



# Company Presentation

RAV SISTEMI is a company founded in 1994 and sited in the south Florentine area (Tuscany – Italy).

RAV SISTEMI operates in pharmaceutical, cosmetic and food sectors, providing new packaging machines and plants, revision/revamping services and transformation of existing equipment and production processes.



In particular RAV SISTEMI offers:

- **Construction of machines for filling, closing and packaging of typical products of the pharmaceutical, cosmetic and food products (powders and liquids)**
- **Quality control systems for finished product**
- **Dosing systems with weight control and feedback**
- **Reconditioning of second hand machines**
- **Service and maintenance of various machines either in RAV workshop or at customer site**
- **Representation of new machines from foreign market (Korea)**

# Our Products



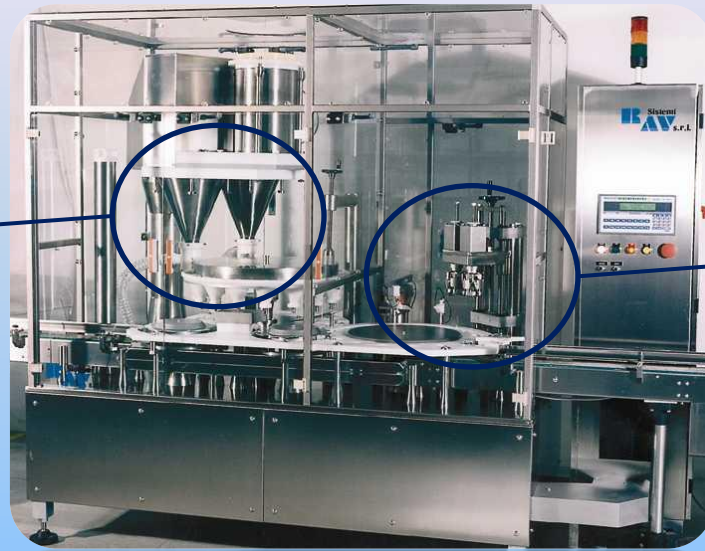
## DOSING SYSTEM



Dosing head with auger tool, assembled on a column; up-down movement of whole device with the possibility of rotation for cleaning operations

Stainless steel hopper with  $\varnothing 140$  mm. hole; calling product function and level control by capacitive sensor

Dosage control by 100 pulses/rev. encoder and Siemens quick counter modules



## GENERAL FEATURES

Main structure in anodized aluminum frame, completely covered with stainless steel panels.

Input and output conveyor belt driven by one motor: adjustable guides and structure in stainless steel

Bottles positioning by high density POLYZENE star wheel

Optional Net Weight System with automatic feedback, based on high speed load cells and Siemens Siwarex module: 100% controlled up to 70 bottles/min

## CAPPING SYSTEM



Caps feeding device by vibration cup in stainless steel,  $\varnothing 800$  mm., with sound-dampening container or with mechanical unscrambler

Caps positioning by mechanical or pneumatic device

Closing head(s) for screw or aluminum caps, with adjustable rotation speed and magnetic clutch with torque selection

Two programmable speeds for approaching and closing in up/down movement.

