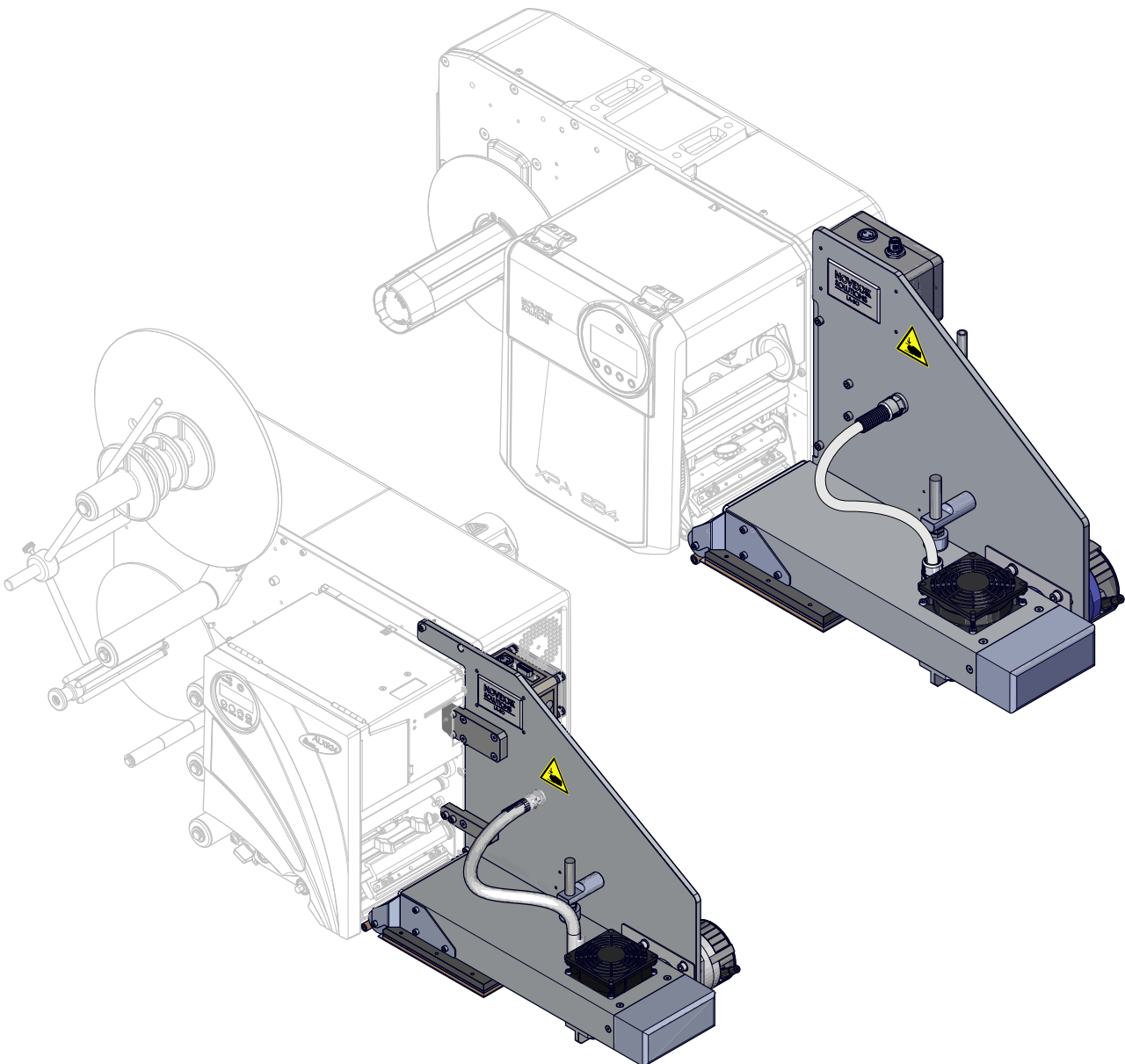


OPERATING MANUAL

LA-SO Applicator



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Please Note

GENERAL INFORMATION

Validity of this manual and required compliance

Contents

The complete operating manual for the LA- SO consist of the following parts:

- User manual (for operating personnel)
- Operating manual (for operating and service personnel)
- Service manual (for service personnel)
- Spare parts catalogue (for service personnel)

This *operating manual* describes the installation and operation of the named applicators. For safe and proper operation of the dispenser/print-dispenser with attached LA- SO, it is indispensable to consult the operating manual for the relevant dispenser/print-dispenser too.

For technical questions not covered in this operating manual:

→ Follow the instructions of the service manual for the applicator or the dispenser/print-dispenser or

→ Request a service technician from our sales partner.

Our sales partner's customer service department is available especially for configuration settings and malfunctions.

Device designation

LA-SO is the abbreviation for "Label Applicator Swing-On". The abbreviation 'SO' (swing on) distinguishes this applicator from other application techniques such as 'blow on' or 'tamp on'.

The LA- SO is available in different designs and versions. For details refer to chapter **Configurations**  on page 21.

Technical release

04/2013

Liability

NOVEXX Solutions reserves the right:

- to make changes in design, parts and software and to use equivalent parts instead of those specified for the purpose of technological progress.
- to change information in this manual.

Any obligation to extend these changes to machines previously delivered is excluded.

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How information is represented

Explanation of symbols

To enhance readability and make information easier to find, different types of information are identified:

→ Instruction with no order of tasks assigned

1. Numbered instructions introduced by preceding text
2. The specified order must be followed!

▮▮▮▮ Special note for action that must be performed.

☹ Explanation of an error cause in the reference of error messages.

- Enumeration of features
- Other feature



The Experts symbol identifies activities that are reserved exclusively for qualified and specially trained personnel.



The information symbol identifies notes and recommendations as well as additional information.

Notes about hazards and risks

Important instructions that must absolutely be followed are specially highlighted:

**WARNING!**

A warning symbol refers to risks that can result in severe or fatal injuries! The note contains safety measures to protect affected persons.

→ Instructions must be followed without exception.

CAUTION!

A caution symbol refers to risks that can result in property damage or personal injury (minor injuries). The note contains instructions for preventing damage.



→ Instructions must be followed without exception.

Illustrations

Illustrations appear in the text where required. References to these illustrations are shown in [square brackets] containing the number of the illustrations. Uppercase letters after an illustration number, for example [12A], refer to the corresponding item within the illustration.

Key symbols

Keys in the *dispenser control panel* (if present) are represented as symbols.

If multiple keys must be pressed simultaneously, the symbols are joined in the text by "+":  + 

Keys in the *printer control panel* are represented as text, for example "Press the ONLINE key".

Parameters

Parameters in the parameter menu are represented in the format MENU NAME > Parameter name in grey type.

FOR YOUR SAFETY

Intended use

**WARNING!**

The device described here is „partly completed machinery“ as defined by machinery directive 2006/42/EC!

→ Do not set the applicator in operation until it has been determined that the machine in which the applicator will be installed meets the requirements of directive 2006/42 EC, appendix IIA.



Although the applicator is „partly completed machinery“ under the terms of the machinery directive, for reasons of clarity it is called „machine“ or „applicator“ in this manual

The LA-SO is a device for automatic application of self-adhesive labels that are supplied by a print & apply system (ALX 92x or XPA 93x). The LA-SO is firmly attached to the print & apply system.

The advantage of the LA-SO is that it can be used to apply labels to the fronts of products, which is not possible using classic tamp-on applicators (e.g., LA-TO).

Furthermore, the LA-SO can also apply labels to the sides or tops of products moving at speeds faster than 20 m/min.

The LTP/LTPV applicator is a device for automatic attachment of self-adhesive labels, which are supplied to the applicator by one of the following print & apply systems:

- ALX 92x
- XPA 93x

The LTP/LTPV is firmly attached to the respective machine. In contrast to direct dispensing from the dispensing edge of the machine onto the product, the LTP/LTPV can bridge distances of up to 20 cm between dispensing edge and product. The „light touch“ function enables the LTP/LTPV to attach labels on products with varying heights.

Any other type of or more extensive application will be considered non-intended use. NOVEXX Solutions shall assume no liability for damage resulting from non-intended use of the machine.

Information and qualification

Ensuring the necessary qualification

- Only fully trained and authorised personnel are permitted to operate, adjust and maintain the machine.
- Service work must only be performed by qualified and appropriately trained technical specialists (service technicians) or the customer service department.
- Areas of responsibilities for operating and servicing the machine must be clearly defined and consistently observed.
- Personnel must also be regularly instructed in on-the-job safety and environmental protection.

Qualification for operation

The instruction provided for the operating personnel must ensure:


- that the operating personnel can use the machine independently and without danger.
 - that the operating personnel can rectify minor operating faults (for example a paper jam) independently.
- At least 2 persons should be instructed in operation.

→ Have a sufficient quantity of label materials available for tests and instruction.

Qualification for system integrators and service technicians

Knowledge required to install the device and perform service work must be demonstrated through appropriate qualification. Only service personnel with technical training are able to assess the tasks to be performed and recognise potential dangers.

- Knowledge acquired through technical training in mechanics and electronics (for example in Germany the training to become a mechatronics engineer).
- Participation in a technical training course for the corresponding device offered by the manufacturer.
- The service personnel must be acquainted with the functionality of the device.
- The system integrator must be acquainted with the functionality of the system into which the device is being integrated.

Tasks	System integrator	Operator	Service technician
Install the machine	X		
Connect	X		
Make settings	X		
Switch on/off	X	X	X
Insert/change material/ribbon	X	X	X
Application-related settings	X	X	X
Rectify minor operating faults ^a	X	X	X
Clean the machine		X	X
Rectify major operating faults ^b			X
Settings to the electronics/ mechanics			X
Repairs			X
 Manual:	Service manual	Operating Manual	Service manual, spare parts catalogue

[Tab. 1] An example of the distribution of tasks among different qualified personnel.

a) For example faults during label feeding

b) For example replacement of lamp or printhead

Making note of information**WARNING!**

The device can only be operated safely and efficiently by complying with all of the requisite information!

→ Carry out the installation, connection, programming, setting, and repairing of the machine exclusively in accordance with the specifications in this manual.

→ Before beginning operation, read this operating manual and the operating manual of the dispenser/print-dispenser and follow all of the instructions.

→ Observe all additional safety and warning information given on the device.

→ Only technically knowledgeable persons are permitted to operate the device and make settings on it.

Any product liability and warranty claims will not be valid unless the machine is operated according to the instructions in the operating manual.

Keep product information at hand

This user manual

- must remain readily available for operating personnel at a location near to the machine.
- must be kept in legible condition.
- If the machine is sold, it must be made available to the new owner.
- The safety and warning symbols and messages on the machine must be kept in a clean and legible state. Replace any signs that are damaged or missing.

Safety functions**WARNING!**

Danger of personal injury and property damage!

Without operational safety functions and protective equipment the LA-SO may cause personal injury and property damage.

