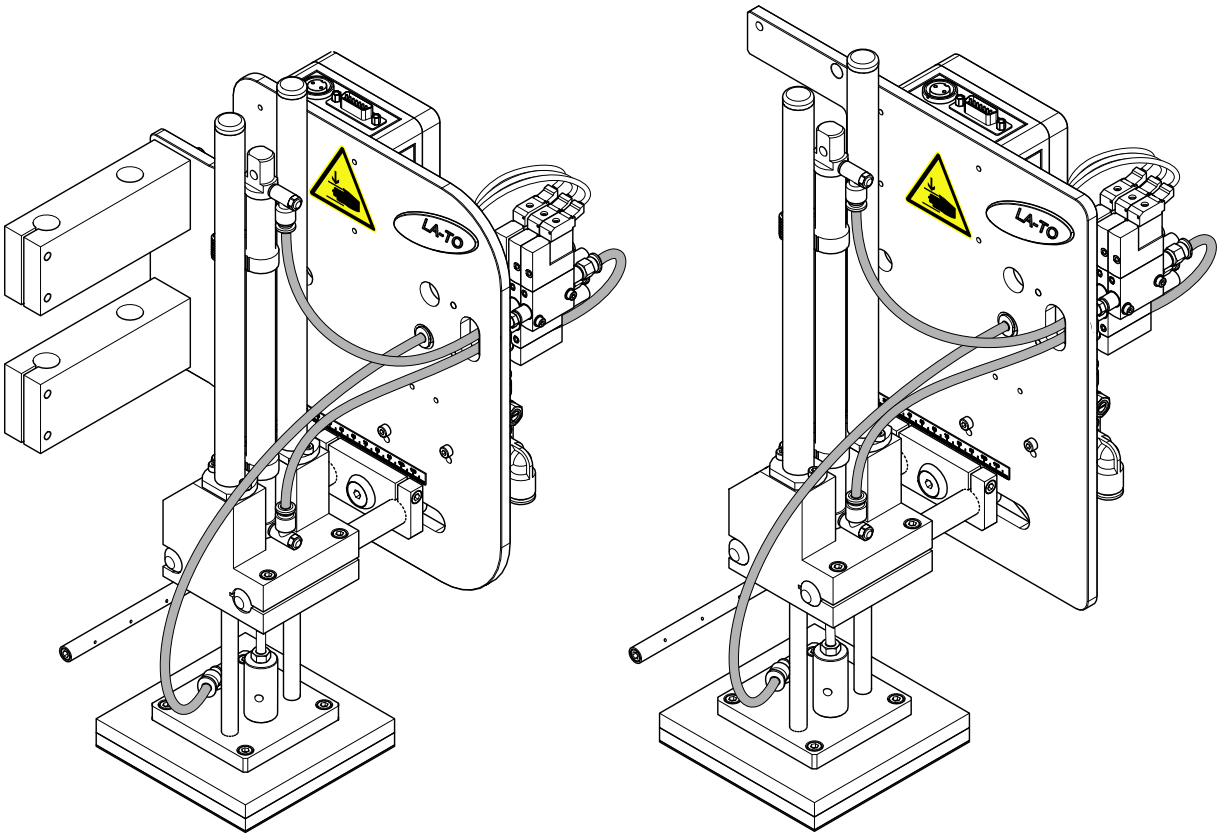
NOVEXX SOLUTIONS

OPERATING MANUAL

LA-TO xx

Applicators



Release 5 - 12/2018 - A106424 - Translation of original version

Content

Please Note

GENERAL INFORMATION

Validity of this manual and required compliance

Contents

The complete operating manual for the LA-TO (XL), LA-TO TD (XL) and LA-TOBO(XL) 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)

The present *operating manual* describes the installation and operation of the named applicators. For safe and proper operation of the dispenser/print-dispenser with attached LA-TO, 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 -TO stands for "Label Applicator Touch-On". The abbreviation ‘TO’ (touch on) distinguishes this applicator from other application techniques such as ‘blow on’ or ‘swing on’.

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

Technical release

07/2014

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-TO applicator is a device for automatic attachement of self-adhesive labels, which are supplied to the applicator by one of the following label dispensers or print & apply machines.

Dispensers:

- ALS 20x
- ALS 256
- ALS 30x

Print & apply machines:

- ALX 73x
- ALX 92x

The LA-TO is firmly attached to the respective machine. In contrast to direct dispensing from the dispensing edge of the machine onto the product, the LA-TO can bridge distances of up to 18 cm (LA-TO XL: 38 cm) between dispensing edge and product.

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-TO 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.

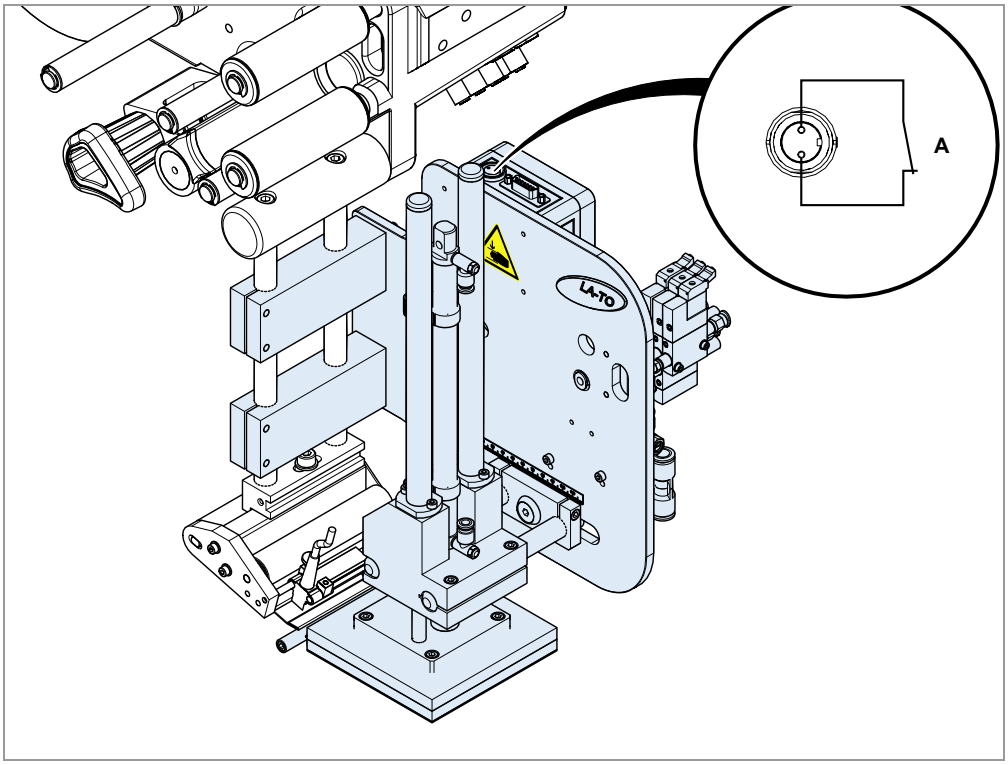
Connecting an interlocking guard

The illustrations in this chapter show exemplary a LA-TO at an ALS 20x RH labeller (pictured without cables and hoses). The following instructions apply equally to all other LA-TO versions.

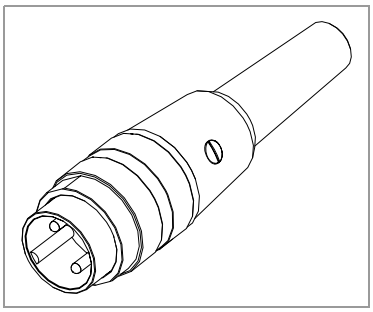
➔ Connect the interlock switch [3D] of the safeguarding device to the connector [2] delivered with the applicator [3E].

➔ Plug the connector to the switch box.

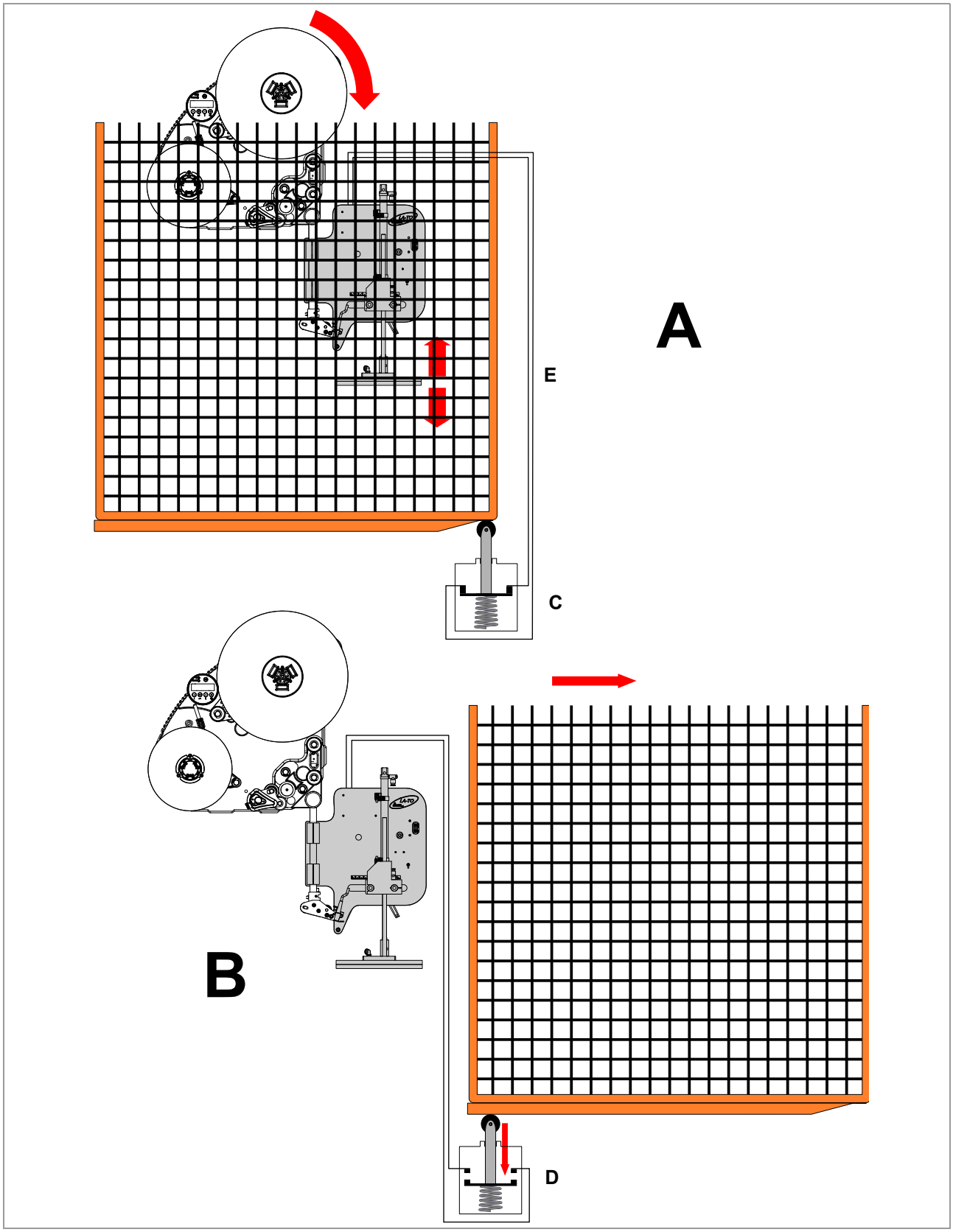
➠ Operation of the LA-TO without the described safeguarding device shall be regarded as abnormal use. NOVEXX Solutions assumes no liability for damage due to abnormal use of the printer.



[1] Connecting the interlock switch (A) of the safeguarding device (or an emergency-stop switch) to a LA-TO (at an ALS 20x).



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



[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.

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

[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 7.

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 12).

➔ 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.

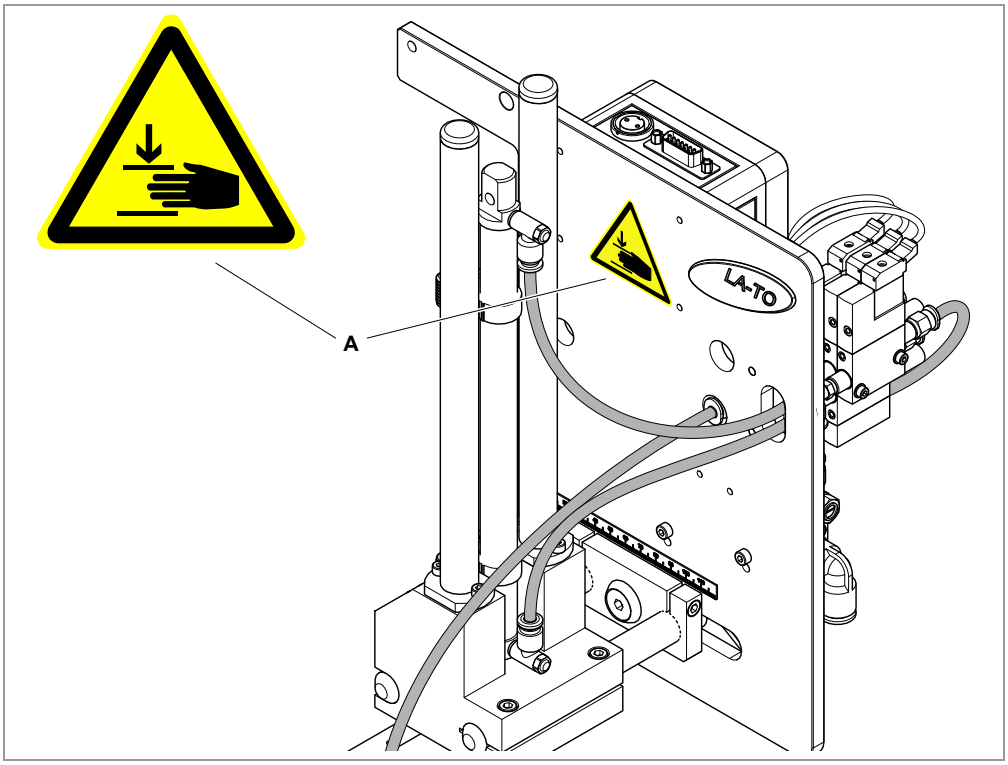
Warning symbols on the machine

CAUTION!

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

➔ Do not remove warning symbols.

➔ Replace missing or illegible warning symbols.



[4] Warning symbols on the LA-TO.