## ENTRY LEVEL MACHINES: 04L AND 06

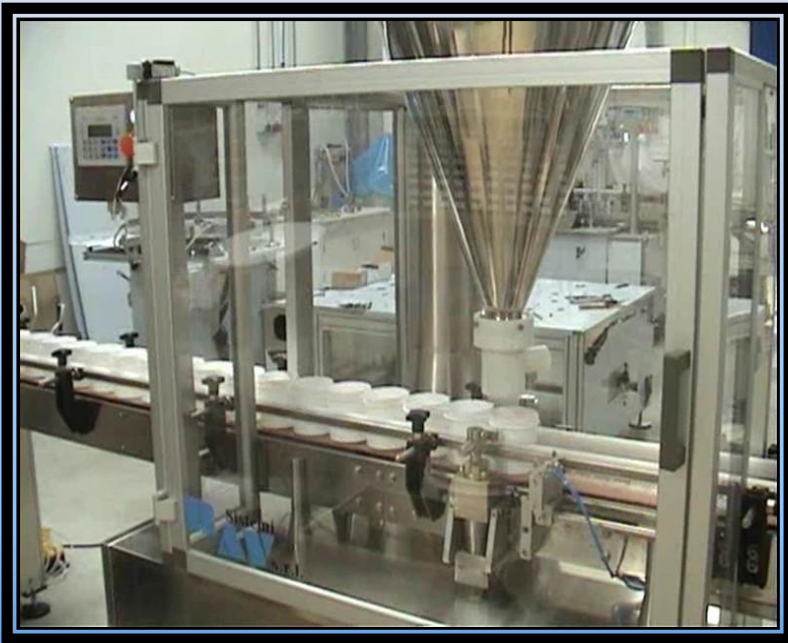


**RAV 04L**



**RAV 06-06/2**

## RAV 04L



RAV04L is a linear powder filling machine for macro-dosing.

Without any cost for different size of containers, it can reach a production rate up to 32 pcs./min.

A Stop & Go system drive the bottles under dosing head; an optional pneumatic device lifts each container allowing the dosage directly into the neck.

## RAV 06-06/2



RAV06 is the entry level for an automatic powder micro-dosing and capping machine. A mechanical system lift each bottle up to effect the dosage directly inside the bottle neck.

The machine is supplied with a complete automatic closing system.

## NET WEIGHT SYSTEM MACHINES: 04/05 NW





- High speed load cells with capacity of 1000 g and accuracy of 8000 steps for the whole range.
- Check weight system by SIEMENS SIVAREX U with digital filters to compensate vibrations; each bottle is checked before filling and after filling and capping: net weight is calculated.

## NET WEIGHT SYSTEM



- Auto-tuning feedback system to adjust the weight within the set range: two levels of control (EXAMPLE: from 0% to  $\pm 1.5\%$  OK, from 1.5% to 2.5% auto-tuning of dosing head, more than 2.5% discarding and auto-tuning of dosing head)
- Electrical or pneumatic Device for discarding out of range bottles
- Each function controlled by Touch Screen Panel
- Connection to USB printer for printout of report data



## GRANULES BATCHING MACHINES: 05 2T



**RAV05/2T is equipped with a special dosing system with volumetric cups, especially studied for granules and solids like salt or spices**

RAV05/2T is a high speed powder filling machine for granules macro-dosing. The double step system allow to reach a rate of 100 pcs./min.

A mechanical system lift each bottle up to effect the dosage directly inside the bottle neck.

The machine is equipped with a double closing head for rubber stop, screw plastic or aluminum caps.



# Liquid Machines

## DOSING SYSTEM



## CAPPING SYSTEM



## GENERAL FEATURES

Stainless Steel AISI 316 nozzles and pistons with sphere valves.

Mechanical adjustment of dosing volume.

Nozzles and pistons movements are independent with own motorization and absolute encoder for phases setting.

Motorizations with inverter and adjustable speed by operator panel.

Main structure in aluminum shape, completely covered by stainless steel panels  
Input and output conveyor belt by one motor: adjustable guides and structure in stainless steel

In linear models, a pneumatic Stop & Go system drives the bottles under dosing nozzles: container size up to  $\varnothing$  80 mm, H 160 mm.

Bottles positioning by high density POLYZENE or INOX star wheel in RAV06LIQ model

Cab made with aluminum shape and tempered glasses or polycarbonate with mechanical safety switches

Electrical and logic controls located inside a stainless box, side the machine.

