PRINT AND APPLY SYSTEM
SERIES 4050

EXPERIENCE AND VISION

We are **PHOENIX ITALIA Srl** , an Italian firm which is strongly committed , since 1994, in developing and manufacturing labelers, print&apply systems and OEM components.

Phoenix Italia is strategically located in the heart of the Italian «labeling valley»,where we can rely on a network of certified sub-contractors .
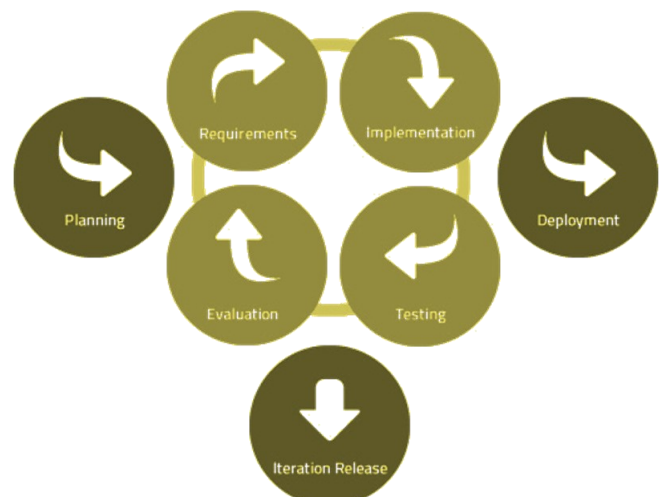

A WORLDWIDE PLAYER

Our products are sold, installed and serviced by our trusted Distributors in **more than 70 Countries**; we are able to ship , mostly within 24h, any spare part of our current and past production.

Components as pneumatic parts, sensors and stepper motors comes from primary suppliers, in order to achieve the highest **reliability** and a minimum risk of machine failure.

INCREMENTAL DEVELOPMENT DESIGN

We are constantly focused on **product implementation**, thanks to requests and requirements coming from the market through our Partners.

Any new product or process is targeted to be simple to use / maintain, reliable and correctly dimensioned according needs - even as TCO.
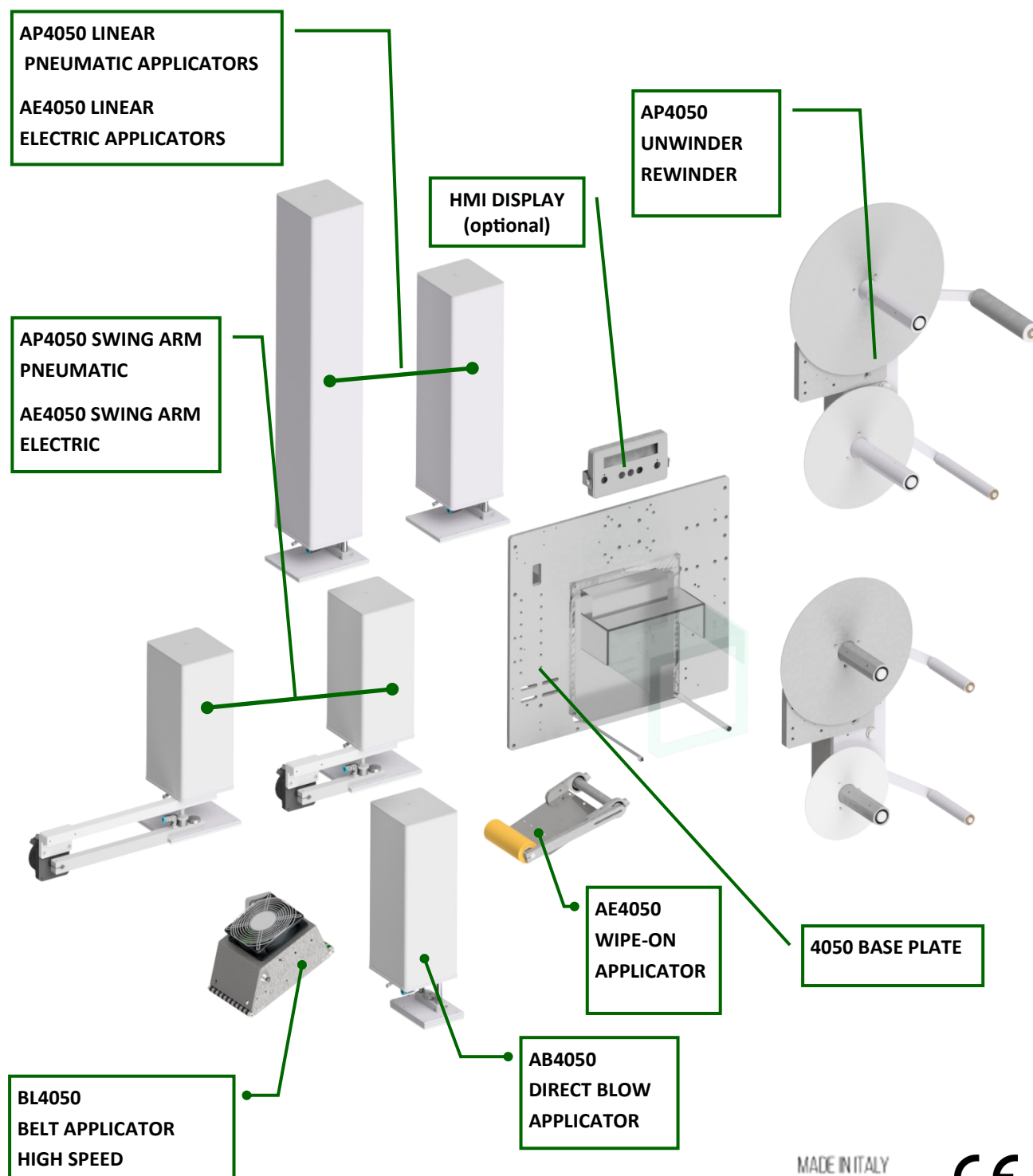
MODULAR & FLEXIBLE