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

[Tab. 3] Meaning of the warning symbols

Product description

TECHNICAL DATA

Differences between LA-TO and LA-TO XL

The table shows *those* properties that are different between LA-TO and LA-TO XL:

Specification	LA-TO	LA-TO XL
Stroke length	180 mm	380 mm
Product speed during application	max. 15 m/min	keine
Air consumption per stroke	0.3 l	0.6 l
Size in mm	at ALS: 240x420x260 at ALX: 260x410x260	at ALS: 240x620x260 at ALX: 260x610x260
Weight	approx. 5 kg	approx. 6 kg

Dimensions

W x H x D	• LA-TO – for ALS: 240 x 420 x 260 mm – for ALX: 260 x 410 x 260 mm • LA-TO XL – for ALS: 240 x 620 x 260 mm – for ALX: 260 x 610 x 260 mm
Weight	• LA-TO: approx. 5 kg • LA-TO XL: approx. 6 kg

Connectors

Power supply	via standard signal interface (ALS 20x/256/30x, ALX 73x) via applicator interface • ALS 20x/256/30x, ALX 73x: optional • ALX 92x: mandatory
Supply current	max. 0.5 A
Supply voltage	24 VDC
Supply air pressure	6 bar [1]
Air consumption	• LA-TO: 0,3 l/stroke • LA-TO XL: 0,6 l/stroke Max. 40 l/min for vacuum (depending on duration of vacuum)

1) Max. admissible input pressure at the pressure regulator: 10 bar

Label material

Type	Self-adhesive (paper, plastic materials) [1]
Material width	• LA-TO (XL): 30-160 mm • LA-TO BO (XL): 50-110 mm
Material length	• LA-TO (XL): 30-210 mm • LA-TO BO (XL): 50-160 mm

1) 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.

Capacity

LA-TO at ALS 20x/256/30x	max. 100 labels/min [1]
LA-TO at ALX 92x	max. 80 labels/min [2]

1) Depends on: application time, stroke length, label size, label material
2) Depends on: application time, stroke length, label size, label material and printing rate

Application

Stroke length	• LA-TO: 180 mm • LA-TO XL: 380 mm Net distance, with sensor for end and home positions LA-TO BO: Additionally to the max. stroke length, some centimeters [1] blow-on length are added.
Application direction	From top, sideways or from bottom
Tolerance for label position	±1 mm
Application angle	90°
Application pressure LA-TO TD	• At one edge of the touchdown plate: 16-20 N • In the middle of the touchdown plate: 30-35 N
Product speed during application step	• LA-TO: max. 15 m/min • LA-TO XL: 0 m/min
Air stream	Suction nozzle

1) The blow-on length depends on several factors, e.g. label size and air pressure

Ambient conditions

Installation location	• Inside buildings • Protected from wind and spray water • Dry • *Not* in areas with potentially explosive atmosphere • Operation to max. 2000 m above sea level
Operating temperature	5-40°C
Storage temperature	0-70°C
Air humidity	45-75% non-condensing
Noise emission	< 70 dB(A)
Protection rating	IP 21

OVERVIEW

Product name

LA-TO is the abbreviation for "Label Applicator Touch-On". The abbreviation ‘TO’ (touch on) distinguishes this applicator from other application techniques such as ‘blow on’ or ‘swing on’.

The designation LA-TO may be followed by one or two pairs of letters to define the applicator configuration in detail:

LA-TO xx yy

- xx = TD or BO
- yy = XL

Meaning of the pairs of letters:

- *TD*: LA-TO with touch down sensor (TD = touch down). The applicator returns as soon as the applicator plate encounters resistance. Thus, products with alternating heights can be labelled.
- *BO*: LA-TO with blow-on function (BO = blow on). The last part of stroke length is overcome by blowing the label onto the product.
- *XL*: LA-TO with extended stroke length (XL = extended length).

List of LA-TO configurations:

- LA-TO
- LA-TO XL
- LA-TO TD
- LA-TO TD XL
- LA-TO BO
- LA-TO BO XL

Furthermore, each of the listed designs is available in two versions:

- for fitting on ALX 92x
- for fitting on ALX 73x, ALS 20x/256 or ALS 30x

Those two versions provide different mounting plates.

For reasons of clarity in this manual, the XL, TD and BO designs are only mentioned separately, if their specifications or their use differ from the „standard“ LA-TO.

For details refer to chapter chapter Configurations on page 21.

„Machine“ means in the following the dispenser/print-dispenser with installed LA-TO applicator.

Intended Use of System

The LA-TO applicator is a device for automatic attachement of self-adhesive labels, which are supplied to the applicator by one of the following label dispensers or print & apply machines.

Dispensers:

- ALS 20x
- ALS 256
- ALS 30x

Print & apply machines:

- ALX 73x
- ALX 92x

The LA-TO is firmly attached to the respective machine. In contrast to direct dispensing from the dispensing edge of the machine onto the product, the LA-TO can bridge distances of up to 18 cm (LA-TO XL: 38 cm) between dispensing edge and product.

System requirements

Products

- LA-TO: admissible are
  - non-moving products with *alternating heights*
  - moving products with the *same height*
- LA-TO TD / LA-TO BO: Admissible are non-moving or moving products with *alternating heights*

Compressed air

- Compressed air connection must be available
- Mounting surface for pressure controller: See Installing the service unit 🗋 on page 31

Machine (dispenser /print-dispenser)

Mashine	Equippement
ALX 92x	ALX 92x with standard dispensing edge and optional applicator interface [a].
ALX 73x	• ALX 734, ALX 735 or ALX 736 with fixed L-shape dispensing edge. • Control via standard signal interface or via optional applicator interface.
ALS 20x/256, ALS 30x	• ALS 20x, ALS 256 or ALS 30x with fixed L-shape dispensing edge. • Control via standard signal interface or via optional applicator interface.

[Tab. 4] Minimum required machine equippement for applicator operation.

a) If the applicator interface was retrofittet, make sure that the D-Sub 15 connector for Avery applicators (top side of the front hood) is fitted.

Firmware

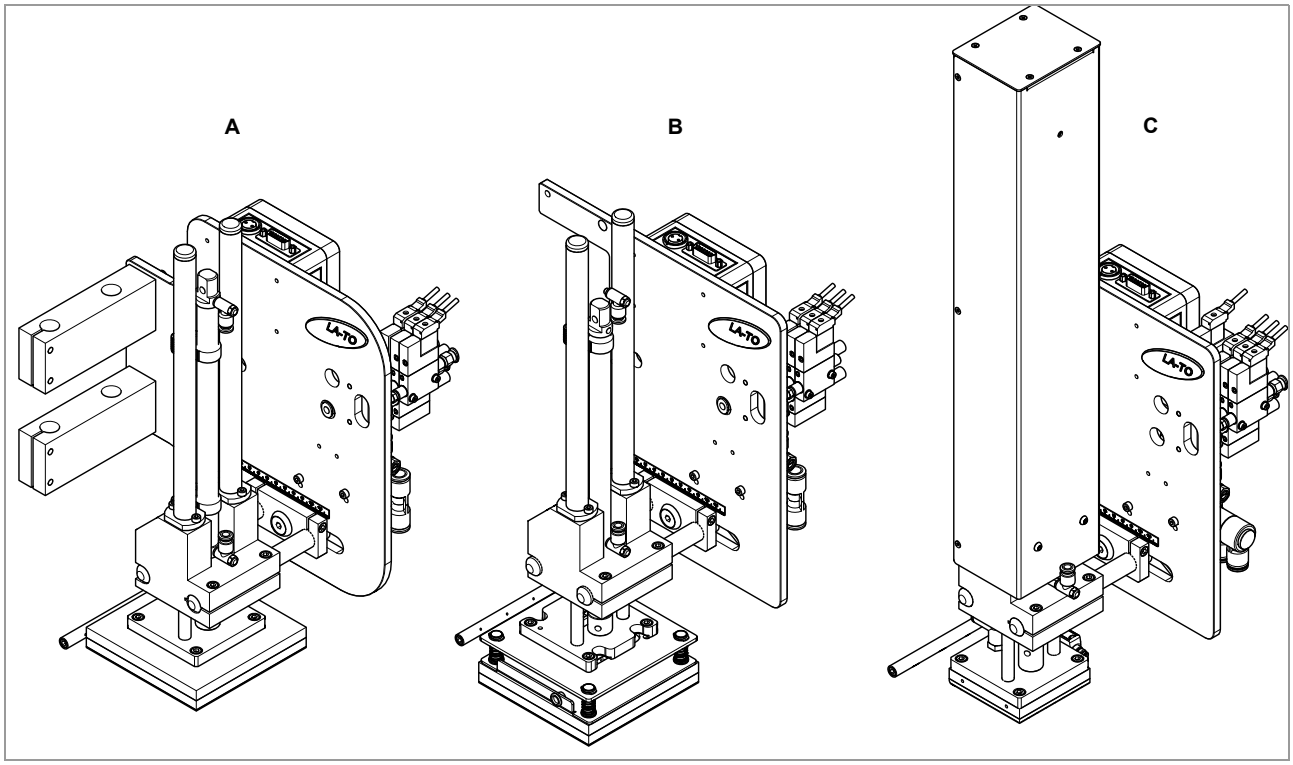
Machine	Applicator	Machine firmware (min.)	AI firmware (min.)
ALX 92x	LA-TO, LA-TO TD	5.33	1.23
	LA-TO BO	6.52	1.40
ALX 73x	LA-TO, LA-TO TD	6.36 (PMA) and 1.36 (LMA)	CPU Gen. 1: 1.23 CPU Gen. 2: 1.38
	LA-TO BO	6.52 (PMA) and 2.52 (LMA)	1.40

[Tab. 5] Firmware requirements for applicator operation.

Machine	Applicator	Machine firmware (min.)	AI firmware (min.)
ALS 20x/256, ALS 30x	LA-TO, LA-TO TD	CPU Gen. 1: 1.33 CPU Gen. 2: 2.50	CPU Gen. 1: 1.23 CPU Gen. 2: 1.38
	LA-TO BO	2.52	1.40

[Tab. 5] Firmware requirements for applicator operation.

Configurations



[5] Examples of LA-TO designs (all RH):
A LA-TO for ALS or ALX 73x(pad size 125x125 mm)
B LA-TO TD for ALX 92x (pad size 125x125 mm)
C LA-TO BO XL TD for ALX 92x (pad size 80x80 mm)

All LA-TO applicators are available in two designs, each right-handed or left-handed:

- For fitting on the base plate of an ALX 92x [5B][5C]
- For fitting on the dispensing edge holder for L-shape dispensing edges at the following machines: ALX 73x, ALS 20x/256, ALS 30x [5A]

➠ Applicator and dispenser/print-dispenser must be of the same handedness, that is both must be RH or LH versions.

Functionality

The LA-TO applicator is an additional module to be mounted to one of the above named label dispensers or print & apply machines (see chapter Intended Use of System on page 19). The device takes over self-adhesive labels from the dispensing edge of the dispenser/print-dispenser, moves each of the labels to the product in a linear movement and presses or blows (LA-TO BO) it to the product.

The label is sucked on to the pressure plate that is driven by a pneumatic cylinder between home position and end position. With the LA-TO BO, the label is blown from the pressure plate onto the product.

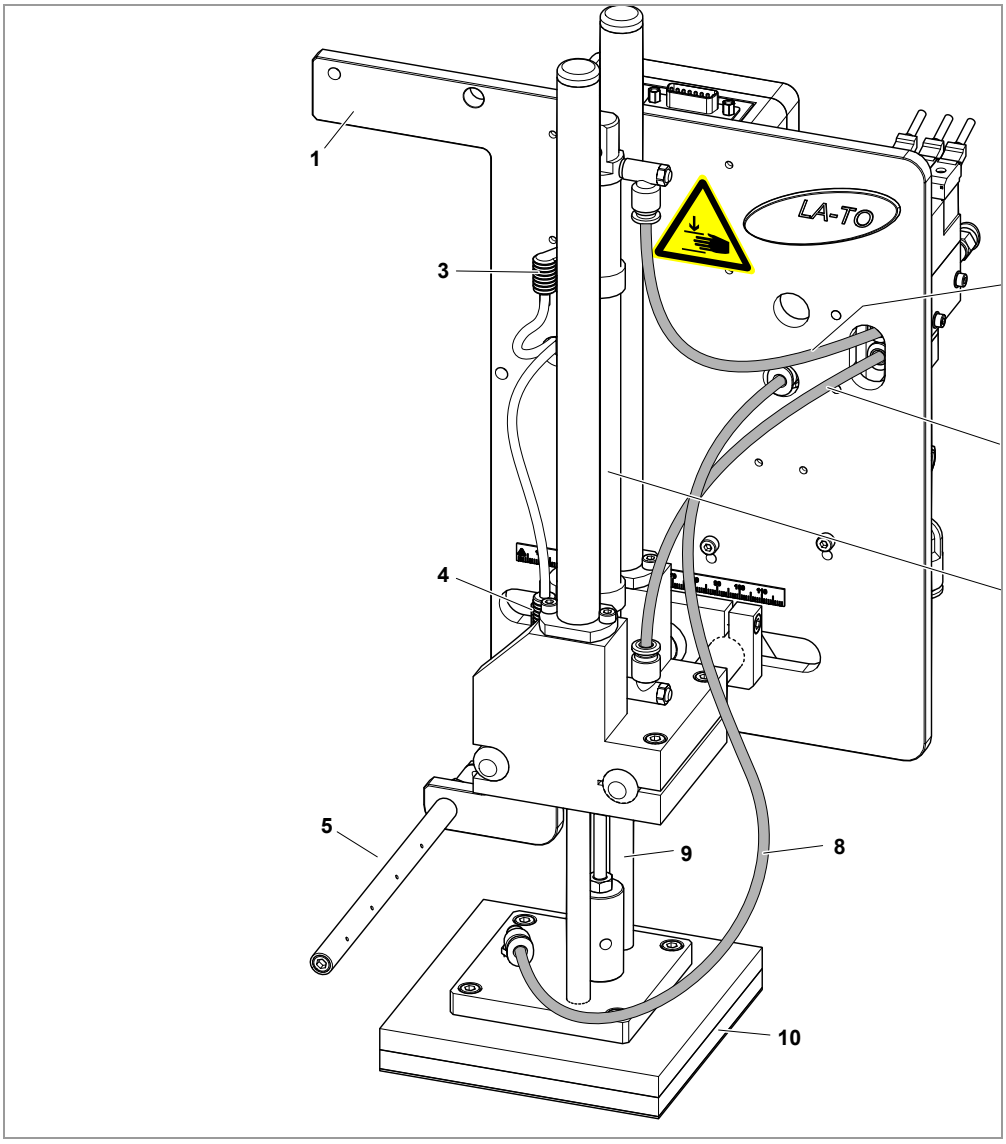
In home position, the label is taken over from the dispenser or the print & apply machine. The arrival of the pressure plate in home position is detected by a sensor at the pneumatic cylinder of the applicator. The label is peeled off the backing paper by the dispensing edge and is pushed under the pressure plate, where it is sucked on by a vacuum. Additionally, the label is blown onto the pressure plate by an air stream from the support air nozzle. Afterwards, the pressure plate moves to the end position, where the label is attached to the product.

