

# AUTOMATIC INJECTOR IA/IAS

MACHINE FOR AUTOMATICALLY INJECTING HIGH-VISCOSITY LIQUIDS WITH A HIGH PERCENTAGE OF SUGAR SUCH AS CHOCOLATE OR JAM INTO THE ALREADY COOKED PRODUCT

## DISPLAY

Configure all of the machine's functions in a simple and visual way.

## NOZZLES

Wide range of nozzles for injecting high-viscosity liquids with a high percentage of sugar.

## CONVEYOR AND TRAYS

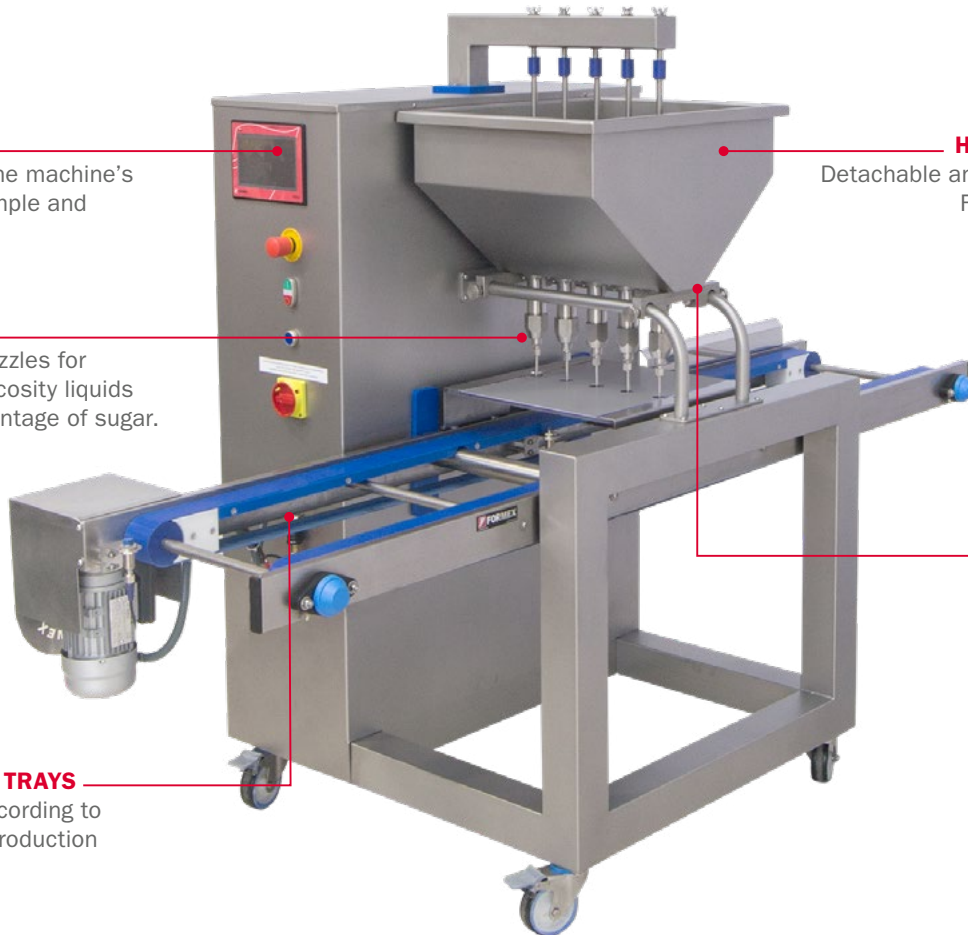
Customisable according to product and/or production needs.

## HEAD AND HOPPER

Detachable and interchangeable. Facilitates cleaning.

## DOSING SYSTEM

Pneumatic or with servo motor.



MODEL: IAS 40



CROISSANTS • MUFFINS • PANETONNE • PIES • PLUM CAKE • ROLLS • PROFITEROLES • SPONGE CAKE • BICOLOUR FILLINGS



# FORMEX

CREATING SOLUTIONS TO DOSE YOUR PRODUCT

## GENERAL CHARACTERISTICS

- Suitable for the **fast and precise injection of fillings**, flavoured syrups and highly viscous liquids into the product made on the same baking tray, **avoiding any unnecessary handling of the product**.
- The **volumetric depositing is exact** and guarantees the same amount of product is deposited in all injection needles.
- It stands out for its speed, precision and ease of operation.
- Flexible and expandable.
- **Homogeneous injection**.
- Quick and easy change of the different accessories for **multi-product work**.
- Made of AISI304 stainless steel and materials suitable for the processing of food products.
- For **semi-automatic productions and/or** those with a **higher degree of automation**, since it can be attached to a conveyor belt or production line..