The best seller **Phoenix Series 4050** is a family of modular items of **Print and Apply** systems, offering an high flexibility.

A complete system is composed by a **base plate**, on which are fitted an **Unwinder / Rewinder unit** and one **Applicator Group.**
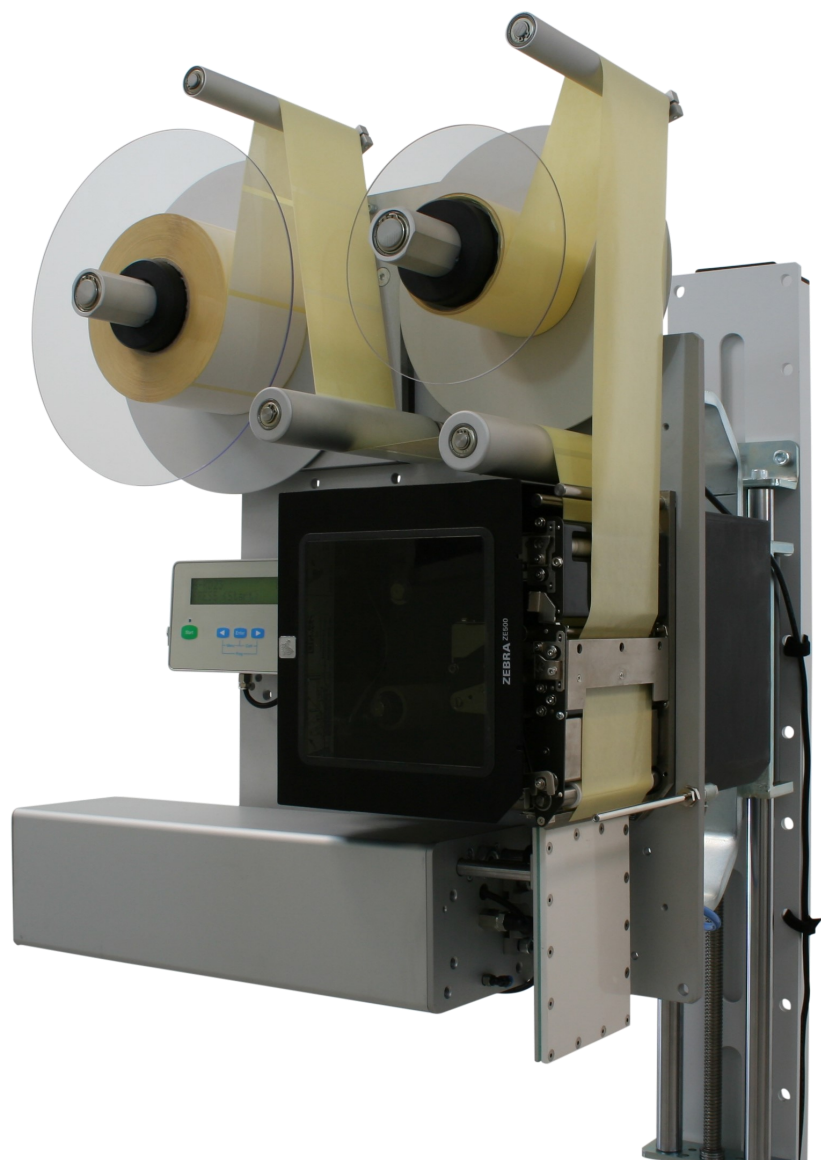
On this assembly, your favorite print engine has to be fitted and it will complete the Print&Apply machine.