The arrival in the end position is either detected by a sensor [1] (sensor controlled), or by reaching the end of a time interval set in the parameter menu (time controlled, see chapter Settings on page 35).

1) End position sensor at LA-TO or touchdown sensor at LA-TO TD

Component overviews

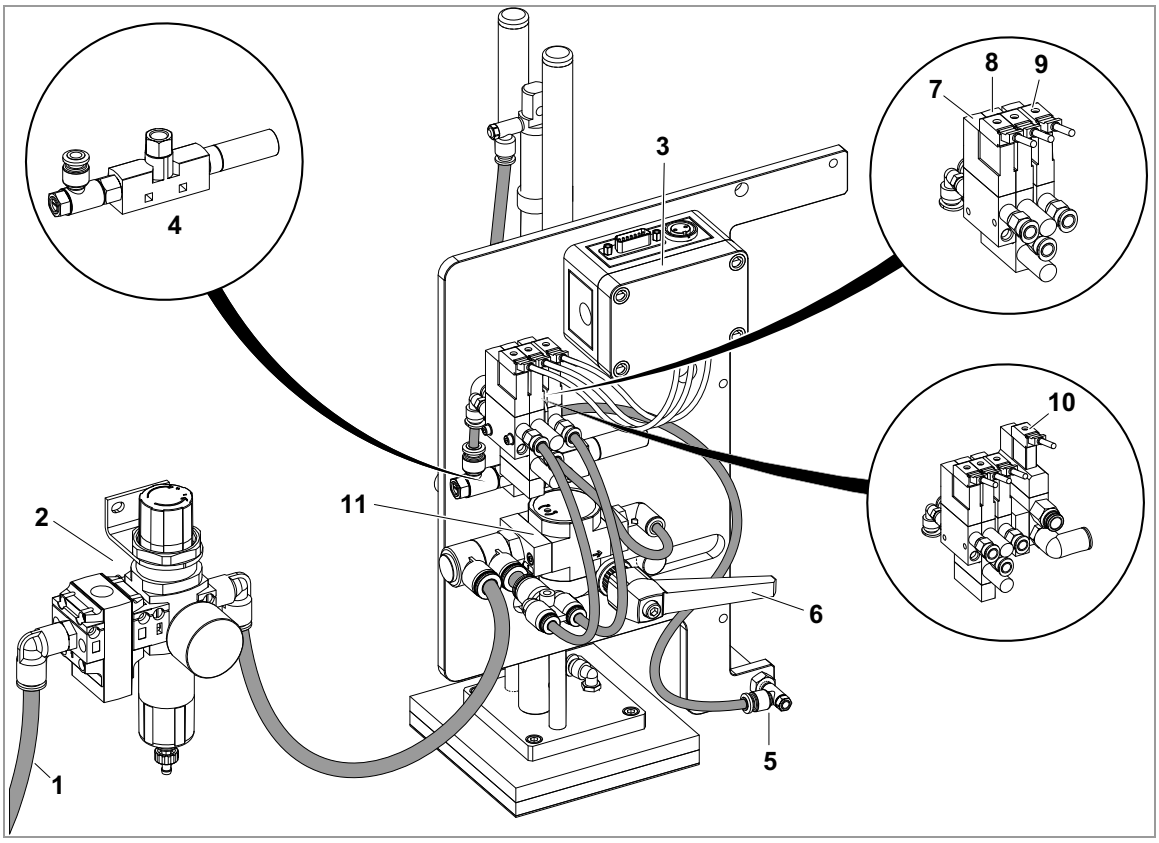
LA-TO front side



[6] Front side (LA-TO for ALX 92x).

No.	Name
1	Mounting plate (type-specific)
2	Pneumatic cylinder
3	Home position sensor
4	End position sensor (not at LA-TO BO)
5	Support air nozzle
6	Pressure line for downwards movement
7	Pressure line for upwards movement
8	Vacuum line for vacuum plate
9	Guide rod
10	Vacuum plate (LA-TO TD: touchdown plate)

LA-TO rear side



[7] Rear side (LA-TO for ALX 92x)

No.	Name
1	Compressed air connector (10 mm tube-Ø)
2	Service unit (manual on-off valve, filter regulator, condensate drain)
3	Connector box
4	Support air valve with silencer
5	Connector and setting valve support air nozzle
6	Clamping button
7	Support air nozzle
8	Cylinder valve
9	Vacuum valve
10	(LA-TO BO) Blow-on valve
11	On-off valve

Startup

INSTALLATION

Safety Notes

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!

➔ Avoid access to the running machine by installing higher-level protective guards [a].

a) Movable, separating guards according to EN 953

General notes

In the following chapters, the LA-TO is displayed without cables and without compressed air hoses for the purpose of better visibility.

Preparing the connection cable for the interlock circuit

The LA-TO comes with a plug [8] that is intended for connecting an interlocking guard.

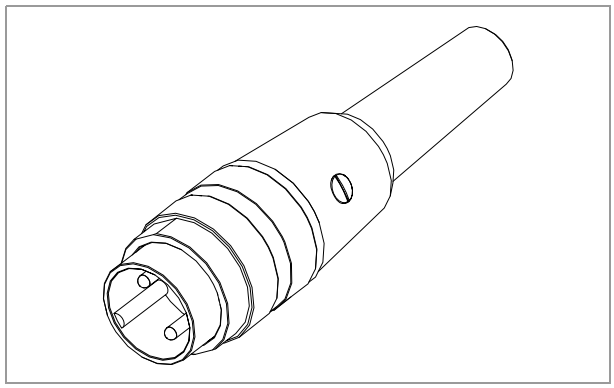
Tool

Small screwdriver (0.6x3.5 mm)

Assembly

➔ Connect the plug [8] to the interlock switch, which is part of the interlock circuit.

See chapter Connecting an interlocking guard 🗋 on page 10.



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

Mounting on an ALX 92x

Tool

4 mm hex socket screwdriver

Assembly

1. Switch-off the ALX 92x.
2. Fasten the LA-TO to the ALX 92x using 3 bolts [9A].
3. Connect cable to LA-TO and ALX 92x [10A] (article no. A3744).
4. Connect the interlock circuit of the protective guard to the LA-TO [10B].

   See chapter Connecting an interlocking guard on page 10.

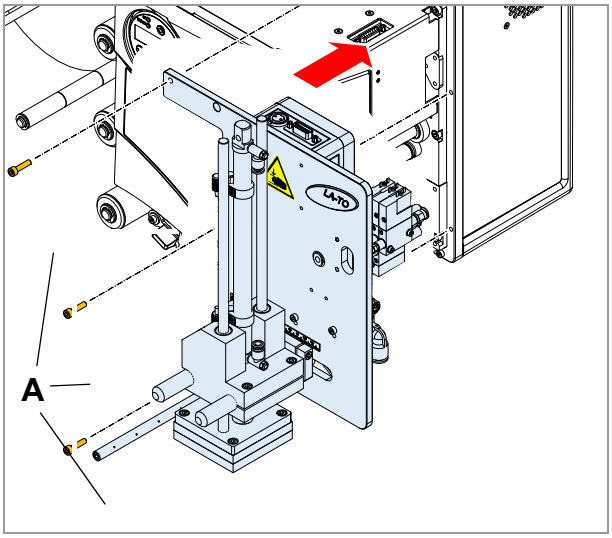
   ➠ Connecting an interlock circuit is mandatory. The LA-TO must not and cannot be operated without.
5. Install the pressure regulator.

   See chapter Installing the service unit on page 31.
6. Connect the compressed air supply.

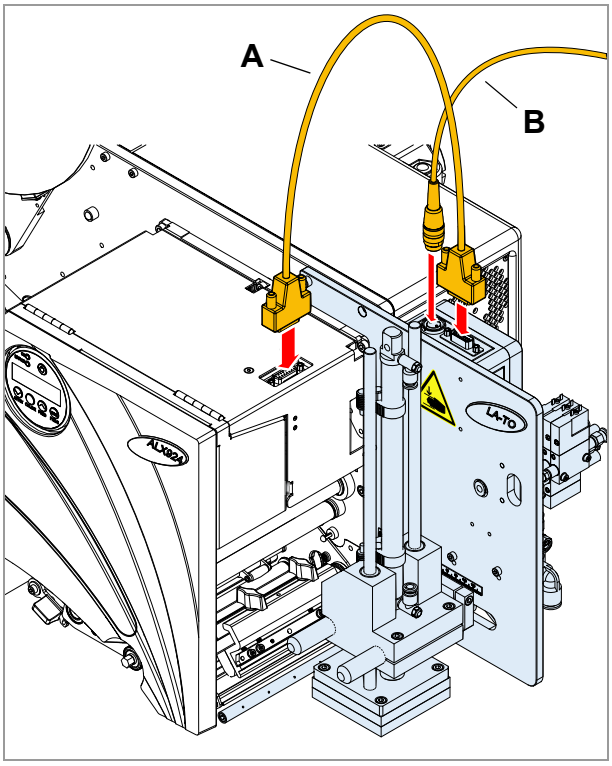
   See chapter Connecting the compressed air on page 32.
7. Switch-on the ALX 92x.
8. Make settings in the parameter menu.

   See chapter Parameter settings on page 36.
9. Adjust the LA-TO.

   See chapter Settings on page 36.



[9] Mounting the LA-TO to an ALX 92x.



[10] Connecting to an ALX 92x.

Mounting on an ALX 73x

Tools

2.5/4 mm hex socket screwdriver

Assembly

1. Switch-off the ALX 73x.
2. Unscrew 2 screws [11A] and take off the dispensing edge together with the holding rods [11C].
3. Push the LA-TO onto the holding rods and fasten it there using the locking screws [11B].
4. Push the rods back into the cross arm [11D] and fix it there with 2 screws [11A].
5. Connect the cable to LA-TO and ALX 73x.

   ➠ Connection to standard signal interface [12A] (article no.: A7074)

   ➠ Connection to applicator interface [13A] (article no.: A8752)
6. Connect the interlock circuit of the protective guard to the LA-TO [10B].

   See chapter Connecting an interlocking guard 🗋 on page 10.

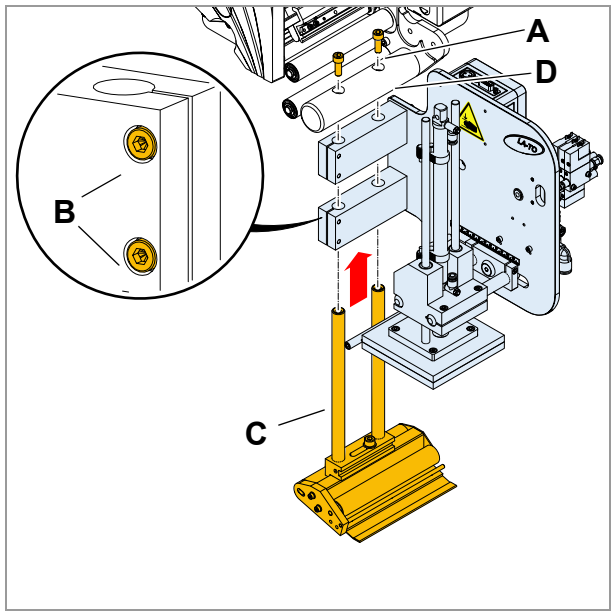
   ➠ Connecting an interlock circuit is mandatory. The LA-TO must not and cannot be operated without.
7. Install the pressure regulator.

   See chapter Installing the service unit 🗋 on page 31.
8. Connect the compressed air supply.

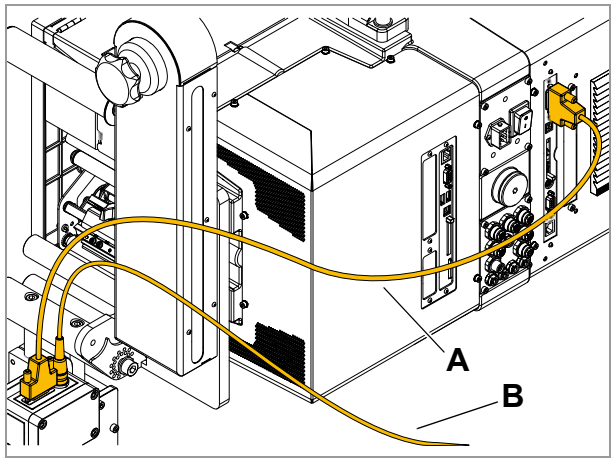
   See chapter Connecting the compressed air 🗋 on page 32.
9. Switch-on the ALX 73x.
10. Make setting in the parameter menu.

    See chapter Parameter settings 🗋 on page 36.
11. Adjust the LA-TO.

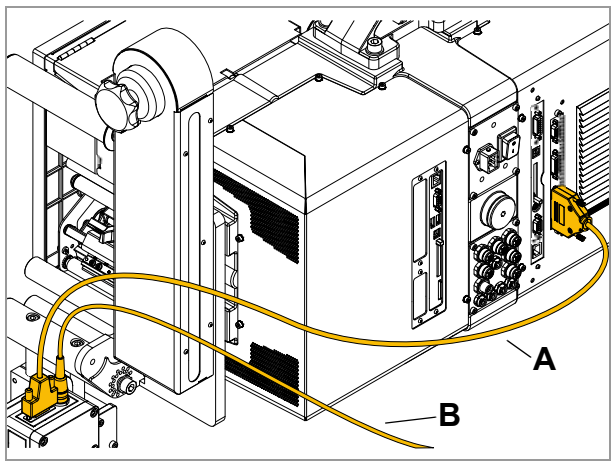
    See chapter Settings 🗋 on page 36.



[11] Mounting the LA-TO to an ALX 73x.



[12] Connecting to an ALX 73x (standard signal interface).



[13] Connecting to an ALX 73x (optional applicator interface).

Mounting on an ALS 20x

Tools

4/6 mm hex socket screwdrivers

Assembly

1. Switch-off the ALS 20x.

   ➠ Mark the lateral position of the dispensing edge (material zero-line), before disassembling it.

2. Unscrew 1 screw [14A] and take off the dispensing edge [14B].
3. Unscrew 2 screws [14C] and remove the lower cross arm [14D].
4. Push the LA-TO onto the holding rods and fasten it there using the locking screws [14E].
5. Remount the dispensing edge.

