

# **OPERATING MANUAL**

# LA-BO Applicator



Edition 06 - 10/2023



## Contents

### Please Note -3

General Information -3 Validity of this manual and required compliance -3 How information is represented -4 For your safety -5 Intended use -5 Information and qualification -5 Operating safety of the machine -7

### Product description -8

Application Notes -8 System requirements -8 Component overview -10 Technical data -12

### Startup -13

Mounting & setting on ALX 92x -13 Mounting -13 Adjustment/Setting -14 Mounting & Setting on ALS/XLS 2xx, ALS 306 or ALX 73x -16 Mounting -16 Adjustment/Setting -18 Mounting & setting on XPA 93x - 19 Montage -19 Adjustment/Setting -20 Installing the service unit -22 Connecting compressed air - 23 Adjusting the application height -24 Adjustments to the label material -25 Adjusting the sliding bars in the vacuum grid -25 Adjusting the air nozzles in the vacuum grid -27 Adjusting the air stream support -28 Setting the dispensing position parameter - 29

### Operation - 30

Activating/deactivating the applicator - **30** Cleaning - **31** Fault correction - **32** 

### Appendix - 33

Pneumatic diagram - 33



# **Please Note**

## **GENERAL INFORMATION**

### Validity of this manual and required compliance

### Contents

The complete technical documentation for the LA-BO consists of the following parts:

- Operating manual (for system integrators and operating personnel)
- · Service manual (for service personnel)
- Spare parts catalog (for service personnel)

The *operating manual* describes the installation and operation of the LA-BO. For safe and proper operation of the print & apply system or of the labeler with attached LA-BO, it is indispensable to consult the operating manual for the relevant machine too.

The *service manual* has the same content as the operating manual and also contains a chapter with repair instructions.

For technical questions not covered in this operating manual,

► Follow the instructions of the LA-BO service manual or of the service manual of the print & apply system or of the labeler.

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

### **Technical status**

LA-BO for:

- ALX 92x, ALS/XLS 2xx: 10/2007
- ALS 306: 3/2009
- ALX 73x: 6/2011
- XPA 93x: 10/2019

### 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.

### Copyright

NOVEXX Solutions retains all rights to this manual and its appendices. Reproduction, reprint or any other type of duplication, including parts of the manual, are permitted only with written approval.



### Manufacturer

Novexx Solutions GmbH Ohmstrasse 3 85386 Eching, Germany Phone: +49-8165-925-0 Fax: +49-8165-3143

www.novexx.com

### 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!
  - Note about how an action has to be performed.

### 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.

Always follow the instructions.

### CAUTION!

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

► Always follow the instructions.

### **Figures**

Texts are accompanied by figures where necessary.

Generally, the LA-BO unit shown is a right-handed version. The left-handed version is only shown where it is necessary to differentiate between the two.



## FOR YOUR SAFETY

### Intended use

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

Print & apply systems:

- ALX 92x
- ALX 73x
- XPA 93x

Labelers:

- ALS/XLS 20x
- ALS/XLS 256
- ALS/XLS 272
- ALS 306

The LA-BO is mounted to the respective machine by means of its base plate. In contrast to direct dispensing from the dispensing edge of the machine onto the product, the LA-BO can bridge distances of up to 10 cm between dispensing edge and product. The applicator is controlled by an optional applicator interface (depending on the machine type) or by the internal applicator interface (ALS only, for details read chapter Systemrequirements > Machine type on page 8). The electrical connection to the LA-BO is done via a plug connector. The drive is provided by compressed air.

The application process is triggered by means of a product sensor, which is connected to the machine.

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.

### Making note of information

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

The operating 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.



### Operating safety of the machine

### Intended use

The machine must only be used in accordance with the specifications described in chapter **Technical** data on page 12 and in chapter **System requirements** on page 8.

WARNING!

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

- ▶ Only use the unit in accordance with the instructions specified in this manual.
- ▶ Only configure the unit in accordance with this manual and with the required care.
- ► Only use original accessories.
- Do not make any modifications or alterations to the unit.
- ► Repairs to the device may only be performed by authorised specialists who are aware of the risks involved.

### Protection against injuries by electrical current

Applicators of type LA-BO operate using low voltage 24 V DC supplied by NOVEXX Solutions print& apply systems or labelers ("machine").



### WARNING!

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

- Never connect the LA-BO unit directly to mains voltage!
- Only operate the unit once the housing has been reassembled properly.
- ► Before cleaning, switch off the machine and remove the power cable from the socket.
- Keep the unit dry.