Without operational safety functions and protective equipment the LTP/LTPV may cause personal injury and property damage.

- Do not operate the machine without protective equipment.
- Do not operate the machine when the safety functions are deactivated.

Protective equipment

A separating protective device must be installed by the system integrator in compliance with the requirements of EN953. It could be a protective enclosure with a secured door, for example.

The separating protective equipment is not included in the scope of delivery of the machine.

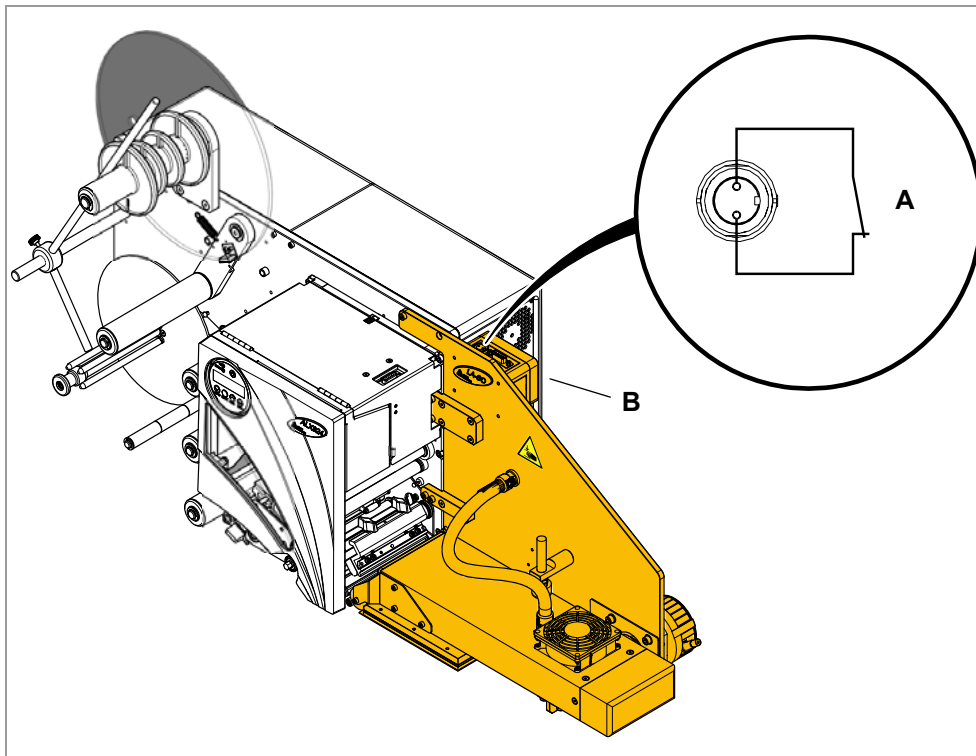
Connecting an interlocking guard

According to the EC machinery directive, the LA-SO is a *partly completed machine*. In order that the completed machine matches the health and safety requirements of the machinery directive, LA-SO *must* be safeguarded against access by an appropriate safeguarding device ¹ [3].

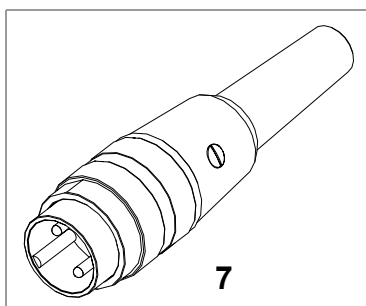
→ Connect the interlock switch [3D] of the safeguarding device to the connector [2] delivered with the applicator [3E].

→ Plug the connector to the switch box [1B].

⚠ Operation of the LA-SO without the described safeguarding device shall be regarded as abnormal use. NOVEXX Solutions assumes no liability for damage due to abnormal use of the printer.

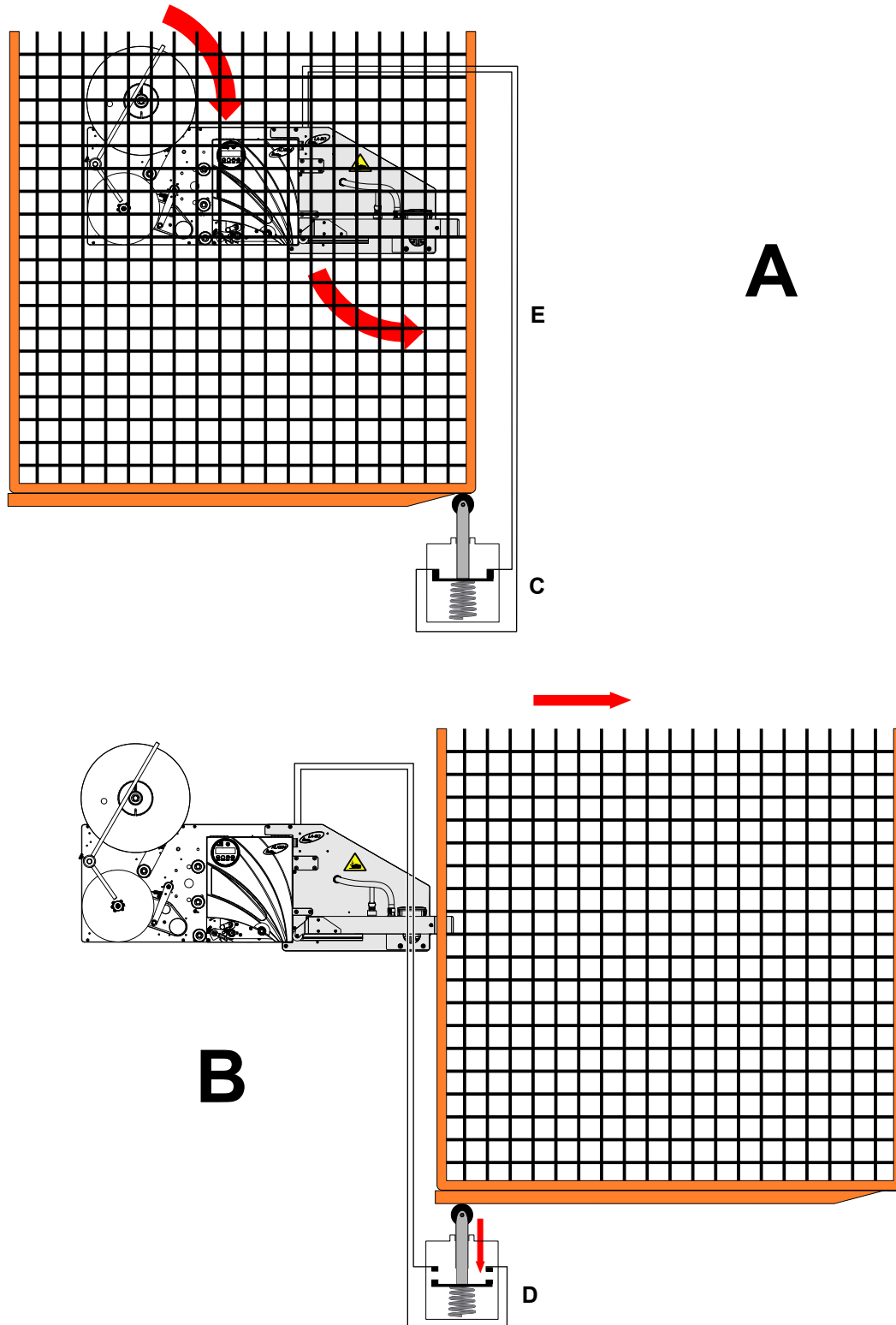


[1] Connecting the interlock switch (A) of the safeguarding device (or an emergency-stop switch) to a LA-SO.



[2] Plug that comes with the LA-SO for connecting an interlock switch (article number: A102076).

1) Movable interlocking guard according to EN ISO 12100-1, 3.25.4



[3] Diagram of a movable interlocking guard:

A Protective guard closed. Interlock switch connected (C). Applicator is working.

B Protective guard open. Interlock switch not connected (D). Applicator stopped.

Connecting an interlocking guard

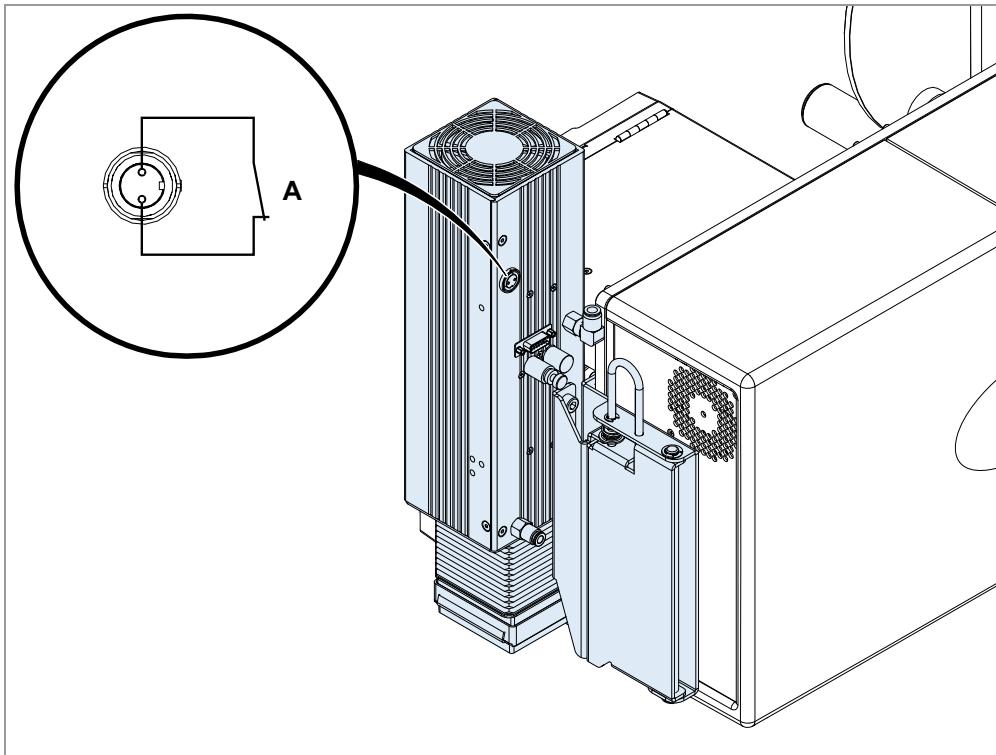
The illustrations in this chapter show a LTP at an ALX 92x RH print & apply system (pictured without cables and hoses). The following instructions apply equally to all other LTP/LTPV versions.

According to the EC machinery directive, the LTP/LTPV are *partly completed machines*. In order that the completed machine matches the health and safety requirements of the machinery directive, LTP/LTPV *must* be safeguarded against access by an appropriate safeguarding device ¹ [6].