   ➠ Position the dispensing edge as marked before.

6. Connect the cable to LA-TO and ALS 20x.

   ➠ Connection to standard signal interface [12A] (article no.: A7074)

   ➠ Connection to applicator interface [13A] (article no.: A8752)

7. Connect the interlock circuit of the protective guard to the LA-TO [10B].

   See chapter Connecting an interlocking guard 🗋 on page 10.

   ➠ Connecting an interlock circuit is mandatory. The LA-TO must not and cannot be operated without.

8. Install the pressure regulator.

   See chapter Installing the service unit 🗋 on page 31.

9. Connect the compressed air supply.

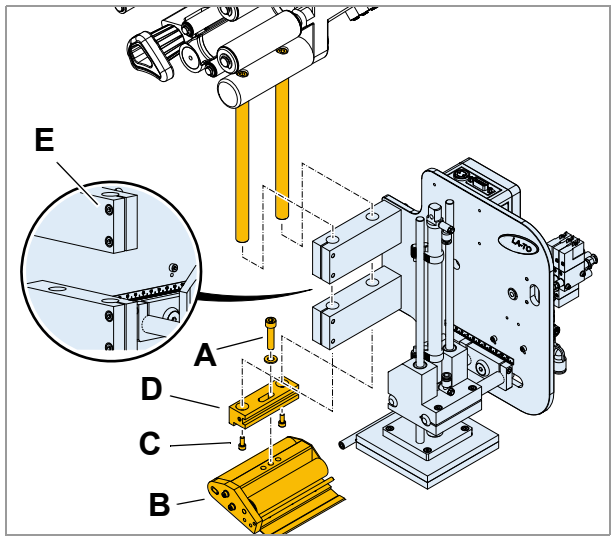
   See chapter Connecting the compressed air 🗋 on page 32.

10. Switch-on the ALS 20x.
11. Make setting in the parameter menu.

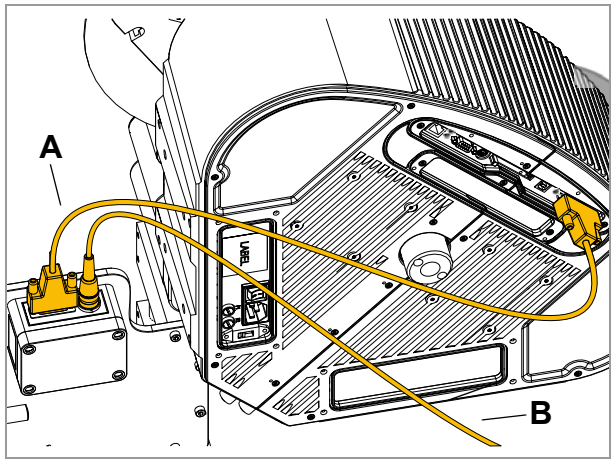
    See chapter Parameter settings 🗋 on page 36.

12. Adjust the LA-TO.

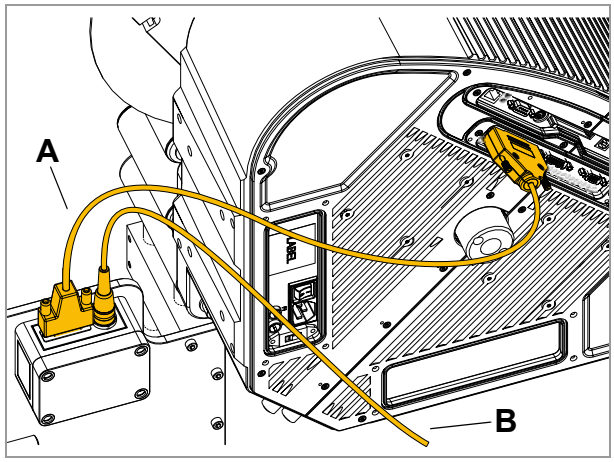
    See chapter Settings 🗋 on page 36.



[14] Mounting the LA-TO to an ALS 20x



[15] Connecting to an ALS 20x (standard signal interface).



[16] Connecting to an ALS 20x (optional applicator interface).

Mounting on an ALS 30x

Tools

2.5/4 mm hex socket screwdriver

Assembly

1. Switch-off the ALS 30x.
2. Remove the four set screws [17A] and take off the dispensing edge with holding rods [17C].
3. Push the LA-TO onto the holding rods and fasten it there using the locking screws [17B].
4. Insert the holding rods into the cross arm [17D] and fix it with the four set screws [17A].
5. Connect the cable to LA-TO and ALS 20x.

   ➠ Connection to standard signal interface [12A] (article no.: A7074)

   ➠ Connection to applicator interface [13A] (article no.: A8752)
6. Connect the interlock circuit of the protective guard to the LA-TO [10B].

   See chapter Connecting an interlocking guard 🗋 on page 10.

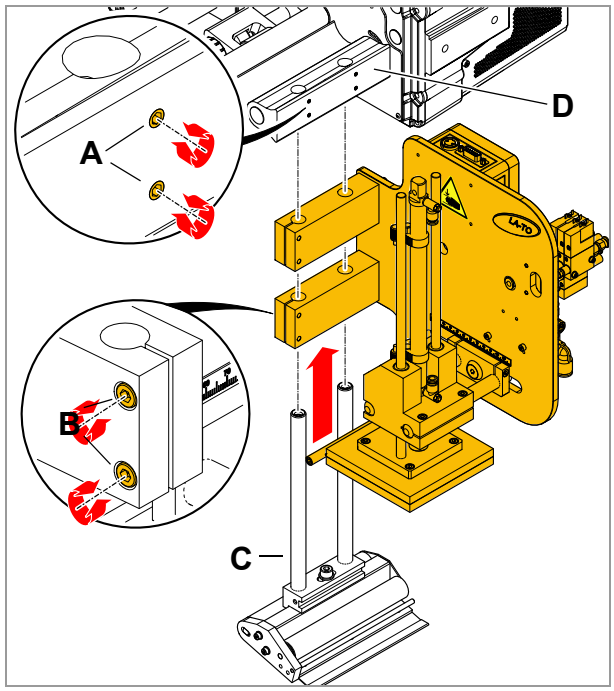
   ➠ Connecting an interlock circuit is mandatory. The LA-TO must not and cannot be operated without.
7. Install the pressure regulator.

   See chapter Installing the service unit 🗋 on page 31.
8. Connect the compressed air supply.

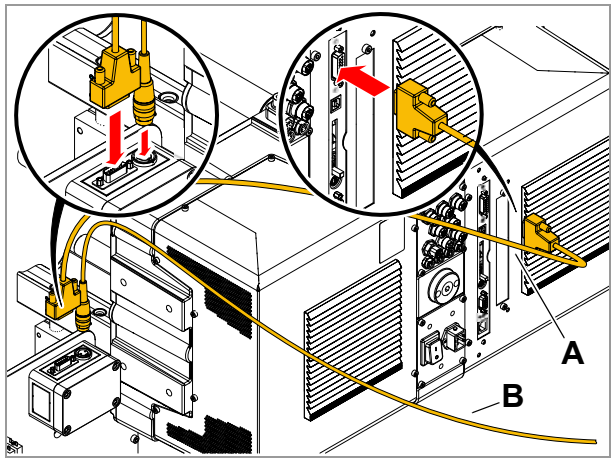
   See chapter Connecting the compressed air 🗋 on page 32.
9. Switch-on the ALS 20x.
10. Make setting in the parameter menu.

    See chapter Parameter settings 🗋 on page 36.
11. Adjust the LA-TO.

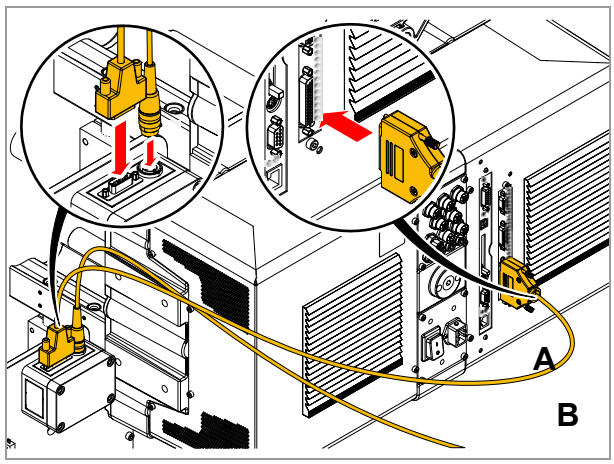
    See chapter Settings 🗋 on page 36.



[17] Mounting the LA-TO to an ALS 30x.



[18] Connecting to an ALS 30x (standard signal interface).



[19] Connecting to an ALS 30x (optional applicator interface).

Installing the service unit

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

- Manual on-off valve
- Filter regulator
- Condensate drain

Tools:

- Screwdriver size 2
- 5 mm hex screwdriver

Assembly

➔ Fasten the service unit directly onto the enclosure [21] or using a mounting bracket [20A].

➔ The condensate drain [20B] must point downwards.

Fastening	Bolts	Hole separation
With bracket	M6x16	28 mm
Without bracket	M4x45	35 mm

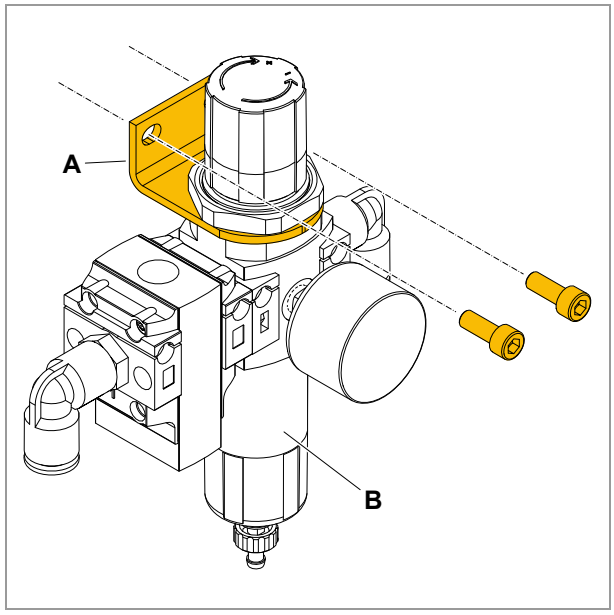
➔ Fasten the pressure tubes so that the air flows through the pressure regulator in the direction from mark „1“ to mark „2“.

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

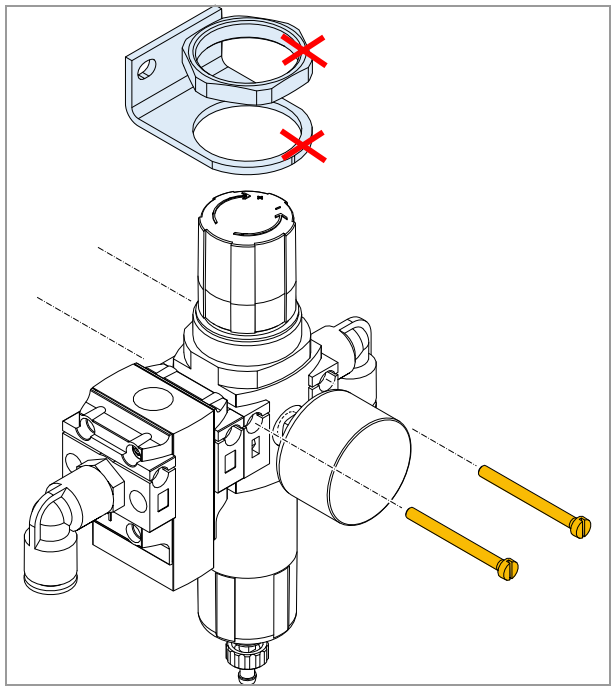
➠ The compressed air outlet can be optionally set to the right or left on the pressure regulator. This requires Installing the compressed air outlet to the opposite side:

1. Remove the bolt plug [22A].
2. Remove the manometer [22B].
3. Install the bolt plugs and manometer to their opposite sides.

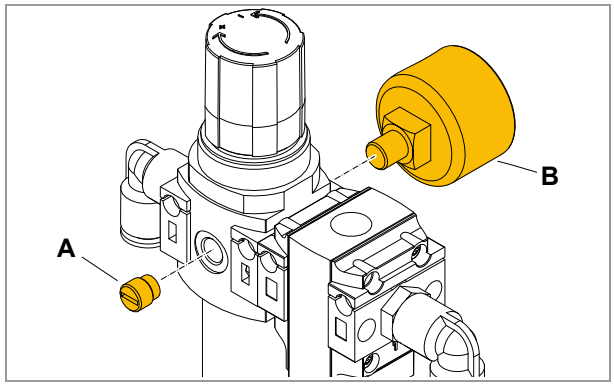
➠ Mind the instruction sheet of the manufacturer, which comes with the service unit.



[20] Mounting the service unit with mounting bracket.



[21] Mounting the service unit without mounting bracket (bracket and hex nut can be layed aside).



[22] Rear view of the service unit. Arrows = compressed air flow direction.

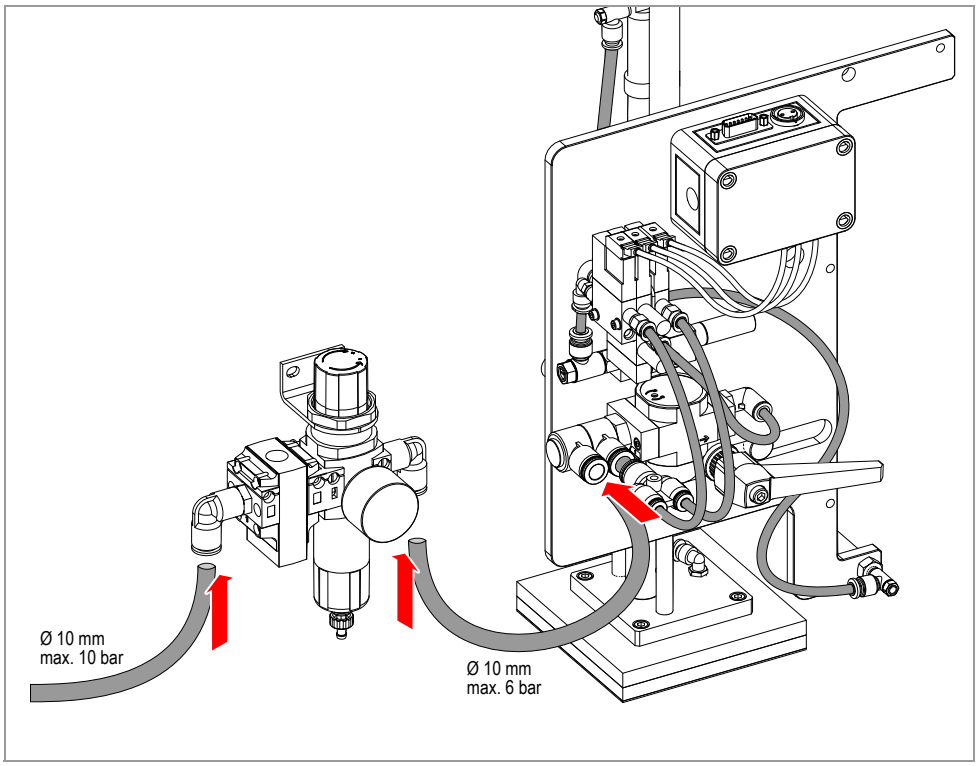
Connecting the compressed air

Prerequisites:

- Hose diameter: 10 mm
- Maximum admissible compressed air pressure at the service unit *entrance*: 10 bar
- Maximum admissible compressed air pressure at the service unit *exit*: 6 bar

➔ Connect the compressed air hose as illustrated [23].

