

OPERATING MANUAL

(Original operating manual)

Automatic Pallet Loader APL-VLF

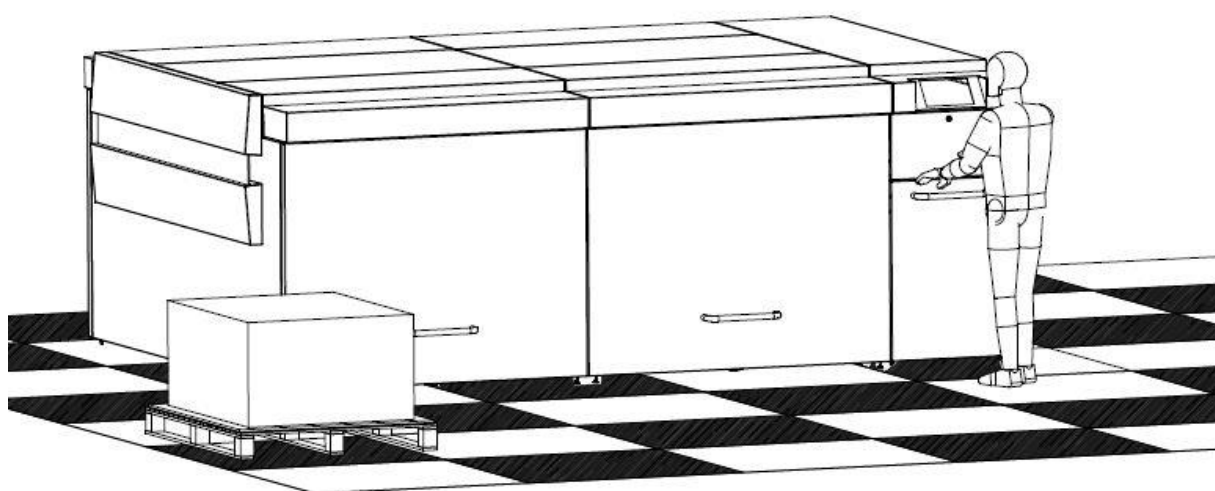
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Please keep this manual for future use!

HEIDELBERG

Machine / machine line: Auto Pallet Loader APL
Year of construction: 2022

Version 09

Revision: January 2022

Document history

Version 02: Maintenance plan added

Version 03: Means of transport added

Version 04: Pallet positions specified. Plate formats added to the technical data.

Note on the plate securing bracket on page 43

Various corrections, May 3, 2018

Version 05: Layout changed, added lubricant, maintenance intervals changed

Version 06: Cassette option added

Version 07: Plate format changed

Version 08: Maximal stack height added

Version 09: Maximal stack height and plate thickness added

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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 (referred to as the "machine" in the following).

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

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 Personnel 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 Personnel 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.



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

2.5.2 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.

2.5.3 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

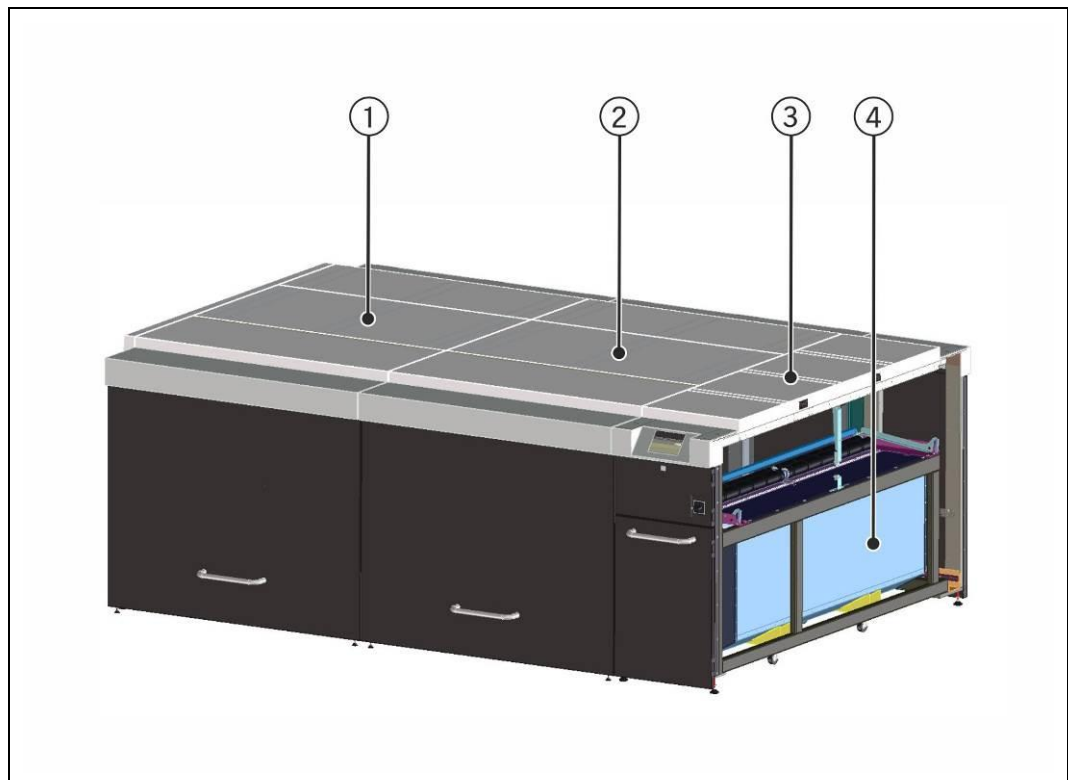
- Be prepared for accidents at any time.
- Keep the first-aid equipment (first-aid boxes, blankets etc.) ready to hand.
- Train personnel so that they are familiar with accident reporting and the first-aid equipment.
- Keep accesses clear for emergency vehicles.

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.

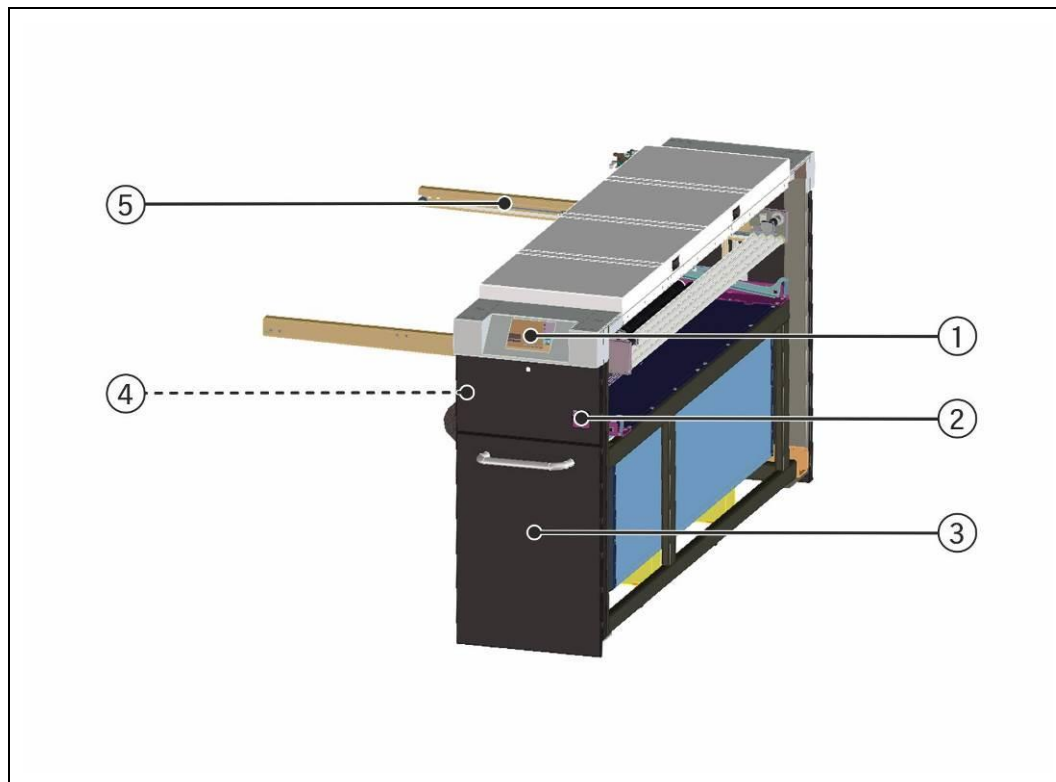
3 Machine description

3.1 Machine overview



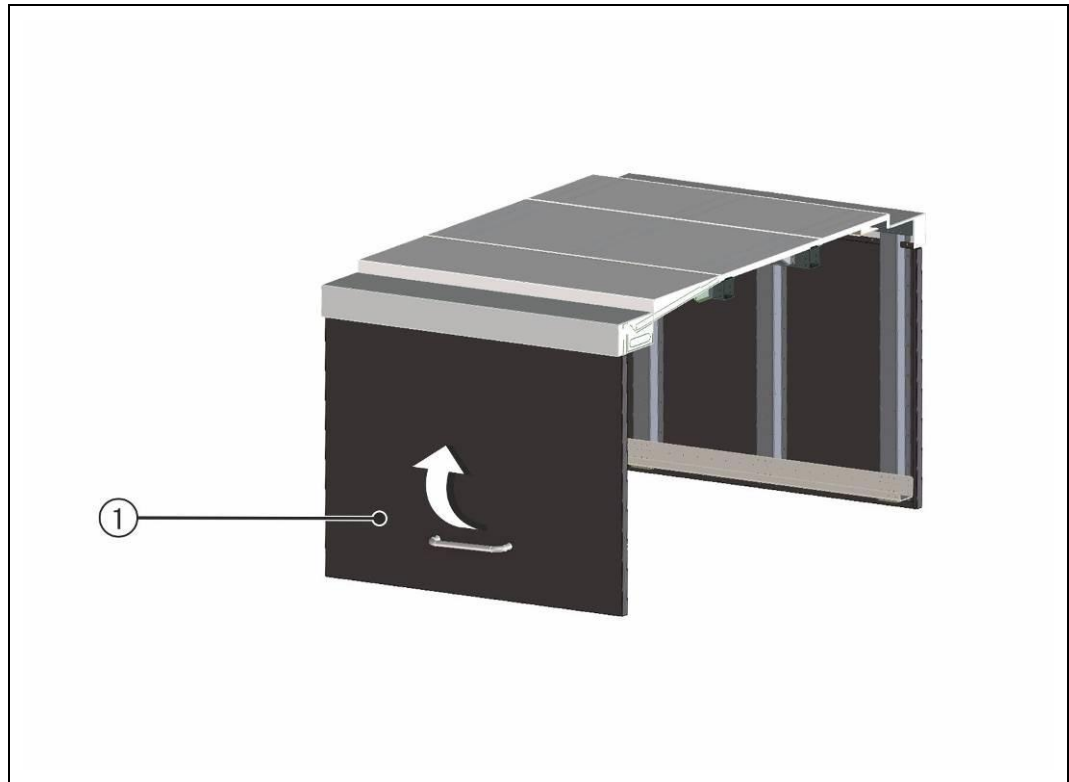
- | | |
|--------------------|--|
| 1 End module | (for receiving printing plates) |
| 2 Extension module | (for receiving printing plates) |
| 3 Basic module | (printing plate transfer) |
| 4 Paper bin | (for receiving paper/printing plate separating sheets) |