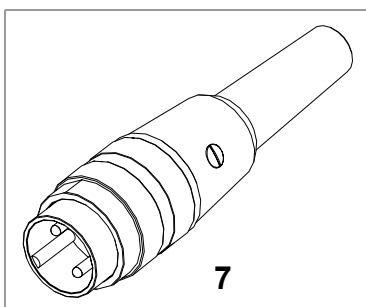
→ Connect the interlock switch [6D] of the safeguarding device to the connector [5] delivered with the applicator.

→ Plug the connector to the LTP/LTPV.

⚠ Operation of the LTP/LTPV without the described safeguarding device shall be regarded as abnormal use. NOVEXX Solutions assumes no liability for damage due to abnormal use of the printer.

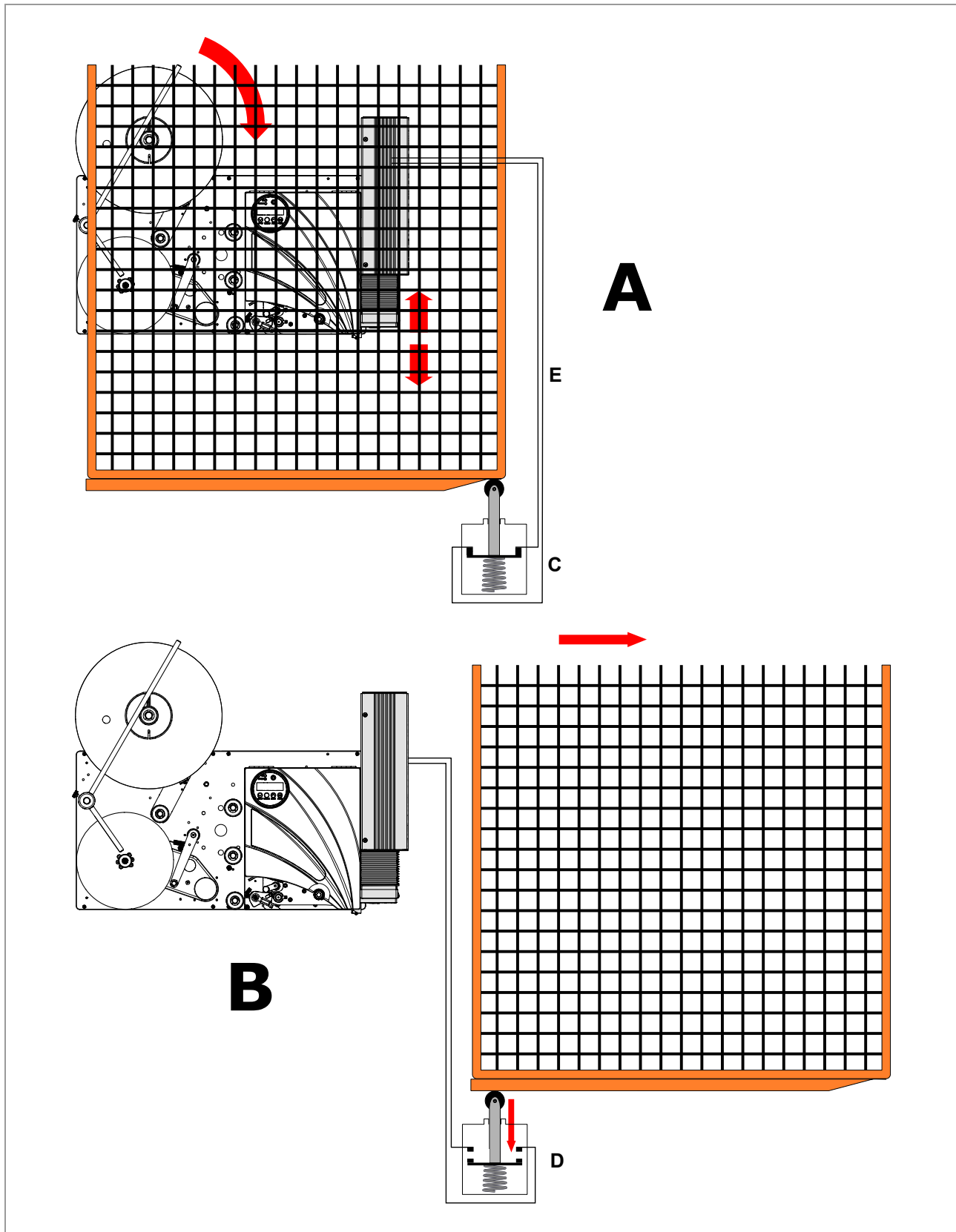


[4] Connecting the interlock switch (A) of the safeguarding device (or an emergency-stop switch) to a LTP/LTPV.



[5] Plug that comes with the LTP/LTPV for connecting an interlock switch to the LTP/LTPV (article number: A102076).

1) Movable interlocking guard according to EN ISO 12100-1, 3.25.4



[6] Diagram of a movable interlocking guard:

A Protective guard closed. Interlock switch connected (C). Applicator is working.

B Protective guard open. Interlock switch not connected (D). Applicator stopped.

Emergency Stop

An external Emergency Stop device must be installed by the system integrator. It could be an Emergency Stop button located outside of the protective equipment, for example. The button must be pressed if a hazardous situation occurs or in the event of an emergency.

The external Emergency Stop device is not included in the scope of delivery of the machine.

Checking the safety functions


The following safety functions can be checked by the user or a service technician:

Safety function	Functional check
Emergency Stop	<p>→ Activate the Emergency Stop device (for example press the Emergency Stop button).</p> <p>The applicator must stop immediately.</p>
Protective equipment	<p>→ Interrupt the safety switch circuit (for example open the safety door).</p> <p>The applicator must stop immediately.</p>
Switching-on valve	<p>→ Switch on compressed air.</p> <p>The applicator foot moves from the end position <i>slowly</i> up to the home position. If the movement occurs abruptly, the switching-on valve must be adjusted by a service technician.</p>

[Tab. 2] Overview: Checking the safety functions

Operating safety of the machine

Intended use

→ The machine must only be used in accordance with the specifications in section **Intended use**  on page 8.

Installation, maintenance**WARNING!**

Improper usage of the machine can lead to accidents, material damage and loss of production!

- When installing the machine, check for visible shipment damage. Immediately inform NOVEXX Solutions of any damage.
- When installing the machine, consider the admissible ambient conditions.
- When installing the machine, make sure that it can not tip over.
- When installing the machine, provide a supply disconnecting device and an emergency stop device.
- Install the supply disconnecting device and the emergency stop device in a way that they are easy reachable.
- Lay the connection cable and pneumatic hoses so that no one can trip over them.
- Check if all safety functions are functioning properly.
- Only put the machine into operation if it is in flawless condition.
- Only perform alterations or conversions to the machine with the consent of NOVEXX Solutions' customer service.
- Max. admissible operating air pressure: 6 bar
- The applicator must only be connected with other machines if they meet the requirements of a SELV circuit (Safety Extra-Low Voltage circuit) in accordance with EN 60950.
- Fasten the pneumatic hoses in place to prevent them from whipping.
- Replace faulty pneumatic hoses immediately.
- Only put the machine into operation after at least one successful test run has been completed.
- Only use original replacement parts.

**WARNING!**

Danger of crushing between applicator and dispensing edge as well as between applicator and conveyor!

- Avoid access to the running machine by installing higher-level protective guards ^a.

a) Movable, separating guards according to EN 953

Warning of injuries due to electrical shock**WARNING!**

The machine to which the applicator is attached works with mains voltage! Contacting electrically live components can cause lethal electrical shocks and burns.

- Switch the machine off before cleaning and servicing.
- Keep the machine dry.
- If a liquid gets into the machine, switch off the machine immediately. Notify a service technician.
- The applicator must only be connected with other machines if they meet the requirements of a SELV circuit (Safety Extra-Low Voltage circuit) in accordance with EN 60950.
- In case of emergency switch off the machine.

Warning of injury hazards from mechanical components**WARNING!**

Danger of crushing between the machine and conveyor equipment and between movable parts of the applicator!

- The machine may only be operated with higher-level protective equipment.
- Never remove or bypass the protective equipment that is designed to prevent reaching in while the machine is in operation.

Danger of injury due to moving and rapidly rotating parts!

- Maintain a safety clearance from the machine when it is in operation.
- Never reach into a machine that is running.
- Switch off the machine before making any mechanical adjustments.
- Keep clear of the area around moving parts even when the machine is stopped if there is any possibility of the machine starting up.


Entanglement hazard!

- When working in the vicinity of machines in operation, do not wear ties, loose clothing items, jewellery, wrist watches or similar objects on your body.
- Long hair must be kept in a hair net and must not be worn loose.

Tripping hazard!

- Lay the connection cable and pneumatic hoses (if fitted) so that no one can trip over them.

Every time before starting production

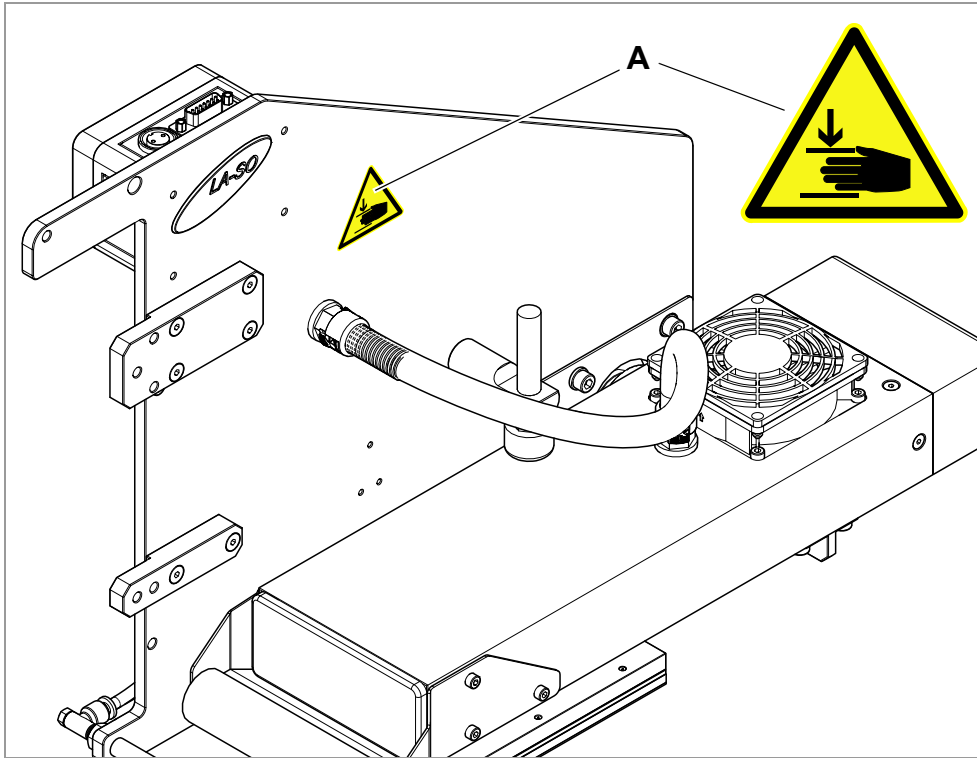
- Check the safety functions to ensure they are working properly (see **Checking the safety functions**  on page 16).
- Check the machine for visible damage. Report defects that are discovered immediately.
- Use personal protective equipment properly, for example wearing a hair net.
- Remove material and objects that are not required from the working area of the machine.
- Ensure that only authorised persons remain in the working area of the machine.
- Ensure that no one can be endangered by the machine starting up.