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



[23] Connecting the compressed air hose.

Alternative connection variant:

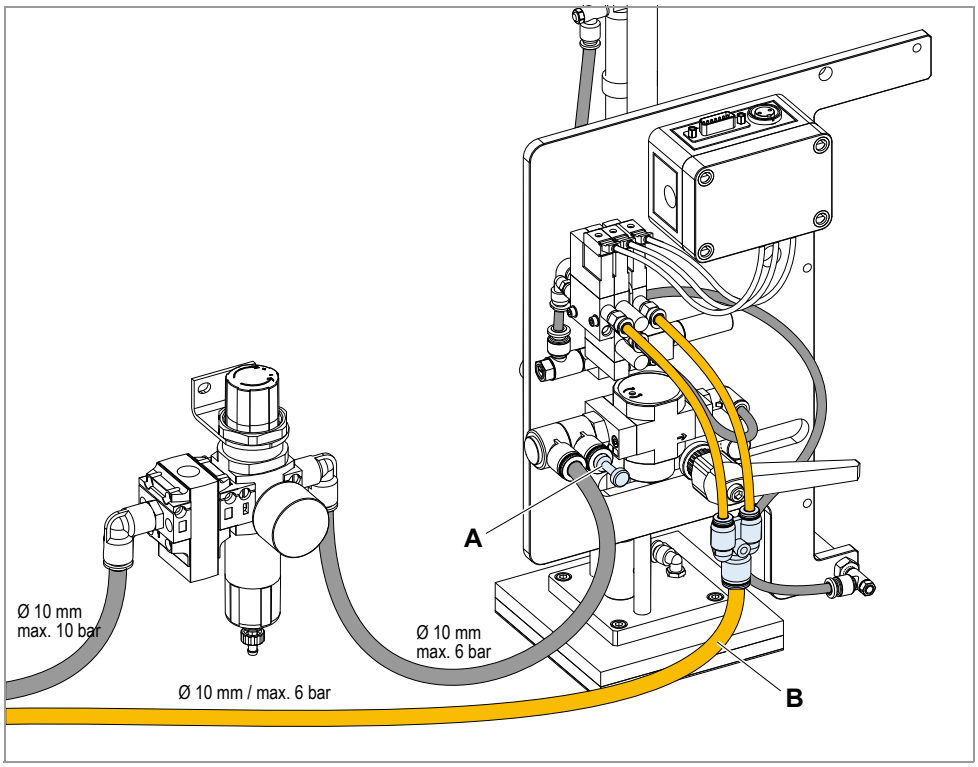
As an alternative can both, vacuum and support air valves be connected to permanent compressed air supply [24]. This has the advantage that a label, that is already sucked onto the applicator pressure plate, stays in place, even if the compressed air supply of the applicator is switched off by an emergency stop.

> CAUTION!
>
> After switching off the compressed air supply, the applicator pressure plate moves to the end position. Hazard of damaging the applicator by collision with passing products.
>
> ➔ Stop the conveyor *or*
>
> ➔ Make sure that no products pass by *or*
>
> ➔ Fix the applicator pressure plate in its home position

➔ Pull the hose coming from the Y-shape connector off the multiple distrubutor and connect the open hose end to a permanent available compressed air supply [24B].

➠ Max. admissible pressure: 6 bar

➔ Close the now open fitting at the multiple distrubutor with the dummy plug [24A].



[24] Hosing with permanent compressed air supply (B) at vacuum and support air valves.

Selecting the size of the vacuum plate

The LA-TO can be equipped with vacuum plates in 4 sizes.

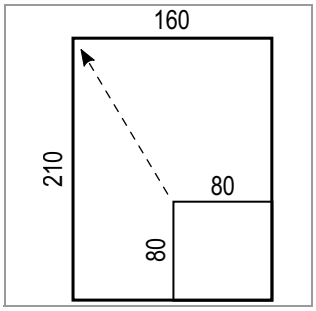
Vacuum plate (L x W)	Article no.
80 x 80 mm	A103966
125 x 125 mm	A103967
160 x 110 mm	A9415
210 x 160 mm [a]	A9410

[Tab. 6] Measures and article numbers of the available vacuum plates.

a) Suitable for DIN A5 size labels.

With those vacuum plates, labels in the following size range can be applied:

80 x 80 mm up to 160 x 210 mm (length x width)



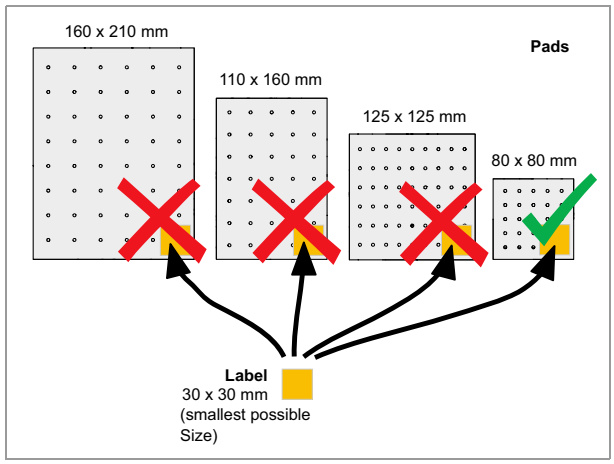
[28] Size range for labels.

Selecting the appropriate pad:

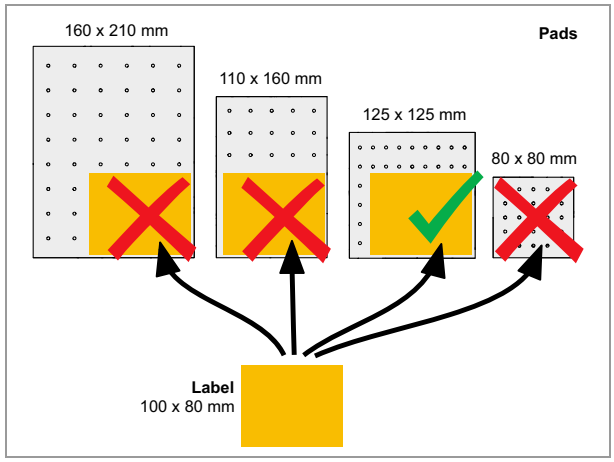
➔ Choose the *smallest possible* vacuum plate

➠ The label must not be larger than the vacuum plate

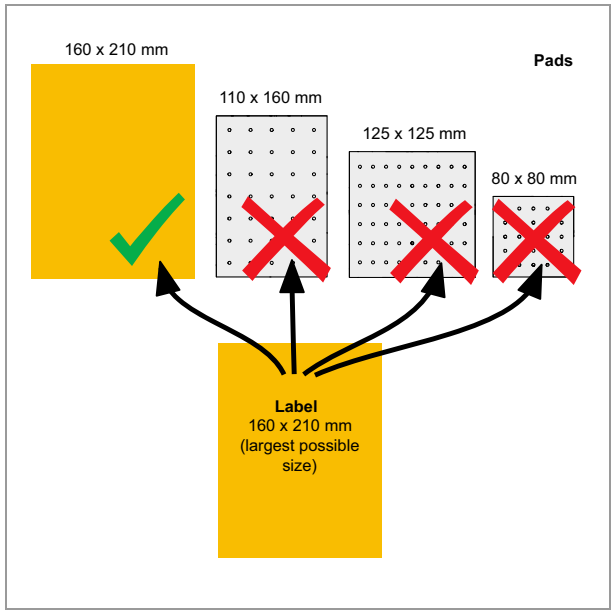
Examples see figures on the right:



[25] Selecting the vacuum plate for a 30 x 30 mm label.



[26] Selecting the vacuum plate for a 100 x 80 mm label.



[27] Selecting the vacuum plate for a 160 x 210 mm label.

SETTINGS

Parameter settings

ALX 92x

The following parameters control the operation of the ALX 92x and LA-TO. You must set these parameters before using the unit for the first time:

Parameter	Setting
APPLICATOR PARA > Applicator type	LA-TO: • „LA-TO Timed“ (time controlled) • „LA-TO Sensor“ (sensor controlled) LA-TO TD: „LA-TO Sensor“ LA-TO BO: • „LA-TO BO Timed“ (time controlled) • „LA-TO BO Sensor“ (sensor controlled)
APPLICATOR PARA > Apply mode	Setting depends on application
APPLICATOR PARA > Dwell time	Only required for „LA-TO Timed“ Setting depends on application
APPLICATOR PARA > Blow on time	Only required for LA-TO BO Setting depends on application

For more information on how to set the parameters, refer to the user manual ALX 92x, topic section „Info-Printouts and Parametes“.

ALS 20x/256, ALS 30x, ALX 73x (LMA)

The following parameters control the operation of the ALS 20x/256, ALS 30x and ALX 73x with LA-TO. You must set these parameters before using the unit for the first time:

Parameter	Setting
LABEL SETUP > Dispense speed	Depends on application. Operation *without* APSF is recommended.
SIGNAL INTERFACE > Interface mode	„Applic. signals“
SIGNAL INTERFACE >APPLIC. SIGNALS > Applicator type [a] SIGNAL INTERFACE >AI BOARD SIGNAL > Applicator type [b]	LA-TO: • „LA-TO Timed“ (time controlled) • „LA-TO Sensor“ (sensor controlled) LA-TO TD: „LA-TO Sensor“ LA-TO BO: • „LA-TO BO Timed“ (time controlled) • „LA-TO BO Sensor“ (sensor controlled)
SIGNAL INTERFACE >APPLIC. SIGNALS > Apply mode [a] SIGNAL INTERFACE >AI BOARD SIGNAL > Apply mode [b]	Setting depends on application
SIGNAL INTERFACE >APPLIC. SIGNALS > Dwell time [a]	Only required for „LA-TO Timed“
SIGNAL INTERFACE >AI BOARD SIGNAL > Dwell time [b]	Setting depends on application
SIGNAL INTERFACE >APPLIC. SIGNALS > Blow on time [a]	Only required for LA-TO BO
SIGNAL INTERFACE >AI BOARD SIGNAL > Blow on time [b]	Setting depends on application

a) Applicator control via standard signal interface
b) Applicator control via optional applicator interface

For more information on how to set the parameters, refer to user manual of the respective machine type.

Position of the pressure plate

WARNING!

Injury hazard by unintentionally triggered applicator.

➔ Unplug the compressed air line before starting the adjustment.

The following sections only apply to units where a LA-TO is mounted onto an ALX 92x. Furthermore, only one variant of the vacuum plate is shown. However, the settings described here apply analogously to units where a LA-TO is mounted onto an ALS 20x, ALS 30x or an ALX 73x together with any other type of vacuum plate.

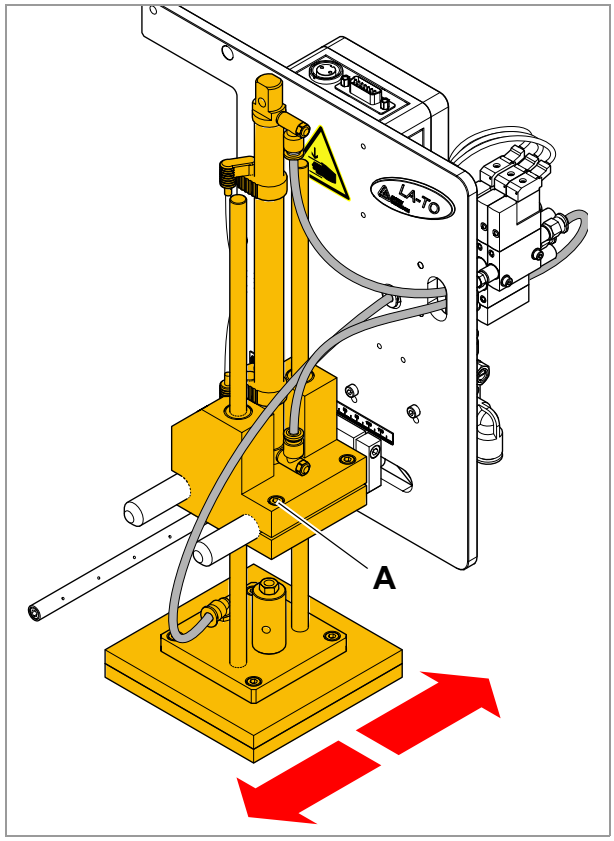
Tools

- 4 mm hex socket driver
- Open-ended spanners: sizes 10/13/17
- Calliper gauge
- Screw drivers: small, medium

Adjusting the lateral position

The lateral position of the vacuum plate must be set such that labels can be pushed onto the centre of the vacuum plate. If this is not the case, the lateral position of the vacuum plate can be adjusted as follows:

1. Unplug the compressed air line.
2. Remove the two Allen bolts [30A].
3. Push the vacuum plate so that the labels are transferred centrally.
4. Fasten the vacuum plate in place using the Allen bolts [30A].



[29] Adjusting the lateral position.

Adjust the distance to the dispensing edge

The gap between pressure plate and dispensing edge must be set so that the label passes around the edge of the pressure plate and pushes onto the plate as closely and smoothly as possible.

The movement of the label onto the applicator pressure plate is influenced by the dispensing speed and by the following settngs:

- Horizontal gap between dispensing edge and pressure plate [31A]
- Vertical distance between dispensing edge and pressure plate
- Setting of the support air stream, see chapter Einstellung der Stützluft, see chapter Checking the transfer process on page 44.

