2 Preparatory measures

Prior to dismantling the machine ensure that

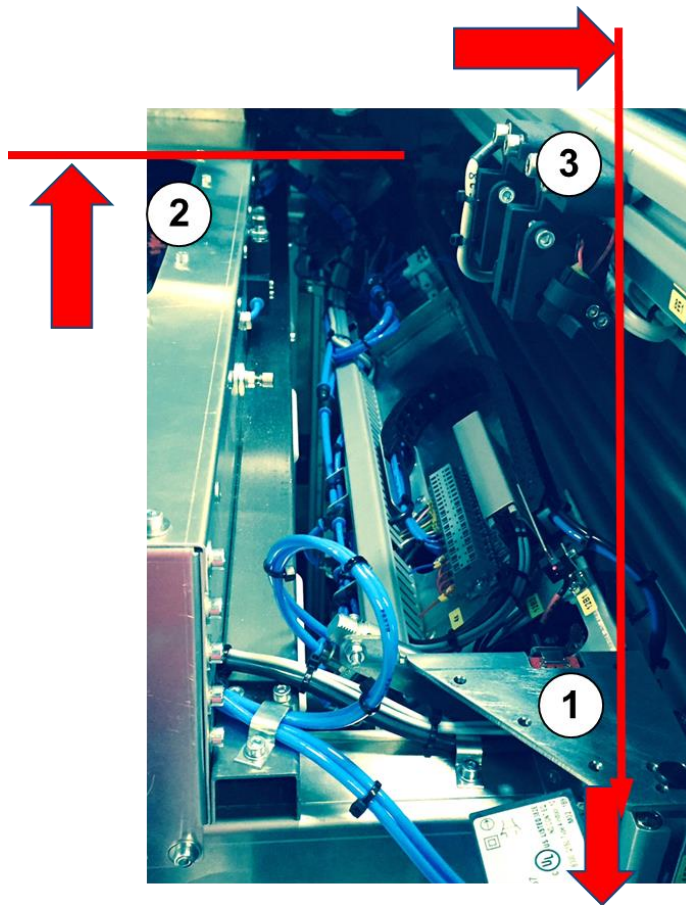
- the machine has been de-commissioned (properly shut down and disconnected)  
(see section "9 De-commissioning");
- the necessary tools for dismantling are provided;
- the necessary transport securing devices are provided;
- the transport equipment is provided  
(see section "4.1.6 Recommended transport equipment");
- additional light sources (hand lamps) are provided for dismantling;
- the floor area at the site is clean and dust-free to ensure problem-free transport of the component parts.

## 10.3 Dismantling the machine and securing it for transport

To prepare the machine for transport, proceed in the following order.

1. Preparing and securing the machine for transport
2. Supply lines
3. Paper bin
4. Package

### 10.3.1 Preparing and securing the machine for transport



Moving the machine to its transport position

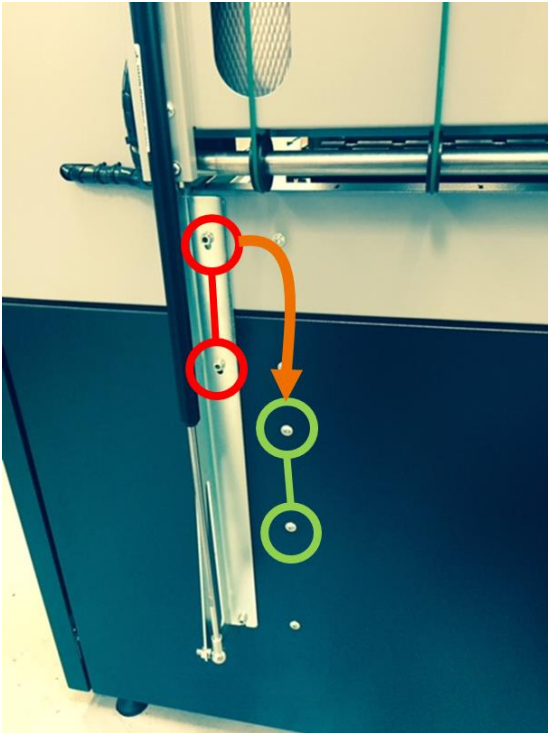
- Lifting unit down (1)
- Z axis up to just before the stop (2)
- x axis right until the extraction unit is approximately below the line lasers (3)