Warning symbols on the machine

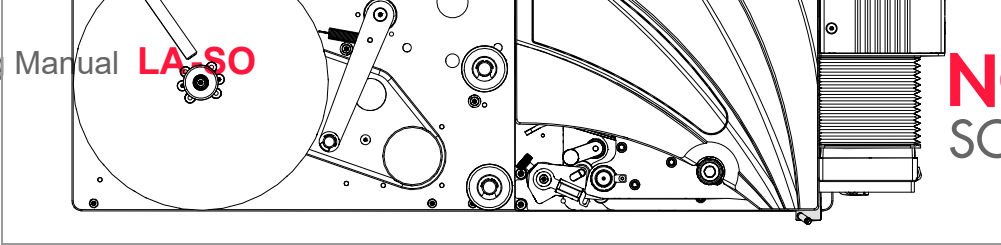
CAUTION!

Warning symbols on the machine provide important information for the operating personnel.

- Do not remove warning symbols.
- Replace missing or illegible warning symbols.





[7] Warning note on the LA-SO.



[8] Warning note on the LTP/LTPV.

Meaning of the warning symbols:

Warning symbol	Meaning	Order No.
	The warning symbol "Danger of crushing" warns of dangerous movements of the device that could lead to crushing. Switch off the device previously.	A103530
	The blue label 'Read manual' demands that users read the unit instructions.	A5331

[Tab. 3] Meaning of the warning symbols

Product description

TECHNICAL DATA

Label material

Type	Self-adhesive (paper, plastic materials) ^a
Material width	80-150 mm
Material length	80-210 mm

a) As a result of static charge and friction effects, plastic materials may tend to crease during the dispensation step. Therefore, plastic materials must be tested under application conditions before being used in production.

Label rate

Label on front	max. 20 labels/min ^a
Label on top/side	max. 30 labels/min ^a

a) Depends on: pressure speed, pressure rate, product distance, product speed, label size and label material.

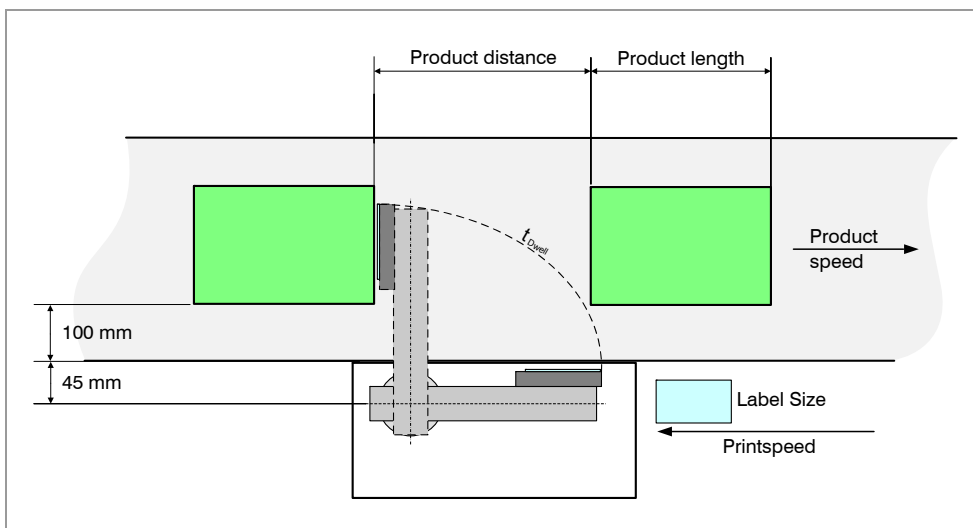
Example:

With the application shown afterwards (Tab. 4) [9], a rate of 18 labels/min is possible.

▮ If one of the settings is changed, all other settings must be fit, what may also change the label rate.

Setting	Value
Distance LA-SO centre - Product	145 mm
Label length	152.4 mm
Apply time t_{Appl}	500 ms
Product length	400 mm
Product distance	min. 230 mm
Print speed	200 mm/s
Product speed	15 m/min

[Tab. 4] Settings for example application.



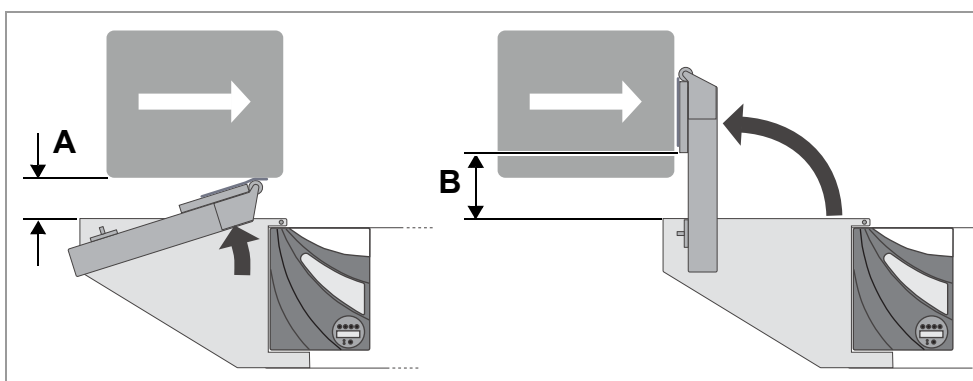
[9] LA-SO example application (schematic).

Application Process

Application distance ^a	Label on front [10B]: approx. 10 cm ^b Label on top/front [10A]: approx. 20 cm
Application direction	Side labelling: label on front or side, see chapter Side labelling on page 26. Top labelling: label on front or top, see chapter Front labelling on page 26.
Tolerance of label position	±2mm
Product speed during application	Label on front: max. 15 m/min Label on side/top: max. 30 m/min
Air stream	Blowers

a) Distance between pressure dispensing system and label.

b) When labels are used that are smaller than the pressure plate, the exposed area of the pads can be added to the application distance.



[10] Application distance. Left: label on side. Right: label on front.

Dimensions

W x H x D	240 x 355 x 500 mm
Weight	6.5 kg

Connections

Power supply	ALX 92x: Via applicator interface XPA 93x: Via 8IO board
Power consumption	15 VA
Supply air pressure	4-6 bar
Air consumption	approx. 0.3 l/stroke

Ambient conditions

Operating temperature	5-40°C
Storage temperature	0-70°C
Air humidity	45-75% non-condensing
Noise emissions	< 70 dB(A)
Protection rating	IP 21

OVERVIEW

Product name

LA-SO is the abbreviation for "Label Applicator Swing-On". The abbreviation 'SO' (swing on) distinguishes this applicator from other application techniques such as 'blow on' or 'tamp on'.

Intended Use

The LA-SO is a device for the automatic application of self-adhesive labels fed from an ALX 92x or XPA 93x print & apply system. The LA-SO is permanently connected to the print & apply system.

Designs

The LA-SO is available in both right-handed and left-handed versions.

System requirements

Compressed air

- Compressed air connection must be available
- Mounting surface for pressure controller: See [Installing the pressure regulator](#) on page 15

ALX 92x

- ALX 92x with standard dispensing edge and firmware version 5.33 or higher
- ALX 92x and LA-SO must be both RH or both LH
- Installed applicator interface (optional) with firmware version 1.23 or higher. If the applicator interface was retrofitted, pay attention that the D-Sub 15 connector for Avery applicators (top side of the front hood) is available.

➡ Displaying printer firmware version: SERVICE DATA > MODULE FW VERS. > System Version

➡ Displaying firmware version of applicator interface: SERVICE DATA > MODULE FW VERS. > Applicator Int.

XPA 93x

- XPA 93x with standard dispensing edge and firmware version 1.01 or higher
- XPA 93x and LA-SO must be both RH or both LH
- Installed 8IO board

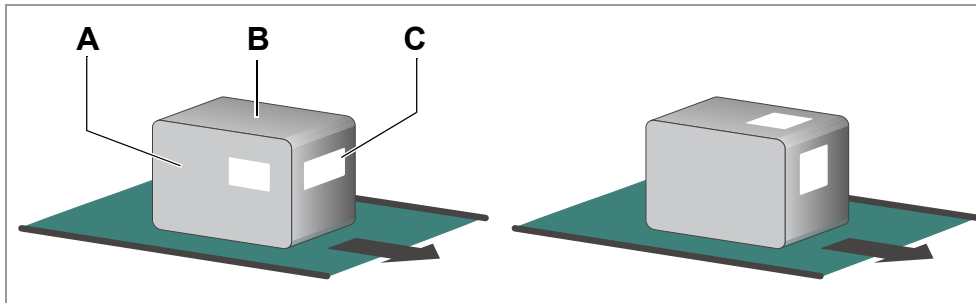
➡ Displaying firmware version: Info > System > Module FW. Vers. > System version

Functionality

The LA-SO is a supplementary module for mounting at an print & apply system ALX 92x or XPA 93x. It takes over labels from the dispensing edge of the ALX 92x or XPA 93x and moves them in a curved movement to the product, where it presses the labels on (frontside) or rolls it on (side, top side).

The advantage of the LA-SO is that it can apply labels to the front side of a product, which is not possible with classic tamp-on applicators (e.g. LA-TO).

Furthermore, the LA-SO can label products that are moving with more than 20 m/min on the side or top side.

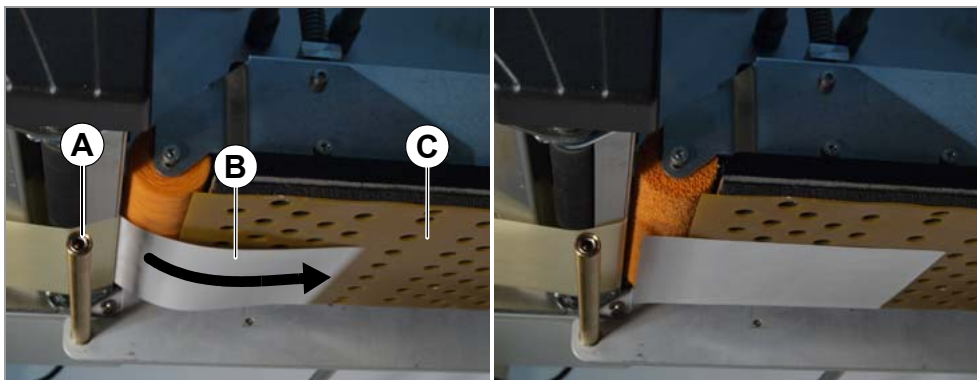


[11] Designations for the sides of the product. Possible label positions for side labelling (left figure) and top labelling (right figure).