3.2 Basic module function and operating elements



- | | |
|----------------------|-----------------------|
| 1 Operating panel | (machine controls) |
| 2 Main switch | |
| 3 Door element | (access to paper bin) |
| 4 Air servicing unit | (pneumatic system) |
| 5 Feeder | |

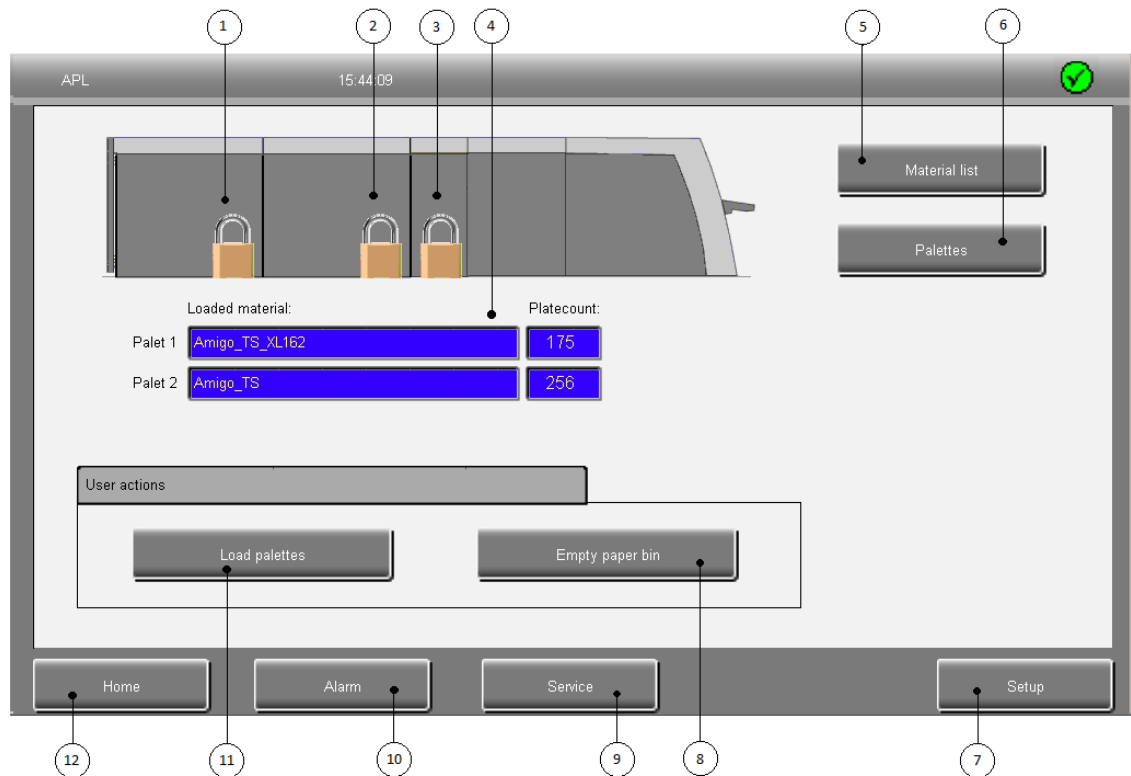
3.3 Extension and end module function and operating elements



1 Swivel hood

3.4 Operating panel

Main menu



- | | |
|---------------------|--|
| 1 Display | Locking status (end module hood) |
| 2 Display | Locking status (extension module hood) |
| 3 Display | Locking status (basic module door) |
| 4 Display | Display of the currently loaded material with the number of plates remaining |
| 5 [Material list] | Display of the material list (material database) |
| 6 [Palettes] | Display/change the loaded pallets/materials |
| 7 [Setup] | System settings |
| 8 [Empty paper bin] | User prompting for emptying the paper bin (see section "6.2 Emptying the paper bin") |
| 9 [Service] | Settings |
| 10 [Alarm] | Display of the alarm list with the malfunctions that have occurred |
| 11 [Load pallets] | User prompting for loading the pallets (see section "6.3 Loading a pallet") |
| 12 [Home] | Return to main menu |

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 extension and end module respectively.

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

A third fixing bracket – consisting of a base plate and bracket element – is designed as a temporary securing bracket. The fixing bracket is removed once the pallet has been placed in the extension or end module.

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

3.6.1 EMERGENCY STOP button

An emergency stop is triggered by pressing the EMERGENCY STOP button.

The EMERGENCY STOP button is located on the downstream machine line module "Recorder" (see "Recorder Operating Manual").

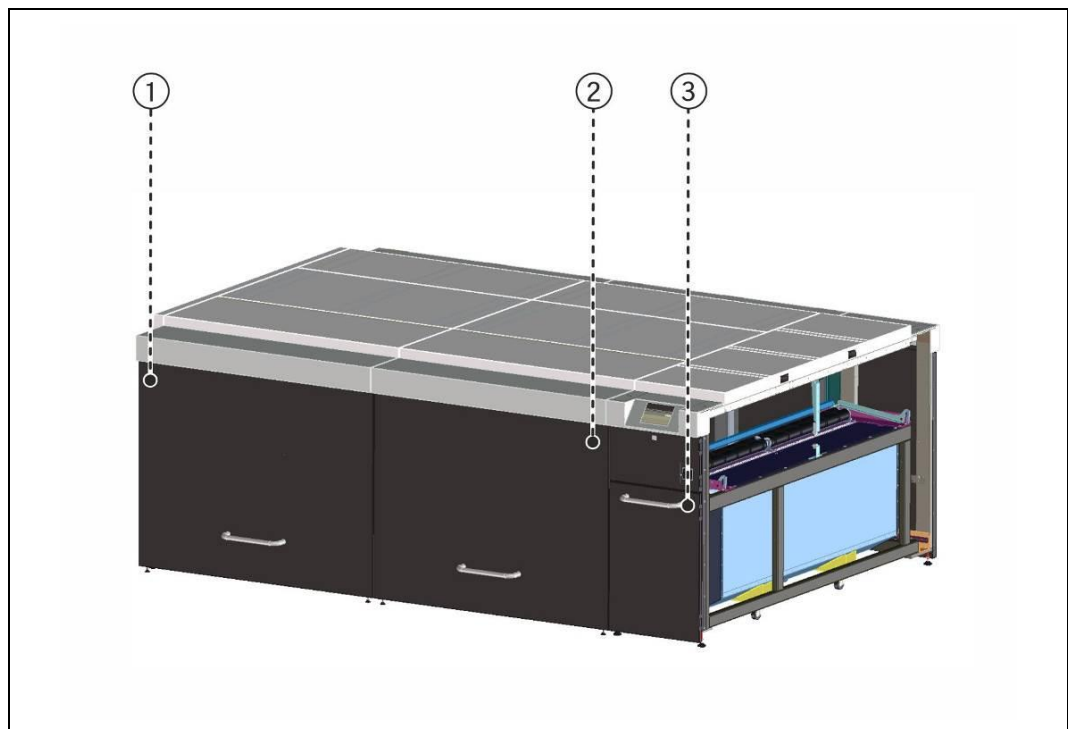
To restart the machine, it is necessary to rearm the EMERGENCY STOP button by turning.

3.6.2 Basic module, extension and end module contact switches

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 extension and end module are equipped with contact switches with guard control.

The release for the door and the cover hoods is given at the operating panel.



- | | |
|-----------------------|-------------------------------------|
| 1 Contact switch | (end module cover hood) |
| 2 Contact switch | (extension module cover hood) |
| 3 Door contact switch | (access to paper bin, basic module) |

3.7 Type plate

The type plate is affixed to the basic module in the area of the main switch.

KRAUSE			
Krause - Biagosch GmbH			
D - 33649 Bielefeld Tel. 0521 / 745 99 - 01			
Paul Schwarze Str.5			
CE			
Type	Auto Pallet Loader for Suprasetter		
Nummer Number	28947	Baujahr year of manufacturing	03 / 2015
Spannung voltage	380 - 400V / 50-60 HZ / 3~ + PE		
Leistung Power	0,96 KW	Strom current	1,6 A
Schaltplan diagram	D-20720		
Serie	860a - 01 - 2		
Gebrauchsanweisung beachten read the operation manual			
Made in Germany			

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:

- Basic module (printing plate transfer module)
- Extension module (printing plate receiving module)
- End module (printing plate receiving module)
- Paper bin
- 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 components are delivered on pallets or in crates (packages). These can be moved using a forklift truck or lift truck.