► If liquids have penetrated the LA-BO unit, switch the machine off and disconnect or unplug it's power cable immediately. Inform a service technician.

### Protection against injuries by mechanical action

### WARNING!

Risk of injury due to moving parts!

Risk of crushing hands between the vacuum grid of the LA-BO and the conveyed products!

► Never reach between the product and the LA-BO edge while the unit is in operation or ready for operation.

### Protection against injuries by chemicals



### WARNING!

Operating materials such as cleaning agents or the solvents in glues can be damaging to health.

► Always follow the instructions, use and safety regulations specified by the manufacturer!



## **Product description**

## **APPLICATION NOTES**

### Installation position

Permissible installation positions for the LA-BO are:

- *Vertical*: if application takes place from top to bottom (also referred to as "top labelling" the product is located below the applicator) or from bottom to top (also referred to as "bottom labelling" the product is located above the applicator).
- Horizontal: the product is located next to the applicator (also referred to as "side labelling").

### **Device designation**

LA-BO stands for "Label Applicator Blow-On". The abbreviation 'BO' (blow on) distinguishes this applicator from other application techniques such as 'touch on' or 'swing on'.

### Mode of Operation

The fan in the LA-BO is continuously powered, creating a strong inwards airflow through the aluminium vacuum grid at the bottom side. While a label is dispensed, the small blow pipe is activated, creating a small focused air stream to force the label against the aluminium grid. When the label is fully dispensed, it is held onto the aluminium grid by the inwards airflow and is then stand-by to blow off the label. When the application cycle is triggered by the product sensor, a high volume air pressure is applied through the air nozzles built-in above the aluminium grid. The nozzles which are not covered by the black sliding bars will now blow off the label towards the product at a high velocity. After that, the next label can be dispensed on the grid.

Video of an example application: Click here.

## SYSTEM REQUIREMENTS

### Machine type

Machine	Article no. LA-BO	Controller	Notes
XPA 934/935/936 LH	N102171	8IO	Machine must be equiped with short dispensing edge and 8IO board.
XPA 934/935/936 RH	N102333		
ALX 924/925/926 LH	A8679	AI	Machine must be equiped with short dispensing edge and AI (see table below).
ALX 924/925/926 RH	A8680		



Machine	Article no. LA-BO	Controller	Notes
ALS 306 LH	A9776	Al or internal	Machine must be equiped with L-shape fixed dispensing edge (ALX 73x: holder with 160 mm width mandatory; ALS/XLS 272: holder with 110 mm width mandatory). The AI is an Option; nevertheless, the connector at the LA-BO cable matches the AI.
ALS 306 RH	A9777		
ALX 734/735/736 LH	A9776		
ALX 734/735/736 RH	A9777		
ALS/XLS 204/206/256/272 LH	A8677		As a standard, the internal applicator interface can be used, but limits the use of PLC signals.
ALS/XLS 204/206/256/272 RH	A8678		cable A9103 (option) is mandatory.

Table 1: Machines at which the LA-BO can be operated and the appropriate article numbers for ordering.

By ordering the specified part number, you will receive a LA-BO applicator with installation material and connection cables, suitable for installation on the device type listed at the beginning of the line. The Applicator Interface (AI) board is *not* part of the delivery and has to be ordered separately:

Machine	Al factory installed	Al retrofit kit	Adapter cable
ALX 92x	A5032	A5207	not required
ALS/XLS 2xx	A106215		
ALS 306	A0594	A9516	A9103
ALX 73x	A9304		

Table 2: Article numbers AI and adapter cable

### Firmware

Machine	Firmware Machine	Firmware AI
ALX 92x	3.30	1 11
ALS/XLS 2xx	1.17	1.11
XPA 93x	1.00	

Table 3: Required minimum firmware versions for machine and AI.

### **Compressed air**

The LA-BO should be operated with an air pressure of 5-6 bar.

### CAUTION!

The applied compressed air must match the following conditions to assure proper operation of the applicator:

► The maximum air pressure must not exceed 6 bar! A higher pressure can damage the device.

► The air pressure must be kept constant to ensure the correct operation of the applicator.



### Start signal

ALX 92x:

Connect the start signal to the product sensor input of the AI interface.

For details see service manual ALX 92x, topic section "Applicator Interface", chapter "Pin assignments"> "Product sensor connection".

ALS/XLS 2xx, ALS 306 or ALX 73x:

► Connect the start signal to the M12-connector "Start".