Moving the transfer table down

- Move the transfer table down





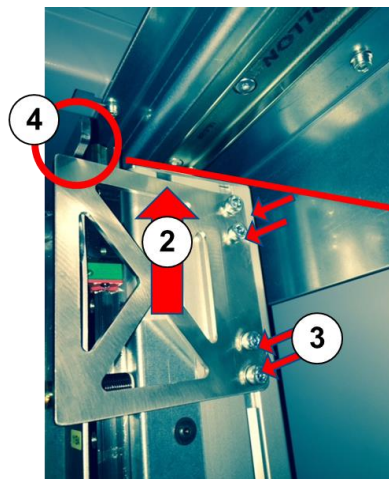
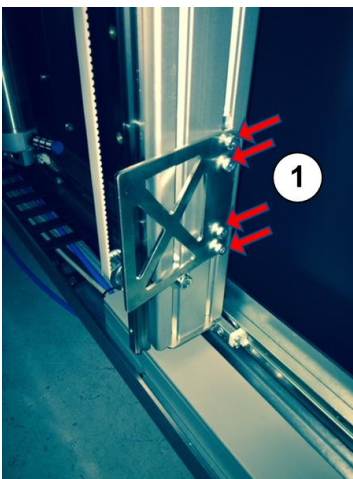
### Moving the transfer table down

- Turn out the screws marked in green
- Have two persons hold the table
- Turn out the screws marked in red,
- Move the table and fasten on both sides
- using the screws marked in green



### Moving down and securing the suction gripping unit

- Use cable ties to secure the lifting unit against turning and moving up on both sides



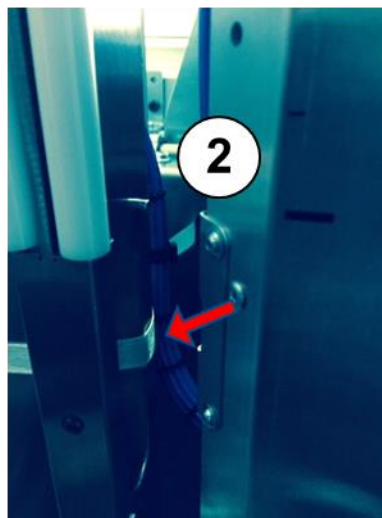
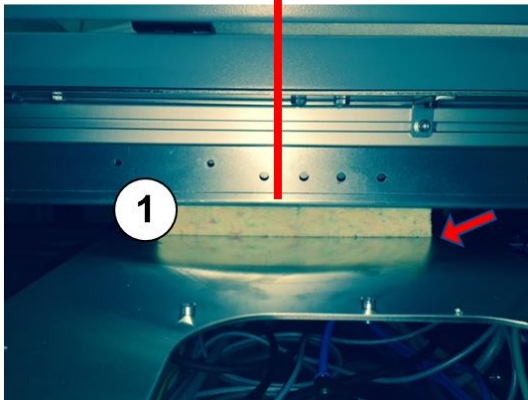
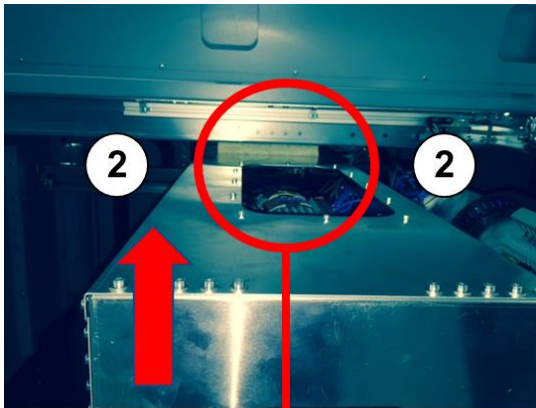
### Securing the z axis, part 1