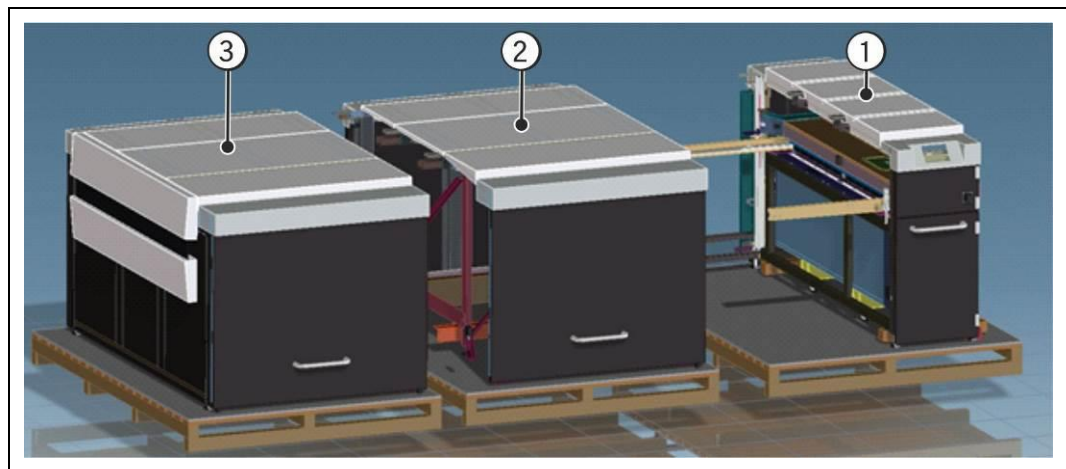
Ensure that

- 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



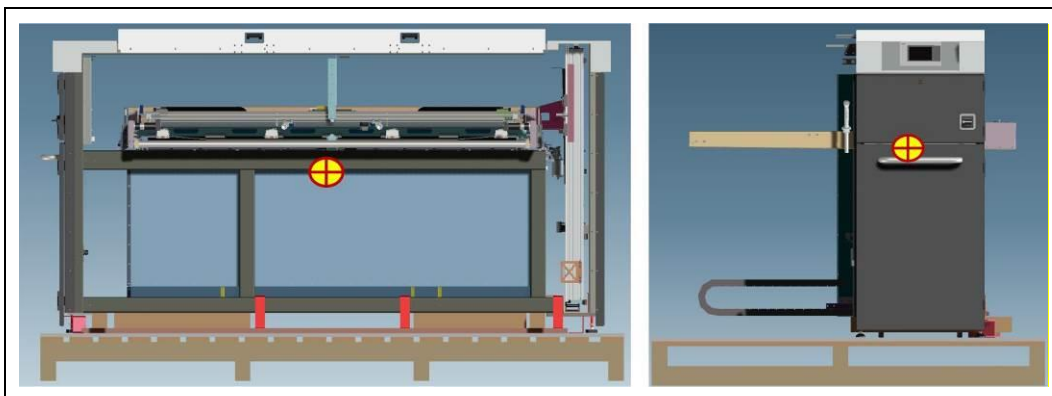
Package	Table of Contents	Length (mm)	Width (mm)	Height (mm)	Weight (kg)	Type
1	Basic module with feeder	2050	3250	1930	1000	Crate
2	Extension module	2050	3250	1930	800	Crate
3	End module	2050	3250	1930	800	Crate

* Weight incl. pallet weight (approx. 270 kg)

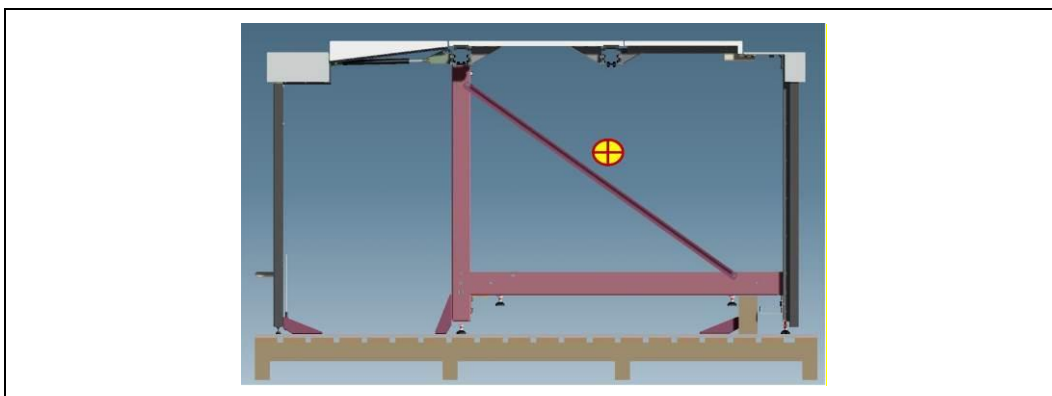
Interior dimensions of the 3 modules: 3150 x 1950 x 1650 mm

4.1.6 Centre of gravity of the packages

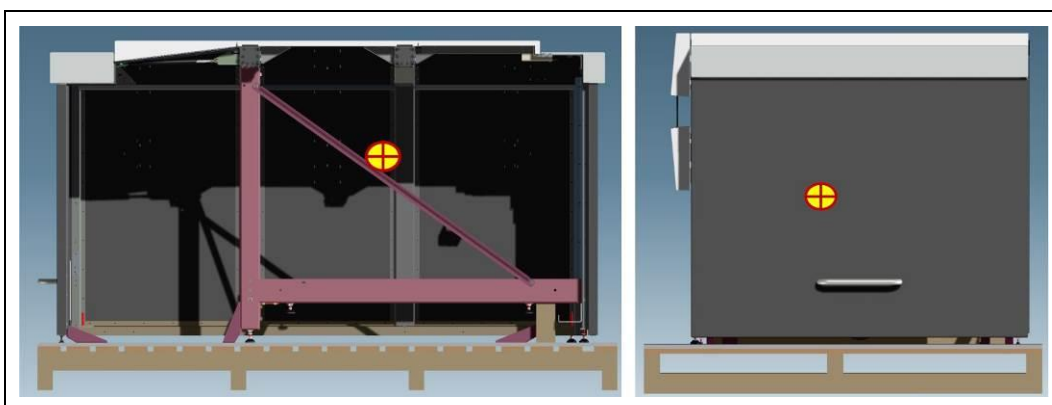
Basic module



Extension module



End module



4.1.7 Recommended transport equipment

Transport equipment	Type (quantity)	Fork length (mm)	Perm. load-bearing capacity (kg)
Transport equipment 1 (for unloading the lorry)	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)	8 dollies		

4.1.8 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.

4.1.9 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. See technical data in chapter 12.

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 Auto Pallet Loader APL")

6 Operation



WARNING

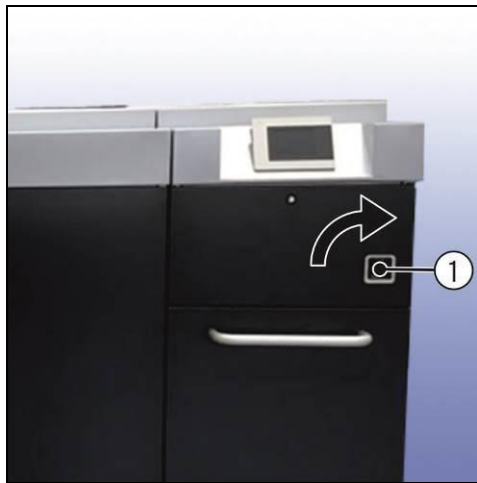
Risk of injury in the event of insufficient qualifications!

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

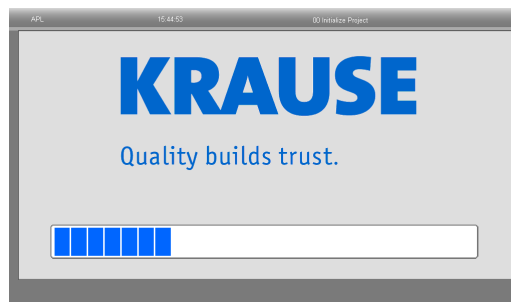
- Therefore restrict all activities for operating the machine to suitably qualified personnel.

6.1 Switching on the machine

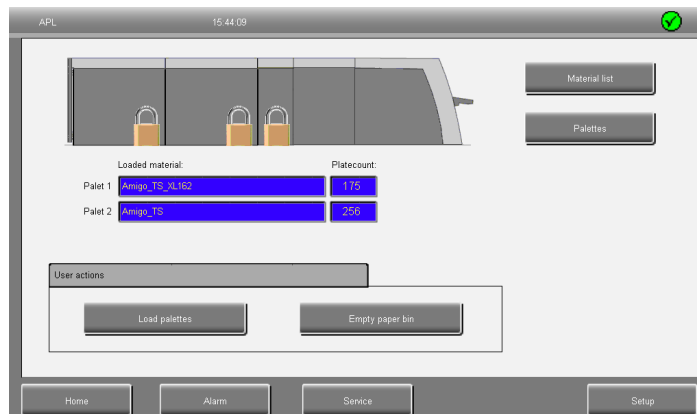
- Switch on the higher-ranking machine line module if applicable (see the "Recorder" operating manual).



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



The system controls start up.



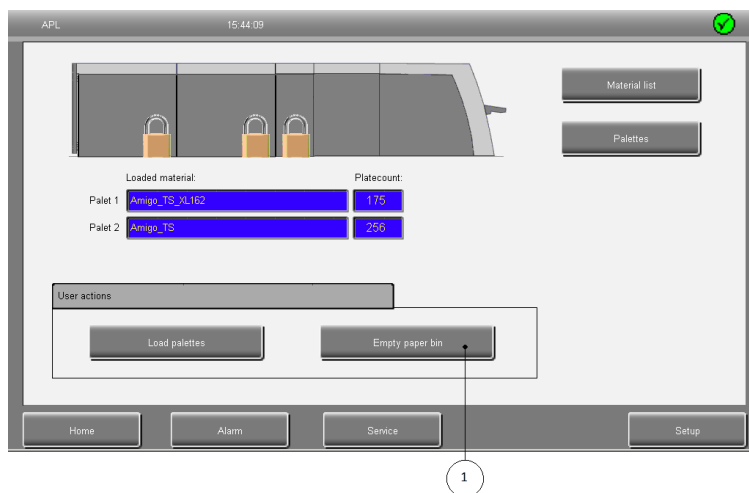
The machine carries out a reference run.
The machine is ready for operation when the user mask is displayed and the green dot at the top right is visible.