AP4050 LINEAR PNEUMATIC APPLICATORS

AE4050 LINEAR ELECTRIC APPLICATORS

AP4050 UNWINDER REWINDER

HMI DISPLAY (optional)

AP4050 SWING ARM PNEUMATIC

AE4050 SWING ARM ELECTRIC

AE4050 WIPE-ON APPLICATOR

4050 BASE PLATE

BL4050 BELT APPLICATOR HIGH SPEED

AB4050 DIRECT BLOW APPLICATOR

MADE IN ITALY

CE

LINEAR APPLICATORS

AP4050 PNEUMATIC LINEAR APPLICATOR

The **AP4050** applicator with linear stroke-unit represents the most common solution for print & apply integrations.

This best seller, thanks to its clever mechanical design and advanced electronics and firmware is **simple, reliable and cost effective**.

The slide guide, moved by a Festo 12mm ISO cylinder, is available in two standard lengths, 250mm and 500mm, and operates without oil or grease, requiring minimum maintenance during the machine life cycle.

Due to the moderate force of the actuator, the AP4050 with linear stroke unit is **intrinsically safe** for the operators.

This applicator comes as standard with a quick-exchange tamp pad mechanism, which allows changing label format in seconds, with a simple and safe operation.

Thanks to the optional Display controller or through the powerful Phoenix Remote Control Software, all the configuration parameters can be easily configured.

The linear stroke unit is avaialable in two different paper width (4" and 6").

✔ SIMPLE AND RELIABLE   ✔ EASY TO OPERATE   ✔ VERSATILE

AE4050 ELECTRIC LINEAR APPLICATOR

AE4050 is the electric driven applicator which is rewriting the rules of Print&Apply systems.

Faster than pneumatic, it allows a complete and **highly accurate** control of the applicator stroke, as regards speed, accelerations and **positioning**.

The slide guide, moved by a stepper motor, it is available in two lengths -250mm and 500mm.

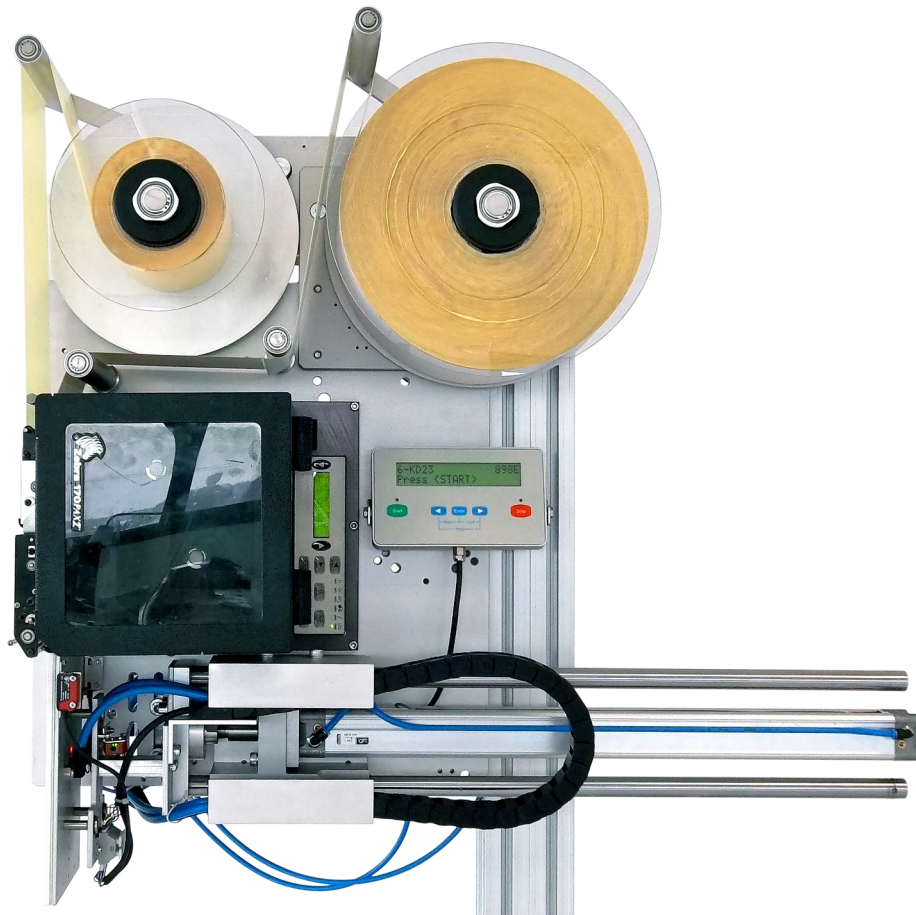Compressed air is used, only for vacuum/blowing phase.

