

## **Product Catalogue**

**proyema**  
caps assembly machines

## standard manufacturing program

### 1. CAPS ASSEMBLY MACHINES

- 1.1 Threading caps assembly machine CVR
- 1.2 Pressure caps assembly machine CVP
- 1.3 Caps lining machine from roll TVJ
- 1.4 Pre-cut wads insertion machine CVJ
- 1.5 Flip-top closing machine CVB
- 1.6 Folding machine CVA
- 1.7 Customized machines

### 2. CAPS FEEDING SYSTEMS

- 2.1 Cap feeder AR
- 2.2 Cap feeder AS
- 2.3 Cap feeder AP
- 2.4 Cap feeder AC
- 2.5 Pumps and triggers feeder AP
- 2.6 Waterfall cap feeder PE
- 2.7 Waterfall cap feeder PEZ
- 2.8 Standard pre-feeder (Hopper) EL
- 2.9 Pre-feeder with motorized hopper ELH

### 3. CAPS VERIFICATION SYSTEMS

- 3.1 Artificial vision caps verification
- 3.2 Height measurement caps verification

### 4. TRANSPORT SYSTEMS

- 4.1 Conveyor belts
- 4.2 Cooling conveyors
- 4.3 Injection machine extraction conveyor belt

### 5. MAGNETIC THREADING HEADS FOR CAPS

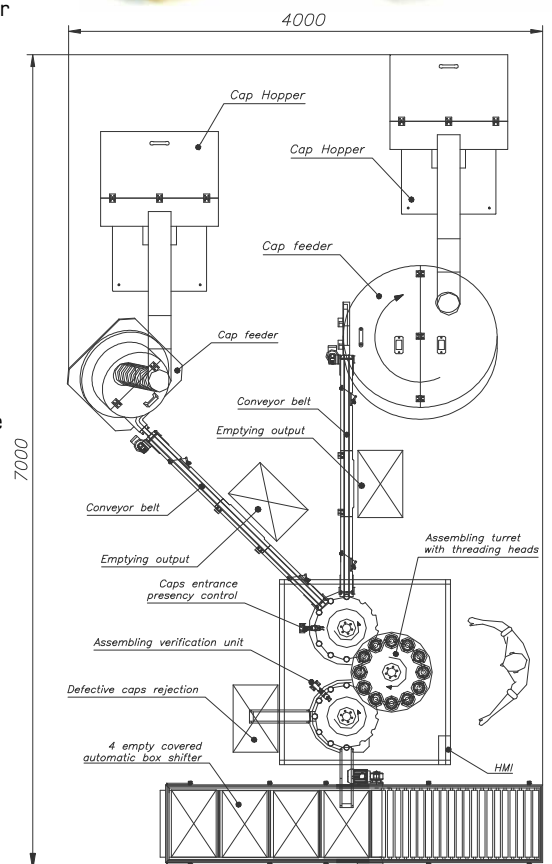
- 5.1 Threading heads with fix grip LPS /LPH
- 5.2 Threading heads with neumatic grip CE
- 5.3 Threading gripper