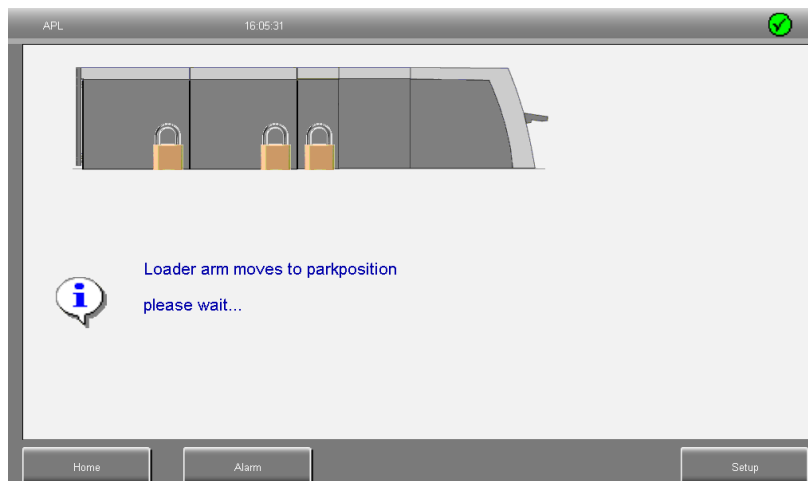
The reference run is automatically started when the Recorder starts up and for each "Correct error".

There is no provision for starting the reference run from the operating panel of the APL.

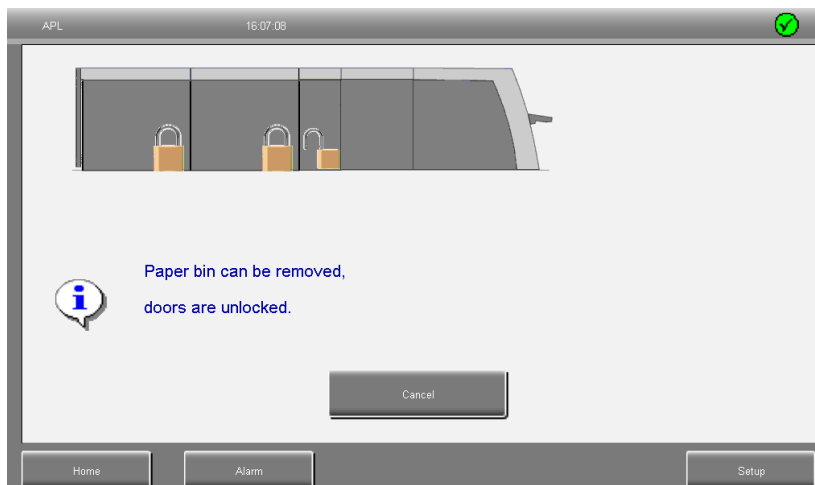
6.2 Emptying the paper bin



- Touch [Empty paper bin] (1).



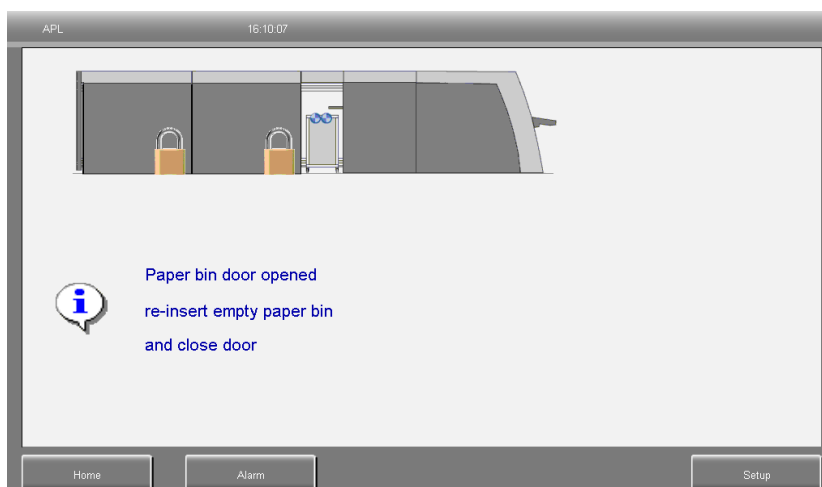
The machine moves into the safe position (park position).



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.

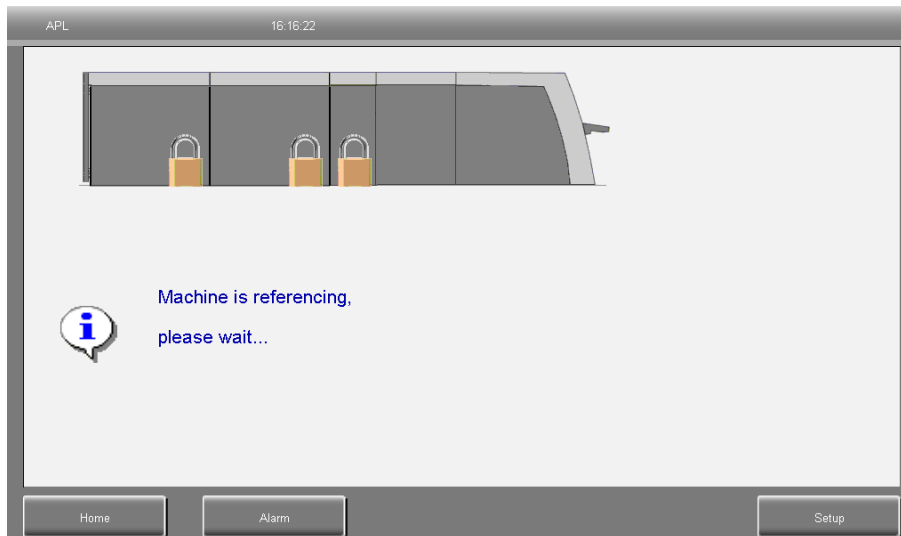
- Empty the paper bin.
- Push the paper bin back into the set-up area and close the door. The door is automatically locked.

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.



The machine carries out a reference run.



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

Optionally you can confirm, that you did not empty the paper bin.

Note: The message disappears automatically after 10 seconds.

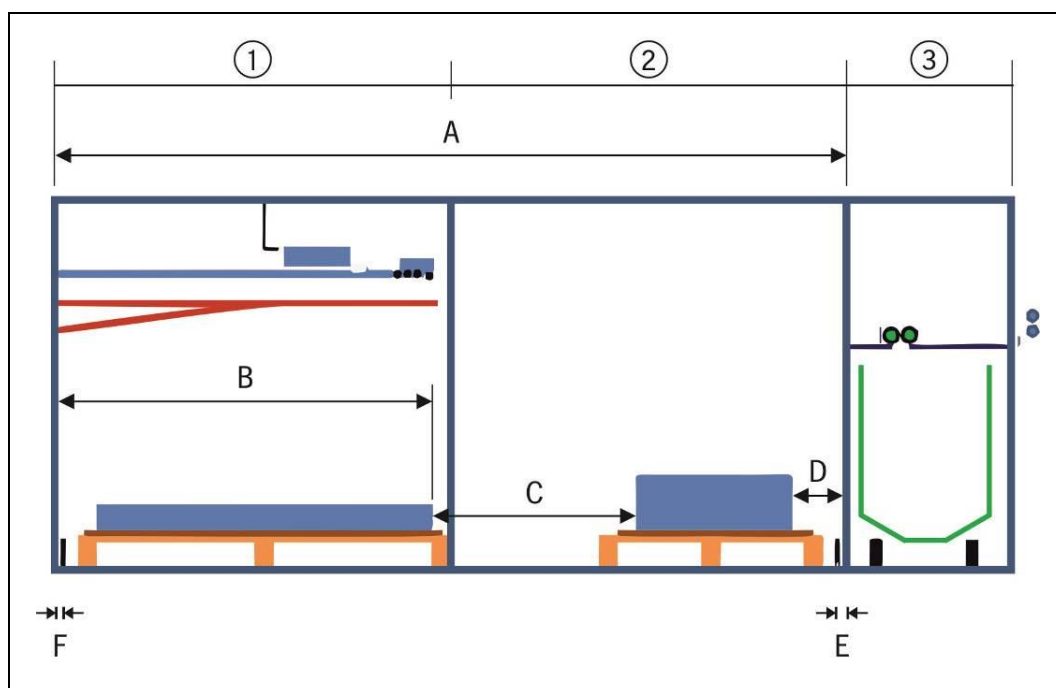
The machine is then ready for operation again.

6.3 Loading a pallet

Up to 2 pallets with printing plates can be set up in the set-up area.

Pallet positions

The pallets have to be precisely positioned in the set-up area so that the printing plate stacks can be detected by the stack detection system. The following figure shows the areas in which the pallets have to be set up.