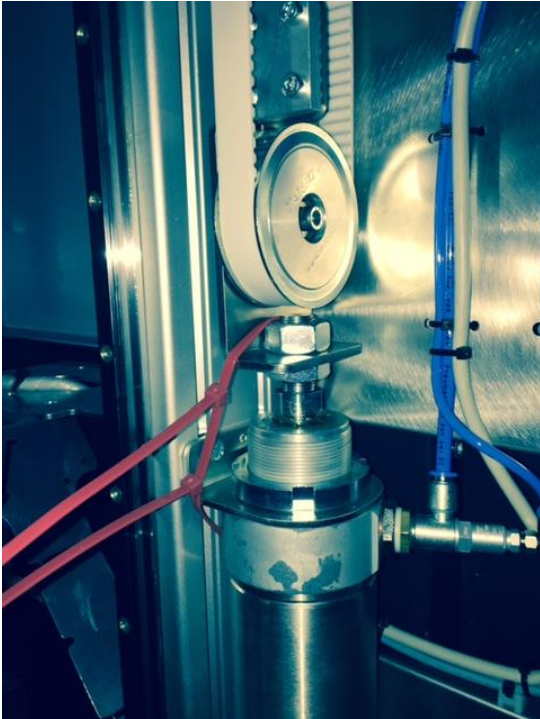
- Undo the framework plate on the z axis (4 screws) (1)
- Push the framework plate up to the stop (2)
- Tighten the screws on the framework plate (3)
- The hook of the feeder then makes contact with the framework plate (4)



#### Securing the z axis, part 2

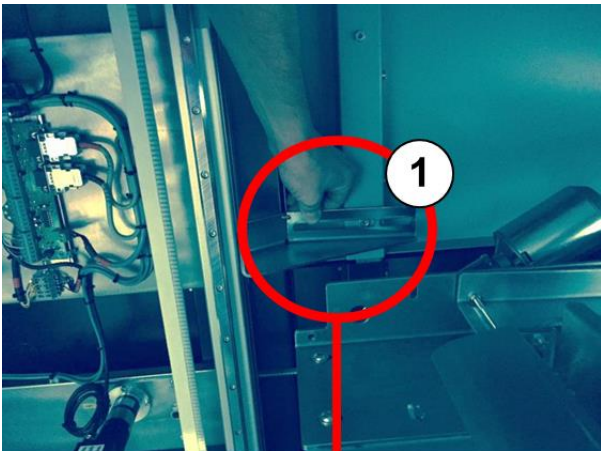
- Place a foam plate between the feeder and the cladding (1)
- In addition, use a belt to secure the feeder. Guide the belt through two openings in the cladding crossbar (2).





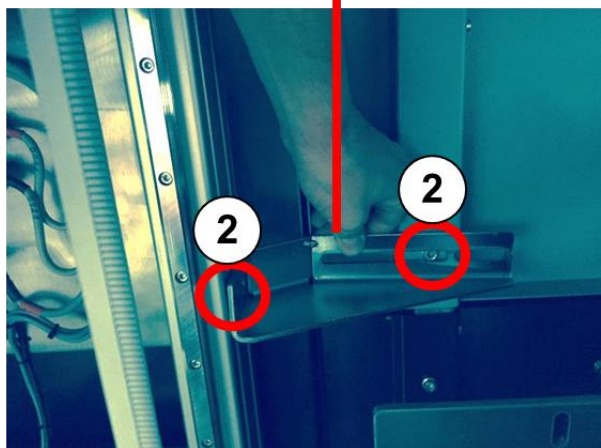
### Securing the z axis cylinder

- Prevent the large z cylinder from extending by securing it with cable ties.
- If the cylinder extends during transport while the feeder is secured in the top position, the white timing belt will come loose and lose its position.