✚✓ **FAST**

✚✓ **ACCURATE**

This applicator can be fitted with fixed tamp pad or with a quick-exchange tamp pad mechanism, which allows changing label format in seconds, with a simple and safe operation.

As for the rest of the 4050 Series, the applicator **can be easily configured** and operated thanks to the intuitive Display controller or remotely through Phoenix Remote Control Software.

AS4050 HEAVY DUTY& LONG STROKE

The **AS4050** expands the 4050 Serie adding the capability to apply labels **up to A5 size**, with a stronger application arm **up to 1000mm long**. AS4050 is available for 6" print engines, in two different geometries for portrait and landscape label application, and three diferent stroke lenghts: 500mm, 700mm, 1000mm.

✓ **STROKE UP TO 1000 MM**

All the components were designed to grant strenght, reliability and durability fitting this label applicator for **heavy duty integrations** and end-of-line labeling. The robust slide is equipped with roller ball bearings, 20mm slide bars and a 32mm ISO pneumatic cylinder.

The standard A5 spring loaded application plate holds two **proximity photosensor** and may be equipped with a barcode scanner managed locally by the standard machine firmware.
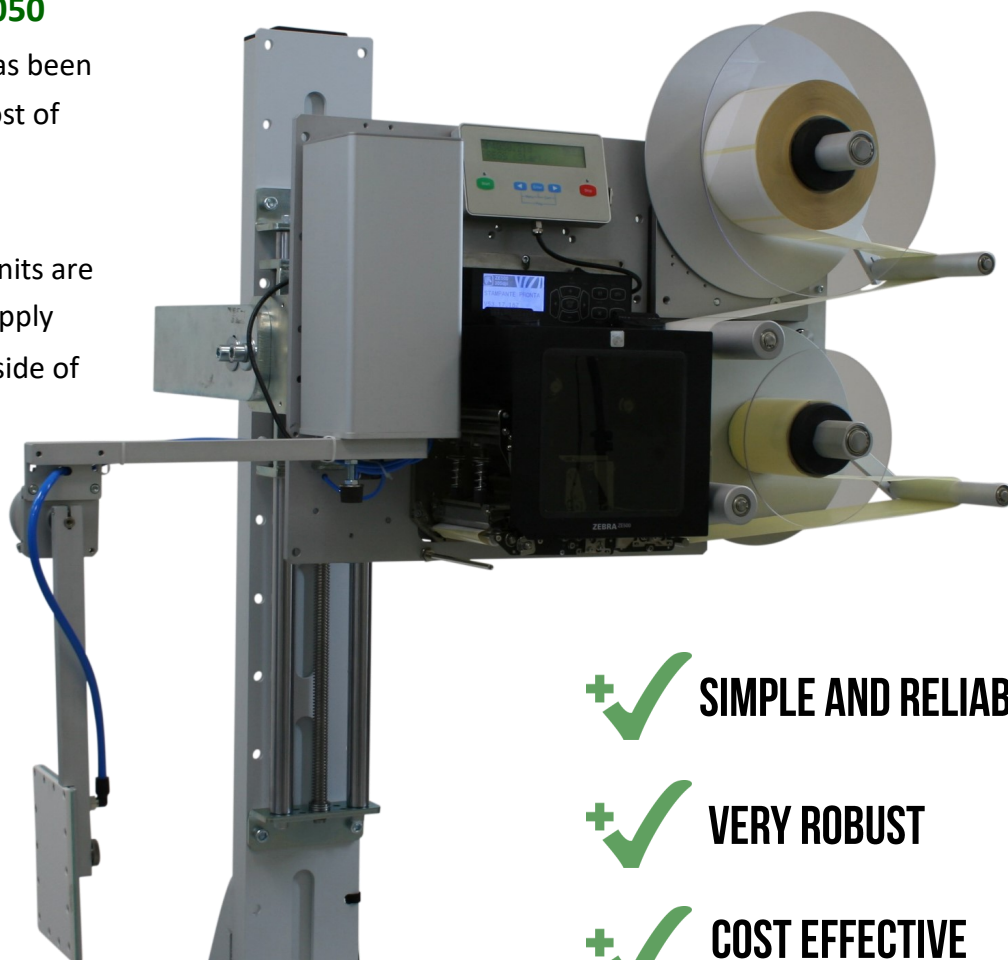
✓ **HIGHLY ROBUST** ✓ **A5 PORTRAIT OR LANDSCAPE**