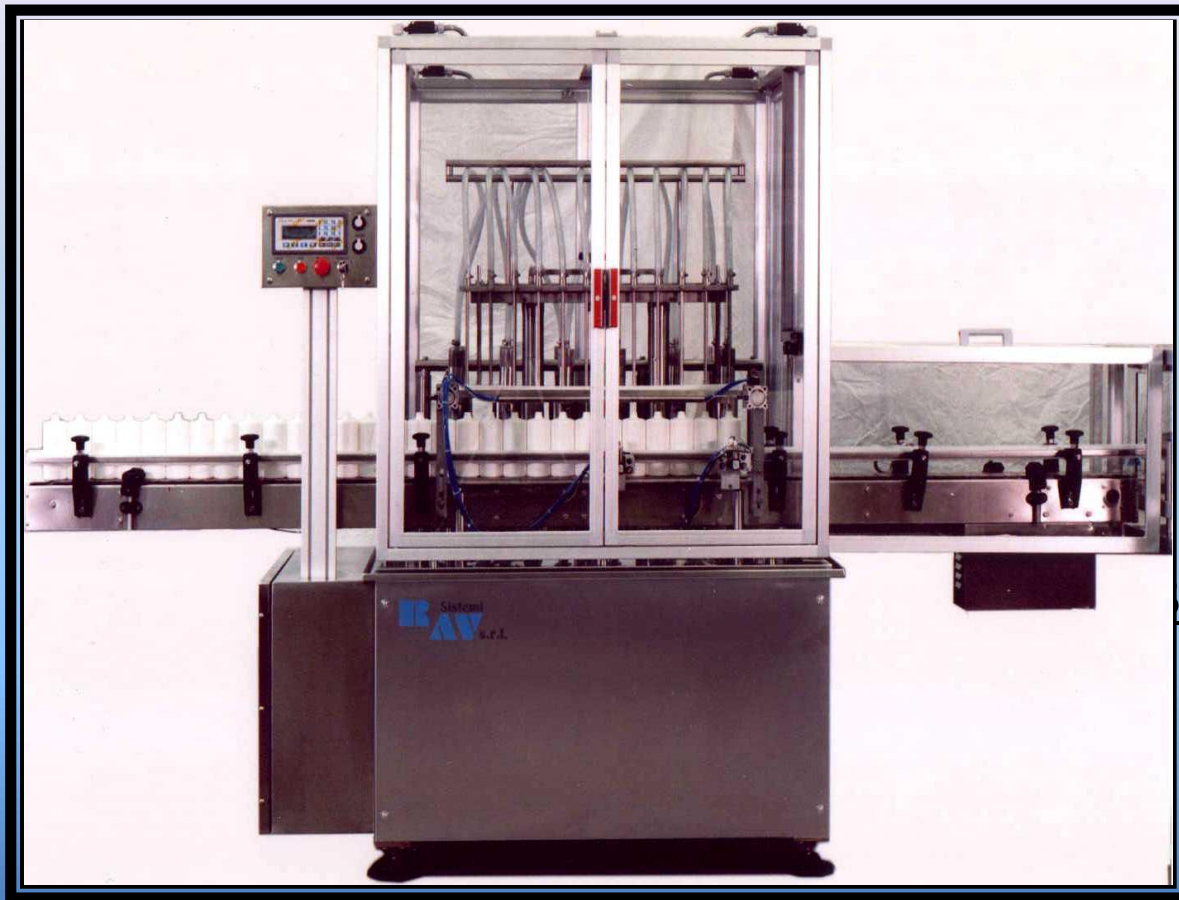
Caps feeding device by vibration cup in stainless steel,  $\varnothing$ 800 mm., with sound-dampening container or with mechanical unscrambler

Caps positioning by mechanical or pneumatic device

Closing head(s) for screw or aluminum caps, with adjustable rotation speed and magnetic clutch with torque selection

Two programmable speeds for approaching and closing in up/down movement.

# Liquid Machines



**RAV L04 ÷ L012** are basic linear liquid filling machines for production rate up to 2000 (L04) ÷ 6000 (L012) bottles/hour.

It can be supplied with n. 4-12 pistons up to 500 ml. each

Minimum costs and a very short time are necessary for setting the machine to different sizes of containers.

**RAV L05 - L06** are filling/capping mono-block machines for macro-dosing. They can be delivered with volumetric cylinders or peristaltic pumps or special dosing unit for dense products.

The machines are equipped with one closing head for plastic or aluminum caps. Dropper or rubber stop inserting device available on request.

**RAV L05 NW** is a filling/capping mono-block machine for macro-dosing liquid product equipped with a Net Weight System for dosing control and auto-tuning feedback device.

**RAV L05/2-3** is a high speed liquid filling/closing machine. The double step system allow to reach a mechanical rate of 80÷ 120 pcs./min.

It can be delivered with volumetric cylinders or peristaltic pumps or special dosing units for dense products.