- A** Side
- B** Top
- C** Front

Initially, the LA-SO is in idle mode and the swivel arm is folded inwards.

As soon as a start signal is received from the product sensor, the ALX 92x or XPA 93x prints and dispenses a label [12B]. The stream of compressed air emitted from the support air nozzle [12A] presses the label against the pressure plate of the LA-SO [12C]. The label is held in place there by a vacuum created by the fan on the swivel arm.

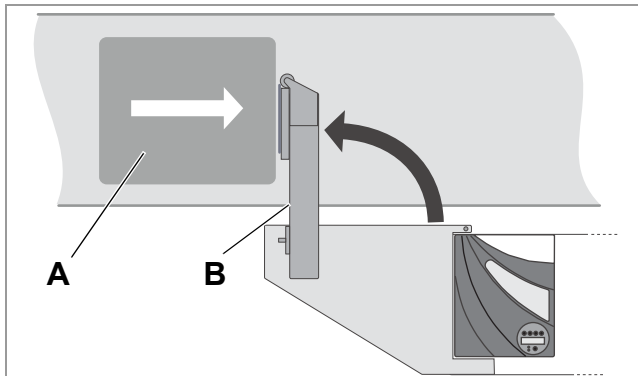


[12] Dispensing labels onto the pressure plate.

Once a label has been dispensed, a compressed air valve switches and causes the swivel arm to move. The swivel movement ends once the time limit set in the ALX 92x or XPA 93x menu elapses. This time limit must be set so that the swivel arm reaches the product before the reverse movement begins.

Front labelling

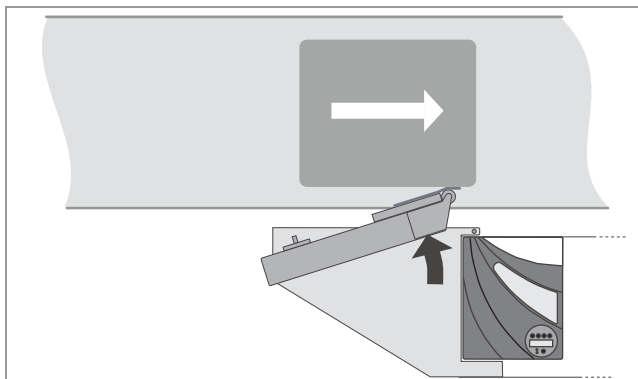
When applying labels to the front of a product, the entire surface of the label is pressed against the pressure plate [13].



[13] Side labelling with LA-SO (RH) (B) on product front (A).

Side labelling

When labelling the side of a product, the end of the label is first pressed against the pressure roller. As the product moves forwards, it pulls the label away from the pressure plate and the pressure roller presses the label against the product [14].

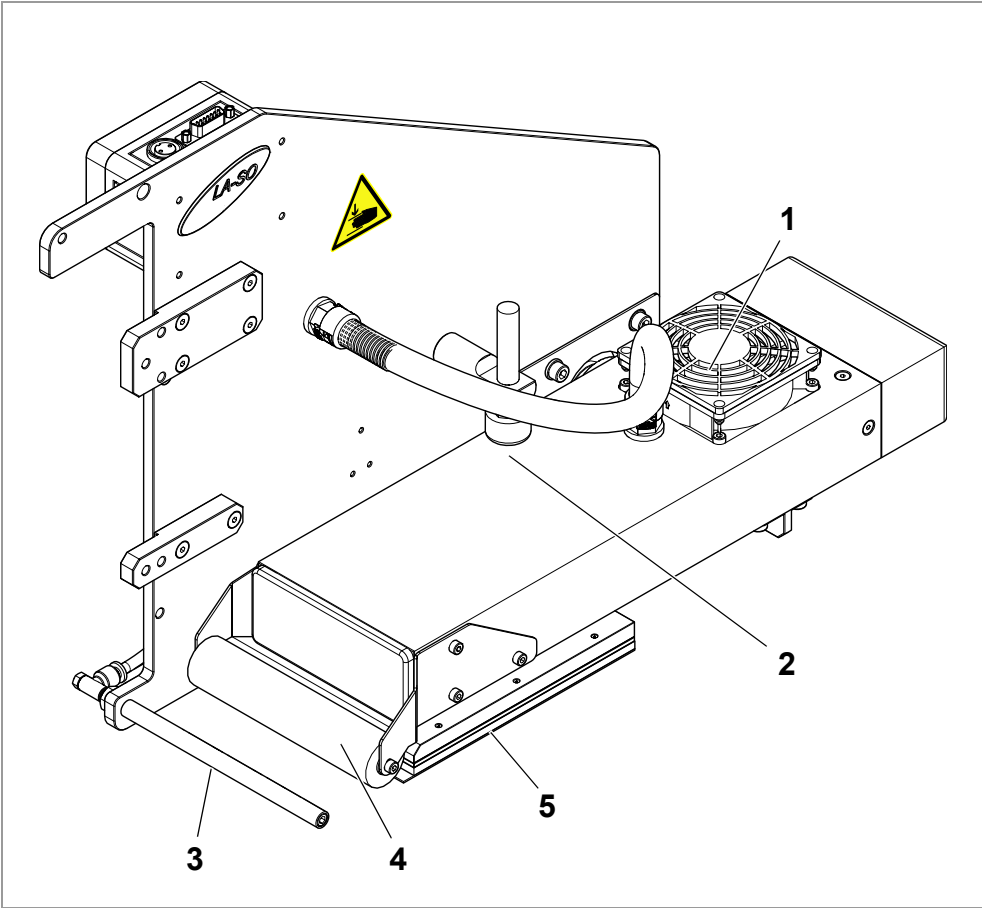


[14] Side labelling with LA-SO (RH) on product side.

Component overview

The applicators for ALX 92x and for XPA 93x differ only in the shape of the base plate and in the type of connections. The illustrations show the version for ALX 92x.

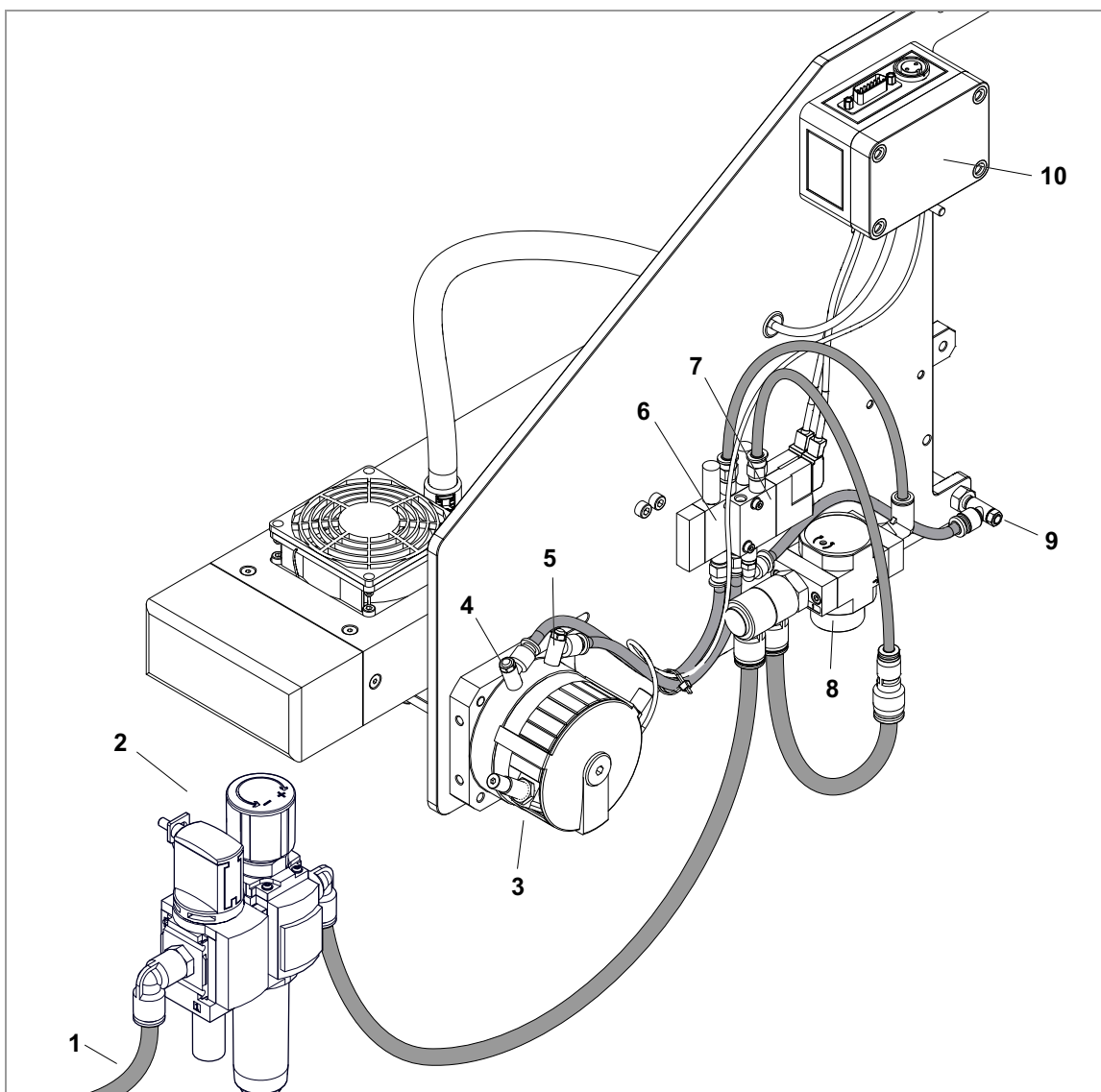
Front of LA-SO



[15] LA-SO (RH) for ALX 92x, front.

No.	Name
1	Fan (creates vacuum along pressure plate)
2	Limit stop with damper
3	Support air nozzle
4	Pressure roller
5	Pressure plate

[Tab. 5] Components on front of unit.

Rear of LA-SO

[16] LA-SO (RH) for ALX 92x, rear.

No.	Name
1	Compressed air connection (10 mm hose Ø)
2	Service unit (manual on-off valve, filter regulator, condensate drain)
3	Swivel module
4	Choker valve for forwards movement
5	Choker valve for reverse movement
6	Valve for swivel module
7	Support air valve
8	On-off valve
9	Connection and setting valve for support air nozzle
10	Connector box

[Tab. 6] Components on rear of unit.

Startup

ASSEMBLY

**WARNING**

Risk of tripping!

→ Lay cables and compressed air hoses in a way that nobody can stumble over it.

**WARNING!**

Risk of injuries caused by lashing pneumatic hoses.