LINEAR APPLICATORS

LINEAR APPLICATORS—PERFORMANCES & TYPICAL INSTALLATIONS

Model	Application	Available Versions	Label Dimension	Cycles per minute
AP4050 Pneumatic Linear	• Tamp (contact) • Tamp & Blow (Contactless) • Variable Stroke with sensor	• Right Hand Or Left Hand • For 4" or up to 6" print engines • With 250 mm or 500 mm stroke	· From 20x20 mm up to 120x160 mm Or up to 160x220 mm (printer depending)	• Up to 60
AE4050 Electric Linear	• Tamp (contact) • Tamp & Blow (Contactless) • Programmable Stroke • Variable stroke with sensor	• Right Hand Or Left Hand • For 4" or up to 6" print engines • With 250 mm, 500 mm or 800 mm stroke	· From 20x20 mm up to 120x160 mm Or up to 160x220 mm (printer depending)	• Up to 60
AS4050 Heavy Duty Long Run	• Tamp (contact) • Tamp & Blow (Contactless) • Variable Stroke with sensor	• Right Hand Or Left Hand • Printer up Or Printer down • Portrait or Landscape orientation • For 6" print engines • With 500 mm, 700 mm or 1000 mm stroke	UNI ISO A5 (150x210mm)	Stroke length depending

AP4050 PNEUMATIC SWING-ARM

A wide range of **AP4050 Swing-arm units** has been designed to fit the most of the application cases.

Using a Festo rotating cylinder, Swing-arm units are the ideal solution to apply labels **on the front** side of the package.
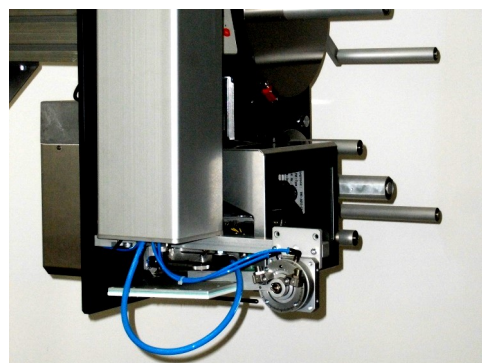

✓ **SIMPLE AND RELIABLE**

✓ **VERY ROBUST**

✓ **COST EFFECTIVE**

Swing arms are mainly used for label **frontal application**, on products moving on a conveyor.

Other common usages includes corner-wrap applications and the dispensing of the label on the sides of non-stopping package.

" **Transversal**" and "**Reverse Transversal** swing arm**" applicators are used for label frontal application, with the printer placed transversally of 90° respect to the conveyor line.

These two configurations helps to fit the machine by the conveyor line, even in tight spaces, allowing to place the label rolls in an **easy-to-access** position and to achieve a quick media reload.

✓ **SPACE SAVING**

AE4050 ELECTRIC SWING-ARM

+ ✓ **VERSATILE**

+ ✓ **FAST**

+ ✓ **LOW TCO**

The **AE4050 Electric swing-arm** is driven by an electric motor with toothed belt, which brings the tamp plate at the desired angle, with a maximum angle which can be 180° , programmable

The electric drive allow to be **faster** than pneumatic, and accurate in angling the arm/pad assembly.

Differently from pneumatic, the arm acceleration and deceleration is settable, allowing a safe and **fully controlled movement**, and avoiding the adoption of dampeners.

SWING ARM APPLICATORS—PERFORMANCES TABLE

Model	Application	Available Versions	Label Dimension	Cycles / minute
AP4050 **Pneumatic Swing arm**	• Tamp (contact) • Tamp & Blow (Contactless)	• Right Hand Or Left Hand • 180mm, 250mm or 400 mm stroke • Longitudinal /transversal / reverse transversal mounting	· From 20x20 mm up to 120x160 mm Or up to 160x220 mm (printer depending)	• Up to 40
AE4050 **Electric Swing Arm**	• Tamp (contact) • Tamp & Blow (Contactless) • Programmable Stroke	• Right Hand Or Left Hand • 250 mm or 400 mm stroke • Longitudinal mounting	· From 20x20 mm up to 120x160 mm Or up to 160x220 mm (printer depending)	• Up to 40

BL4050 BELT APPLICATOR

BL4050 Belt Applicator
is a motorized wipe-on applicator, suitable for the application of labels, while printing in real time, and on products which are moving.

As soon as a label is printed, and it is leaving the printer area, BL4050 will keep the label in suction, and will deliver it to the application point., thanks to a **motorized belt system**.