The machine is equipped with a double closing head for plastic or aluminum caps. Dropper or rubber stop inserting device available on request.

**A NEW SOLUTION FOR HIGH PRODUCTION RATES (10.000 pcs/hour)**

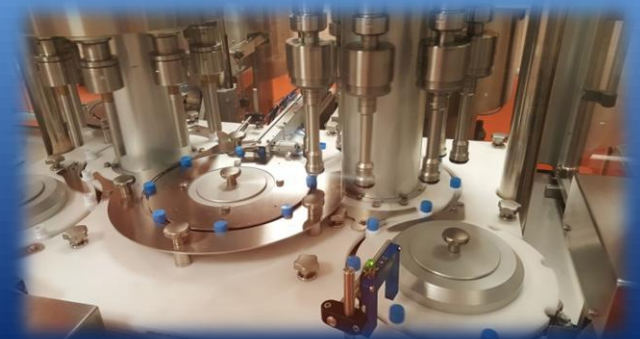


## RAV L08RK2

**COUNTINUOS LINEAR FILLING AND  
ROTATING CAPPING MACHINE  
(TWO CLOSING SYSTEMS)**



The L08RK2 filling and capping system for high production rate is composed by a nr. 8 needles linear filling machine (RAV L08) integrated with a rotating continuous capping machine (RAV CAP02R). The movement of the linear filling group will be tracking type, in phase with the capping machine.



# Monodose Machines

Monodose machines TE4 and PUSH&DRINK models are special machines made to fill with powder, weld with alu foil and pack monodose separator caps.

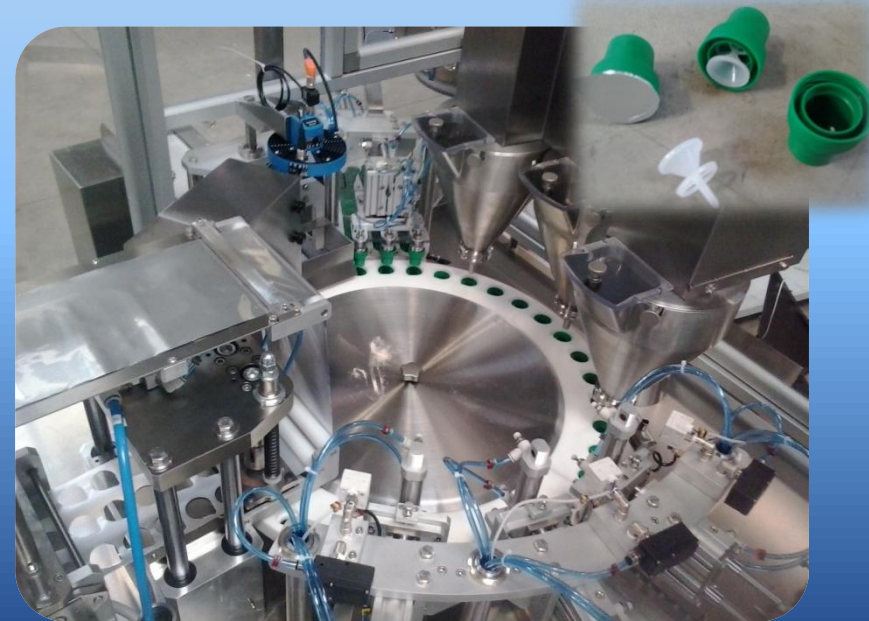
These mono-block machines are equipped with an inserting station, a powder filling station, a cutting alu foil station, a welding station and a final capping station.

The expected production is 7.500 ÷ 15.000 pcs/hour (according to required dosage)

## RAV TE4



## PUSH&DRINK



# Monodose Machines

Main structure in anodized aluminum frame, completely covered with stainless steel panels.

