



# Technical Data

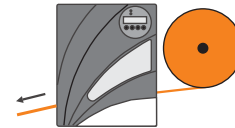
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## Device types, use

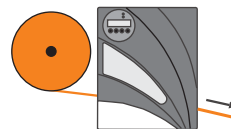
### General Notes

Print width	DPM, PEM and ALX 92x are available in two housing widths and three print width (max. 106, 127 or 160 mm). Machines with 106 or 127 mm print width come in a narrow housing, those with 160 mm print width come in a wider housing.
Resolution	300 dpi
Print speed	Machines with 106/127 mm print width: up to 400 mm/s Machines with 160 mm print width: up to 300 mm/s
RH/LH	DPM and ALX 92x are both available in a righthand (RH) as well as a lefthand (LH) version. Distinguishing feature:

- LH-version: Printed Labels leave the machine on the lefthand side (line of vision towards the display).



- RH-version: Printed Labels leave the machine on the righthand side (line of vision towards the display).



### DPM

- Dispensing Printing Module (DPM)
- Monotone printing on labelling materials for thermal and thermotransfer processes
- Requires labelling roll material
- Dispensing of the printed labels
- Mounting into the cutout of an appropriate plate

### PEM

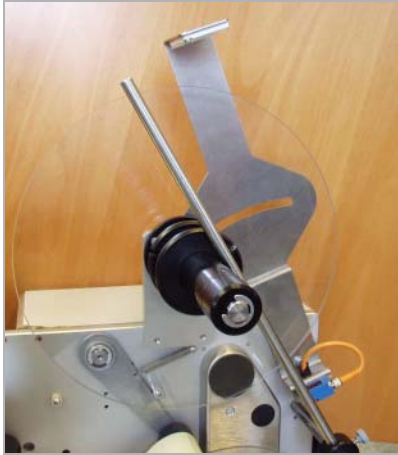
- Print Engine Module (PEM)
- Same features as the DPM, but without label dispensing and backing paper rewinding function

### ALX 92x

- Dispensing printing machine, based on the DPM.
- Same features as the DPM, with separate labelling material unwind and rewind unit.
- Mounting on a tripod
- ALX 92x AI Pro contains additionally:
  - Applicator Interface AI Pro for a maximum over all output current of 4 A
  - Separate power supply for the Applicator Interface

## Options (DPM Gen. 2 / ALX 92x Gen. 2)

■► This section counts for machines, which are equipped with CPU boards A2292 or A2293.

Realtime clock	To add any production dates to the label layout (e.g. best off date). The real-time-clock is a standard for DPM and PEM.
USI board	<p>Universal Signal Interface (USI) board, available with 5V or 24V signal voltage and 4 inputs as well as 7 outputs. A USI test box is available.</p> <p>For details refer to the service manual, topic section „Electronics Gen. 2“, chap. <a href="#">USI Board</a> □ on page 12.</p>
Applicator Interface (AI)	<p>Programmable applicator interface, designed to control nearly all applicator types. The AI can be integrated into the ALX 92x. For application with the DPM, an external applicator box is available.</p> <p>For details refer to the service manual, topic section <a href="#">Applicator Interface</a> □.</p>
Applicator-PLC	(ALX 92x only) PLC for control of Avery applicators of the types LTP/LTPV/LTSI.
Options board	<p>Provides an additional serial interface (COM2) and a keyboard connector (PS/2).</p> <p>For details refer to the service manual, topic section „Electronics Gen. 2“, chap. <a href="#">Option Board</a> □ on page 11.</p> <p>For details about keyboard application read the user manual, topic section „Advanced Applications“, chap. <a href="#">Standalone Operation</a> □ on page 8.</p>
OD control	

[1] Right: OD control mounted.

(ALX 92x only)

The „Outer diameter (OD) control“ for the label roll detects early if the machine is going to run out of labelling material - how early this happens can be adjusted. The application of the OD control requires a USI, which provides a warning signal as soon as the roll OD falls below the set value.

For details refer to the service manual, topic section „Electronics Gen. 3“, chap. [OD control sensor \(ALX\)](#) □ on page 42.

## Options (DPM Gen. 3 / PEM / ALX 92x Gen. 3)

■ This section counts for machines, which are equipped with CPU board A6621.

■ The optional boards can not be combined arbitrarily (Tab. 1).

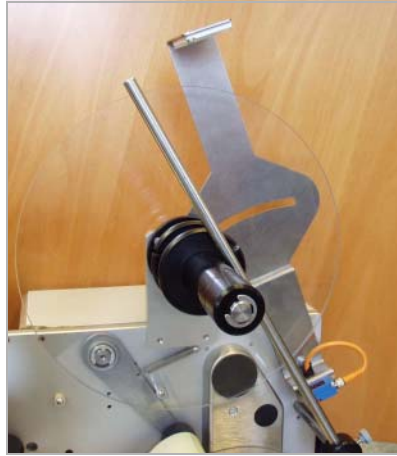
Boards	Centronics	I/O	USI	AI	CF	RFID
	Centronics	no	yes	yes	yes	yes
I/O	no		yes	yes	yes	yes
USI	yes	yes		no	yes	yes
AI	yes	yes	no		yes	yes
CF	yes	yes	yes	yes		yes
RFID	yes	yes	yes	yes	yes	

[Tab. 1] Compatibility of optional interface boards:  
yes = compatible  
no = not compatible