✓ NO COMPRESSED AIR

On a standard tamp & blow system, performances are limited by the print speed, while adopting BL4050, the printing phase and the dispensing one are independent each other. The application speed is accordingly **more than 1000 mm per second**.
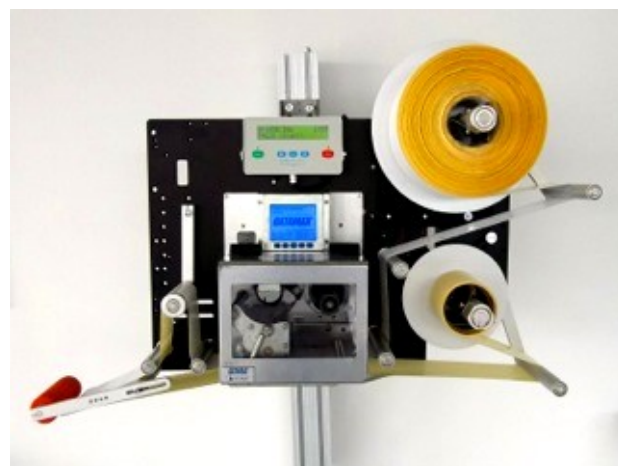
Avoiding compressed air usage, its total cost of ownership is lower than a pneumatic applicator and it allows a simplified installation wherever compressed air is not available.

Moreover, any BL4050 suits with different label dimensions, without any adaptor or modification needed. **up to 230mm** long labels.

AL4050 WIPE-ON APPLICATOR

The **AL4050** is a simple and **cost-effective** label dispenser for print engine. It allows to apply label on moving objects using the printer to feed and peel the labels. The application speed is limited only by the print engine selected for the integration.
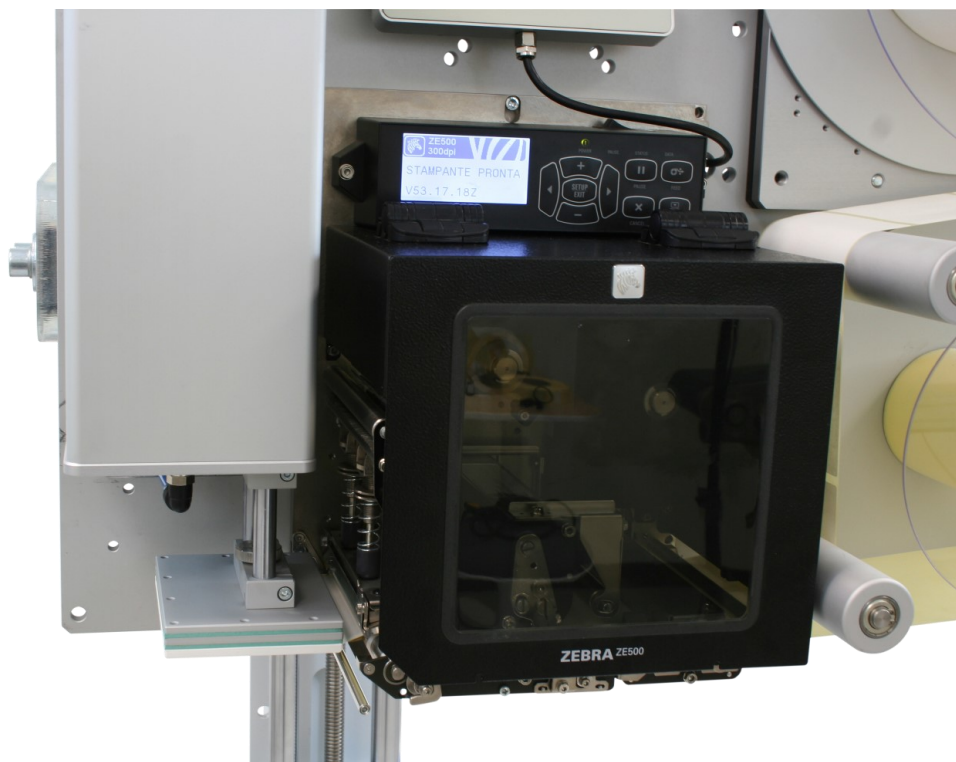
The quick and fine acceleration ramps of the most used print engines provides great precision in label positioning.

HIGH SPEED APPLICATORS—PERFORMANCES TABLE

Model	Application	Available Versions	Label Dimension	Cycles / minute
BL4050 Belt Applicator	• High speed wipe-on application	• Right Hand Or Left Hand • For 4" or up to 6"	• From 20x20 mm Up to 170x230 mm (printer depending)	Up to 120
AB4050 Direct Blow	• High speed direct blow application, up to 80 mm	• Right Hand Or Left Hand • For 4" or up to 6"	• From 20x20 mm Up to 120x90 mm	> 200 (label depending)
AL4050 Wipe on	• Print & Apply with print queue (not in real time)	• Right Hand Or Left Hand • For 4" or up to 6"	• minimum 20x20 mm.; • maximum limited by the printer	> 200 (label depending)