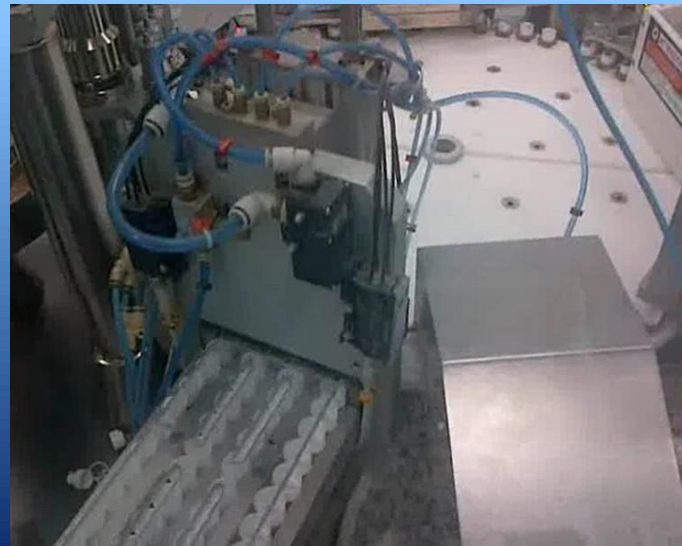
Safety cab in anodized aluminum profile with polycarbonate panels

Electrical box in stainless steel, side the machine, with Siemens PLC and Operational panel

Intermediate check points (powder, alu/PE foil, sealing) with automatic rejection device.

Induction sealing system synchronized with the rotary table

Cap transport system with high precision rotary table and variable speed drive



dosing group with 4+4 nozzles; volume and compression mechanically adjustable. The movement is synchronized with the rotary table

Powder infeeding through a container with powder level control.

Cutting and inserting system for alu-PE foil diskette; infeeding step and movements are synchronized with the rotary table

Caps sorting and infeeding with vibrator bowl and pick & place system

gasket sorting and infeeding with vibrator bowl and pick & place system

# Monodose Machines

## STRUCTURE

Main structure in alu shape, completely covered by stainless steel panels  
Cab made with alu shape and polycarbonate with mechanical safety switches  
Electrical and logic controls located inside a stainless steel box, beside the machine.

## CAPS SORTING

Caps sorting device by vibration cup in stainless steel, Ø800 mm., with sound-dampening container  
Caps infeding by linear vibrator and pneumatic device

## CLOSING SYSTEM

It inserts feeding device by vibration cup in stainless steel, Ø800 mm., with sound-dampening container  
Inserts infeding by linear vibrator and pneumatic pick&place system



## DOSING UNIT

Dosing head with auger tools, assembled on a column with n.3 units, each with its own motor and control.  
Stainless steel hopper with mixer inside  
Dosage control by encoder and quick counter modules

## LOGIC CONTROLS

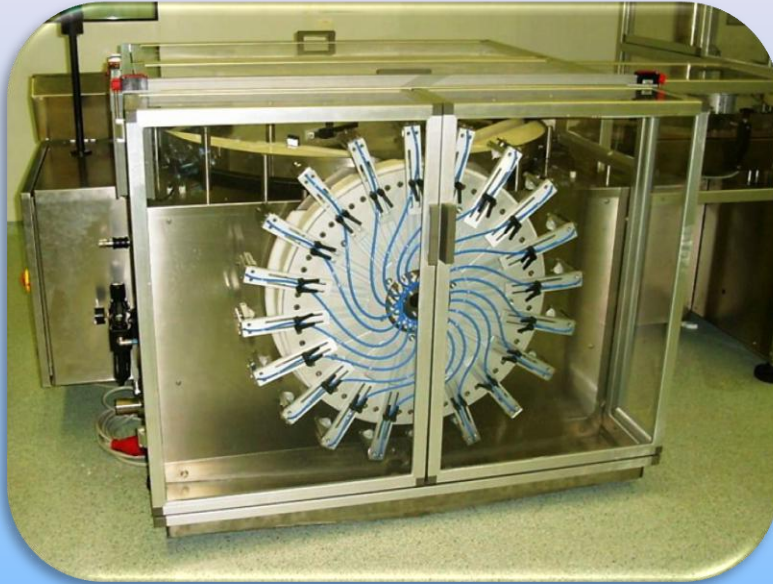
Logic controls based on PLC Siemens S7 CPU 313C with special modules for axis control  
Operational Panel Touch Screen Siemens TP170B with alarm list, setup function and sensitive areas.