- 2<sup>nd</sup> CompactFlash slot** Available as option on a separate daughter board.  
See Service Manual, topic section „Electronics Gen. 3“, chap. [CF daughter board](#) on page 11.
- USI board** Universal Signal Interface (USI) board with 24V signal voltage and 4 inputs as well as 7 outputs. A USI test box is available.  
For details refer to the service manual, topic section „Electronics Gen. 3“, chap. [USI Board](#) on page 16.
- I/O board**
- D-Sub 9 jack; second serial interface for RS-232/422/485; selectable by parameter setting, max. baud rate 115200
  - D-Sub 15 jack providing I/O signals similar to the USI
- For details refer to the service manual, topic section „Electronics Gen. 3“, chap. [I/O Board](#) on page 32.
- Applicator Interface (AI)** Programmable applicator interface, designed to control nearly all applicator types. The AI can be integrated into the ALX 92x (max. over all output current: 1 A; for a higher over all output current of up to 4 A choose the ALX 92x AI Pro). For application with the DPM, an external applicator box is available.  
For details refer to the service manual, topic section [Applicator Interface](#).
- Applicator-PLC** (ALX 92x only) PLC for control of Avery applicators of the types LTP/LTPV/LTSI.
- Applicators** Several Applicators is available for operation at the DPM/ALX 92x.
- RFID read/write unit** Optional equipment for reading and writing labels with integrated RFID transponder.

**Bar code verifier**

Online bar code verifier (OLV). Checks the readability of the printed bar code and stops the printer in case of a negative result.

**OD control**

[2] OD control mounted.

(ALX 92x only)

The „Outer diameter (OD) control“ for the label roll detects early if the machine is going to run out of labelling material - how early this happens can be adjusted. The application of the OD control requires a USI, which provides a warning signal as soon as the roll OD falls below the set value (min. firmware: 5.31).

For details refer to the service manual, topic section „Electronics Gen. 3“, chap. [OD control sensor \(ALX\)](#) on page 42.

**External control panel**

[3] External control panel.

An external control panel can be connected in addition to the integrated control panel. An external control panel is useful if the standard control panel is difficult to access due to the position in which the unit is installed.

**USB-Stick**

All types of USB mass storage class devices connected to the USB host port are supported. Those are e. g. USB sticks (min. firmware: 5.31).

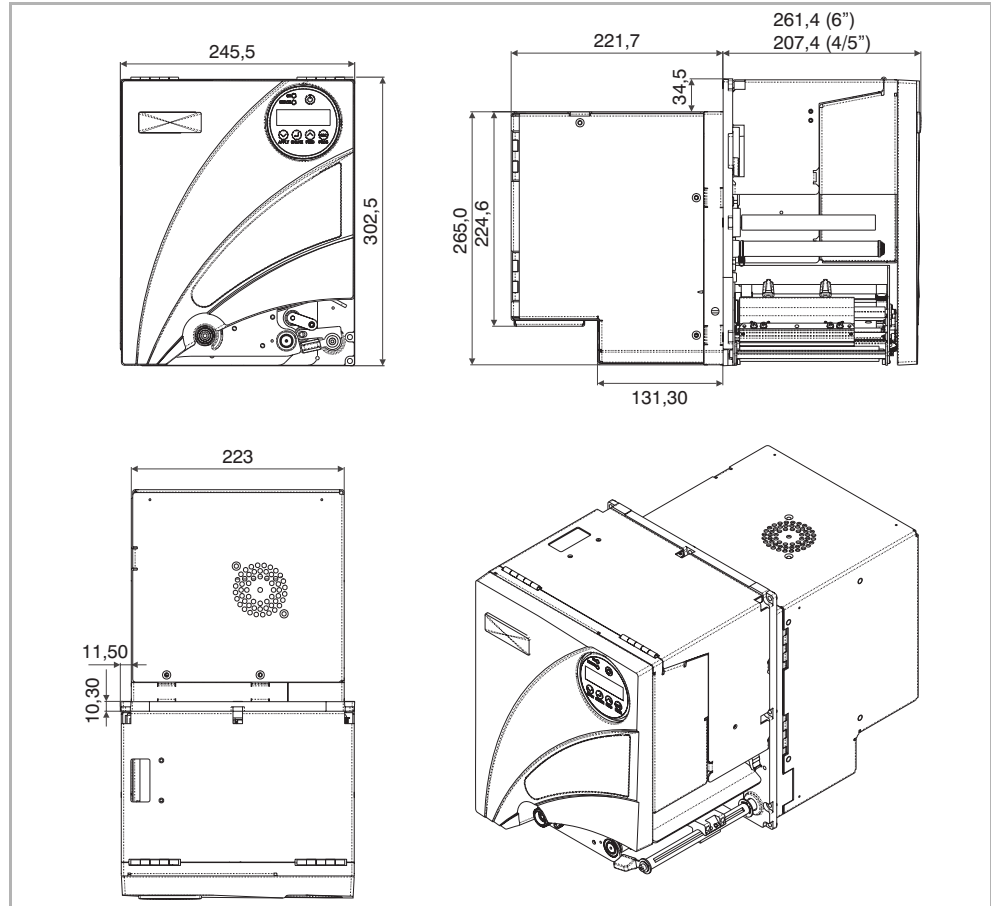
**USB-Scanner**

USB scanner can be operated at one of the USB host ports. Scanned data is interpreted as keyboard input (min. firmware: 5.31).