### Securing the x axis

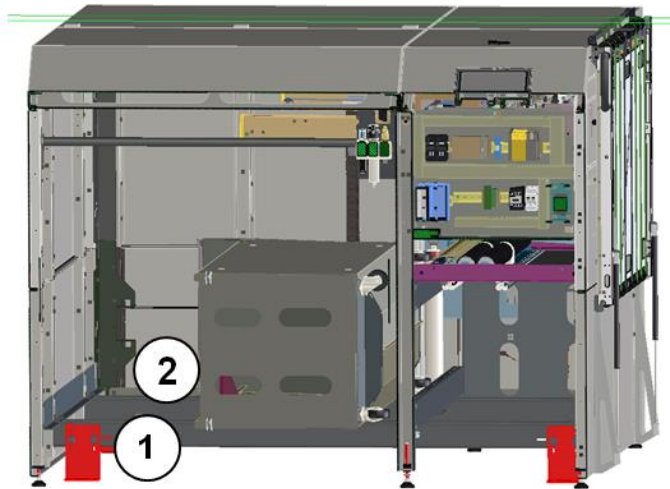
- Use a bracket to secure the xz unit (1).
- The bracket is screwed to the cladding and to the perpendicular aluminium profile of the x-z unit. The screw on the cladding is used for this purpose.



## 10.3 Dismantling the machine and securing it for transport

### Attaching transport bars

- Two transport bars are used for transport with a lift truck. (1) and (2)



### Cassette securing

The cassettes are secured vertically with a wooden bar between the cassette and the paper trolley.



### 10.3.2 Supply lines

The cables for the voltage supply and the signal cables are routed in cable ducts and in an energy chain.

- Disconnect the cables from the connections and pull them out of the cable ducts.
- Remove the energy chain.
- Remove the compressed air hoses.

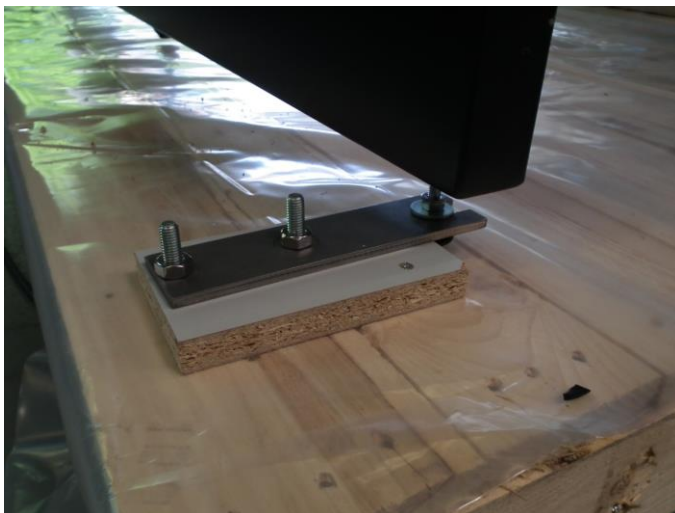
### 10.3.3 Paper bin



#### Paper bin

- Open the door to the basic module and pull the paper bin out of the basic module.
- Remove the paper bin
- and screw it to the plywood board (1) (2).

#### Securing the hood



- Use one flat bar (1) each to secure the hood on the feet.



#### Securing the paper bin door

- Once everything is screwed to the pallet, wrap the machine in stretch film.
- This also secures the paper bin door (1)

## 11 Disposal



### CAUTION

#### **Hazards to health due to incorrect disposal of the machine!**

The machine contains pollutants.

- Hand the assembly groups and machine components over to a recognised disposal company.
- Do not dispose of the assembly groups and machine components via the domestic waste system.
- Adhere to the national regulations.



Addresses of recognised disposal companies can be obtained from the environmental agency or responsible authorities.

The information is based on our current knowledge and experience. It does not release the disposal company from the obligation of adhering to the national regulations and laws valid at the time of disposal.