## CHECK POINTS

- Minimum load of caps (stand by)
- Minimum load of inserts (stand by)
- Cap presence in filling point (no dosing)
- Insert presence in closing point (stop)

# Accessories

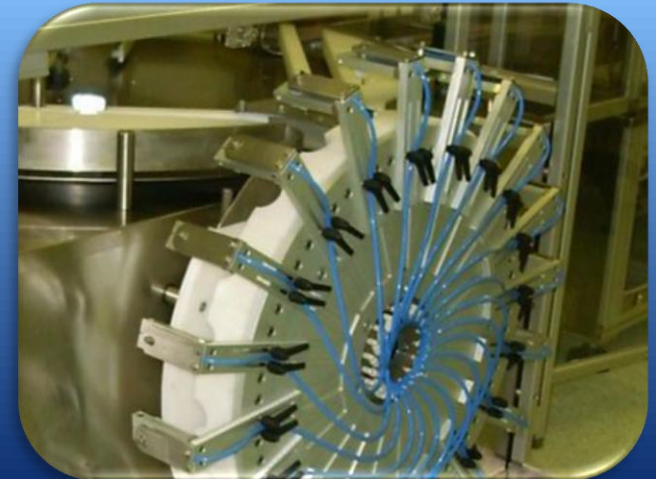
## TS 200



TS 200 is a machine designed for cleaning the inside of the cylindrical bottles by compressed air. The bottles are loaded manually and conveyed through the rotary table and the guides to the entrance of the blower wheel. Going into the blower wheel, bottles, housed in the cells, are cleaned by a jet of compressed air sterile. Once the blowing operation is finished, the vials return to the turntable, and then are conveyed into the guides output.



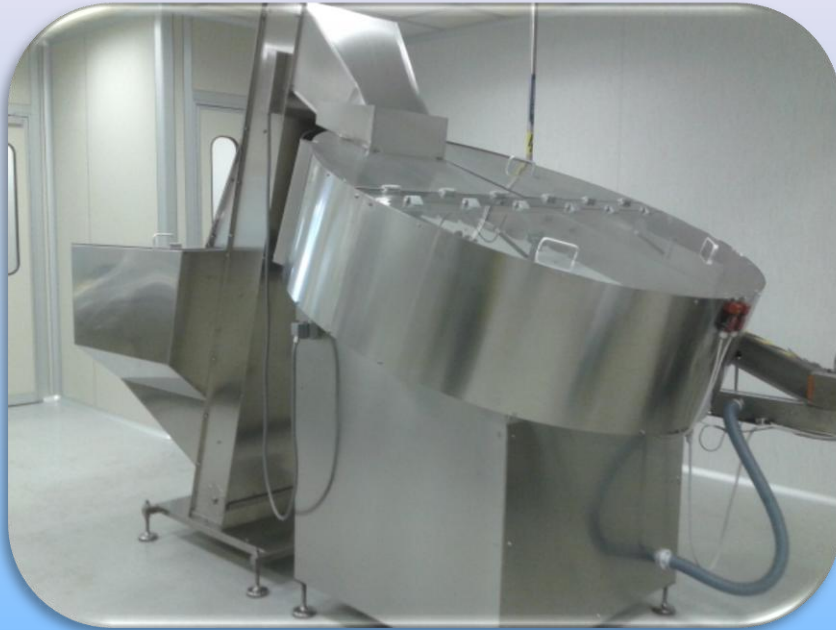
**DIAMETER:**  $\varnothing$  15 ÷ 90 mm  
**HEIGHT:** h . 40 ÷ 240 mm  
**Max SPEED:** 200 Pcs/Min.