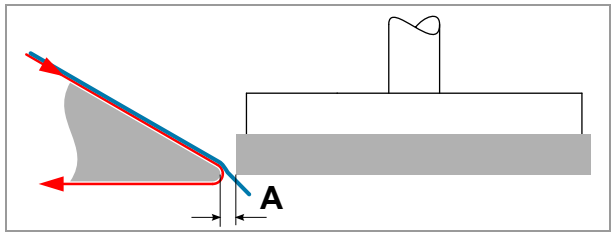
The gap is set as follows:

- Setting the *horizontal distance* [31A] :
  1. Unplug the compressed air line.
  2. Loosen the clamping lever [32A].
  3. Push the transport unit until the vacuum plate is positioned approximately 3 mm behind the label dispensing edge.
  4. Tighten the clamping lever.
- Setting the *vertical distance*:
  1. Unplug the compressed air line.
  2. Loosen the counter nut [33A].
  3. Depending on its current position, turn the piston rod clockwise or anti-clockwise.

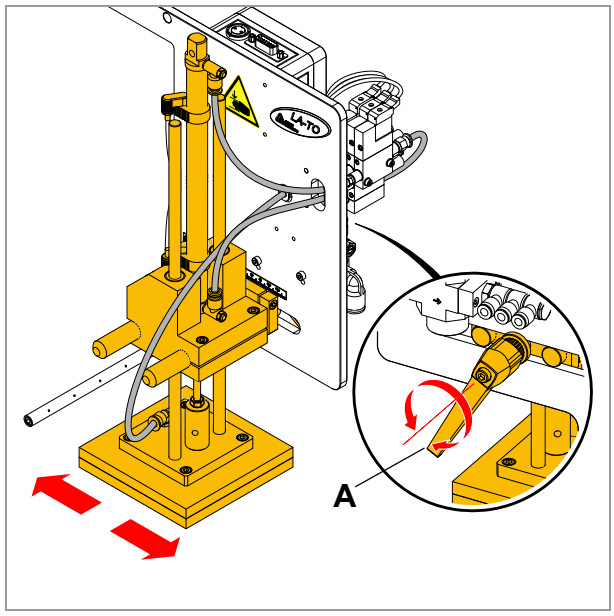
  ➠ Set the applicator position so that the dispensed label is pushed *just under* the applicator plate. With the LA-TO at an ALX 92x, this requires dispense tests during *print operation* - dispense tests by pressing the APPLY button are not sufficient!

  4. Change the position if necessary.
  5. Retighten the counter nut.

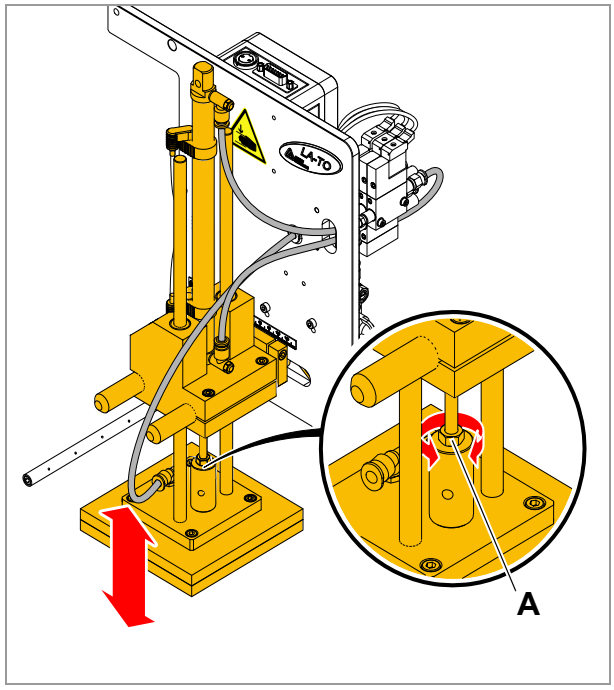
  ➠ If the LA-TO is mounted to an ALS 20x/256, ALS 30x or ALX 73x, the height difference can be adjusted by loosening the clamping blocks of the LA-TO. Afterwards, the clamping blocks have to be refastened.



[30] Distance between dispensing edge and pressure plate (schematic).



[31] Adjust the horizontal distance to the dispensing edge.



[32] Adjusting the vertical distance to the dispensing edge.

Sensor adjustment

WARNING!

Injury hazard by unintentionally triggered applicator.

➔ Unplug the compressed air line before starting the adjustment.

Adjust the home position

The upper limit stop of the piston rod in the pneumatic cylinder is referred to as the “home position”. This position must be reliably detected by the home position sensor.

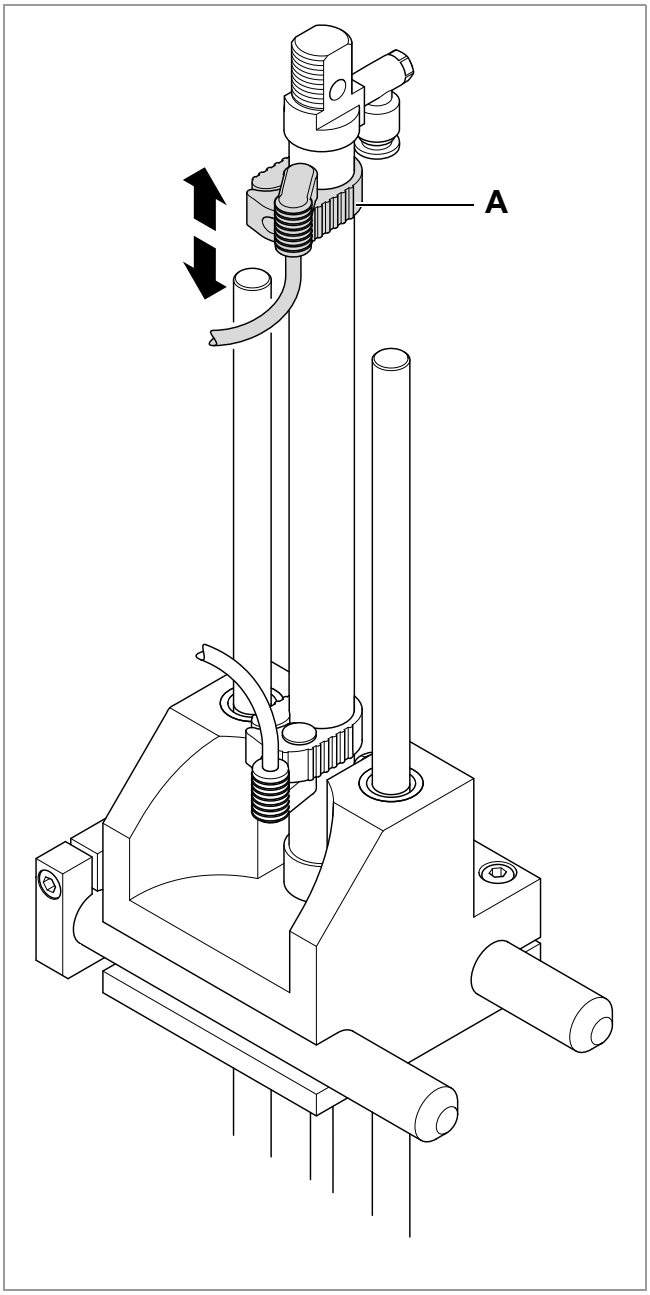
Tool

Small screwdriver (0.6x4 mm)

Functionality check of the home position sensor:

1. Unplug the compressed air line.
2. Slowly push the vacuum plate upwards. While doing this, check that the home position sensor detects the pressure plate when the plate is approximately 2 mm below the upper limit stop.

   ➠ Applicators controlled by applicator interface: The sensor is active when the status LED „Home“ at the interface lights up.
3. If necessary, loosen the clamping bolt [34A] and move the home position sensor onto the pneumatic cylinder.
4. Refasten the home position sensor using the clamping bolt.



[33] Adjust the home position

Adjusting the end position at LA-TO

This setting is only required, if the LA-TO is supposed to be operated sensor-controlled (... > Applicator type = „LA-TO Sensor“).

As soon as a label is transferred from the vacuum plate, the vacuum plate moves downwards to the final position.

The final position is determined solely by the adjustable final position sensor. By moving the sensor, you can change the height of the final position and adjust it to suit your specific needs.

Tool

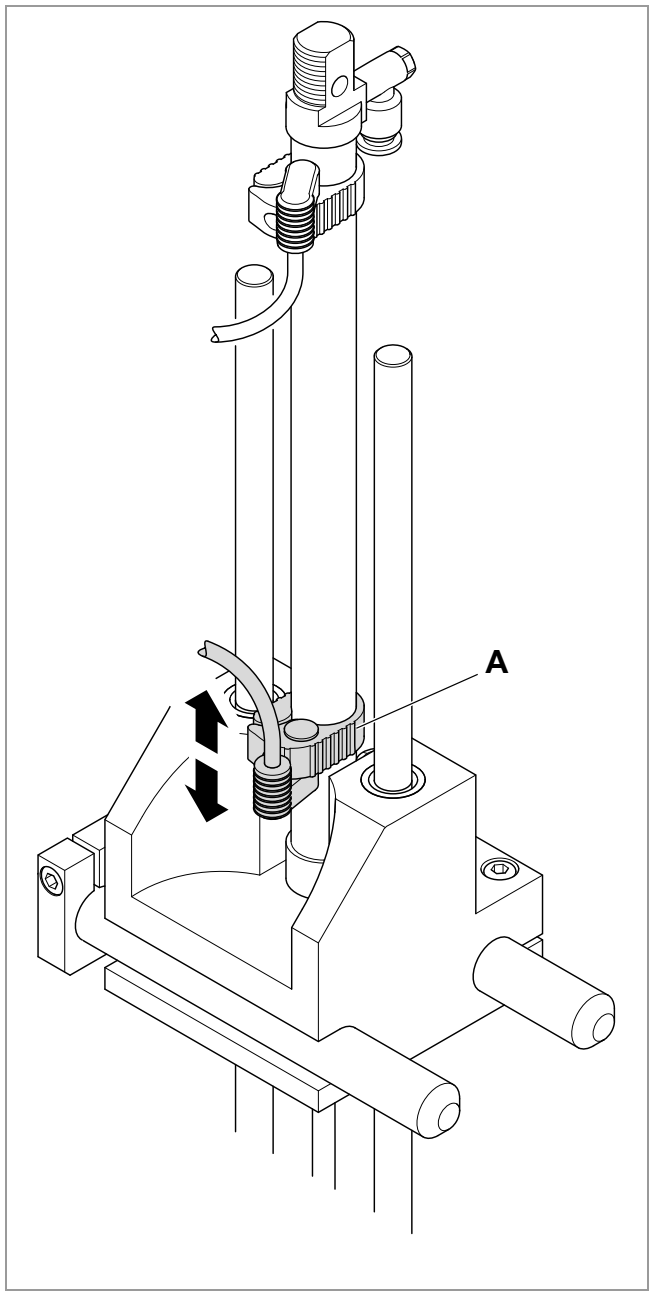
Small screwdriver (0.6x4 mm)

Adjusting the end position of the sensor:

1. Unplug the compressed air line.
2. Place the product to be labelled beneath the LA-TO.
3. Push the vacuum plate slowly downwards until it is lying on the product.
4. If necessary, loosen the clamping bolt [35A] and push the transfer sensor along the pneumatic cylinder until the LED on the sensor lights up.
5. Fasten the sensor by retightening the clamping bolt.

➠ Adjust this setting according to the operating speed of your applicator to prevent the applicator plate from ‘hammering’ too severely against the product.

➔ For high operating speeds, move the sensor slightly upwards.



[34] Adjusting the end position

Adjusting the end position at LA-TO BO

At the LA-TO BO, the end position is the position where the movement of the applicator plate stops and the blow-on starts. This position is detected by a photoelectric proximity sensor.

This setting is only required, if the LA-TO is supposed to be operated sensor-controlled (... > Applicator type = „LA-TO BO Sensor“).

Setting:

1. Unplug the compressed air line.
2. Place the product to be labelled beneath the blow-on plate.
3. Push the vacuum plate to the appropriate blow-on height.
4. With a small screwdriver turn the pot [36C] at the front end of the proximity sensor to the left limit („-“ direction).
5. Turn the pot [36C] slowly to the right („+“ direction) until the yellow LED [36B] lights up.

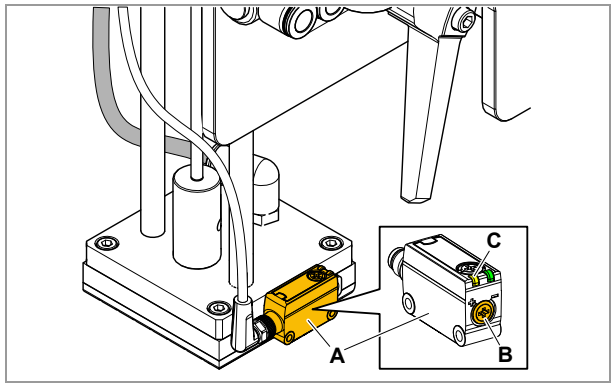
   ➠ It is recommended to add a 15% safety supplement to the distance sensor-to-product.

Meaning of the LEDs:

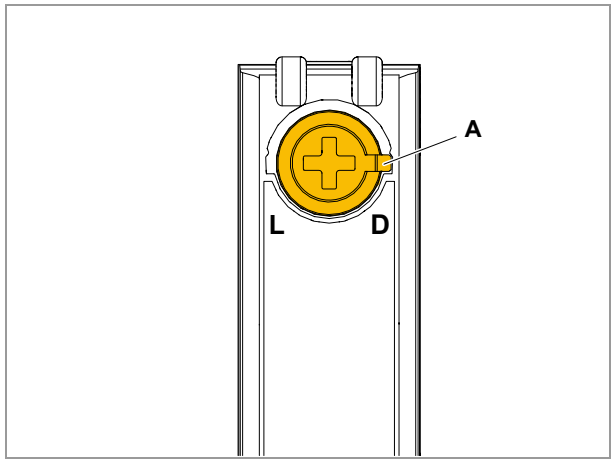
- Yellow LED: Sensor switches
- Green LED: Supply voltage is connected

The switch at the top side of the sensor [37A] serves as light/dark-switch:

- „L(ight)“ position (default setting): The sensor switches (yellow LED lights), if a product is detected.
- „D(ark)“ position: The sensor switches (yellow LED lights), if *no* product is detected.



[35] Proximity sensor (A) at LA-TO BO.



[36] Switch (A) at the top side of the proximity sensor.

Valves

WARNING!

Danger of cuts and crush injuries between moveable vacuum plate and dispensing edge.

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.