→ Fix pneumatic hoses against lashing.

→ Immediately replace defective pneumatic hoses.

Preparing the connection cable for the interlock circuit

The LA -SO comes with a plug [17] that is intended for connecting an interlocking guard.

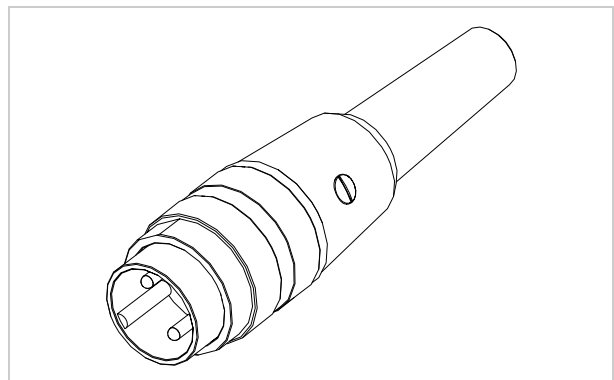
Tool

Small screwdriver (0.6x3.5 mm)

Assembly

→ Connect the plug [17] to the interlock switch, which is part of the interlock circuit.

See chapter **Connecting an interlocking guard** on page 10.



[17] Plug for connecting the interlock circuit (comes with the applicator).

Mounting on ALX 92x

Tools

Hex screwdriver 4 mm

Assembly

1. Switch-off the ALX 92x.
2. Screw the LA-SO with 6 screws to the ALX 92x [18].
3. Connect the cable to LA-SO and ALX 92x [19A] (article no. A3744).
4. Connect the interlock circuit of the protective guard to the LA-SO [19B].

See chapter **Connecting an interlocking guard** on page 10.

■▶ Connecting an interlock circuit is mandatory.
The LA-SO must not and cannot be operated without.

5. Install the service unit.

See chapter **Installing the service unit** on page 32.

6. Connect the compressed air supply.

See chapter **Connecting the compressed air** on page 33.

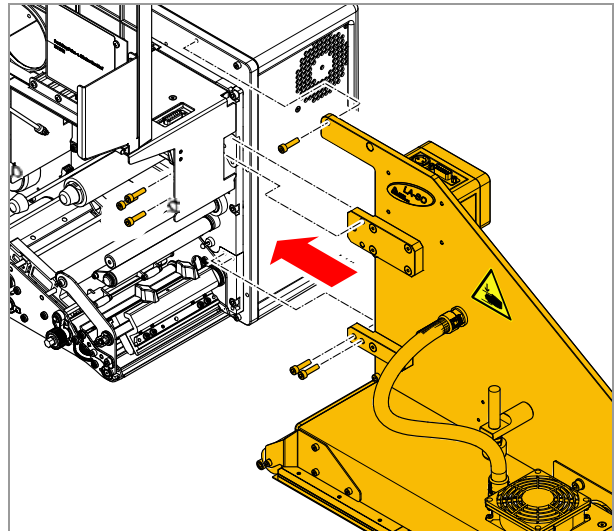
7. Switch-on the ALX 92x.

8. Make setting in the parameter menu.

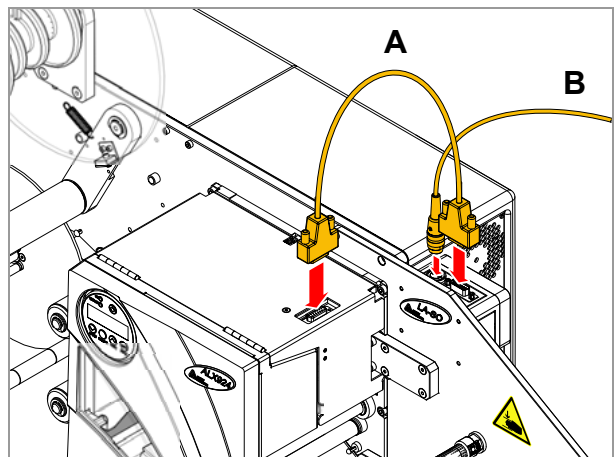
See chapter **Settings in parameter menu** on page 34.

9. Adjust the LA-SO.

See chapter **Settings** on page 34.



[18] Mounting the LA-SO on an ALX 92x.



[19] Connecting to an ALX 92x.

Mounting on XPA 93x

Tools

Hex screwdriver 8 mm

Assembly

1. Switch-off the XPA 93x.
2. Screw the LA-SO to the flange of the XPA 93x with the 4 enclosed screws [20].
3. Connect the supplied connection cable to LA-SO and XPA 93x [21A] (article no. N101573).
4. Connect the interlock circuit of the protective guard to the LA-SO [21B].

See chapter **Connecting an interlocking guard** on page 10.

■▶ Connecting an interlock circuit is mandatory.
The LA-SO must not and cannot be operated without.

5. Install the service unit.

See chapter **Installing the service unit** on page 32.

6. Connect the compressed air supply.

See chapter **Connecting the compressed air** on page 33.

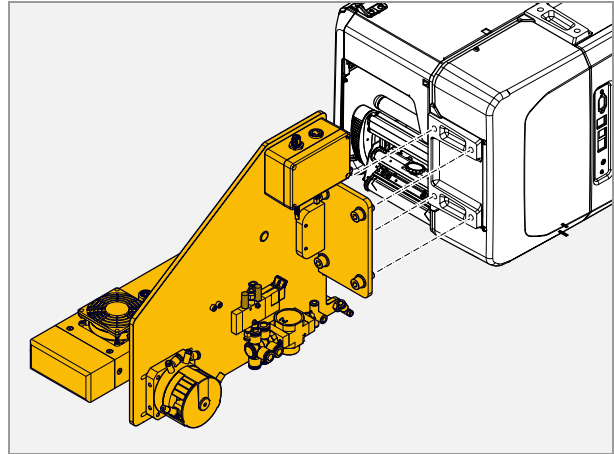
7. Switch-on the XPA 93x.

8. Make setting in the parameter menu.

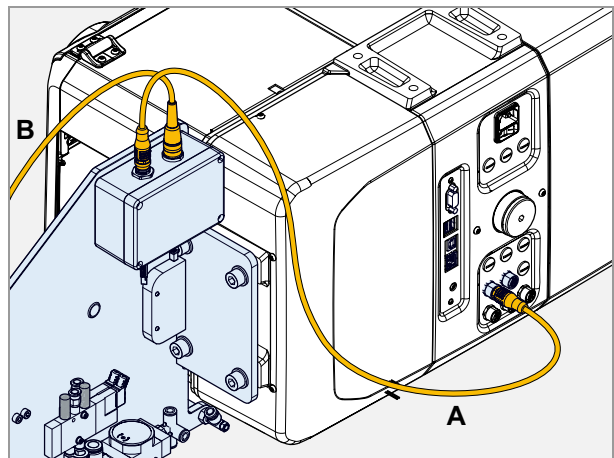
See chapter **Settings in parameter menu** on page 34.

9. Adjust the LA-SO.

See chapter **Settings** on page 34.



[20] Mounting the LA-SO on an XPA 93x.



[21] Connecting to an XPA 93x.

Installing the service unit

The service unit comes with the applicator. It consists of the following components:

- Manual on-off valve [22A]
- Filter regulator [22B] with pressure gauge [22C]
- Condensate drain [22D]

Tools:

4 mm hex screwdriver

Assembly

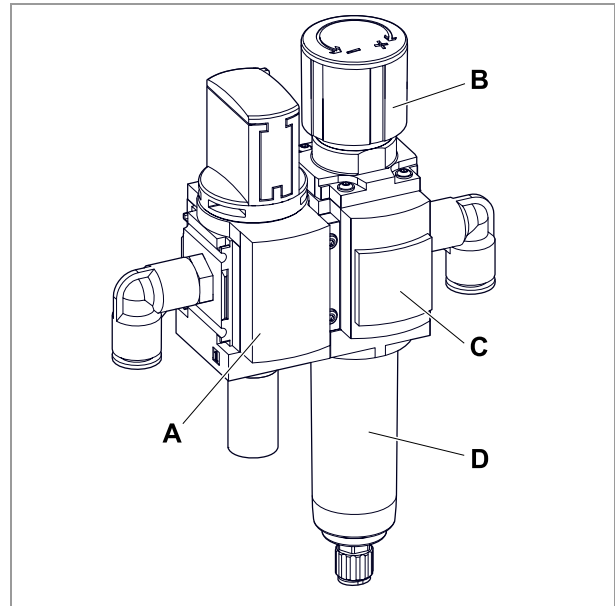
→ Screw on the maintenance unit with the enclosed screws (M5x12) [23A].

→ The condensate drain [23B] must point downwards.

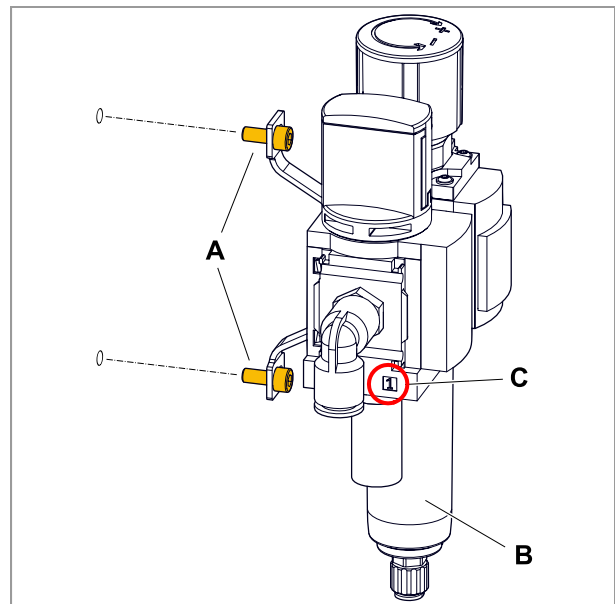
→ Fasten the pressure tubes so that the air flows through the pressure regulator in the direction from mark „1“ [23C] to mark „2“.

The connector marked „2“ is the compressed air outlet. This must be connected to the applicator.

► Mind the instruction sheet of the manufacturer, which comes with the service unit.



[22] Components of the service unit.