# Technical specifications

## Dimensions

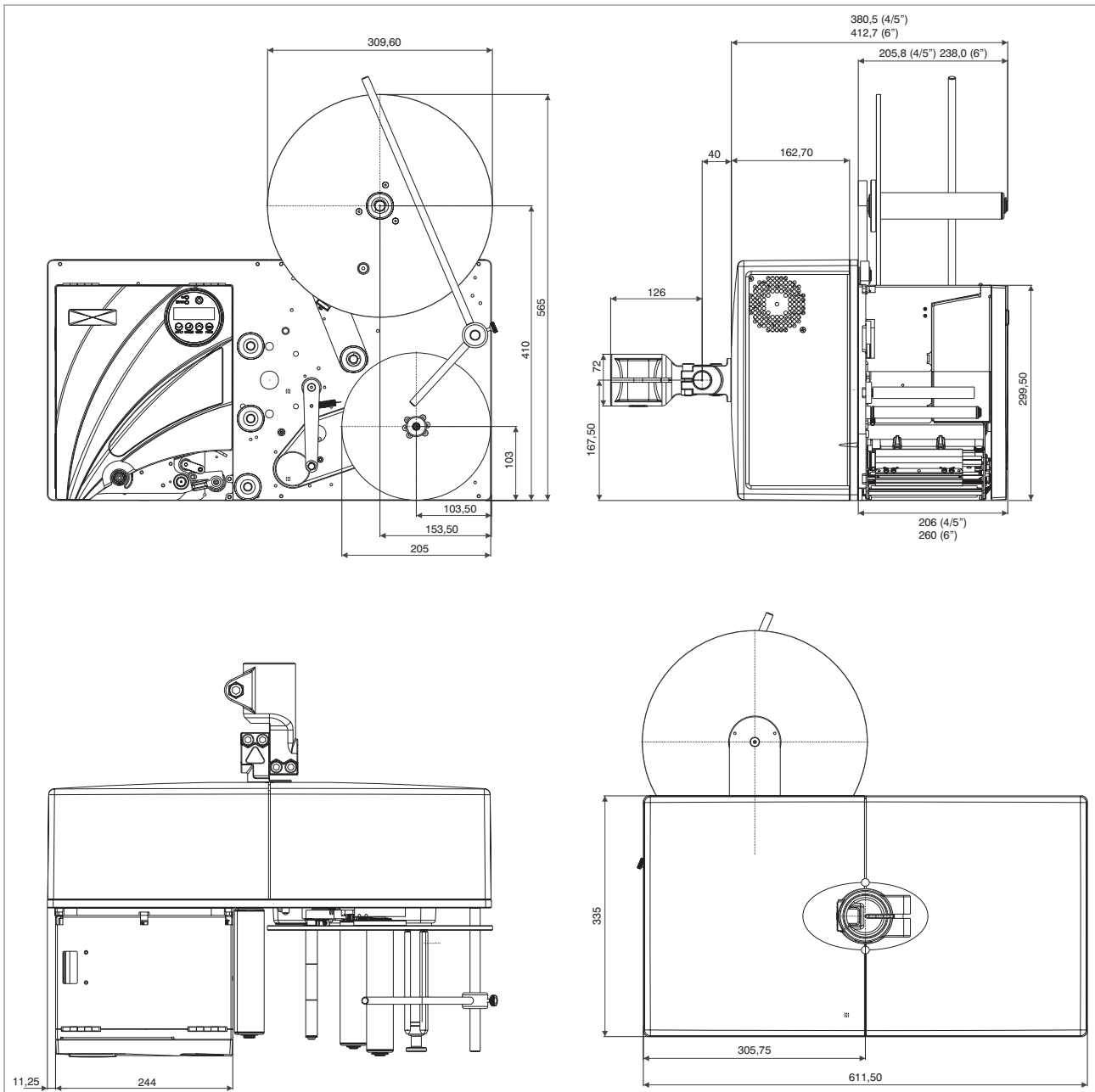
DPM/PEM



[4] Dimensions of the DPM as L-version. The PEM has the same measures.

Dimensioned drawings of the DPM/PEM in DXF format (Autocad) can be found on the Documentation-CD in directory „\Dimensional Drawings“.

ALX 92x



[5] Dimensions of the ALX 92x (L-version).

Dimensioned drawings of the ALX 92x in DXF format (Autocad) can be found on the Documentation-CD in directory „\Dimensional Drawings“.

Weight

Machine	Weight
DPM / PEM 4“/5“	17kg
DPM / PEM 6“	18kg
ALX 924/925	35kg
ALX 926	39kg
ALX 924/925 AI Pro	38 kg

[Tab. 2] Weights of DPM/PEM and ALX 92x.

<b>Machine</b>	<b>Weight</b>
ALX 926 AI Pro	42 kg

[Tab. 2] Weights of DPM/PEM and ALX 92x.



Performance data

Print technology	Thermal direct printing, thermal transfer printing
Print head	„Near Edge Type“ print head, high-definition, fast, with integrated temperature control, easy to replace
Resolution	12 Dot/mm (300 dpi)

Print speed  
Print width

Machine	Print speed	Print width
DPM 4"		
PEM 4"	50 bis 400 mm/s (16 inch/s)	106 mm
ALX 924		
DPM 5"		
PEM 5"	50 bis 400 mm/s (16 inch/s)	127 mm
ALX 925		
DPM 6"		
PEM 6"	50 bis 300 mm/s (12 inch/s)	160 mm
ALX 926		

[Tab. 3] Print speed and print with of DPM /PEM and ALX92x.