(ALS/XLS 2xx, ALS 306) For details see service manual ALS/XLS 2xx or ALS 306, chapter "Electronics Description"> "Applicator Interface"> "Pin assignment for product sensor connection".

(ALX 73x) For details see service manual ALX 73x, topic section "Dispenser Electronics", chapter "Applicator Interface"> "Pin assignment for product sensor connection".

XPA 93x:

Connect the start signal to the M12 connector "Start" (BasicIO board, leftmost).

For details see service manual XPA 93x, chapter "Electronics Description" > "Boards" > "BasicIO" > "Connection A".

## **COMPONENT OVERVIEW**

### Front side



Fig. 1: Control elements on the front side of the LA-BO (here: version for ALS/XLS 2xx, ALS 306 and ALX 73x).



Pos.	Name
Α	Fan
В	Sliding bars
С	Knob for unlocking the swivelling mechanism
D	Knobs for adjusting the air nozzles in feed direction
Е	Knob for adjusting the air nozzles across feed direction

### **Rear side**



Fig. 2: Control elements on the rear side of the LA-BO (here: version for ALS/XLS 2xx, ALS 306 and ALX 73x).

Pos.	Name
Α	Sliding bars
В	Vacuum grid
С	Knob at the sliding bar
D	Blow pipe
Е	Ring to close off holes in the blow pipe
F	Connection for compressed air supply hose
G	Air nozzle



## **TECHNICAL DATA**

Material type	Self-adhesive labels of paper, PE or PP
Label size	Min. 30 x 30 mm Max. 100 x 100 mm
Application distance	Min. 20 mm Max. 100 mm <sup>[1]</sup>
Application capacity	Up to 160 labels/min <sup>[2]</sup>
Product speed	From 0 up to 120 m/min <sup>[3]</sup>
Application angle	90° +/- 10°
Application accuracy	Typically +/- 1 mm
Control	Standard signal interface, Applicator Interface or 8IO interface (see chap. System requirements on page 8)
Compressed air	5-6 bar
Air consumption	Approx. 1 liter per apply cycle
Dimensions	<i>ALX 92x</i> : 300 x 345 x 153 mm <i>ALS 20x/256/306, ALX 73x</i> : 357 x 188 x 153 mm
Weight	3.5 kg
Environmental conditions	Enclosed rooms Working temperature: 5 to 40°C Storage temperature: 0 to 60°C Relative humidity: 30 to 80%, non-condensing
Protection class	IP 21
Power consumption	15 VA
Supply voltage	24 V DC (from ALX or ALS)
Noise level	82 dB(A) during blow cycle

<sup>&</sup>lt;sup>1</sup> Depending on label size.

<sup>&</sup>lt;sup>2</sup> Depending on label size and time necessary for trailing edge of label to be released from backing paper.

<sup>&</sup>lt;sup>3</sup> Depending on labelsize, blow distance, productsurface and accuracy.



## Startup

## MOUNTING & SETTING ON ALX 92X

### Mounting

This chapter describes how to mount the LA-BO to an ALX 92x machine. The pictures show an ALX 92x (RH). For article numbers refer to chapter Machine type on page 8.

### Before you begin



Fig. 3: LA-BO for ALX 92x (delivery status).

Tools:

- · Allen key 3 mm
- Small size screwdriver

At ALX 92x supplied before May 2007, the 3 mounting holes have to be drilled in the ALX 92x ground-plate subsequently. Please refer to service manual chapter "Repair & Maintenance" > "Pre-Installation of the LA-BO on the ALX 92x" for detailed instructions.

### Procedure

1. Pull out the black top-left knob (A) and turn the LA-BO housing in the upper position (B).





2. Screw the base plate of the applicator onto the base plate of the ALX 92x (3x M5x20).



**3.** Plug the cable of the LA-BO into the D-sub connector of the ALX 92x on the top side of the printer unit.



- **4.** Mount the supplied service unit near the LA-BO, e.g. on the support stand of the machine. For more information on mounting, see chapter **Installing the service unit** on page 22.
- **5.** Connect the LA-BO to the service unit. Connect the compressed air line to the service unit. For more information, see chapter Connecting compressed air on page 23.

### Adjustment/Setting

### Adjusting the dispensing edge to the vacuum grid

After fitting the applicator, the position of the dispensing edge in relation to the vacuum grid of the applicator must be verified and adjusted if necessary. When viewed from the side, the bottom surface of the vacuum grid must be slightly below and in front of the dispensing edge (figure below).