AB4050 DIRECT BLOW APPLICATOR

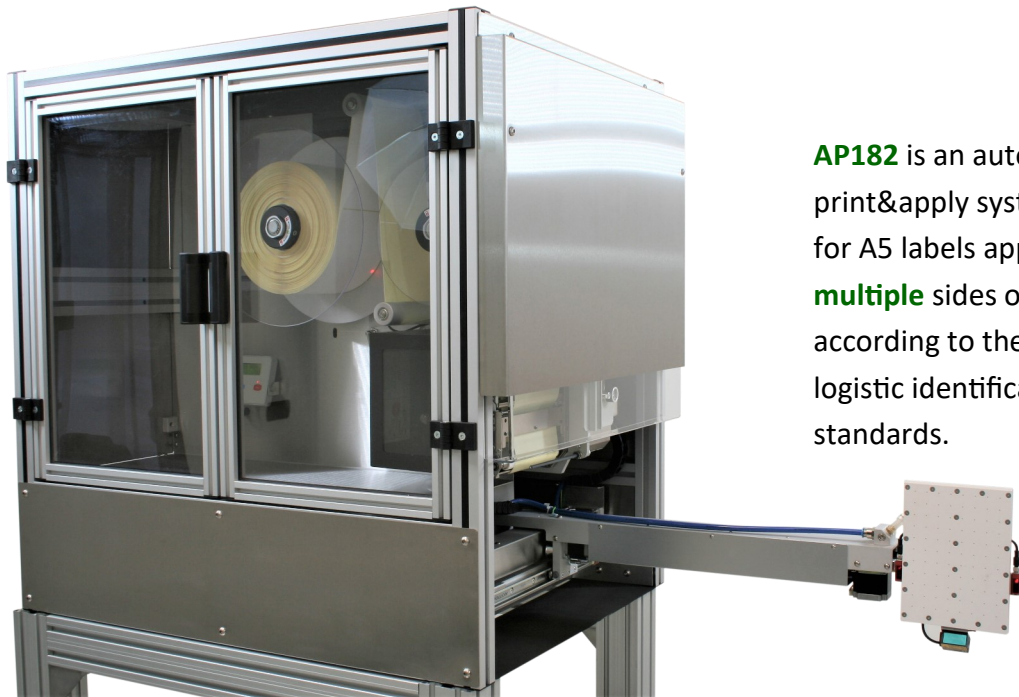The **AB4050** is a reliable, fast and easy to use Direct Blow applicator.

Thanks to the optimized pneumatics and firmware, the AB4050 can **apply up to 180 labels** per minute (depending on label size and printer speed).

✔ **SUITABLE FOR LABEL WITH DIFFERENT SIZES**

The **quick-exchange** tamp-pad features gives the chance to change label formats in seconds, with a simple operation and without further regulations.

AP182 PRINT & APPLY 3 SIDES ON PALLET

AP182 is an automatic print&apply system, suitable for A5 labels application on **multiple** sides of a pallet, according to the international logistic identification standards.

AP182 can apply **one to three sides of a pallet**, and thanks to its **fully programmable logic** , the label application can be performed, in some conditions, even on moving pallet.

The applicator arm is driven by stepper motors, and the application pad (+/- 90° turning) **can work both by contact or blowing the label** on the pallet surface.

The tamp is mounted on springs, for a perfect adaption to uneven surfaces. A proximity sensor is mounted on the application plate.
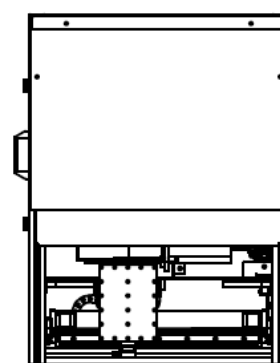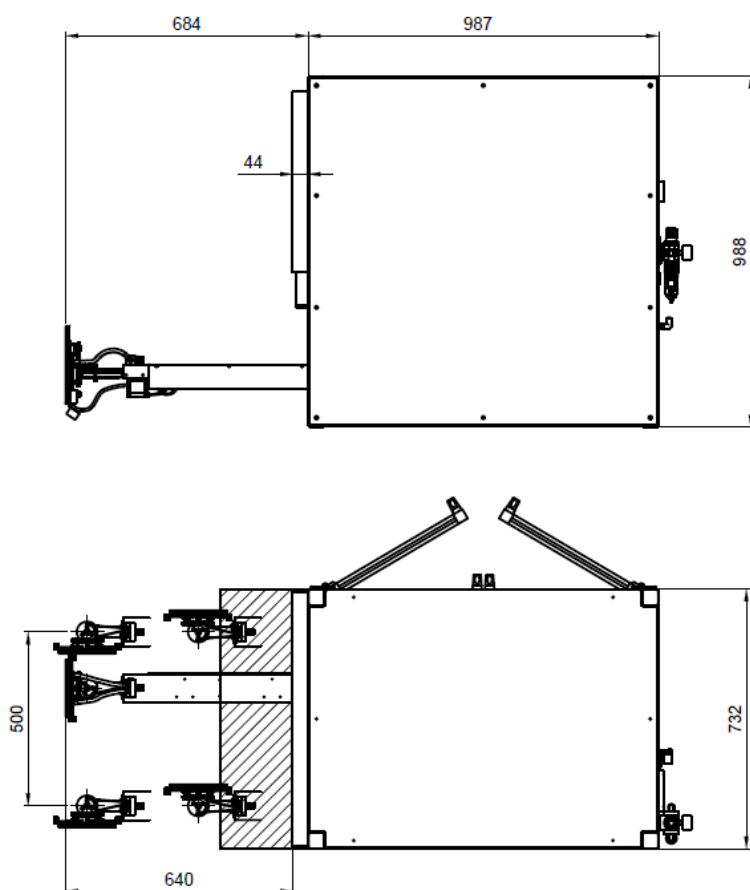
AP182 is ready to be completed with the most frequently used 6" Print Engine. Printer is not included.