Unit interval: 5 mm/s or 1 inch/s (0.2 inch/s with Easy-Plug #PR command)



**CAUTION!** - Disregarding the following limitations will have negative effects on the print result and/or on the machine function:

*Devices with 6" print width:* The maximum print speed of 300mm/s can only be used under certain limitations. Limiting factors are:

- Material width
- Core diameter of the material roll
- Diameter of the ribbon roll

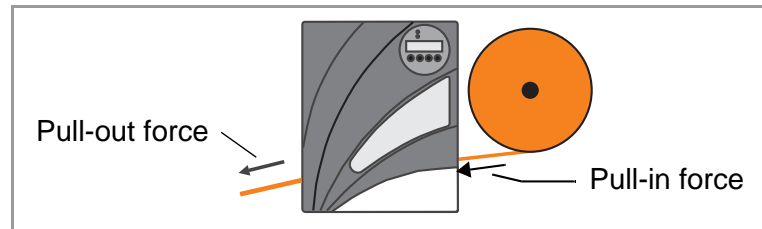
See (Tab. 12) to (Tab. 13).

If *huge ribbon rolls* (run length of 1000m) are supposed to be used with activated ribbon economy function, limitations of both, print speed and ribbon brake setting must be considered ! Disregard of those limitations can cause the ribbon to tear off!

See (Tab. 6) and (Tab. 7).

Pull-in force,  
pull-out force

(DPM, PEM only)



[6] Pull-in force, schematic.

▣▣▣▣ The maximum difference between pull-in and pull-out force may be 9 N.

▣▣▣▣ The pulling forces in the label web must be applied evenly.

Example: The unwinder brakes with 10 N. Then, the rewinder may pull with a force in the range of 1 to 9 N (given that the backing paper is strong enough not to tear off).

## Punch detection

- DPM, ALX 92x: Self-initializing light-through sensor for punched label material.
- PEM: Self-initializing combination sensor, which can detect punches as well as reflex marks on the material bottom side.

	Module width	Light-through sensor	Reflex sensor <sup>a)</sup>
Setting range <sup>b)</sup>	4"/5"	2-80 mm	2-80 mm
	6"	2-100 mm	2-100 mm

[Tab. 4] Setting ranges for punch and reflex sensors.

a) Only with PEM (material bottom side).

b) Measured: lay edge to sensor center.

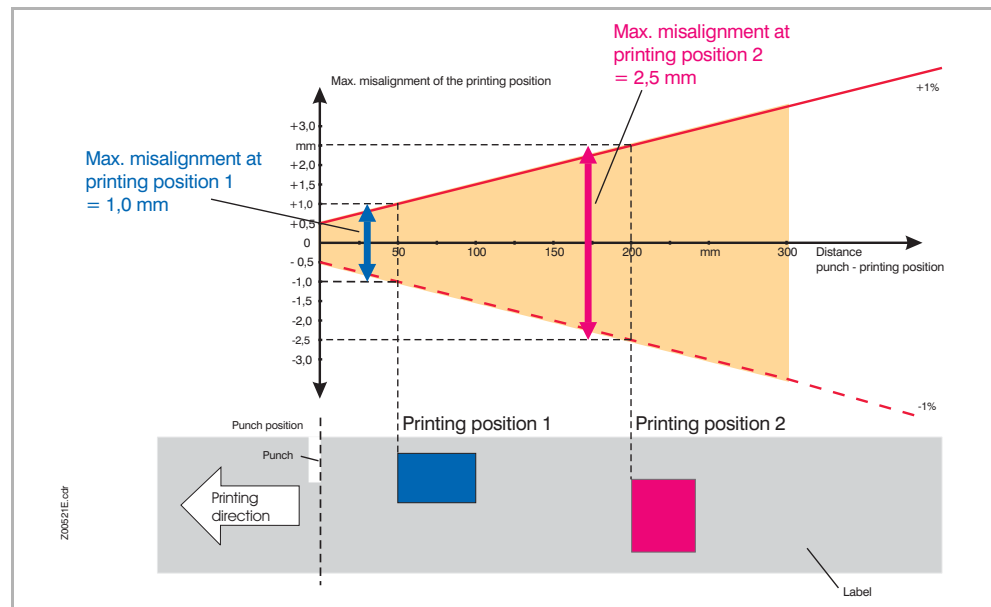
Punch position and size see [Punch measures](#)  on page 16.

**Impression accuracy**

- In printing (y-) direction:

The impression accuracy depends on the print position. With the printout starting directly at the punch position, the accuracy is  $\pm 0.5$  mm. A distance between punch (that is label start) and print position will add  $\pm 1\%$  of this distance to the accuracy fault (see fig. [7]).

- X-direction:  $\pm 0.5$  mm.



[7] Impression accuracy in printing direction, depending on the printing position.

**Output modes**

1:1 and 100% printable.