Fig. 4: Position of dispensing edge to vacuum grid.

As a guideline, the center of the dispensing edge should be positioned approximately 1 mm *above* the vacuum grid surface.

To adjust:

► Loosen the fixing screws of the angular adjustment of the dispensing edge, rotate the dispensing edge in the desired position and retighten the screws.

Menu	Parameter	Setting
DISPENSER PARA	Dispenseposition	0mm (label must be entirely dispensed)
	Head disp dist.	24.5mm
	Application mode	"Safe mode"
APPLICATOR PARA	Applicator type	LA-BO
	Application mode	"After start sig." (preferred for maximum output capacity)
	Blow on time	60ms

### Parameter settings on the ALX 92x



# MOUNTING & SETTING ON ALS/XLS 2XX, ALS 306 OR ALX 73X

### Mounting

This chapter describes how to mount the LA-BO to an ALS/XLS 2xx, ALS 306 or ALX 73x machine. The pictures show an ALS 20x (RH), but the procedure is the same for the other listed machine types. For article numbers refer to chapter Machine type on page 8.

### Before you begin



Fig. 5: LA-BO for ALS/XLS 2xx, ALS 306 or ALX 73x (delivery status)

Tools:

- Allen key 3 mm
- Small size screwdriver

### Procedure

 Remove the pressure roller (A) from the dispensing edge and then remove the dispensing edge (B) from the dispensing edge holder by loosening the M8 screw (D). Remove the black bracket (C) from the dispenser rods by releasing the 2 M5 screws at the bottom side.





2. Slide the aluminium bracket of the LA-BO over the 2 dispenser arm rods (A) and tighten the screws (B).



3. Remount the black bracket (A) on the dispenser arm rods and adjust the height of the LA-BO so that there's a distance of approximately 39 mm to the black bracket for the dispensing edge. Remount the dispensing edge (B) to the black bracket at the dispensing edge holder.



**4.** Plug the cable of the LA-BO into the (44 pin) D-sub connector in the AI-board at the back side of the machine. Alternatively, plug the cable into the D-Sub 15 connector when using internal applicator interface (adapter connector A9103 necessary).



**5.** Mount the supplied service unit near the LA-BO, e.g. on the support stand of the machine. For more information on mounting, see chapter **Installing the service unit** on page 22.



6. Connect the LA-BO to the service unit. Connect the compressed air line to the service unit. For more information, see chapter Connecting compressed air on page 23.

### Adjustment/Setting

### Adjusting the dispensing edge to the vacuum grid

After fitting the applicator, the position of the vacuum grid of the applicator in relation to the dispensing edge must be verified and adjusted if necessary. When viewed from the side, the bottom surface of the vacuum grid must be slightly below and in front of the dispensing edge (figure below).



Fig. 6: Position of dispensing edge to vacuum grid.

As a guideline, the vacuum grid surface should be positioned approximately 1 mm *below* the center of the dispensing edge.

To adjust:

► Adjust the position of the applicator so that the lower edge of the mounting block on the rods is 39 mm above the black end piece (picture above).

### Standard signal interface - parameter settings

The parameter settings required for operating the LA-BO applicator controlled by the *standard signal interface*:

Menu	Parameter	Setting
LABEL SETUP	Lab. stop offset	19.0 mm (also depending on distance of label sensor to disp. edge, label must be entirely dispensed)
SIGNAL INTERFACE	Interface mode	"Applic. signals"
SIGNAL INTERFACE	Apply mode	"After start sig." (preferred setting for maximum output capacity)
AFFLIG. SIGNALS	Blow on time	60 ms



### AI - parameter settings

The parameter settings required for operating the LA-BO applicator controlled by the *applicator interface* (AI).

The SIGNAL INTERFACE > >AI BOARD SIGNAL menu appears, if an AI is installed *and* if SIGNAL INTERFACE > Interface mode is set to "Applic. signals".

Menu	Parameter	Setting
LABEL SETUP	Lab. stop offset	19.0 mm (also depending on distance of label sensor to disp. edge, label must be entirely dispensed)
SIGNAL INTERFACE	Interface mode	"Applic. signals"
SIGNAL INTERFACE	Apply mode	"After start sig." (preferred setting for maximum output capacity)
AI BOARD SIGNAL	Blow on time	60 ms

## MOUNTING & SETTING ON XPA 93X

### Montage

This chapter describes how to mount the LA-BO to an XPA 93x machine. The pictures show an XPA 93x (RH). For article numbers refer to chapter Machine type on page 8.