### 11.1 Terminology

#### **Recyclable material**

Assembly groups and/or components that contain no pollutants and can be recycled in an environmentally safe manner.

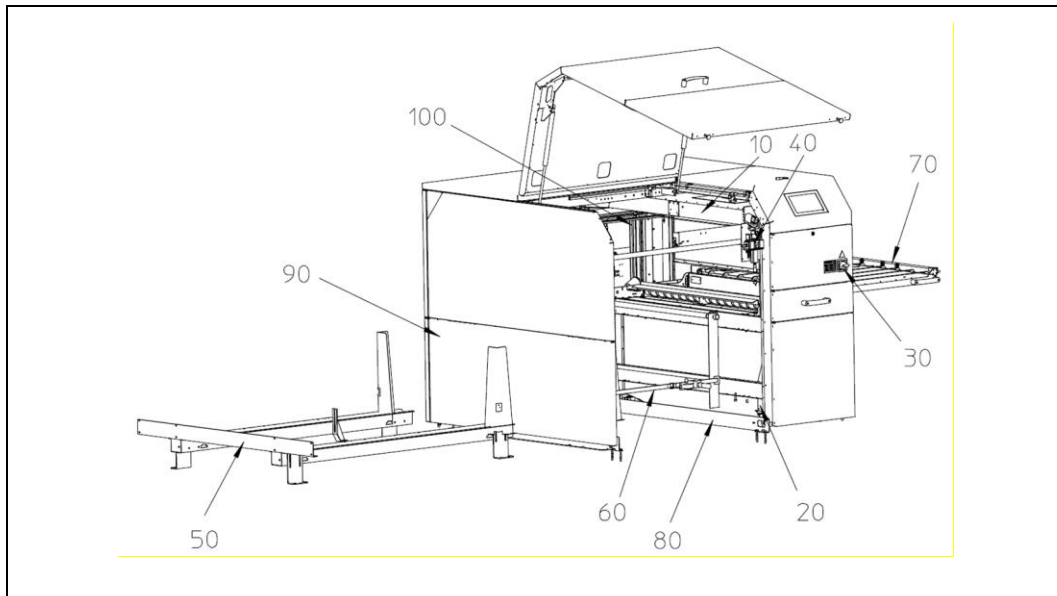
#### **Pollutants**

Assembly groups and/or components that have to be disposed of or recycled separately.



## 11.2 Overview of the assembly groups

The following figure shows the assembly groups and components that contain recyclable material and pollutants.



### Recyclable material/pollutants

Pos.	Assembly group	Recyclable material Metal	Recyclable material Plastic	Pollutants
10	Feeder	Steel and aluminium	Timing belt, vacuum suction cups, pneumatic hoses, plastic moulded parts	Electronics and pneumatics
20	Paper removal	Metal, steel	Rubber rollers	Electric motor
30	Electrical installation	Mounting plate	Terminals, cable ducts	Electronic components, power pack, PCBs, cables
40	Pneumatics		Air servicing unit, valves, pneumatic hoses	
50	Transportequipment	Steel	-	-
60	Plate securing device	Sheet steel		
70	Transfer table	Steel	Belts, 3D printed components	Electric motor

## 11.2 Overview of the assembly groups

Pos.	Assembly group	Recyclable material Metal	Recyclable material Plastic	Pollutants
80	Collision guard	Sheet steel		
90	Cladding	Metal, sheet steel, doors made of aluminium		
100	XZ axle	Metal, steel	Timing belt, electric motor	
	Screws, nuts, bolts	Steel		

### Dismantling information

Item	Assembly group	Dismantling information
10	Feeder	Screw-fitted to vertical guide (relieve before dismantling)
20	Paper removal	Screw-fitted
30	Electrical installation	Mounting plate and operating panel screw-fitted, cables plug-connected
40	Pneumatics	Plug-connected, screw-fitted
50	Transport equipment	Screw fitted (removed from the machine after installation)
60	Plate securing device	Screw-fitted, individual parts
70	Transfer table	Screw-fitted
80	Collision guard	Screw-fitted
90	Cladding	Main elements screw-fitted,
100	XZ axle	Screw-fitted