Non-printable areas:

- 1 mm from the front label edge (1st edge in feed direction)
- 1 mm from the left band border (right border in feed direction)

**Interpreter**

Easy Plug, Line Printer, Hex Dump

**Character sets**

- 17 Fixfonts including OCR-A and OCR-B
- 3 scalable fonts
- Truetype fonts are supported

**Character modification** Scaling in X/Y direction up to factor 16

Rotation:

- Resident fonts, bar codes, lines and graphics: 0, 90, 180, 270 degrees
- Truetype fonts: 0 to 359.9 degrees

## Bar codes

Codabar	Code 128 A, B, C
Code 128	Code 128 UPS
Code 128 pharmacy	ITF
Code 2/5 matrix	MSI
Code 2/5 interleaved	EAN 13 add-on 2
Code 2/5 5-line	EAN 13 add-on 5
Code 2/5 interleaved ratio 1:3	EAN 128
Code 2/5 matrix ratio 1:2,5	Postcode (guide and identity code)
Code 2/5 matrix ratio 1:3	UPC A
Code 39	UPC E
Code 39 extended	Code 93
Code 39 ratio 2,5:1	
Code 39 ratio 3:1	

All bar codes scalable in 30 different width and in the height.

2-dimensional  
bar codes

Data Matrix Code (code according to ECC200)
Maxi Code
PDF 417
Codablock F
Code 49
QR Matrix Code

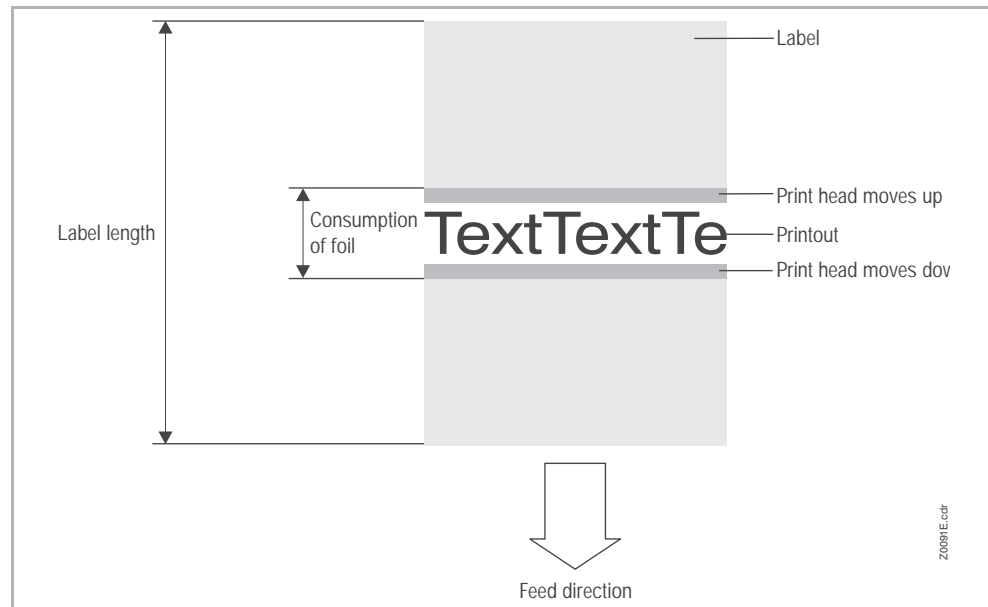
GS1 Databar & CC  
bar codes

Reduced Space Symbology (GS1 Databar) und Composite Component (CC) bar codes:

GS1 Databar-14	UPC-A + CC-A/CC-B
GS1 Databar-14 truncated	UPC-E + CC-A/CC-B
GS1 Databar-14 stacked	EAN 13 + CC-A/CC-B
GS1 Databar-14 stacked omnidirectional	EAN 8 + CC-A/CC-B
GS1 Databar limited	UCC/EAN 128 + CC-A/CC-B
GS1 Databar expanded	UCC/EAN 128 + CC-C

## Automatic ribbon economy

In regular print mode, ribbon is fed simultaneously with the labelling material. The automatic ribbon economy (= „ribbon saving“) stops the feeding of the ribbon if there are label areas of a certain size without imprinting. As a result, ribbon is saved (see Fig. [8]).



[8] Ribbon (Foil) consumption when printing labels with a small imprinting area and activated automatic ribbon economy. Ribbon consumption is slightly higher than the length of the imprinted area.

The effect of ribbon saving depends on the print speed. The reason for this is the up and down movement of the print head as well as the acceleration and slowing-down of the ribbon. Generally said: With a high print speed, less ribbon is saved as with a low print speed (Tab. 5).

Cutting or dispensing applications can additionally deteriorate the effect of ribbon saving.

### Activating ribbon saving

Activate the automatic ribbon economy by selecting parameter  
SYSTEM PARAMETERS > Ribbon autoecon..

Set the minimum distance between two print areas from which on ribbon saving should be activated with parameter SYSTEM PARAMETERS > Ribbon eco. limit.

For detailed information refer to topic section [Info-printouts and Parameters](#).

Print speed in mm/s (Inch/s)	Minimum length of unprinted area in mm	Consumed ribbon per saving action in mm
51 (2)	3.7	1.2
76 (3)	4.6	1.9
102 (4)	5.9	3.1
127 (5)	7.4	4.4
152 (6)	8.9	5.9
178 (7)	11.1	7.6

[Tab. 5] The amount (length) of consumed ribbon per saving action (lifting and lowering of the print head) increases with the print speed.

Print speed in mm/s (Inch/s)	Minimum length of unprinted area in mm	Consumed ribbon per saving action in mm
203 (8)	14.1	9.5
229 (9)	17.6	11.3
254 (10)	21.3	13.6
279 (11)	25.3	15.9
305 (12)	30.0	18.5
330 (13)	34.5	21.2
356 (14)	39.9	24.2
381 (15)	45.6	27.3
406 (16)	51.3	30.5

[Tab. 5] The amount (length) of consumed ribbon per saving action (lifting and lowering of the print head) increases with the print speed.