- 1 End module (pallet position under the storage compartment)
- 2 Extension module (pallet position in front of the set-up area of the paper bin)
- 3 Basic module (set-up area of the paper bin)

A	3360 mm	Internal dimension (measured on the frame profile)
B	1520 mm	Minimum dimension of the front edge of the printing plate stack *
C	210 mm	Minimum spacing of the printing plate stack (the pallets can be positioned closer together)
D	210 mm	Minimum dimension of the front edge of the printing plate stack *
E	25 mm	Collision protection
F	15 mm	Collision protection

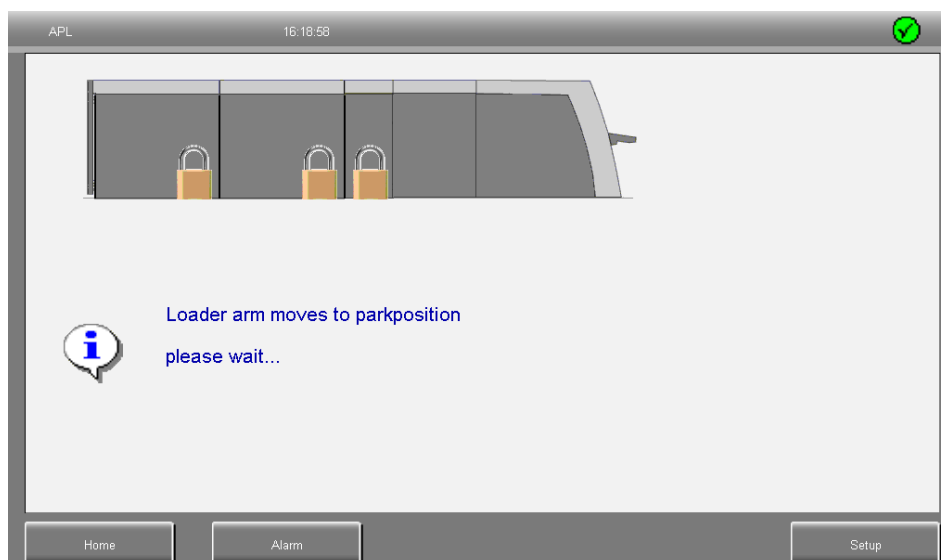
* Front edge of the printing plate stack = edge in the direction of the paper bin and the Recorder

Loading

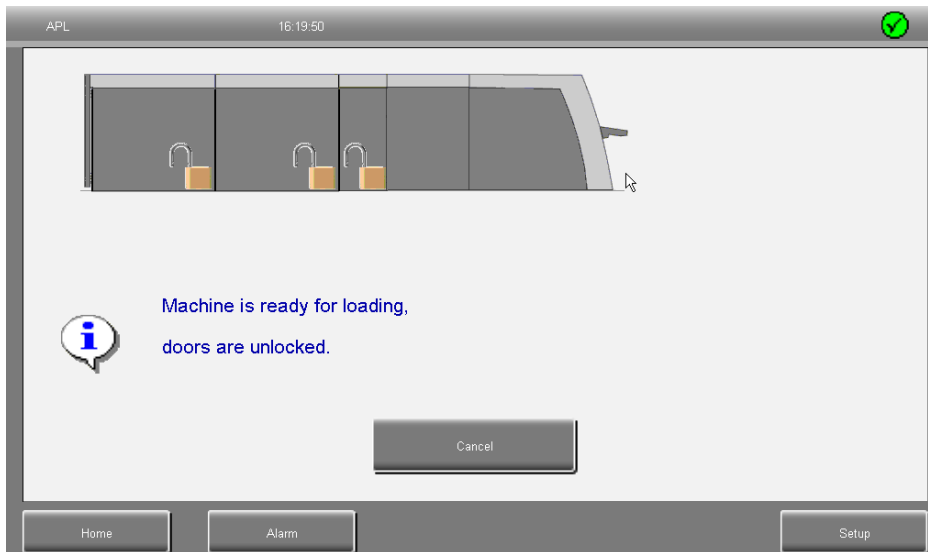
The loading of a pallet is described in the following operating steps



- Touch [Load pallets] (1).

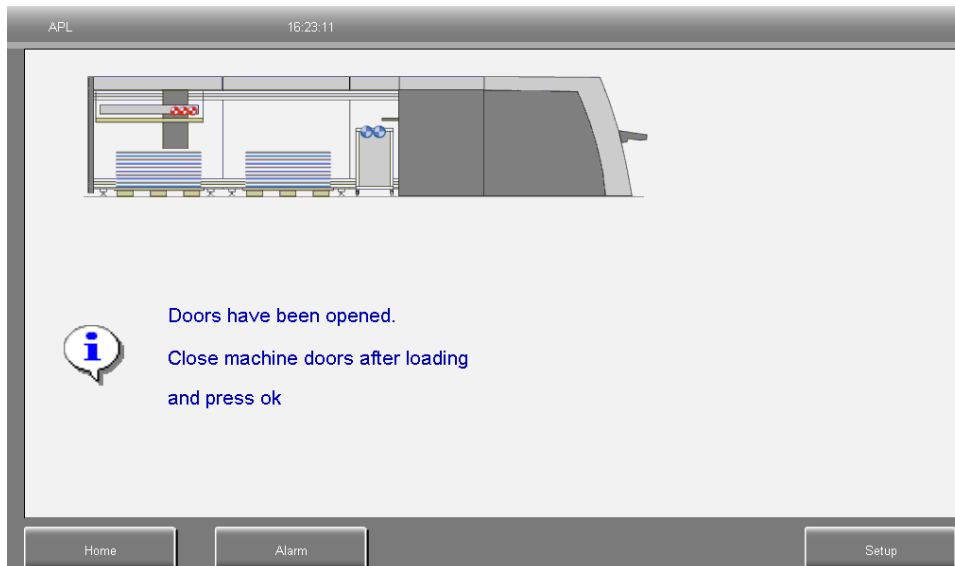


The machine moves into the safe position (park position).



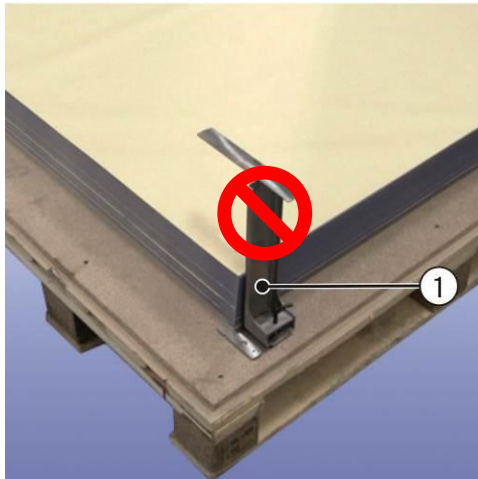
The hoods and the door are unlocked.
The set-up area of the machine can be loaded.

- 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.



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 lifting device.
- Align the pallets such that
 - the front edge of the pallet is flush with the marking on the floor;
 - the longitudinal edge of the printing plate stack is flush with the laser marking.



Remove the securing bracket (1).



The machine will not reach the plate stack in case the bracket is not removed and will issue a vacuum error.

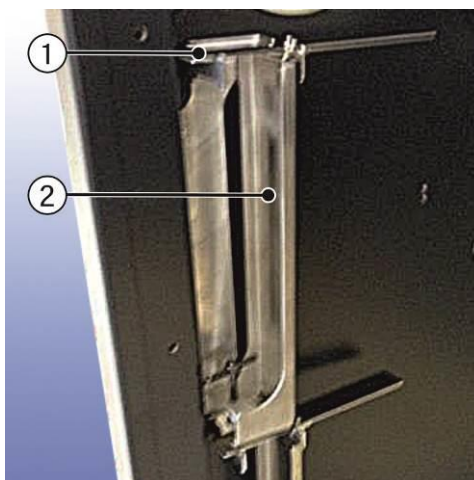


Two versions of brackets are in use. A lower one until 2017. The longer one for up to 1200 plates since June 2018



VORSICHT

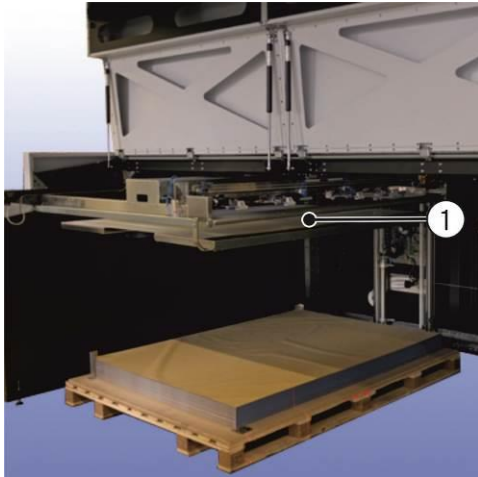
Remove the bracket in any case. This is important for all versions and years or manufacturing.



- Hang the securing bracket (2) from the holder (1) provided on the housing wall of the end module.
- Machines before June 2018 can only take the short bracket. In case such a machine is updated to the longer bracket an adequate place for the storage has to be defined.



Check the storage compartment during the course of loading and remove any printing plates or separating sheets.



- Remove printing plates or separating sheets from the storage compartment (1) if applicable.



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].

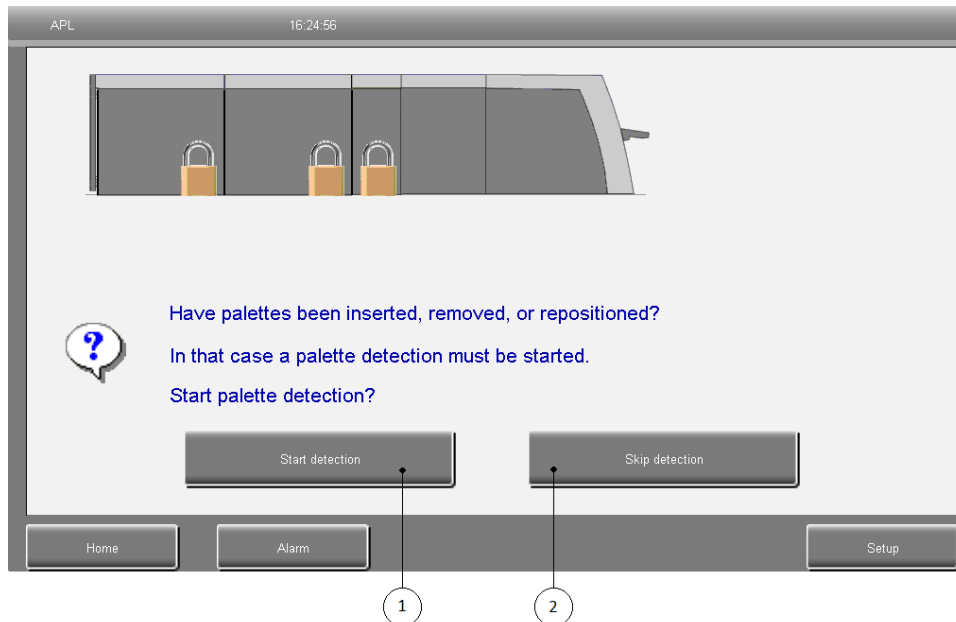


- Confirm with [OK] to lock the hoods.