Tool

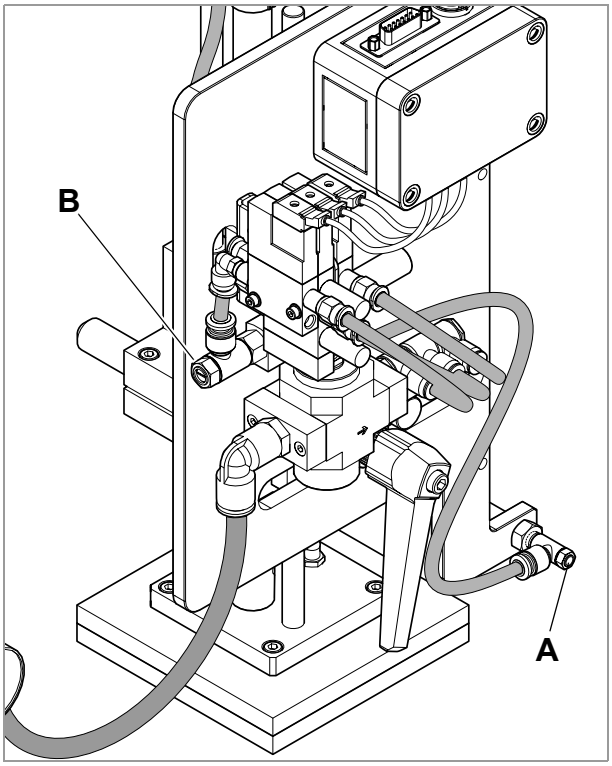
Small screwdriver (0.6x4 mm)

Adjusting the support air

The force of the support air can be adjusted using the set screw [38A]. For information on the proper setting, refer to chapter Checking the transfer process 🗋 on page 44.

Adjust the vacuum at the pressure plate

The holding force of the pressure plate can be adjusted using the set screw [38B]. For information on the proper setting, refer to chapter Checking the transfer process 🗋 on page 44.



[37] Adjusting the support air and the holding force.

Checking the transfer process

The schematics to the right display the typical transfer process: from dispensing the label to transferring the label to the product.

1. Once a print or dispensing command is received, the label is transferred across the dispensing edge [39a] and separated from the release paper [39b]. The label is transferred closely past the edge of the vacuum plate [39c].

   The amount of bending in the label depends on the following factors:

   – Feed speed
   – Adhesive force
   – Label thickness
   – Room temperature

   If the label is not deflected far enough to come past the vacuum plate, adjust the height setting of the dispensing edge. See chapter Adjust the distance to the dispensing edge 🗋 on page 39.

2. The support air [39d] deflects the label away from the vacuum plate.

   For more information, see chapter Adjust the vacuum at the pressure plate 🗋 on page 43.

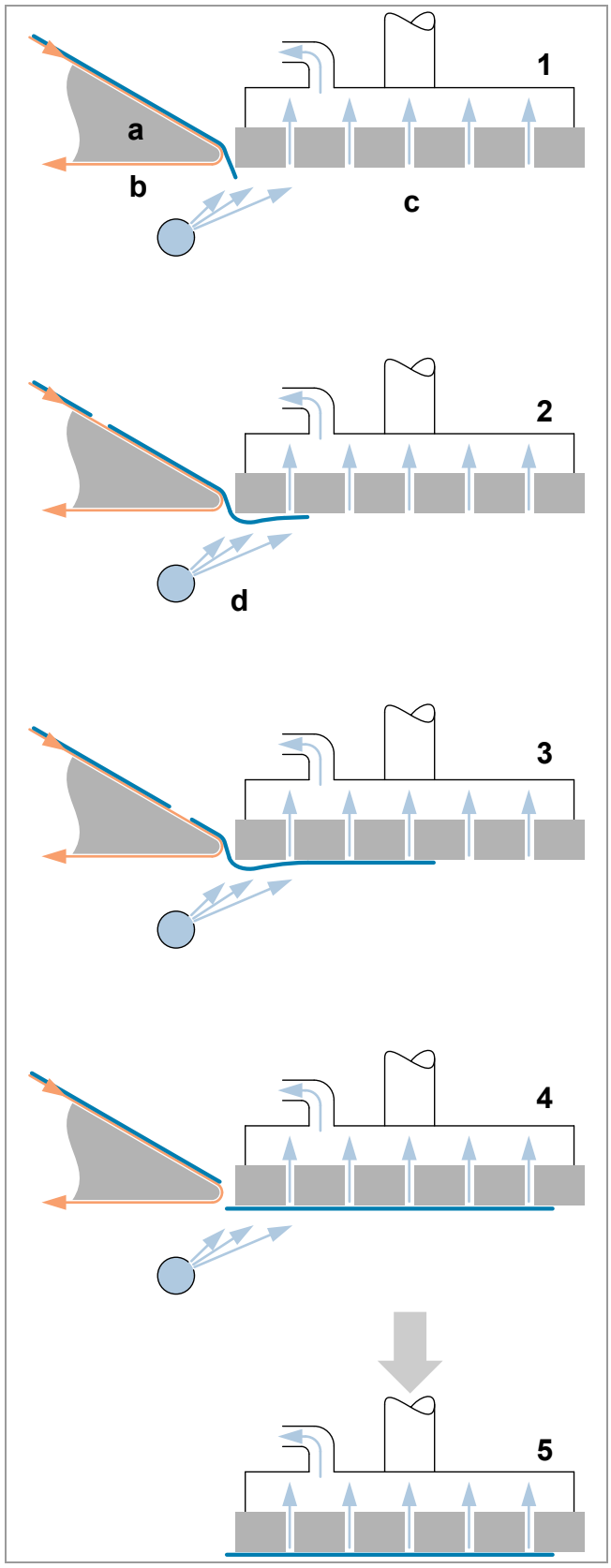
3. The label is ‘caught’ by the vacuum plate and moved along by the feed force. The suction force of the vacuum plate must not exceed the feed force for the label. Here, it is important to consider the interaction between feed force, support air angle, support air force and suction force.

   For more information, see chapter Adjusting the support air 🗋 on page 43.

4. Once the label has separated completely from the dispensing edge, it snaps onto the vacuum plate.

   The distance to the dispensing edge prevents the label from adhering during the downwards movement of the vacuum plate towards the final position.

5. The vacuum plate is pushed downwards to the final position and the label is transferred onto the product.



[38] Schematic of transfer process

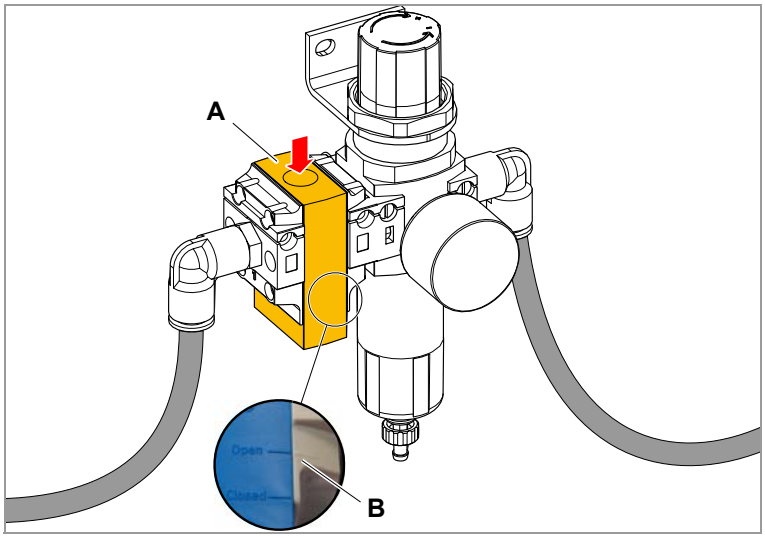
Operation

ACTIVATING/DEACTIVATING THE APPLICATOR

Activating

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

The slide [40A] of the manual on-off valve at the service unit must be positioned in the lower position („Open“) [40B].



[40] Slide of the on-off valve in „open“ position (B).

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 ar 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

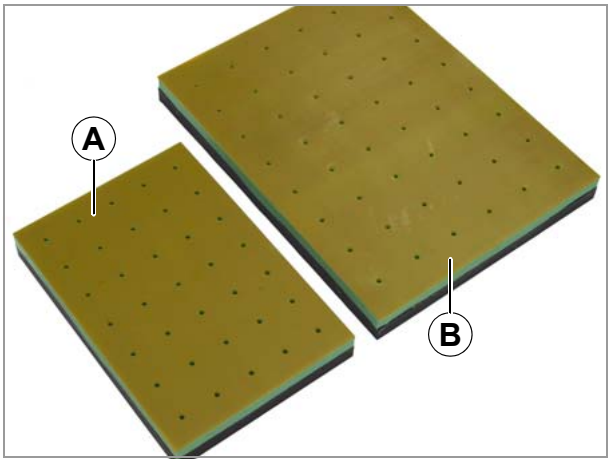
1. Stop the machine, to which the applicator is attached.
2. Switch off the compressed air supply (using an appropriate switch at the plant or the manual on-off valve at the service unit).

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

EXCHANGING THE VACUUM PLATE

Exchanging the vacuum plates at LA-TO / LA-TO TD

Selecting the appropriate size of the vacuum plate see Selecting the size of the vacuum plate on page 34.



[41] Vacuum plates 160 x 110 mm (A) and 210 x 160 mm (B).

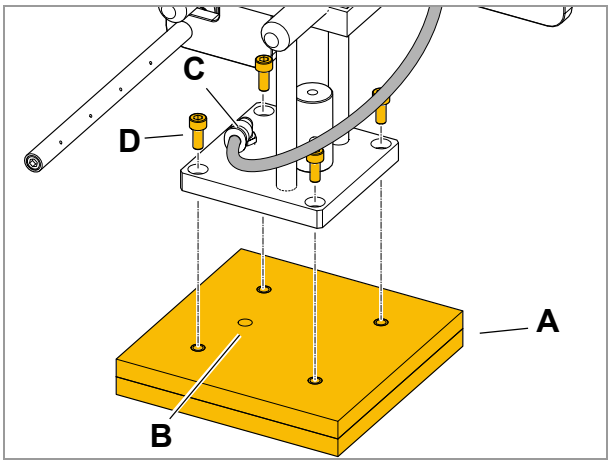
Tool

4 mm hex socket key

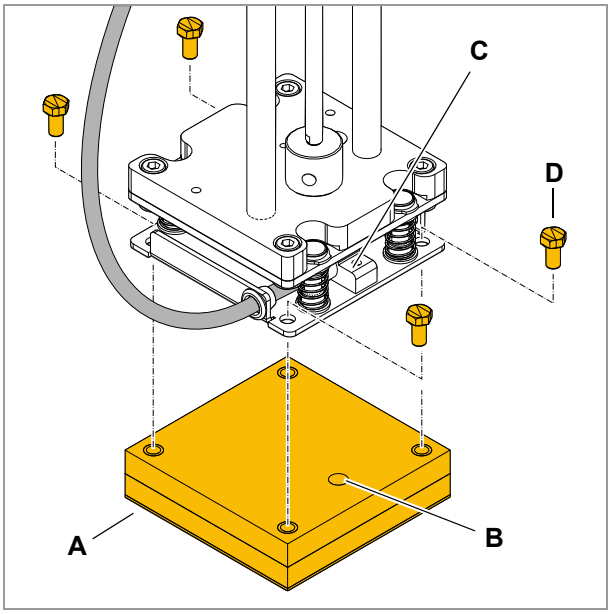
Removing/Assembling the vacuum plate:

➔ Remove the 4 screws [42D][43D] at the applicator foot. Remove the vacuum plate [42A][43A].

➠ Assembly: The vacuum plate must be turned in a way, that the hole [42B][43B] is placed under the vacuum valve [42C][43C].



[42] Fitting the vacuum plate to a LA-TO (size: 125 x 125 mm).



[43] Fitting the vacuum plate (A) to a LA-TO TD (size: 80 x 80 mm).

Exchanging the blow-on plate at a LA-TO BO

The LA-TO BO can be equipped with blow-on plates in 2 sizes. The size of the blow-on plate limits the size of the max. applicable label.

Blow-on plate (l x w)	Article no.
80 x 80 mm	A106707 (RH)
	A106706 (LH)
160 x 110 mm	A106709 (RH)
	A106708 (LH)

[Tab. 8] Sizes and article numbers of the available blow-on plates.

Tool:

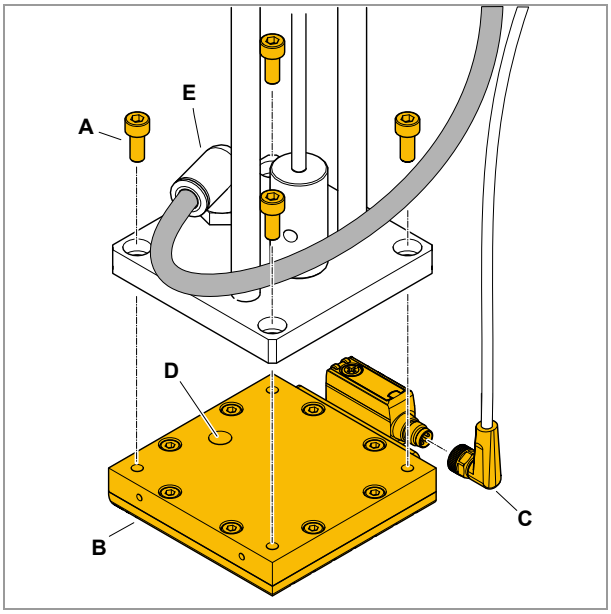
4 mm hex socket key

Removing/Fitting the blow-on plate:

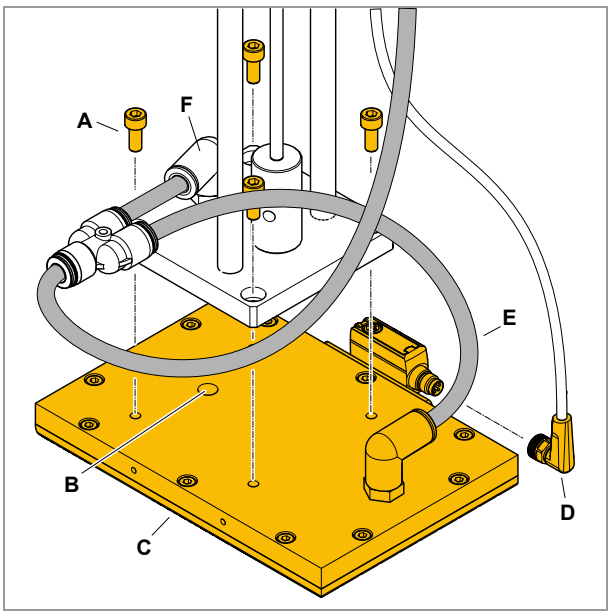
1. Disconnect the sensor cable [44C][45D].
2. (160 x 110 mm plate) disconnect the hose at the blow-on plate [29E].
3. Remove the 4 screws [44A][45A] at the applicator foot. Remove the blow-on plate [44B][45C].