**CAUTION!** - If huge ribbon rolls (run length of 1000m) are supposed to be used with activated ribbon economy function, there is a hazard of the ribbon tearing off.

→ Consider the limitations according to (Tab. 6) and (Tab. 7)!

Ribbon width	Ribbon type 2240-600-...			
	030	055	080	104
max. print speed. (inch/s)	12	12	12	12
max print speed with ribbon economy activated (inch/s)	12	12	12	12
Release the ribbon brake ... turns <sup>a)</sup>	12	8	6	6

[Tab. 6] Limitations for ribbon type 2240-600-..., depending on the ribbon width.

a) Tighten the red hex nut at the unwind mandrel to the limit and then loosen it the indicated number of turns.

Ribbon width	Ribbon type 2240-1000-...			
	030	051	080	102
max. print speed. (inch/s)	12	12	12	12
max print speed with ribbon economy activated (inch/s)	12	10	9	6
Release the ribbon brake ... turns <sup>a)</sup>	12	8	6	6

[Tab. 7] Limitations for ribbon type 2240-1000-..., depending on the ribbon width.

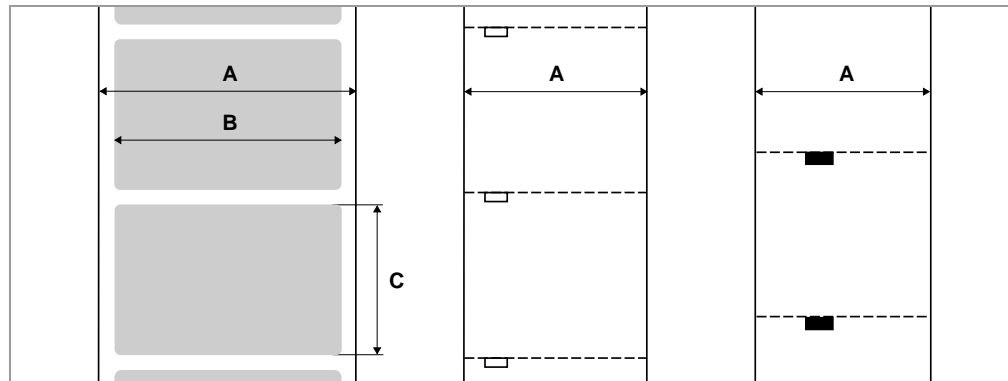
a) Tighten the red hex nut at the unwind mandrel to the limit and then loosen it the indicated number of turns.

For details on setting the ribbon brake refer to the user manual, topic section „Setup“, paragraph „Settings“, “Ribbon tautness“.

## Labelling material

- Material types**
- *DPM/ALX 92x*: All common self-adhesive labelling materials, suitable for printing in thermal direct and thermal transfer process.
  - *PEM*: All common cardboard and self-adhesive labelling materials, suitable for printing in thermal direct and thermal transfer process.
- Material roll** (ALX 92x only)
- Max. outer-Ø 300 mm
  - Inner-Ø 1,5" (38mm), with adapter rings 3" (76mm) or 4" (102mm)
  - Maximum admissible roll weight: 12 kg
- Backing Paper** (DPM/ALX 92x only)
- Maximum admissible weight of the wound up backing paper: 5 kg

### Material measures



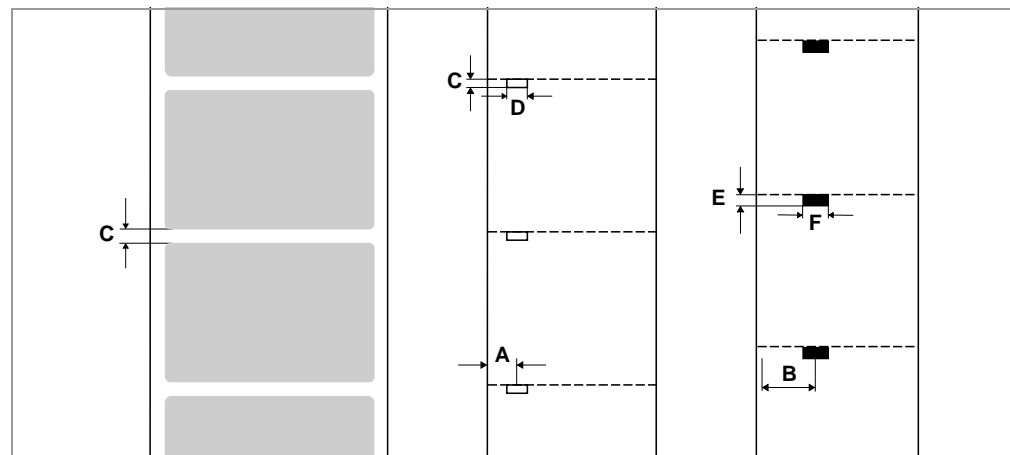
[9] Material measures:

- A Material width
- B Label width
- C Label length

Machine	Material width	Label length
DPM 4/5"	16-136	5-1000
DPM 6"	16-190	
PEM 4/5"	16-136	10-1000
PEM 6"	16-190	
ALX 924/925	16-130	5-1000
ALX 926	16-184	

[Tab. 8] Label measures in mm.