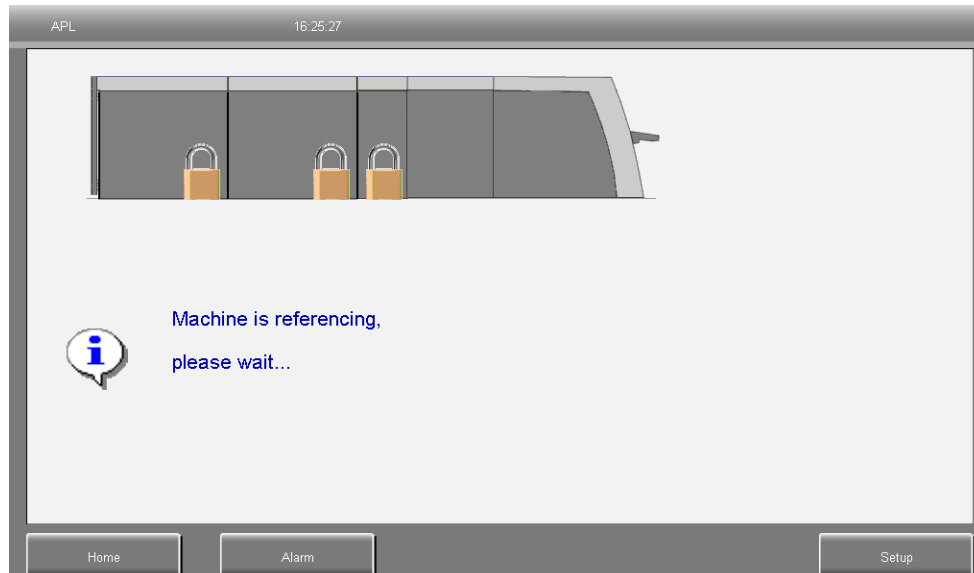
The machine has to carry out a reference run and pallet detection.



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.



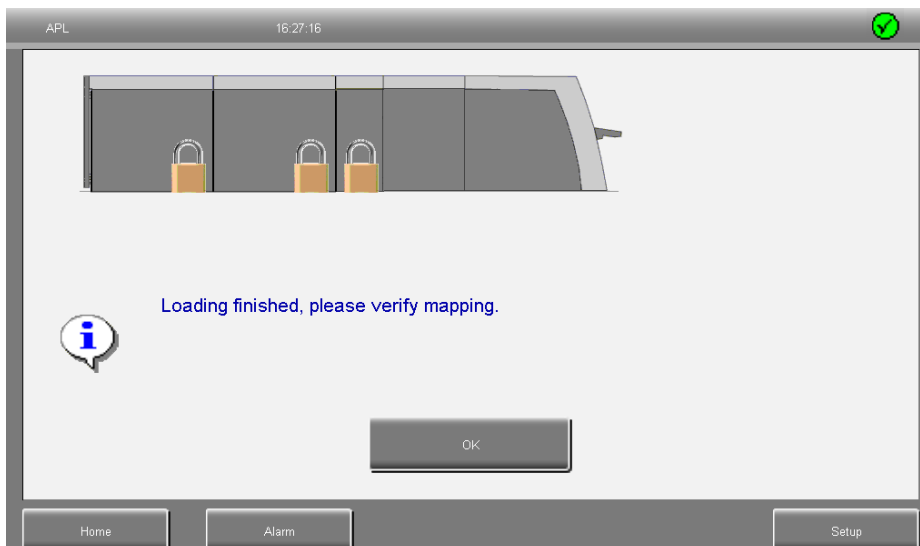
- If pallets have been loaded, removed or moved, start the detection with [Start detection] (1).
- Otherwise detection can be skipped with [Skip detection] (2).
- Check the storage compartment for plates and cardboards and remove it



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.

Number of palettes in machine: 2

Material links

Loaded material:	Mat. Number	Platecount:
Palet 1: Amigo_TS_XL162	< 8 >	175
Palet 2: Amigo_TS	< 6 >	256

Back without saving Apply changes

- 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.

Loading completed.

OK

Home Alarm Setup

- To complete the loading process touch [OK].

Note: The message disappears automatically after 10 seconds.

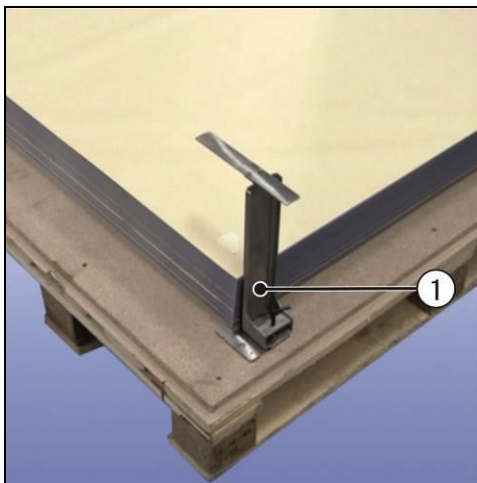
The machine is then ready for operation again.

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

6.4 Removing a pallet

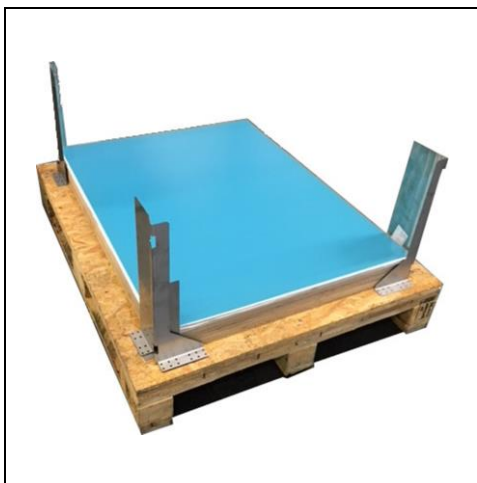
Once the last printing plate has been removed from the feeder, a message appears on the operating panel of the Recorder.

- 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").



Also unscrew the holder for the securing bracket (1) from the empty pallet before disposing of the pallet!

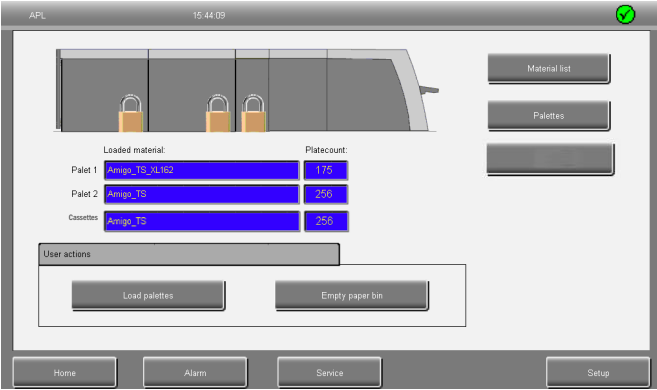
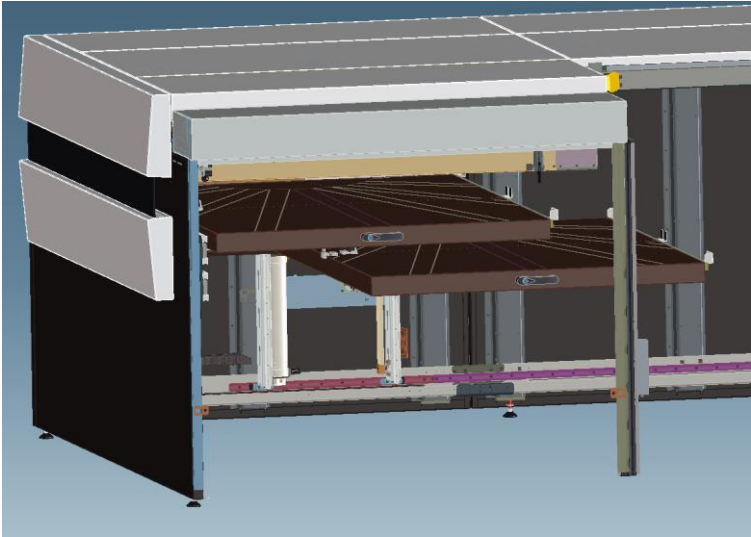


Also unscrew the rear retaining brackets from the empty pallet and fit them to the new pallet!



The brackets are also available for higher plate stacks.

The bracket close to the CTP Recorder has to be removed before the machine is started !!!

6.5 Loading plates to the cassettes (optional)

	<ul style="list-style-type: none">• 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“
	<ul style="list-style-type: none">• Follow the instructions on the screen step by step• The cassette moves out into the loading position in the X direction.• Unlock the cassette with the push-button at the handle and pull it out for loading the plates.• The cassette can hold a maximum of 100 printing plates of 0.3mm thickness (plate format 1055x811mm) or 100kg.
<div data-bbox="327 1648 943 1957"><div>Caution Make sure that the cassette is locked !</div></div>	<ul style="list-style-type: none">• Make sure the cassette is locked correctly after loading and inserting.

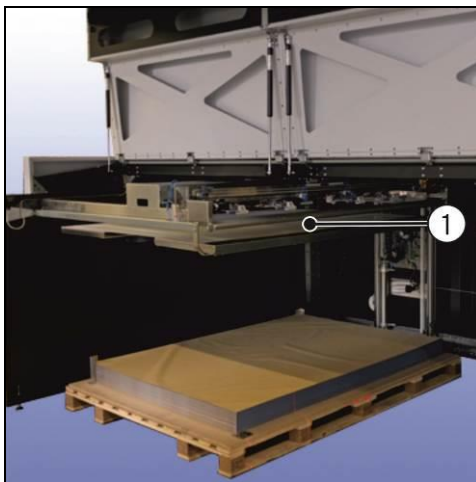
6.6 Removing faulty printing plates

Faulty printing plates are deposited in the storage compartment.



Check and, if necessary, empty the storage compartment every day.

- Start a loading sequence as described in section "6.3 Loading a pallet".
- Open the hoods of the end and extension module.



- Remove the faulty printing plates from the storage compartment (1).
 - Confirm, that the plates are removed
-
- Close the hoods of the end and extension module and follow the instructions according to section "6.3 Load pallet".