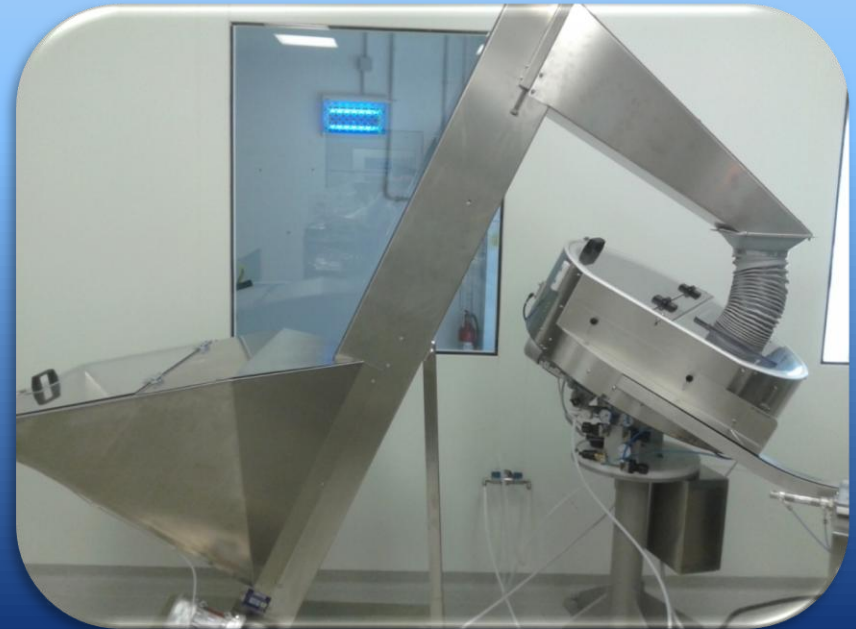


## U800÷U1500

The UXXX system is composed by an infeed elevator and an unscrambler. It allows to select and infeed plastic containers in packaging lines with a max. speed up to 240 pcs/min.



Structure in stainless steel AISI 304 with polycarbonate panels. Storage hopper with capacity up to 700 liters. Conveyor belt in plastic material with adjustable speed. Mechanical unscrambler with rotating disc in high density PE with interchangeable size parts, diameter up to 1500 mm. Adjustable speed and torque with safety clutch system.



# Accessories

## SPECIAL CARTONERS

AO 14 and AV 14 are special cartoning machines for multiple packaging with horizontal or vertical product inserting. Both models are available with tuck-in flap or glue closure.



## UNIQUE REPRESENTATIVES FOR ITALY OF 3 KOREAN COMPANIES FOR SOLIDS PACKAGING

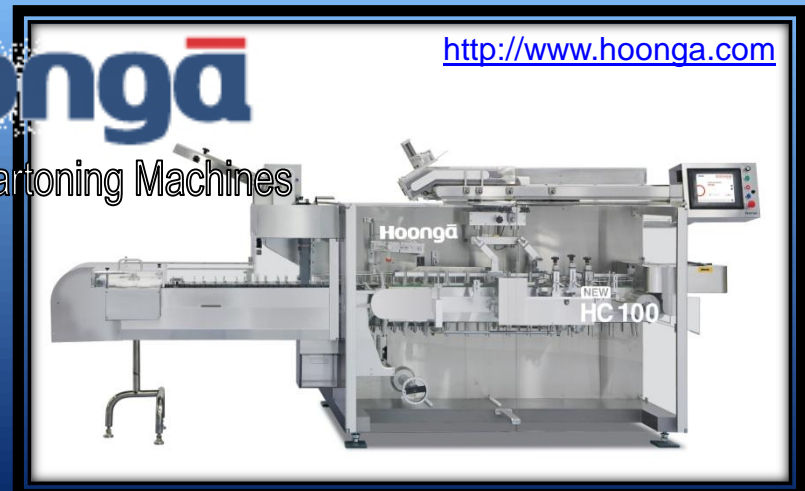
**SEJONG** PHARMATECH  
Capsule Filling Machines  
Tablet Press Machines  
Coating Machines



**COUNTEC**  
Counting Machines for CPR/CPS



**Hoongā**  
Blistering and Cartoning Machines



# Some main references



Humana Pharma International





Thank you for your  
attention

For any other information visit our website:

[www.ravsistemi.it](http://www.ravsistemi.it)

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**RAV Sistemi srl**

Via Piani della Rugginosa, 238 - 50066 Reggello (FI) Italy – Tel. +39 055 0512440 – Fax +39 055 0512444

VAT NR. 02174420485 - [www.ravsistemi.it](http://www.ravsistemi.it) - [info@ravsistemi.it](mailto:info@ravsistemi.it)