## 12 Appendix

### 12.1 Technical data

#### 12.1.1 Dimensions

Hoods and doors closed (in mm)

Module	Length	Width	Height
Overall dimension including all modules without optional extensions	2930	1850	1550
Machine	1980	1850	1550
Transfer table	950	1200	840
Open hood			2395
Optional extension modules	1320	1850	1550

Hoods open, paper bin in front of basic module (in mm)

Module	Length	Width	Height
Open hood		2700	2395
Open paper bin door	-	1450	.

## 12.1.2 Weights

Weights without printing plates with empty paper bin (in kg)

Module	Weight	Max. floor load per foot	Max. surface load
Machine	750	200	

## 12.1.3 Electrical connected loads/rating

Connection	Value
Voltage	200-240V 50/60Hz 2~ + PE
Current	3.46 A
Connected load	0.79 kW
Customer-supplied fuse	10 A or 16A
Fuse in the Recorder	-
Power consumption in operation	165 W
Power consumption in standby	70 W

## 12.1.4 Compressed air connected values/capacity

Connection	Value
Pressure	7 bar
Quality	Dust-free, oil-free in accordance with air quality class 2.4.2 as defined in ISO 8573-1
Consumption	170 l/min
Connection	½ "

### 12.1.5 Ambient conditions

Parameters	Value
Temperature	18 – 23 °C (depending on the printing plate type)
Relative air humidity	40 – 60 %, without condensation
Lighting	Security light in accordance with the information given by the plate manufacturers
Cleanliness	No dust, smoke, dirt
Floor vibrations	No vibrations