6.7 Switching off the machine



The machine is normally switched off via the higher ranking machine line module "Recorder". The machine can be switched off separately in the event of a malfunction or for maintenance work.



- 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 timeout
8208	Suction cup adjustment (Y axis): reference timeout
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

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

Error number	Error message
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
8331	Motor 5 (roller rotation): undervoltage
8332	Motor 5 (roller rotation): overvoltage

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

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

Assembly group	Maintenance interval	Maintenance work	Duties and responsibilities	
			Customer	Service
Entire machine	Every 6 months	– Clean the work area	X	
Guide rails: – Feeder – Extension and end module	Every 6 months	– Clean and oil the slide rails.		X
Guide rails: – Feeder / support rolls	Every 6 months	– Spray the slide rails, in which the support rolls run, with silicone spray.		X
Optical sensors on the feeder (paper detection, plate edge): – 4 light barrier sensors – Laser sensor	Every 6 months or as required	– Clean sensors with a soft lint-free cloth.		X
Ultrasonic sensors at the outfeed slot to the Recorder.	Every 6 months or as required	– Clean sensors with a soft lint-free cloth.		X
Feeder drive belts	Every 6 months	– Check the drive belts for damage.		X
Suction cups, feeder	Every 6 months	– Check the suction cups for damage (tears and deformation).		X
Rubber rollers, basic module	Every 6 months	– Check the rubber rollers for damage.		X
Pneumatic system of the entire machine	Every 6 months	– Check the pneumatic system for leaks. – Check the pneumatic hoses for damage. – Check the condensate level in the air servicing unit.		X

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	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 Basic module 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 "4.1.7 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

The component parts of the machine are dismantled in the following order, one after the other, and prepared for transport.

1. Supply lines
2. Paper bin
3. End module
4. Extension module
5. Basic module

10.3.1 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.

10.3.2 Paper bin

- Open the door to the basic module and pull the paper bin out of the basic module.
- Lift the paper bin onto the prepared pallet and pack the paper bin in transport film.
- Fit the transport securing devices for securing the paper bin to the pallet.
- Move the pallet out of the dismantling area of the machine.

10.3.3 End module

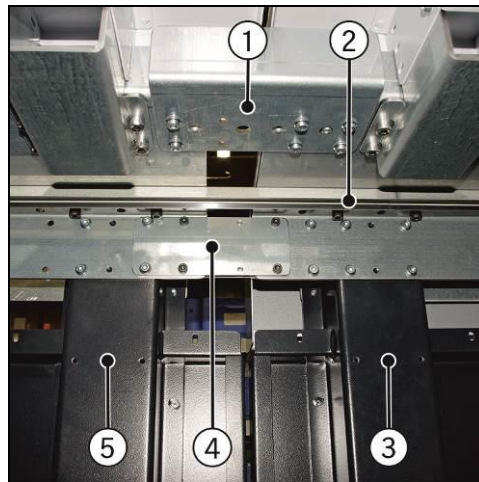
Before dismantling the end module it is necessary to fit the supporting transport securing devices and other transport securing devices.

- Fit the struts, cross brackets and supporting elements.

Releasing the connecting straps

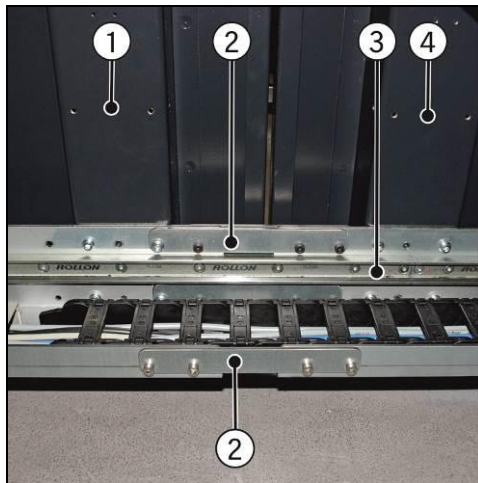
- Open the hood of the end module.

Top connection:



- Remove the 3 screws from the slide rail (2) of the end module (3).
- Remove the connecting strap (4), connecting the end module to the extension module (5).
- Remove the connecting profile (1).

Bottom connection:

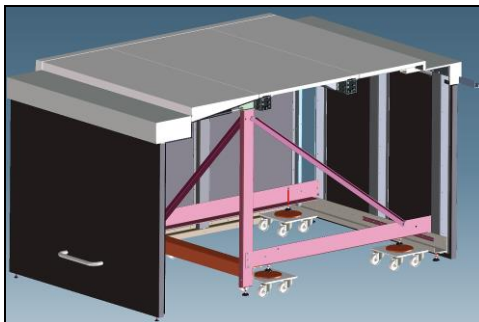


- Remove the 3 screws from the slide rail (3) of the end module (4).
- Remove the connecting strap (2), connecting the end module to the extension module (1).

- Close the hood of the end module.
- Fit the transport securing devices for fixing the hood during transport.

Preparing the end module for transport

- Lift the end module by the attachment points.



- Push the dollies under the support elements and deposit the end module onto the dollies.

- Move the end module out of the dismantling area and into the vicinity of the prepared pallet.
- Lift the end module by the attachment points and deposit it onto the pallet.
- Pack the end module in transport film.
- Fit the transport securing devices for securing the end module to the pallet.

10.3.4 Extension module

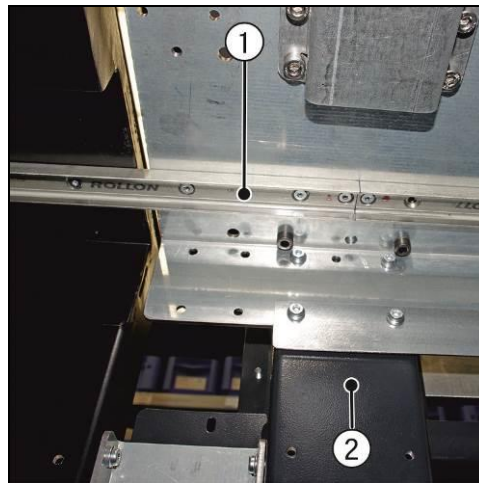
Before dismantling the extension module it is necessary to fit the supporting transport securing devices and other transport securing devices.

- Fit the struts, cross brackets and supporting elements.

Releasing the connecting straps

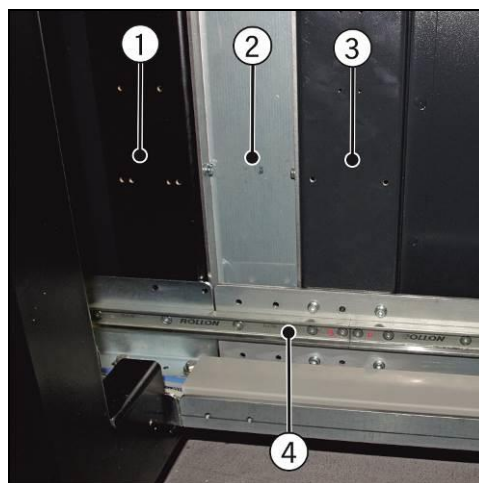
- Open the hood of the extension module.

Top connection:



- Remove the 3 screws from the slide rail (1) of the extension module (2).
- Remove the connecting strap (4), connecting the end module to the extension module (5).
- Remove the connecting profile (1).

Bottom connection:



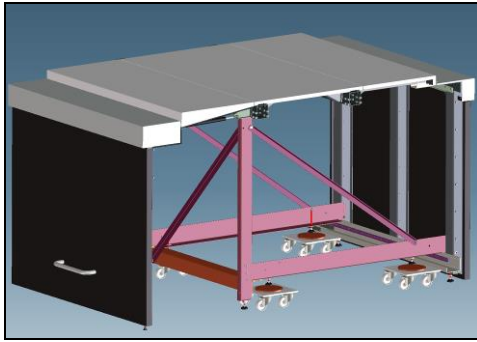
- Remove the 3 screws from the slide rail (4) of the extension module (3).
- Remove the U-section (2) connecting the basic module (1) to the extension module.

The U-section is fastened with Allen screws to the respective frame edges.

- Close the hood of the end module.
- Fit the transport securing devices for fixing the hood during transport.

Preparing the extension module for transport

- Lift the extension module by the attachment points.



- Push the dollies under the support elements and deposit the extension module onto the dollies.

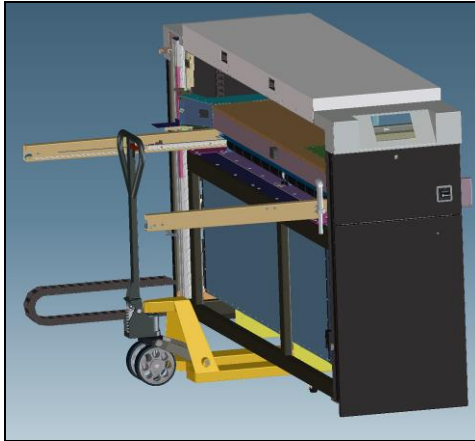
- Move the extension module out of the dismantling area and into the vicinity of the prepared pallet.
- Lift the extension module by the attachment points and deposit it onto the pallet.
- Pack the extension module in transport film.
- Fit the transport securing devices for securing the extension module to the pallet.

10.3.5 Basic module

Releasing the connecting straps

- Remove the mounting straps connecting the basic module to the Recorder.

Preparing the basic module for transport



- Lift the basic module by the attachment points.

- Push the dollies under the frame and deposit the basic module onto the dollies.
- Move the basic module out of the dismantling area and into the vicinity of the prepared pallet.
- Lift the basic module by the attachment points and deposit it onto the pallet.
- Pack the basic module in transport film.
- Fit the transport securing devices provided for securing the basic module to the pallet.