## Punch measures



[10] Punches and reflex marks at different material types.

- A Punch position
- B Reflex mark position (PEM only)
- C Punch length
- D Punch width
- E Reflex mark length
- F Reflex mark width

Item	Machine	Punch	Reflex mark <sup>a)</sup>
Position (mm)	4"/5"	2-80	2-80
	6"	2-100	2-100
Length (mm)	all	0.8-14	4
Width (mm)	all	min. 4	12

[Tab. 9] Measures of punches and reflex marks.

a) PEM only (bottom side of material).

## Thermotransfer ribbon

## Ribbon type

The following recommendations are given for thermotransfer ribbons:

- The ribbon reverse must have an anti-static and friction-reducing coating (backcoating).
- Ribbons must be specified for "Near Edge Type Print Heads" .
- Ribbons should be suitable for print speeds of up to 12 inch/sec.

## Ribbon roll

- Max. outer-Ø: 105mm (equals 1000 m Avery 2240 standard ribbon on a 40.2 mm ribbon core))
- Inner-Ø: 1" (25.4mm) or 1,6" (40.2mm±0,2) with ribbon mandrel adapter.



**CAUTION!** - If huge ribbon rolls (run length of 1000m) are supposed to be used with activated ribbon economy function, there is a hazard of the ribbon tearing off.

→ Consider the limitations according to (Tab. 6) and (Tab. 7)!

Read [Limitations](#) on page 23 for details.

See [Automatic ribbon economy](#) on page 13 for details.



Ribbon width	The ribbon should overlap the label material some milimeters.
	Mechanical features
Dispensing edge	(DPM/ALX 92x only) Adjustable for direct or indirect dispensing mode.
Label drive	Forward and backward movement of labelling material for real 1:1 applications and full size print of labels
Label web tension	(DPM/ALX 92x only) Easy-to-adjust, patented reliable friction mechanism
Ribbon tension	Adjustable by disc-brakes at the unwind- and rewind-mandrel.
Label sensor adjustments	Mechanical via thumb wheel with position indicator, electronical setting via display function
Material unwind	(ALX 92x only) Dancer arm for smooth unwinding of labelling material, label reel unwind with integrated friction brake
Material rewind	(ALX 92x only) Stepper-motor driven rewind mandrel
	Connection, device data
Protection category	I
Mains voltage	100-240V (AC)
Mains frequency	60-50 Hz
Power consumption	450W
Input current	3.5-1.5 A ALX 92x AI Pro: <ul style="list-style-type: none"> <li>• 2.0-1.2 A at connection „Mains 1“</li> <li>• 1.5-0.7 A at connection „Mains 2“</li> </ul>
	Ambient conditions
Operating temp.	+5 to +35°C (ALX 926: +5 to +30°C)
Storage temp.	-20 to +70°C
Humidity	45 to 75%, non-condensing
Protection class	IP 21
Noise	70 dB(A)

## Interfaces (DPM Gen. 2 / ALX 92x Gen. 2)

■ This section counts for machines, which are equipped with CPU boards A2292 or A2293.

- Parallel interface
  - Centronics
  - Bi-directional mode (nibble mode), conforms with IEEE 1284
- Serial interface (Com1)
  - RS 232 or RS 485/422
  - Selectable in the parameter menu
  - Max. baud rate 115200
- *Optional*: 2<sup>nd</sup> serial interface (Com2)
  - RS 232
  - Max. baud rate 115200
- *Optional*: Ethernet Interface (integrated on CPU board)
  - RJ 45
  - 10/100 Base T, with TCP/IP, LPD, RawIP printing, DHCP, HTTPD, FTPD, SNMP
- *Optional*: Universal Signal Interface USI
- *Optional*: Applicator Interface AI; controls nearly every available applicator type
- PS/2 keyboard connector for use in standalone mode and for input of variable print data (optional board)
- *Optional*: Connection for Avery applicators (via USI+SPS or AI)

## Interfaces (DPM Gen. 3 / PEM / ALX 92x Gen. 3)

▣▣▣▣ This section counts for machines, which are equipped with CPU board A6621.

▣▣▣▣ The interfaces can not be combined in any way (Tab. 10)!

	Centronics	2. RS 232/422/485	USI	AI	CF (zweite)	RFID
Centronics		NO	yes	yes	yes	yes
2. RS 232/422/485	no		yes	yes	yes	yes
Signale (USI)	yes	yes		no	yes	yes
AI	yes	yes	NO		yes	yes
CF (zweite)	yes	yes	yes	yes		yes
RFID	yes	yes	yes	yes	yes	

[Tab. 10] Combinability of interface boards.


yes = can be combined

no = can not be combined

- USB interface
  - USB 1.1
  - 2 USB-A host ports
  - 1 USB-B device port (full speed)
- Serial interface (Com1)
  - RS 232
  - Max. baud rate 115200
- *Optional: 2<sup>nd</sup> serial interface (Com2)*
  - RS 232 or RS 485/422
  - Selectable in the parameter menu
  - Max. baud rate 115200

▣▣▣▣ The 2<sup>nd</sup> serial interface (I/O board) can *not* be installed, if a Centronics daughter board is already installed.
- Parallel interface (daughter board)
  - Centronics
  - Bi-directional mode (nibble mode), conforms with IEEE 1284 B

▣▣▣▣ The Centronics daughter board can *not* be installed, if an I/O board (2<sup>nd</sup> serial interface) is already installed.
- Ethernet Interface
  - RJ 45
  - 10/100 Base T, with TCP/IP, LPD, RawIP printing, DHCP, HTTPD, FTPD, SNMP

- *Optional: Universal Signal Interface USI*  
24 V signal voltage
  - ▣▣▣▣► The USI board can *not* be installed, if an AI board is already installed.
- *Optional: Applicator Interface AI*  
Controls nearly every applicator type
  - ▣▣▣▣► The AI board can *not* be installed, if an USI board is already installed.
- Connection for remote operation panel
  - Mini-DIN 6
  - RS 485
- *Optional: Connection for Avery applicators (via USI+SPS or AI)*  
Pin assignments can be found in topic section [Electronics](#) .