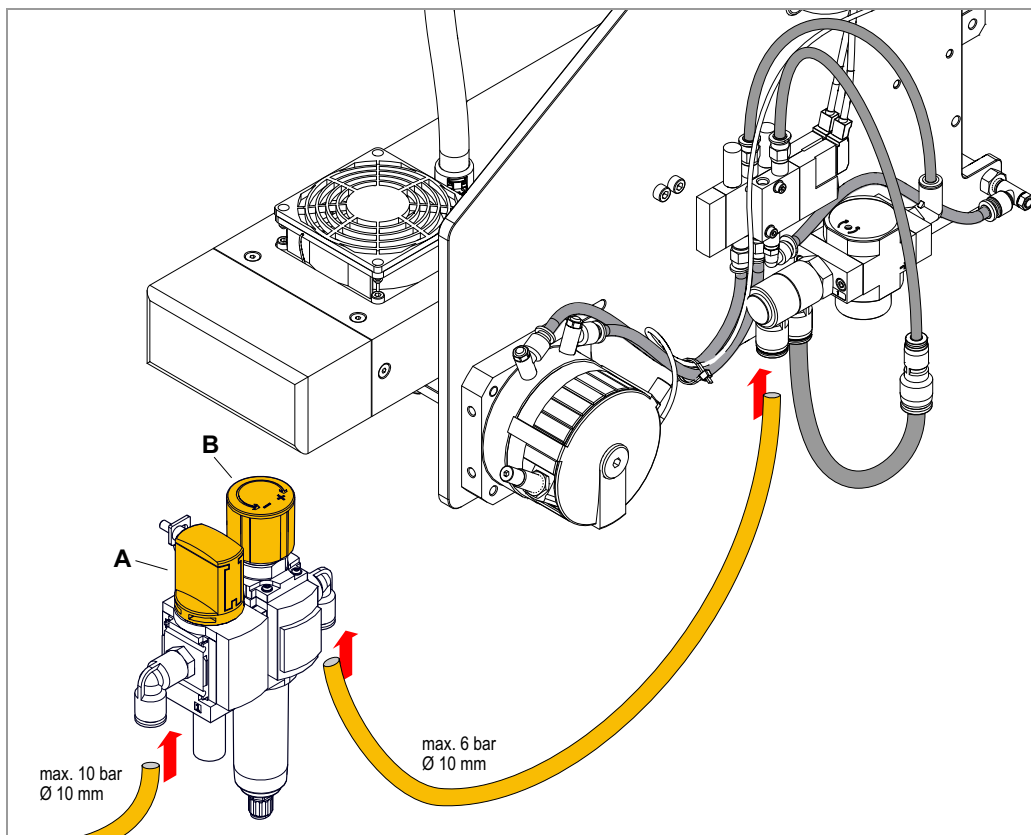
[23] Assembly of the service unit.

Connecting the compressed air

Prerequisites:

- Hose diameter: 10 mm
 - Max. admissible compressed air pressure at the *entrance* of the service unit: 10 bar
 - Max. admissible compressed air pressure at the *exit* of the service unit: 6 bar
1. Switch off the on-off valve. To do this, turn the rotary knob [24A] clockwise as far as it will go.
 2. Reduce the outlet pressure completely. To do this, turn the control valve knob [24B] all the way to "-".
 3. Connect the compressed air line to the connections as shown [24].
 4. Switch on the compressed air.
 5. Switch on the on-off valve. To do this, turn the rotary knob [24A] counterclockwise as far as it will go.
 6. Set the outlet pressure. To do this, slowly turn the control valve knob [24B] in the "+" direction until the pressure gauge indicates the desired outlet pressure.

► Mind the instruction sheet of the manufacturer that comes with the service unit.



[24] Connecting the compressed air hose.

SETTINGS

**WARNING!**

Pinch and shear hazard, especially at the following locations:

- Between swivel arm and dispensing edge.
- Between swivel arm and conveyor belt, if any.

For this reason pay attention to the following when triggering the applicator for test or setup purposes...

→ keep a sufficient distance.

→ don't touch the applicator.

Settings in parameter menu

ALX 92x

The following parameters determine how the ALX 92x and LA-SO operate. You must set these parameters before using the unit for the first time:

Parameter	Setting
APPLICATOR PARA > Applicator type	LA-SO
APPLICATOR PARA > Apply mode	"After print"
APPLICATOR PARA > Dwell time	Depends on application, see next section.

[Tab. 7] Parameter settings for operating LA-SO.

XPA 93x

The following parameters determine how the XPA 93x and LA-SO operate. You must set these parameters before using the unit for the first time:

Parameter	Setting
Options > Selection > Applicator > Applikator Typ	LA-SO
Options > LA-SO > Applizier-Modus	"After print"
Options > LA-SO > Applizierzeit	Depends on application, see next section.

[Tab. 8] Parameter settings for operating LA-SO.

Dwell time

The required dwell time depends on the following factors:

- Product face to receive label (front or side)
 - Front: Swivel arm must reach the product within dwell time. Since the angle to be traversed is always 90°, the required time depends on the speed of the swivel arm. The speed is set using the choker valve on the swivel module.

- Side: The dwell time must be long enough to allow the swivel arm to reach the product where the label is rolled on the side. Thus, the required time depends on the distance to be traversed and the product speed.
- Product speed: The product speed affects the required dwell time (see above). With slowly moving products, the swivel arm can move slower. Therefore, the dwell time is longer than with quickly moving products.
- Product clearance: For products with a smaller clearance, the swivel arm must move more quickly back to the idle position than for products with a larger clearance.

Recommended initial setting: 500 ms

Parameter:

- ALX 92x: APPLICATOR PARA > Dwell time
- XPA 93x: Options > LA-SO > Dwell time

Front labelling:

→ Change the dwell time in steps until the swivel arm just barely reaches the product.

Side labelling:

→ Set the dwell time until the pressure roller of the swivel arm is able to press against the product for a period sufficiently long to apply the entire label.

Setting the choker valve

The swivel unit is equipped with two choker valves: one for forwards and one for reverse movement. The valves limit the air flow whereby the following applies: the higher the flow rate, the faster the swivel arm will move. The required speed depends on the product speed and the product separation.

Tools

Small screwdriver (0.6x4 mm)

Setting

Increase flow rate (speed):

→ Turn the setting screw out.

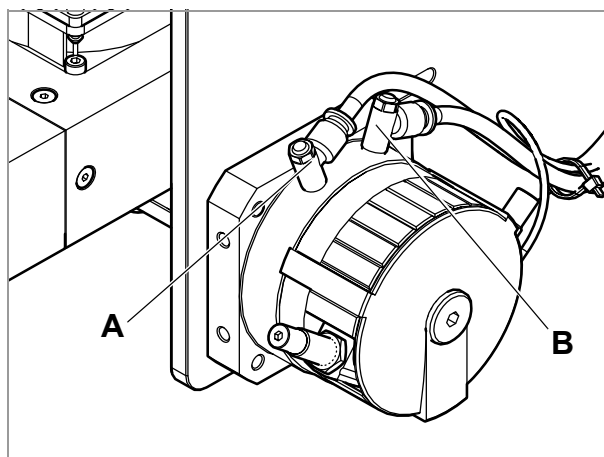
Reduce the flow rate (speed):

→ Turn the setting screw in.

Factory setting:

Choker valve for ...	Setting depth ^a
Forwards movement [25A]	2.0 mm
Reverse movement [25B]	1.4 mm

a) Depth of setting screw as measured with callipers.



[25] Swivel module of LA-SO (RH).

- A Choker valve for forwards movement
- B Choker valve for reverse movement

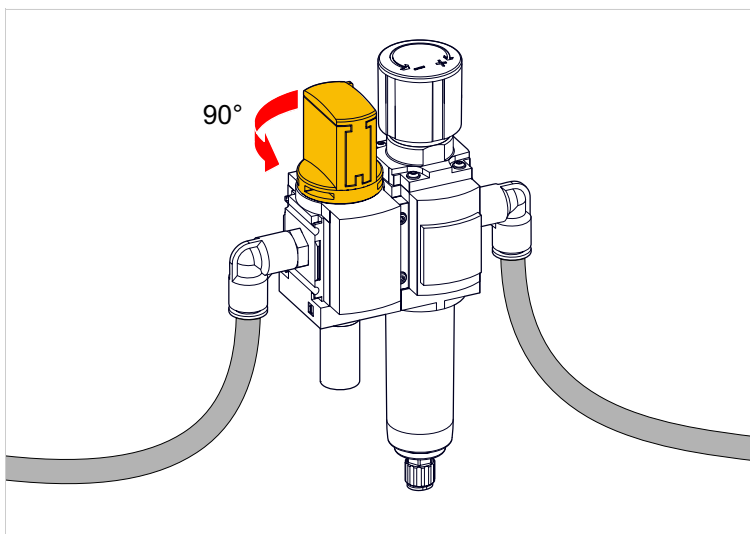
Operation

ACTIVATING/DEACTIVATING THE APPLICATOR

Activating

In *normal operation* mode, the applicator is supplied with compressed air by the plant in which it is integrated.

1. (If the rotary knob of the on-off valve is secured with a padlock) Open the lock and remove it.
2. Turn the rotary knob of the on-off valve on the service unit counterclockwise as far as it will go (90°):



[26] Opening the on-off valve at the service unit (fig. shows closed valve).

After switching on the compressed air supply, the pressure plate starts moving to the top into home position. The apply-cycle starts as soon as the following conditions are fulfilled:

- Pressure plate is in home position
- Control signals are active (print & apply system or labeler is online)
- Interlock circuit is closed (protection door is closed)

Deactivating

CAUTION!

After switching off the compressed air supply, the pressure plate of the applicator moves down into end position. Hazard of damage to the applicator by products passing by.

- Stop the conveyor *or*
- Make sure that no products pass by *or*
- Fix the applicator pressure plate in home position

1. Stop the machine, to which the applicator is attached.
2. Switch off the compressed air supply (using an appropriate switch at the plant or the manual on-off valve at the service unit).

After switching off the compressed air supply, the pressure plate of the applicator moves down into end position.

CLEANING

Safety



WARNING!

Dangerous situations may arise during maintenance and cleaning work. Accidents may occur due to mechanical or electrical effects if the relevant safety instructions are not observed!

- Switch off the machine before cleaning or maintenance and completely disconnect it from the main power supply. Depending on the machine type, it may be necessary to pull out the mains power connecting line (refer to the user manual of the machine)!
- Never allow liquid to get into the machine!
- Do not spray the machine with spray bottles or sprays! Use a cloth wetted with cleaning agent!
- Repairs to the machine must only be made by trained service technicians!

Cleaning interval

- Clean the machine regularly.

The frequency depends on the following factors:

- Operating conditions
- Daily operating duration

Cleaning instructions

CAUTION!

Using sharp cleaning materials may cause damage.

- Do not use any cleaning agents or materials that could damage or destroy the paint finish, labelling, type plates, electrical component, etc.
- Do not use any scouring cleaning agents or any cleaning agents that could dissolve plastic.
- Do not use acid or alkaline solutions.