## PNEUMATIC DEPOSITING OR WITH A SERVO MOTOR

- The **depositing volume and speed** are **independent and adjustable**.
- **The injection system does not harm the dough** and gives us the ability to work with products of different viscosities.
- The IA Injector offers volumetric depositing in its different **versions**, both for the **IA (pneumatic)** and for the **IAS (with servo motor)**. The following table compares the main advantages of using a servo motor.

### IAS - DEPOSITING USING A SERVO MOTOR

Volumetric depositing is **regulated through the touch screen**. Servo motor depositing replaces the mechanical stops and pneumatic adjustments, making the machine **faster, smoother and more precise during operation**.

Thanks to the servo motor, the user can **control** countless **parameters electronically** with a high level of reliability and efficiency.

DIFFERENCES BETWEEN DOSAGES	IA (PNEUMATIC)	IAS (WITH SERVO MOTOR)
Dose change regulation	Mechanical with wheel (manual adjustment)	Electronic by display (very accurate)
Control of the dosing parameters by touch screen	No	Yes
Loading speed control	Pneumatic (not changeable)	Electronic by display (very accurate)
Unloading speed control	Pneumatic (not changeable)	Electronic by display (very accurate)
Re-dosing in the same mould	Yes	Yes
Drop aspiration	No	Yes, by display

# HMI PANEL FOR INTELLIGENT PRODUCTION MANAGEMENT

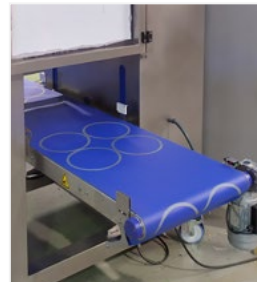
Through the touch screen we can control all of the machine's functions:

- Recipe programming (create, rename, delete, duplicate).
- Management with multi-users and passwords with different access levels according to rank.
- Number of rows per tray and distance between products.
- Trays are moved forward, being positioned for filling and exiting upon completion.
- Option to create dosing patterns to adjust them to the different trays.
- Electronic control of tray presence, when the tray reaches the end of the conveyor belt the machine stops until the tray is removed.
- Single-dosing function for weight adjustment.
- Multi-dosing function: dosing is repeated in the same position on the tray.
- Independent conveyor function.
- Anti-drip control.
- Self-cleaning function.
- List of alarms that occurred on the machine.
- Control of activated automated inputs and outputs.



## TRAYS AND MOULDS

In addition to the standard tray width configuration of 40 cm, 45 cm, 60 cm or 80 cm, other tray sizes can be manufactured. The conveyor belt can be adapted to flat trays, paper trays or different conveyor systems and different types of moulds.



Conveyor belt with markings for product placement.



Conveyor belt with moulds for product placement.

## HOPPER

The standard hopper can be exchanged for one with a larger capacity, it can be heated to work with products such as chocolate, and it is even possible to add another hopper to work with two flavours of fillings.

- Option of using hoppers with different capacities.
- The heads can be interchanged with different configurations in terms of outlets and volumes.
- Removable, facilitates cleaning.



Heated hopper.



Double heated hopper to work with two flavours of fillings.





## INJECTOR NOZZLES

The machine can be used with different types of injection nozzles, a different number of nozzles and distance between them, special injection needles, etc.



Standard nozzle



Large circular injector nozzle to fill panettone



Circular injector nozzle



Triple injection nozzle for croissant fillings

## HORIZONTAL INJECTOR MACHINE

Automatic horizontal injector equipped with servomotor for the injection of different products such as “bollycao”. Each nozzle has a needle positioned horizontally at 90°, which is introduced inside the bun and moves backwards as it injects the product. The tank is heated by means of finned heating elements attached to the sides of the tank.

The conveyor belt is fixed to the chassis and has separators along its entire length to facilitate manual placement of the buns by the operators. It injects 8 buns. At the end of the conveyor there is a pneumatic ejector that pushes eight buns out of the belt.

The functions can be adjusted via the display.