➠ Assembly: The vacuum plate must be turned in a way, that the hole [44D][45B] is placed under the vacuum valve [44E][45F].

➠ There are RH/LH versions of the plates.



[44] Fitting the blow-on plate (B) to a LA-TO BO (size: 80 x 80 mm).



[45] Fitting the blow-on plate (C) to a LA-TO BO (size: 160 x 110 mm).

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

Status

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

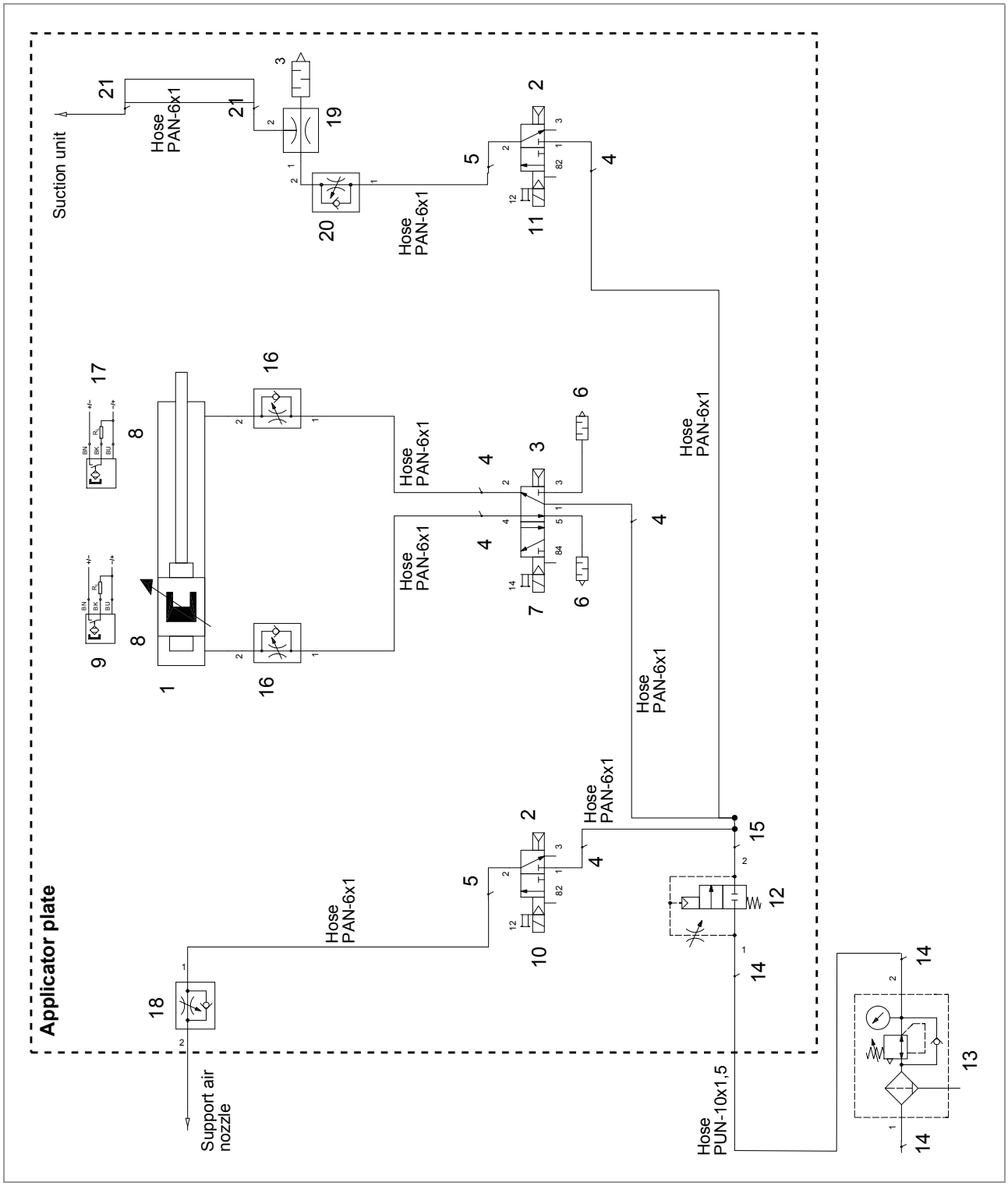
Read the user manual of the dispenser/print-dispenser, topic section „Status Reports“ or „Operational failures“.

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 DIAGRAM LA-TO / LA-TO TD

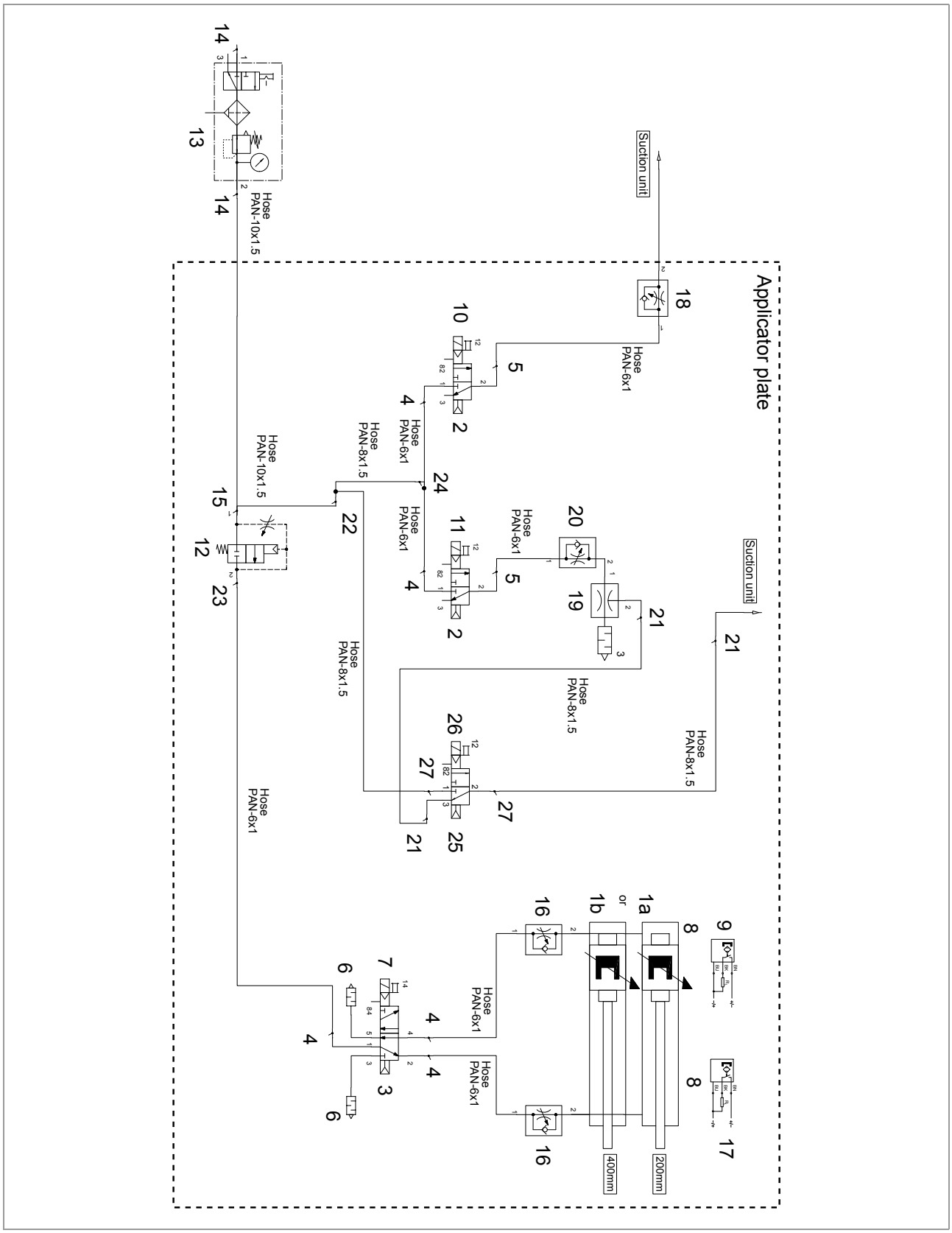


[41] LA-TO pneumatic diagram.

Pos. no.	Article no.	Amount	Designation
1	A4075	1	Norm cylinder
2	A5886	2	Solenoid valve
3	A5887	1	Solenoid valve
4	A4476	5	Push-in fitting
5	A4468	2	Push-in L-fitting
6	A4466	2	Silencer
7	A5895	1	Plug socket with cable
8	A4080	2	Mounting kit
9	A4081	1	Proximity switch
10	A5896	1	Plug socket with cable
11	A5897	1	Plug socket with cable
12	A100551	1	On-off valve
13	A8801	1	Filter control valve
14	A8806	3	Push-in L-fitting
15	A100565	1	Multiple distributor
16	A9519	2	One-way restrictor
17	A9520	1	Proximity switch
18	A9830	1	One-way restrictor
19	A9521	1	Suction nozzle
20	A6303	1	One-way restrictor
21	A4473	2	Push-in L-fitting

[Tab. 8] Parts list for pneumatic diagram.

PNEUMATIC DIAGRAM LA-TO BO



[42] LA-TO BO Pneumatic diagram.

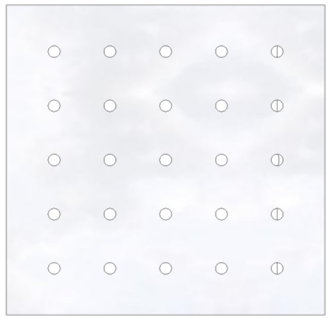
Pos. no.	Article no.	Amount	Designation
1a	A4075	1	Norm cylinder
1b	A105547	1	Norm cylinder
2	A5886	2	Solenoid valve
3	A5887	1	Solenoid valve
4	A4476	5	Push-in fitting
5	A4468	2	Push-in L-fitting
6	A4466	2	Silencer
7	A5895	1	Plug socket with cable
8	A4080	2	Mounting kit
9	A4081	1	Proximity switch
10	A5896	1	Plug socket with cable
11	A5897	1	Plug socket with cable
12	A100551	1	On-off valve
13	A8801	1	Filter control valve
14	A8806	2	Push-in L-fitting
15	A106817	1	Multiple distributor
16	A9519	2	One-way restrictor
17	A9520	1	Proximity switch
18	A9830	1	One-way restrictor
19	A9521	1	Suction nozzle
20	A6303	1	One-way restrictor
21	A9514	3	Push-in L-fitting
22	A106821	1	Push-in Y-fitting
23	A106816	1	Push-in L-fitting
24	A106724	1	Push-in Y-fitting
25	A100427	1	Solenoid valve
26	A106726	1	Plug socket with cable

[Tab. 9] Parts list for pneumatic diagram.

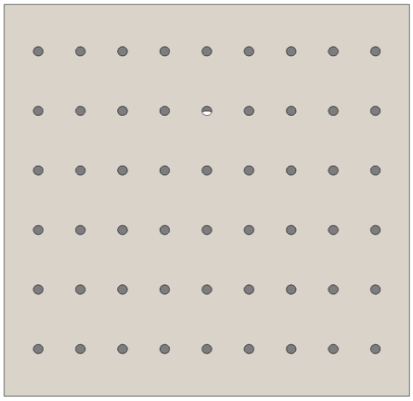
OVERVIEW: DRILLINGS IN THE APPLICATOR PLATES

Article no.	Size (WxL in mm)	No. of drillings	Distance in B	Distance in L
A103966	80 x 80	25	14	14
A103967	125 x 125	54	13	19
A9415	110 x 160	35	21	22
A9410	160 x 210	48	26	24.5

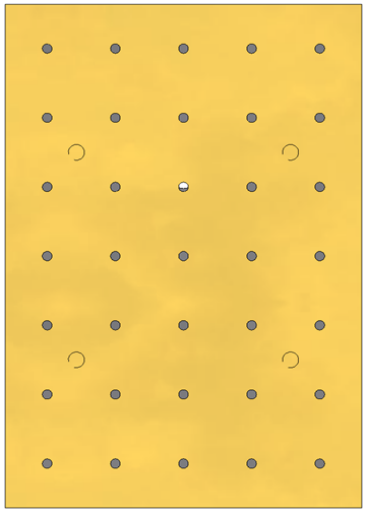
A103966



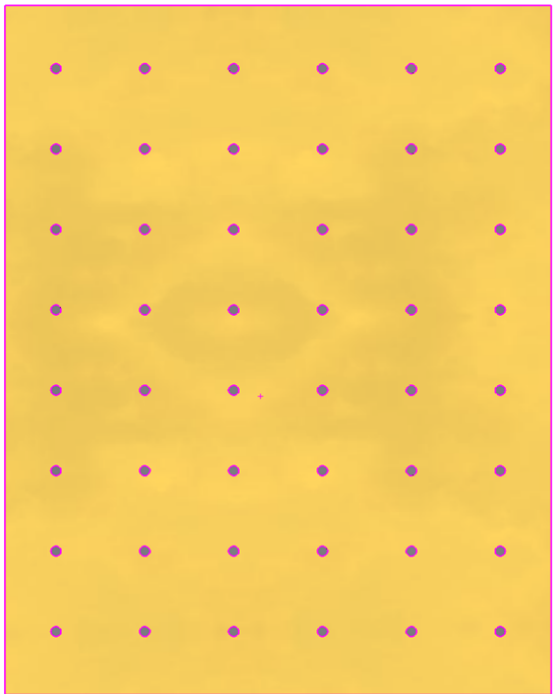
A103967



A9415



A9410



[43] Arrangement of the holes in the applicator plates.

EU Declaration of Incorporation

(Translation of original version)

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

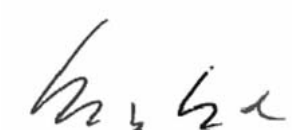
hereby declare that the partly completed machine designated below has been designed and built in such a way as to be in conformity with the safety and health protection requirements of directive 2006/42/EC, annex I, which are marked „fulfilled“ in the following table „Appendix regarding the Declaration 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
General designation	Applicator
Applicable EU directive	2006/42/EG (Maschinery) 2014/30/EU (EMC) 2011/65/EU (RoHS)
Applied harmonized standards, especially	EN ISO 12100 : 2010 EN ISO 4414 : 2010 EN 60950-1/A2 : 2013
The person authorized to compile technical documents	Novexx Solutions GmbH (for address see above)



Eching, 18.06.2018 Manfred Borbe (Operations Director)

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 applicable	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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NOVEXX SOLUTIONS