Thanks to AP182 mechanical design and mounting, replacing the label roll or ribbon can be performed by operator safely and quickly.

FEATURES & PERFORMANCES

Available versions:	AP182 Right Hand or AP182 Left Hand
Operating modes:	Up to 7 fully programmabable pre-set cycles, with settable speed, acceleration, deceleration. Timers. 1 to 3 label applications.
Label pad dimensions	160x220 mm suitable for UNI ISO A5 (150x210 mm)
Label roll dimensions	External Ø: up to 350 mm Internal Ø: 76 mm
Power supply	90-264 VAC / 48/62 Hz, Single phase + Ground
Power Consumption	Up to 600 w (with printer fitted)
Compressed air & **Air consumption**	6 bar 500 Nl/min (dry & filtred) Max 40 Nl/min
Operating temperature	10°- 35° C. Humidity: 20-80% not condensing
Print engine	It can mount any of the most common 6" print engine of the primary worldwide producers.

AP182 Left Hand version

Overall dimensions

MADE IN ITALY

AP4050 UNWINDER /REWINDER UNIT

UNWINDER/REWINDER UNITS

The "**AP4050 unwinder/rewinder group**" are a series of compact, powerful and affordable units which can be used to easily unwind and rewind paper rolls in combination with any compatible print engine.

They are the **core element** of the Print&Apply Systems, bringing the **logic** which is able **to drive any Phoenix applicator,** to power up a printer engine and to manage the **I/O signal** of interface with the external environment.

AP4050 Unwinder /Rewinder group is built in two versions, according to the applicator which has to be driven. Whenever the configuration requires a **pneumatic applicator**, the standard unit with a rewinder motor , 24V power supply, able to handle label rolls with external ∅ 300 mm is the correct choice.

Electric applicators require 48V power supply versions, which allow also the adoption of a **second motor** dedicated for unwinder, and the using of ∅ 350 label rolls

In both versions, the **constant tension** of the rewinded paper is granted thanks to a clever *servo* dancer arm, controlled by the microprocessor, which works together with the micro-step driven stepper motors.

Any Unwinder/rewinder version can be supplied in **right-hand or left-hand**, and for **4"** printer or for up **to 6"** ones.
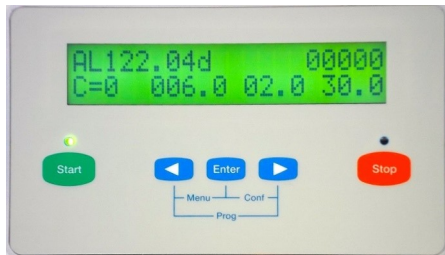
All the parts and options can be easily connected to the unit with industrial grade **M12 connectors**. The AP4050 rewinder unit provides also a D25 connector and several I/Os for **advanced integrations**

Furthermore, an **USB interface** is available as standard, and an **Ethernet** port comes as option.

Thanks to a sophisticated software, which can run under Windows, Linux or MAC OsX, it is possible to **remotely configure and monitor** the unit, perform advanced diagnosis and firmware updates through an intuitive and user-friendly interface.

HMI—MULTILANGUAGE DISPLAY

The display controller unit provides an easy menu for operator interface, allowing all the possible configuration of the 4050 modules and its operations

Any parameter of the system can be **finely tuned**, when connected to the AP4050 Unwinder Rewinder: applicator parameters, delays, acceleration ramps and other.

Status, Warnings and Alarms are displayed on the screen, with explication. An extension cable is available as option.

Thanks to its pushbuttons and the backlit display, it's a robust and easy device to operate. Up to **14 operator languages** can be easly stored into its memory.
The display controller unit is provided with a fully shielded 1,5m long cable with industrial M12 connector, allowing remotisation and fast connection to the machine.

OPTIONAL SENSORS AND I/O

LOW LABEL REEL SENSOR

STATUS LAMP

PRODUCT SENSOR

ENCODER

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