### Electronics (DPM Gen. 2 / ALX 92x Gen. 2)

▣▣▣▣► This section counts for machines, which are equipped with CPU boards A2292 or A2293.

Processor	64 Bit IDT MIPS
RAM	16 MB (extendable to max. 80 MB)
ROM	2 MB
Plug-in cards	Slot for CompactFlash cards (T1) up to 128 MB
Realtime clock	Optional

### Electronics (DPM Gen. 3 / PEM / ALX 92x Gen. 3)

▣▣▣▣► This section counts for machines, which are equipped with CPU board A6621.

Processor	32 Bit AMD MIPS
RAM	64 MB
ROM	4 MB
Plug-in cards	<ul style="list-style-type: none"> <li>• 1 Slot for CompactFlash cards I/II (standard)</li> <li>• 1 Slot for CompactFlash cards I/II (optional)</li> <li>• 1 Slot for SD/MMC cards (standard, is not supported yet)</li> </ul>
Realtime clock	Standard

### External Sensors

Start sensor	Connection to USI or AI
OD sensor	<p>▣▣▣▣► Only for ALX 92x</p> <p>Connection to USI</p>

## Operation

Operation panel	<ul style="list-style-type: none"><li>• (DPM Gen. 2 / ALX 92x Gen. 2)<ul style="list-style-type: none"><li>– 4-key control panel</li><li>– 2-line, 32-figure, illuminated LCD display (5 mm character height)</li></ul></li><li>• (DPM Gen. 3 / PEM / ALX 92x Gen. 3)<ul style="list-style-type: none"><li>– 5-key control panel</li><li>– graphical, 128 x 32 Dot, illuminated LCD display</li></ul></li></ul>
Settings	Definition of parameters using menu or Easy Plug commands
	Status messages / Test functions
Test printouts	Printouts for parameter settings, adding logo and font, line and bar code library
Test functions	Print tests, test routines for memory and sensors, interface test
Error reports	Display of error reports on the display, continuation of print jobs without label loss
Warnings	Ribbon roll nearly used up
Dot check	Checks the printhead on defective dots – automatically or manually

## Test certificates

CE

The devices conform with the following EC-directives:

- EMC
- Low-voltage

For details refer to the [EC Declaration of conformity](#) 

TÜV GS

TÜV GS test certificate: Tested safety (according to EN 60950:00)

EMV

The EMC test was made according to the following norms:

- EN 55022 - Class A
- EN 55024
- EN 61000-3-2
- EN 61000-3-3
- EN 61000-6-2

► The norm EN 55022 prescribes the following warning note to be included in the operation manual for devices of class A:

Warning! This is class A equipment. This equipment may cause radio disturbances if it is used in a living area; in those cases can be demanded of the manufacturer to carry out appropriate measures.

FCC

► FCC Regulations require the following wording for Class A devices:

„WARNING

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to local radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.“

IC

► IC (Industry Canada) requires the following wording for Class A devices:

„CANADIAN D.O.C. WARNING

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicte par le ministère des Communications du Canada.“

## Limitations

### DPM 6"

#### Rewinder construction

Consider the following critical points, when building a rewinding unit for the DPM:

- The rewinder must be fast enough to rewind the backing paper tight even when printing at high speeds.
- There must always be a light tension on the backing paper.

### ALX 926

#### Print speed

Material width in mm up to:	-184	-160	-130	-100
max. print speed ("/s), given a 4" core	10	10	12	12
max. print speed ("/s), given a 3" core	8	9	10	12
max. print speed ("/s), given a 1.5" core	7	9	10	12

[Tab. 11] Maximum print speed for material rolls with 300mm outer diameter, depending on the material width as well as the core diameter.

Material width in mm up to:	-160	-130	-104	-80	-55
max. print speed ("/s)	12	12	12	12	12
max. print speed ("/s) with activated ribbon autoeconomy function	10	10	12	12	12

[Tab. 12] Maximum print speed for foil rolls with 600m length, depending on the material width.

Material width in mm up to:	-160	-130	-104	-80	-55
max. print speed ("/s)	10	10	12	12	12
max. print speed ("/s) with activated ribbon autoeconomy function	6	6	8	10	10

[Tab. 13] Maximum print speed for foil rolls with 1000m length, depending on the material width.

#### Printable area



**CAUTION!** - Disregarding the following notes may cause the machine to work unproper.

→ Do not heat up more than 50% of the print head dots at a time. This means, that lines which are running crossways to the printing direction may only cover half of the maximum print width. The other half of the label may not be printed on in this area.

→ Those lines may not exceed a line width of 3mm

#### Ambient conditions

The ALX 926 may only be operated at a mains voltage of 220V or higher. The operating temperature may not exceed 30°C.