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

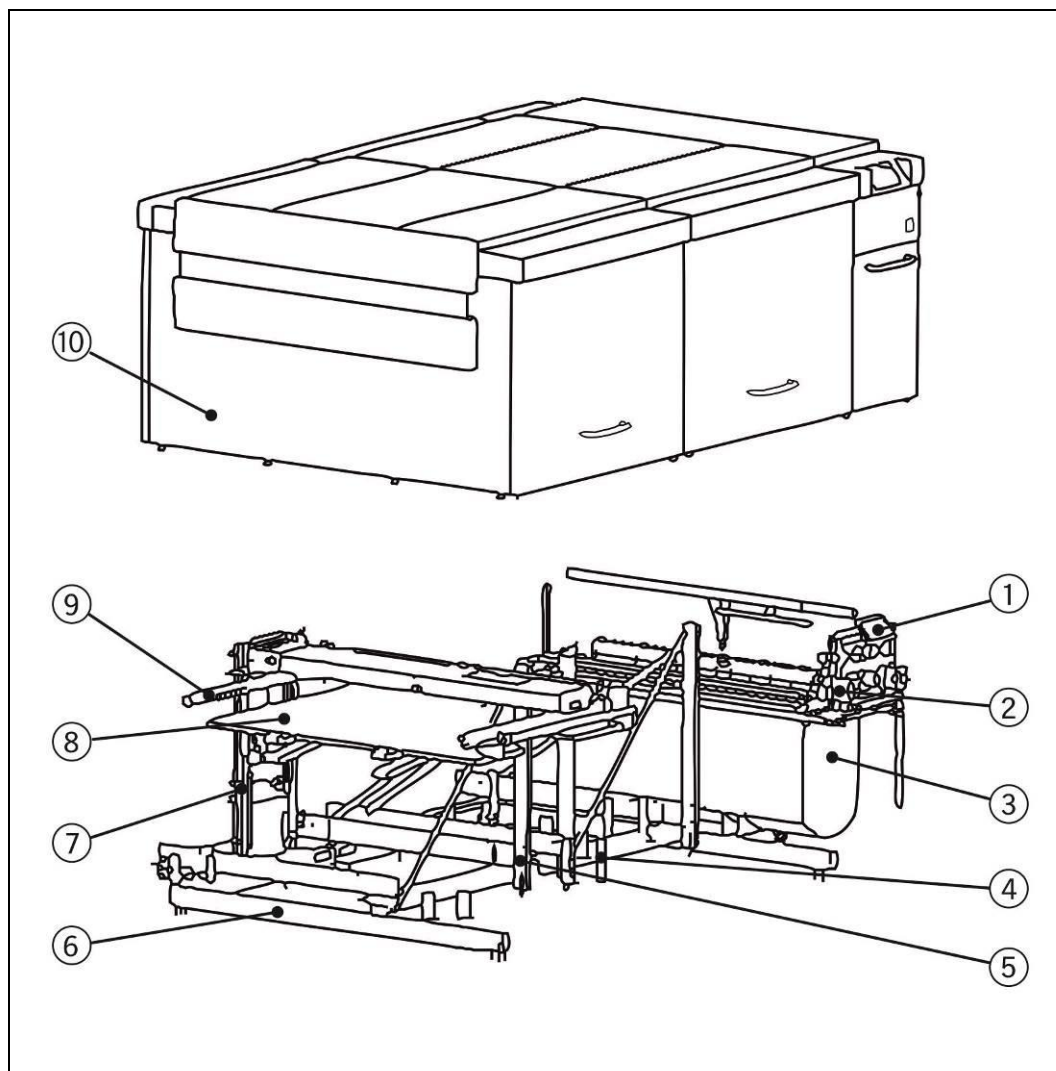
Assembly groups and/or components that contain no pollutants and can be recycled in an environmentally safe manner.

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
1	Electrical installation	Mounting plate	Terminals, cable ducts	Electronic components, power pack, PCBs, cables
2	Pneumatics		Air servicing unit, valves, pneumatic hoses	
3	Paper removal	Metal, steel	Rubber rollers	Electric motor

Pos.	Assembly group	Recyclable material Metal	Recyclable material Plastic	Pollutants
4	Plate securing device	Sheet steel		
5	Transport securing device	Steel		
6	Collision guard	Sheet steel		
7	XZ axle	Metal, steel	Timing belt, electric motor	
8	Storage compartment	Metal holders and plywood		
9	Feeder	Steel and aluminium	Timing belt, vacuum suction cups, pneumatic hoses, plastic moulded parts	Electronics and pneumatics
10	Cladding	Metal, sheet steel, doors made of aluminium		
	Screws, nuts, bolts	Steel		

Dismantling information

Pos.	Assembly group	Dismantling information
1	Electrical installation	Mounting plate and operating panel screw-fitted, cables plug-connected
2	Pneumatics	Plug-connected, screw-fitted
3	Paper removal	Screw-fitted
4	Plate securing device	Loose individual parts
5	Transport securing device	Screw fitted (removed from the machine after installation)
6	Collision guard	Bolted to the floor
7	XZ axle	Suspended in guide rails (remove the feeder before dismantling)
8	Storage compartment	Screw-fitted (stack)
9	Feeder	Screw-fitted to vertical guide (relieve before dismantling)
10	Cladding	All parts 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	4163	2935	1560
Basic module	660	2935	1560
Extension module	1700	2935	1560
End module	1803	2935	1560
Optional extension modules	1700	2935	1560

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

Module	Length	Width	Height
Overall dimension including all modules without optional extensions	4163		
Basic module + paper bin	660	2810 + 2376 = 5186	1560
Extension module	1700	3713	2564
End module	1803	2935	2564
Optional extension modules	1700	2935	2564

12.1.2 Weights

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

Module	Weight	Max. floor load per foot	Max. surface load
Basic module	480	200	
Extension module	380	200	
End module	470	200	
Optional extension modules	380	200	

12.1.3 Electrical connected loads/rating

Connection	Value
Voltage	3 PE 380-480 V 50/60Hz
Current	1.6 A
Connected load	0.96 kW
Fuse	6 A downstream of main switch
Fuse in the Recorder	-

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	Pallet: 1425 x 1915 mm x mm Cassettes: 1325 x 1650 mm x mm
Smallest plate size	Pallet: 611x968 mm x mm Cassettes: 400x500 mm x mm
Plate thicknesses	0,24mm bis 0,4mm
Maxium pallet size	1580 x 2115 mm x mm *)
Smallest pallet size	800 x 1000 mm x mm
Orientation of printing plate	Coating to the sky, landscape

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

12.1.9 Maximal stack height - Palette

Parameter	Thickness	Stack height pcs
Until 2018	0,3 mm	600
	0,4 mm	500
Since 2018	0,3 mm	1200
	0,4 mm	1000

12.1.10 Maximal stack height – Cassette

Printing machine	Plate size	Thickness	Stack height pcs	Weight in kg Max 100kg
Speedmaster 74	605 x 745 mm x mm	0,235 mm	105	32kg
		0,275 mm	90	32kg
		0,3 mm	85	33kg
		0,4 mm	65	33kg
Speedmaster XL75	660 x 745 mm x mm	0,235 mm	105	35kg
		0,275 mm	90	35kg
		0,3 mm	85	36kg
		0,4 mm	65	36kg
Speedmaster 102	790 x 1030 mm x mm	0,235 mm	105	58kg
		0,275 mm	90	57kg
		0,3 mm	85	59kg
		0,4 mm	65	59kg
Speedmaster XL106	811 x 1055 mm x mm	0,235 mm	105	61kg
		0,275 mm	90	60kg
		0,3 mm	85	62kg
		0,4 mm	65	62kg
Speedmaster XL145	1175 x 1460 mm x mm	0,275 mm	78	100kg
		0,3 mm	71	100kg
		0,375 mm	57	100kg
		0,4 mm	53	100kg
Speedmaster XL162	1325 x 1630 mm x mm	0,275 mm	62	100kg
		0,3 mm	57	100kg
		0,375 mm	45	100kg

Printing machine	Plate size	Thickness	Stack height pcs	Weight in kg Max 100kg
		0,4 mm	42	100kg

12.2 Other applicable documents

The following documents are attached to this operating manual:

- Installation manual "Auto Pallet Loader APL"
- Electric wiring diagram D20720
- 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.

EG-Konformitätserklärung für eine Maschine nach 2006/42/EG, Anhang II, Nr. 1A

KRAUSE

Qualität schafft Vertrauen.

Hersteller Krause-Biagosch GmbH,
Paul-Schwarze-Straße 5, D-33649 Bielefeld

**Dokumentations-
bevollmächtigter** Thomas Richter
Adresse wie Herstelleradresse

Hiermit erklären wir, dass die folgende Maschine in Übereinstimmung mit allen einschlägigen Bestimmungen der Maschinenrichtlinie 2006/42/EG ist sowie mit den Bestimmungen der EMV-Richtlinie 2004/108/EG.

Produktbezeichnung: APL Automatischer Palettenlader

Seriennummer -

Maschinentypen: APL VLF

Baujahr: 2014 / 2015

Die folgenden harmonisierten Normen wurden angewendet:

- | | |
|--------------------|--|
| DIN EN ISO 14121-1 | Sicherheit von Maschinen - Risikobeurteilung - Teil 1: Leitsätze |
| DIN EN ISO 12100 | Sicherheit von Maschinen - Grundbegriffe, allgemeine Gestaltungsleitsätze – Teil 1: Grundsätzliche Terminologie, Methodologie und Teil 2: Technische Leitsätze |
| DIN EN ISO 13857 | Sicherheit von Maschinen — Sicherheitsabstände gegen das Erreichen von Gefährdungsbereichen mit den oberen und unteren Gliedmaßen |
| DIN EN ISO 13850 | Sicherheit von Maschinen – NOT-HALT – Gestaltungsleitsätze |
| DIN EN 60825-1 | Sicherheit von Lasereinrichtungen - Teil 1: Klassifizierung von Anlagen und Anforderungen |
| EN 60204-1 | Sicherheit von Maschinen – Elektrische Ausrüstung von Maschinen - Teil 1 : allgemeine Anforderungen |

Ferner wurden die folgenden Normen und technischen Spezifikationen beachtet:

UL 775 Graphic Arts Equipment

Bielefeld, den 11.12.2014

Thomas Lüttgens
Geschäftsführer

i.A.
Thomas Richter
Technischer Leiter