## EXAMPLES OF INJECTOR MACHINES INTEGRATED INTO A WORKING LINE



Working line to fill chocolate croissants with chocolate chip topping.

Production: 18,000 croissants/hour.

Consisting of three stations:

- An injector with three rows of 9 nozzles to inject 27 croissants simultaneously, and with three needles per nozzle so that the product is well distributed.
- A jelly station that sprays the jelly on top of the croissants.
- A topping station, with a top ribbon filled with chocolate shavings so that it falls on the product and gets stuck in the jelly layer.



Working line to inject two different fillings into the baked cupcakes. Subsequently, a chocolate coating and topping are added on top.

The injection and dosing stations are heated. The line is no more than 5 metres long and can be operated by a single person at the start of the conveyor.

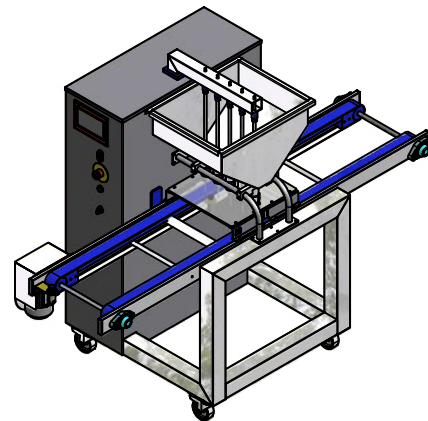
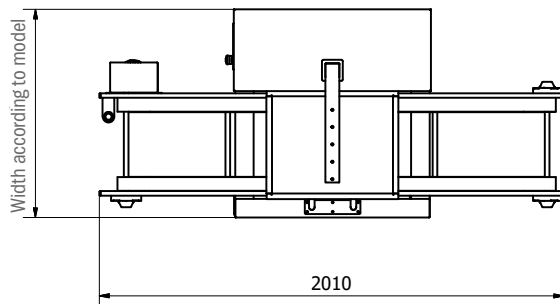
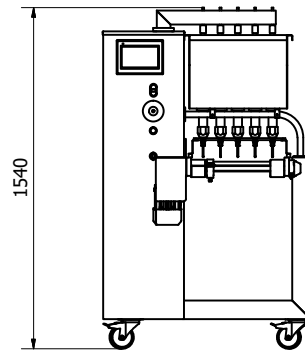
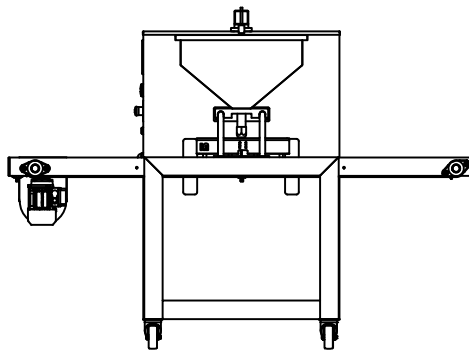
It consists of two injectors, a dosing machine for the chocolate coating and a topping dosing machine.

A double conveyor belt system means that when the tray reaches the end of the upper belt, it automatically descends to a lower belt that turns in the opposite direction and moves the trays with the full product to the start of the line.

## TECHNICAL DATA SHEET

MODELS	IA 40	IA 45	IA 60	IA 65	IA 80
Tray width (cm)	40	45 (18")	60	65 (26")	80
Maximum speed (seconds/cycle)	3,4 (variable value according to the amount of product to be dosed and type of dough)				
No. of nozzles	to be chosen				
Dosing regulation (c.c.)	from 3 to 39				
Hopper capacity (L)	50	55	65	70	80
Measurements WxDxH (cm)	201 x 94 x 154	201 x 99 x 154	201 x 114 x 154	201 x 119 x 154	201 x 134 x 154
Weight (Kg)	200	210	222	232	250
Motor (Kw)	1 of 0,18				
Voltage (V)	220 / 380 III				
Power consumption (Kw)	0,75				
Pressure (compressor required)	6 bar				
Air consumption (L/min)	250				
<b>IAS (servo)</b>	Drive motor (Kw)	2			
	Air consumption (L/min)	100			

### MODEL IAS



Due to constant technological development, the characteristics of our products may be altered without prior notice.

**SEE PRODUCT ON WEBSITE**

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**FABRICAMOS SOLUCIONES PARA DOSIFICAR TU PRODUCTO**