### 12.1.6 Airborne noise emitted

Emission	Value
Noise level	< 70 dB

### 12.1.7 Heat emission

Emission	Value
Heat output *)	< 300 W

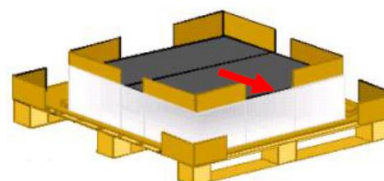
\*) 1 W = 3.413 BTU/h

## 12.1.8 Printing plate and pallet sizes

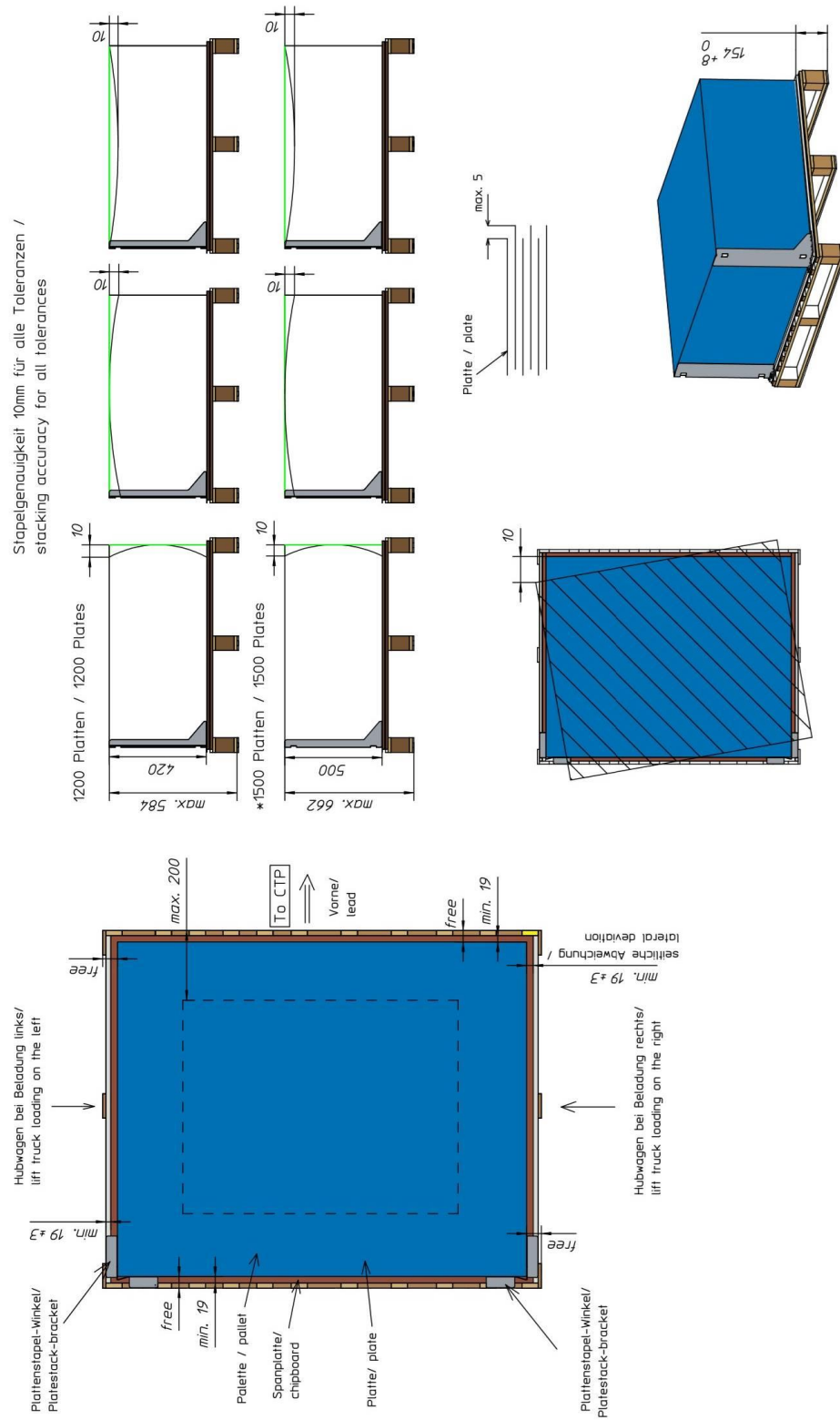
Parameter	Value
Maximum plate size	950x 1165 mm x mm
Smallest plate size	From pallet:: 605x745 mm x mm From cassette 335x485mm x mm
Plate thicknesses	0,24mm bis 0,4mm Cassette (optional): 0,15mm to 0,24mm
Maxium pallet size	1100 x 1350 mm x mm *)
Smallest pallet size	700 x 900 mm x mm
Orientation of printing plate	Coating to the sky, landscape
Max height of the stack in all cases with and without expansion modules or cassettes	Standard:420mm 1200 plates at 0,3mm, 1000 plates at 0,4mm **Optional: 500mm 1500 Platten at 0,3mm,1250 plates at 0,4mm
Max. pallet height overall	Standard: 584mm from the floor Optional: 662 mm from the floor
Curl	10mm maximum over all.
Plate stack position and piling precision tolerances	10mm maximum over all  In case the pile is slate more than 10mm it is necessary to reallgn the pallet in the machine or to re-run the measurement cycle.
Plate stack position on the pallet	Centered in the long direction, fixted distance to the pallet edge in the short direction, 10 to 100mm typically
Pallet orientation	Pallet jack goes in to the short side
Max load for the cassettes	Max stackheight 35mm Max weight : 80 kg For each cassette.

\*) Without extension module one pallet with the maximum size can be loaded. Which sizes can be used simultaneously can be checked case by case

\*\* )Option 1500: not for all models available



## 12.1.9 Pallet specification



\*Option

## 12.2 Other applicable documents

The following documents are attached to this operating manual:

- Installation manual "Auto Pallet Loader APL"
- Electric wiring diagram D20722
- Pneumatic diagram 860.00.00.001

## 12.3 EC Declaration of Conformity

The EC Declaration of Conformity for this complete machine is provided on the following page.