### Before you begin

Tool:

• Allen key, 8 mm

### Procedure

1. Screw the applicator to the flange of the XPA 93x using the supplied screws (4x M10x25):





2. Connect the supplied cable to the connection box of the LA-BO and to the left connection of the 8IO board on the XPA 93x:



- **3.** Mount the supplied service unit near the LA-BO, e.g. on the support stand of the machine. For more information on mounting, see chapter **Installing the service unit** on page 22.
- **4.** Connect the LA-BO to the service unit. Connect the compressed air line to the service unit. For more information, see chapter Connecting compressed air on page 23.

### Adjustment/Setting

### Adjusting the dispensing edge to the vacuum grid

After fitting the applicator, the position of the dispensing edge in relation to the vacuum grid of the applicator must be verified and adjusted if necessary. When viewed from the side, the bottom surface of the vacuum grid must be slightly below and in front of the dispensing edge (figure below).



Fig. 7: Position of dispensing edge to vacuum grid.

As a guideline, the center of the dispensing edge should be positioned approximately 1 mm *above* the vacuum grid surface.

To adjust:

► Loosen the fixing screws of the angular adjustment of the dispensing edge, rotate the dispensing edge in the desired position and retighten the screws.



### Parameter settings on the XPA 93x

Menu	Parameter	Setting
	Dispenseposition	0mm (label must be entirely dispensed)
Dispenser	Dispensing edge	short
	Application mode	"Save mode"
Options > Selection > Applicator	Applicator type	LA-BO
Options > LA-BO	Apply mode	"After start sig." (preferred for maximum output capacity)
	Blow on time	60ms



## INSTALLING THE SERVICE UNIT

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

- Manual on-off valve (A)
- Filter regulator (B) with pressure gauge (C)
- Condensate drain (D)



Fig. 8: Components of the maintenance unit.

### Before you begin

Tool: 4 mm hex screwdriver

### Procedure

Assembly:



Screw on the maintenance unit with the enclosed screws (M5x12).
 The condensate drain (B) must point downwards.



 Fasten the pressure tubes so that the air flows through the pressure regulator in the direction from mark "1" (image above, C) 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.

## CONNECTING COMPRESSED AIR

### Before you begin

- 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

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



### **Procedure**

1. Switch off the on-off valve. To do this, turn the rotary knob (A) clockwise as far as it will go



Fig. shows LA-BO for ALS/XLS 2xx, ALS 306 or ALX 73x.

- 2. Reduce the outlet pressure completely. To do this, turn the control valve knob (fig. above, B) all the way to "-".
- 3. Connect the compressed air line to the connections as shown (fig. above).
- 4. Switch on the compressed air.
- 5. Switch on the on-off valve. To do this, turn the rotary knob (fig. above, A) counterclockwise as far as it will go.
- 6. Set the outlet pressure. To do this, slowly turn the control valve knob (fig. above, B) in the "+" direction until the pressure gauge indicates the desired outlet pressure.

### ADJUSTING THE APPLICATION HEIGHT

In general, to obtain a good apply accuracy of the label on the product, it is recommended to adjust the LA-BO as close as possible to the product surface.

### CAUTION!

Hazard of collision between the conveyed products and the LA-BO. Possible consequences: Damages at LA-BO and/or products respectively impairment of production output.

▶ When adjusting the label height, provide a safe distance between LA-BO (especially the support air nozle) and products on the conveyor.

Consider variations in product height, when adjusting the height of the LA-BO.



The labelling distance of the LA-BO to the product surface may vary between 20 mm and maximum 100 mm.

► Adjustment of the LA-BO application height is done by adjusting the mounting height of the machine.



Fig. 9: Labelling distance between LA-BO and product.

## ADJUSTMENTS TO THE LABEL MATERIAL

The following adjustments have to be made every time the label format is changed on the machine.

### Adjusting the sliding bars in the vacuum grid

Because the LA-BO needs to create a strong air flow, evenly spread over the label surface, it is important to adjust the sliding bars of the vacuum grid. Once this setting is done, the sliding bars will close off the air nozzles which are positioned outside the label area.

### Procedure

1. Adjust the bars of the vacuum grid enough outside so a label can be dispensed freely on the vacuum grid without touching any of the knobs (A) on the bars.



Fig. 10: The sliding bars in the vacuum grid must be adjusted to close off air nozzles outside the label surface.