Cleaning agents:

- Compressed air, vacuum cleaner (if available)
- White spirit (ethanol) or isopropyl alcohol

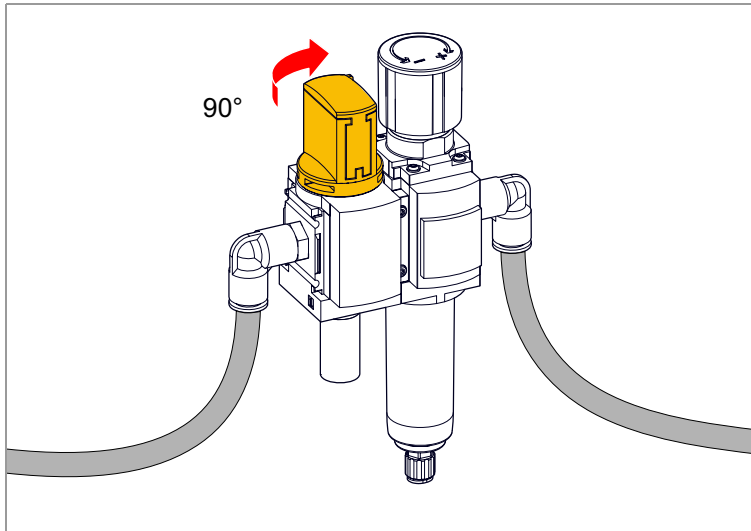
Proceeding:

- Blow away or suck off any dust and abrasive particles with compressed air or a vacuum cleaner (if any of the two is available)
- Moisten a cloth with white spirit and wipe the machine with it.

FAULT CORRECTION

Compressed air shutdown in the event of a malfunction

In the event of a malfunction at the applicator, e.g. paper jam between the labeler and applicator, the applicator can be depressurized using the manual switch-on valve [27] of the maintenance unit. In this way, the malfunction can be rectified safely, independently of the system compressed air supply.



[27] Close the manual on-off valve (turn clockwise as far as it will go; the figure shows the closed valve).

Status

In the event of faults occurring on the machine, evaluate the status reports of the dispenser/print-dispenser before doing anything.

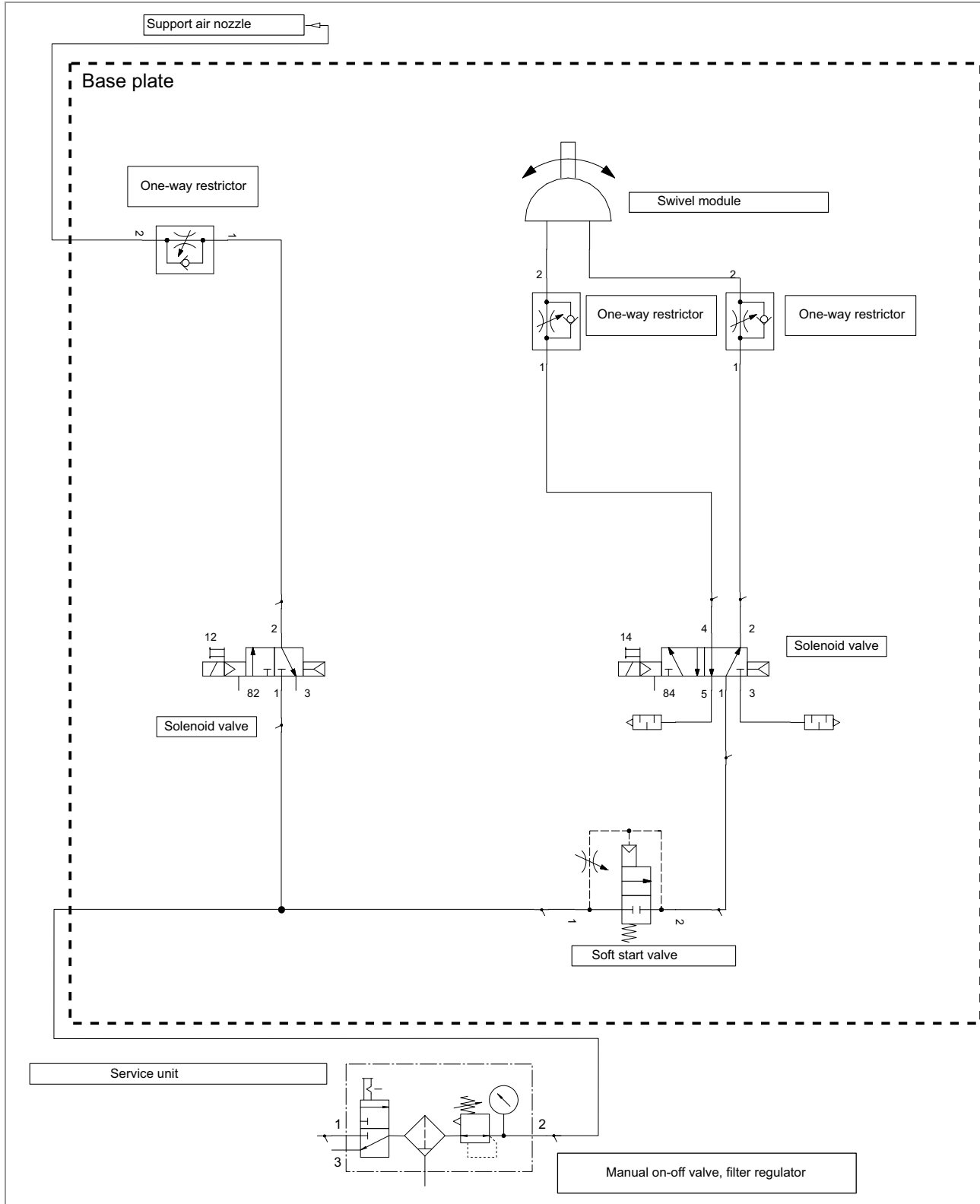
Read the user manual of the dispenser/print-dispenser, topic section „Status Reports“ or „Operational failures“.

Call service

If you are not authorised to carry out diagnosis and fault correction work, call your technician or the authorised service. The appropriate documentation and spare parts are available to the service personnel in order to carry out repair work of a sufficient quality.

Appendix

PNEUMATIC PLAN



[28] LA-SO Pneumatic plan.

EU Declaration of Incorporation

(Translation of original version)

We, Novexx Solutions GmbH
 Ohmstraße 3
 D-85386 Eching
 Germany

hereby declare that the partly completed machine designated below has been designed and built in such a way as to be in conformity with the safety and health protection requirements of directive 2006/42/EC, annex I, which are marked „fulfilled“ in the following table „Appendix regarding the Declaration of Incorporation“.

The special technical documents in accordance with appendix VII part B of directive 2006/42/EC have been created. We undertake to forward the special technical documentation in respect of the partly completed machine to national authorities at their request. We shall submit them by means of electronic data carrier.

The partly completed machine designated herein is furthermore in compliance with the provisions of directive 2014/30/EU (EMC) and directive 2011/65/EU (RoHS).

The designated partly completed machine must not be placed in operation until it has been determined that the machine in which the partly completed machine has been installed is in compliance with the provisions of directive 2006/42/EG.

Models	LA-TO / LA-TO XL LA-TO touch down / LA-TO XL touch down LA-TO BO / LA-TO BO XL LTP / LTPV LA-SO LTSI / LTSA / LTMA
General designation	Applicator
Applicable EU directive	2006/42/EG (Machinery) 2014/30/EU (EMC) 2011/65/EU (RoHS)
Applied harmonized standards, especially	EN ISO 12100 : 2010 EN ISO 4414 : 2010 EN 62638-1:2024/A11:2017
The person authorized to compile technical documents	Novexx Solutions GmbH (for address see above)

Eching, 3.11.2023

Alfredo Sansone
 Head of Supply Chain and Operations and Compliance

APPENDIX REGARDING THE DECLARATION OF INCORPORATION

List of the essential health and safety requirements applied and fulfilled for the product named in the declaration of incorporation, relating to the design and construction of machinery.

Number Annex I	Designation	Not applicable	Fulfilled	Remark
1.1	General remarks			
1.1.2.	Principles of safety integration		X	
1.1.3.	Materials and products		X	
1.1.4.	Lighting	X		
1.1.5.	Design of machinery to facilitate its handling		X	
1.1.6.	Ergonomics	X		
1.1.7.	Operating positions	X		
1.1.8.	Seating	X		
1.2.	Control systems			
1.2.1.	Safety and reliability of control systems	X		
1.2.2.	Control devices	X		
1.2.3.	Starting	X		
1.2.4.	Stopping			
1.2.4.1.	Normal stop	X		
1.2.4.2.	Operational stop	X		
1.2.4.3.	Emergency stop	X		
1.2.4.4.	Assembly of machinery	X		
1.2.5.	Selection of control or operating modes	X		
1.2.6.	Failure of the power supply		X	
1.3.	Protection against mechanical hazards			
1.3.1.	Risk of loss of stability	X		
1.3.2.	Risk of break-up during operation		X	
1.3.3.	Risks due to falling or ejected objects	X		
1.3.4.	Risks due to surfaces, edges or angles		X	
1.3.5.	Risks related to combined machinery	X		
1.3.6.	Risks related to variations in operating conditions	X		
1.3.7.	Risks related to moving parts			Requires protective device ^a
1.3.8.	Choice of protection against risks arising from moving parts			
1.3.8.1.	Moving transmission parts	X		
1.3.8.2.	Moving parts involved in the process			Requires protective device ^a
1.3.9.	Risks of uncontrolled movements	X		
1.4.	Required characteristics of guards and protective devices			
1.4.1.	General requirements			^a
1.4.2.	Special requirements for guards			
1.4.2.1.	Fixed guards	X		
1.4.2.2.	Interlocking movable guards			^a
1.4.2.3.	Adjustable guards restricting access	X		
1.4.3.	Special requirements for protective devices	X		
1.5.	Risks due to other hazards			
1.5.1.	Electricity supply		X	
1.5.2.	Static electricity		X	

Number Annex I	Designation	Not appli- cable	Fulfilled	Remark
1.5.3.	Energy supply other than electricity		X	
1.5.4.	Errors of fitting		X	
1.5.5.	Extreme temperatures		X	
1.5.6.	Fire		X	
1.5.7.	Explosion	X		
1.5.8.	Noise		X	
1.5.9.	Vibrations	X		
1.5.10.	Radiation		X	
1.5.11.	External radiation		X	
1.5.12.	Laser radiation	X		
1.5.13.	Emissions of hazardous materials and substances	X		
1.5.14.	Risk of being trapped in a machine	X		
1.5.15.	Risk of slipping, tripping or falling	X		
1.5.16.	Lightning	X		
1.6.	Maintenance			
1.6.1.	Machinery maintenance		X	
1.6.2.	Access to operating positions and servicing points		X	
1.6.3.	Isolation of energy sources		X	
1.6.4.	Operator intervention		X	
1.6.5.	Cleaning of internal parts	X		
1.7.	Information			
1.7.1.	Information and warnings on the machinery		X	
1.7.1.1.	Information and information devices	X		
1.7.1.2.	Warning devices	X		
1.7.2.	Warning or residual risks		X	
1.7.3.	Marking of machinery		X	
1.7.4.	Instructions		X	
1.7.4.1.	General principles for the drafting of instructions		X	
1.7.4.2.	Contents of the instructions		X	
1.7.4.3.	Sales literature		X	

a) Installation by the system integrator

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SOLUTIONS