**2.** Dispense a single label on the vacuum grid of the applicator. The label should not touch any of the knobs on the adjusting bars.

The label is not dispensed straight on the grid or still sticks with the trailing edge on the dispenser?

- ► Check the height adjustment of the dispenser in relation to the vacuum grid.
- **3.** Carefully adjust the bars to the label size by moving the knobs just against the label edge, without touching the edge of the label. Bars outside the width of the label should be fully moved inwards the vacuum grid so all the air nozzles above this bar are closed.
- **4.** Proceed some dispensing tests and check if the knobs on the bars are not touching or holding the edge of the dispensed label.

### **Results**



Fig. 11: Adjusting the bars in the vacuum grid so air nozzles outside the label surface are closed off.

In most applications with a blow-on applicator, it will be difficult to visually verify the position of the sliding bars from the bottom side of the vacuum grid. Therefore, the bars can also be adjusted by matching the section of the bars outside the vacuum grid to the label surface, as shown on the figure below:





Fig. 12: Adjusting the bars in the vacuum grid by matching the outside section of the sliding bars with the label surface.

### Adjusting the air nozzles in the vacuum grid

To achieve optimal labelling apply accuracy it is important to adjust the blow-off air flow in the center of the label under the vacuum grid. Therefore the air nozzles of the LA-BO can be fine adjusted in the X (width) and Y (length) direction in reference to the label area.

### To adjust the air nozzles in X-direction (width of label)

► Turn the black lower-right knob (A) clockwise or counter clockwise until the sliding bars / nozzles are centered over the width of the label.





Fig. 13: Adjusting the air nozzles across feeding direction.



### To adjust the air nozzles in Y-direction (length of label)

- 1. Loosen the 2 small black knobs (A) and slide them in a direction as follows:
  - Label length < 75 mm: Slide knobs towards the dispensing edge
  - Label length > 75 mm: Slide knobs away from the dispensing edge
- 2. Retighten the 2 small black knobs.
- **3.** Small label formats (less than 40 mm width): Check if the open nozzles are centered over the width of the label.



Fig. 14: Adjusting the air nozzles in feeding direction.

### Adjusting the air stream support

The small brass blow pipe creates an air stream during the dispensing of the label to support the label towards the vacuum grid of the LA-BO. It is necessary to adjust the position of the blow pipe to obtain an aligned and straight label transport to the vacuum grid.

### Before you begin

Tool: Allen key 2.5 mm

### Procedure

- **1.** Loosen the threaded pin (A) at the blowpipe.
- Adjust the blowpipe so the maximum number of air holes are centered to the label width.
  If there are air holes outside the width of the label, they should be closed off by the red rings
   (B).

The air holes in the blow pipe should be directed to the vacuum grid.

3. Retighten the threaded pin to fix the blowpipe.



### **Results**



Fig. 15: Adjusting the air stream support.

### Setting the dispensing position parameter

When using the LA-BO applicator the dispensing stop position of the machine should be set so that the label is just released when dispensed, i.e. so that it no longer adheres to the carrier material.

If the label is not completely dispensed but is still partially attached to the carrier material, the label will be blown off side ways, or upside down or will not be blown off by the LA-BO.

Advancing the carrier material too far can cause the label be pulled back under the dispensing edge in case of strong adhesive or the following label can come in contact with the dispensed label.



# Operation

## ACTIVATING/DEACTIVATING THE APPLICATOR

### About this task

In most cases, the applicator will be supplied with compressed air by the plant in which it is integrated. To switch the compessed air supply on/off, use the appropriate valve at the plant.

Alternatively, the on-off valve at the service unit can be used to switch the compressed air on/off.

### Procedure

Switching on:

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



Switching off:

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



## 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 print & apply system respectively of the labeler before doing anything.

Read the user manual of the print & apply system or of the labeler, 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



Fig. 16: Pneumatic diagram LA-BO

Pos. no.	Article no.	Amount	Designation
1	A8806	4	Push-in L-fitting
2	A8807	1	Solenoid valve
3	A8801	1	Service unit
4	A8808	1	Reducing nipple
5	A8805	1	Check valve with choke
6	A3667	2	Silencer
7	A9760	1	Socket connector
8	A8804	2	Plug
9	A8810	1	Push-in L-fitting
10	A8803	1	Push-in long L-fitting



Novexx Solutions GmbH

Ohmstraße 3 85386 Eching Germany

Telephone: +49-8165-925-0 | www.novexx.com