## threading caps assembly machine

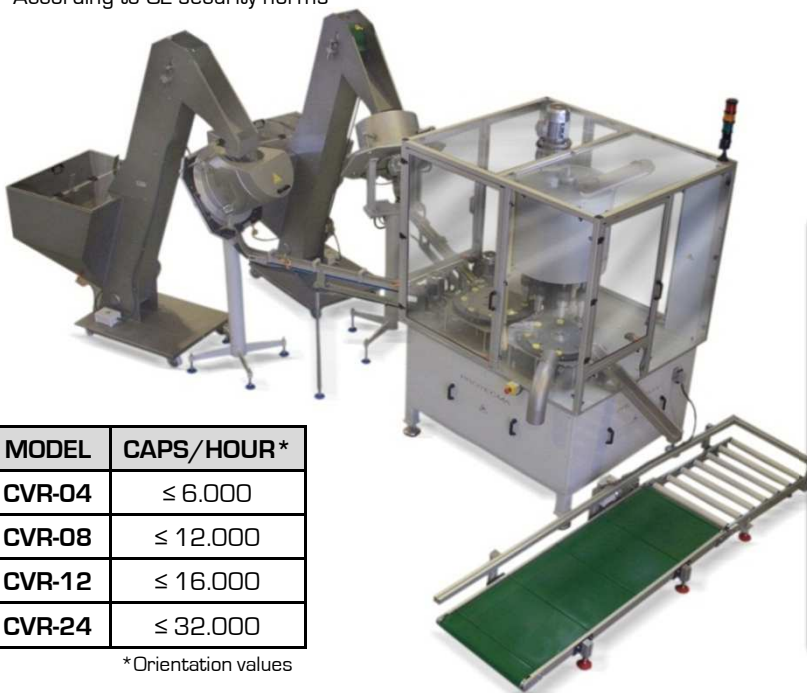
### CVR series

#### Threading assembly machine of caps of 2, 3 or more components

- Customized configuration for each project's necessities: continuous motion machine for high production for caps without orientation or rotary indexed machine for low production for caps with orientation between their components
- CVS: Continuous motion assembly machines with servo drives within each threading head for high production. Allows assembling special caps that require orientation between their components before the assembling and due to the high speed required it is not possible to orient into the cap feeders.
- Customized configuration for each application: 1, 2 or more assembly turrets or stations
- Standard or customized layouts according to the customer requirements
- Histeresys threading heads: Continuous torque
- Torque limiter up to 4 Nm [hysteresis] or 6 Nm [permanent magnets]
- Simple and easy regulation of the speed of rotation of the assembly threading heads
- Stable and reliable assembling and no deformation of the caps
- Flexibility: easy and fast change-over
- Fully-automatic or semi-automatic emptying of the machine
- Multiple verification technologies: height measurement, artificial vision system, micro-hole detection through spark test, leak test, etc.
- Automatic rejection of incorrect parts
- Almost without maintenance
- Tactile screen with detailed statistics and useful data in real time per lot, per box, per assembling unit or per verification device, etc.
- Remote communications or by Ethernet
- According to clean rooms and GMP requirements
- According to CE security norms



Example of CVR-123 for 2 components cap



MODEL	CAPS/HOUR*
CVR-04	≤ 6.000
CVR-08	≤ 12.000
CVR-12	≤ 16.000
CVR-24	≤ 32.000

\*Orientation values



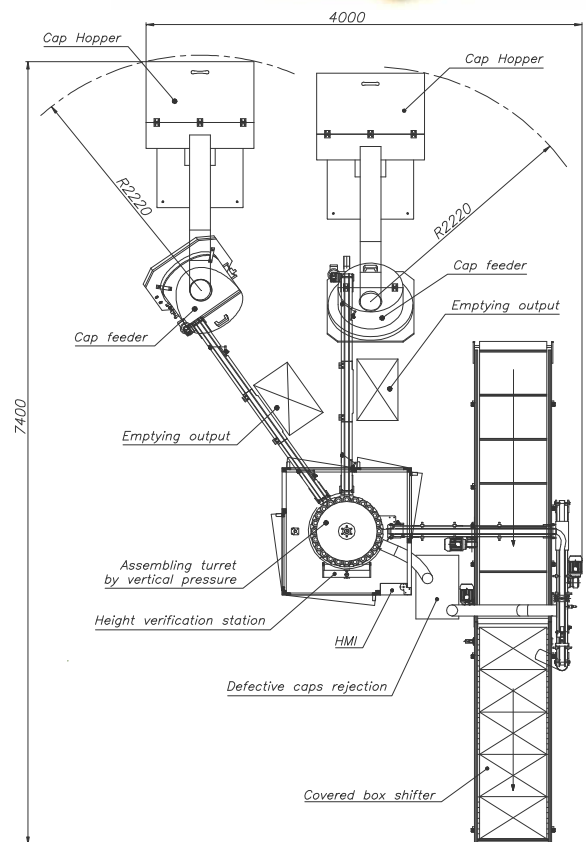
Example of CVR-045 for lenscase assembly

## pressure caps assembly machine

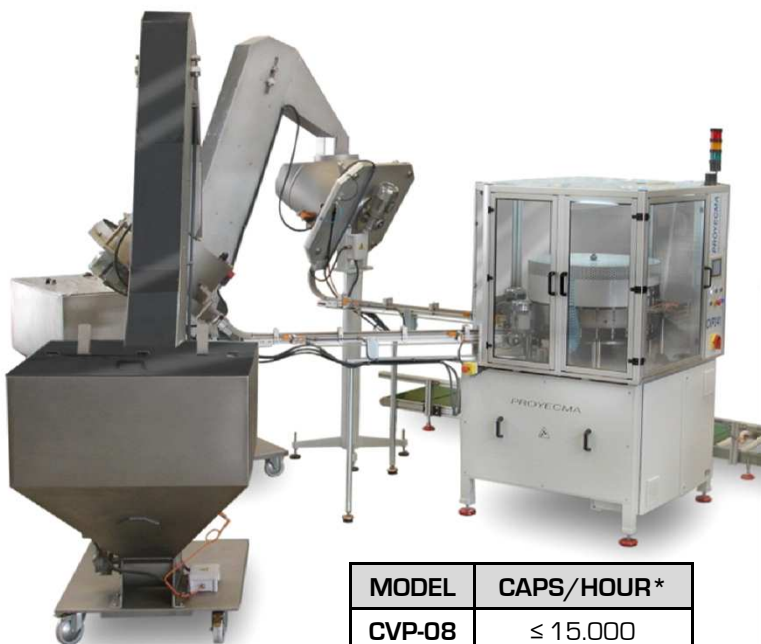
### CVP series

Pressure assembly machine for caps of 2, 3 or more components

- o Customized configuration for each project's necessities: continuous motion machine for high production for caps without orientation or rotary indexed machine for low production for caps with orientation between their components
- o Customized configuration for each application: 1, 2 or more assembly turrets or stations
- o Standard or customized layouts according to the customer requirements
- o Easy adjustment of the assembling strength
- o Easy adjustment of the assembling stroke
- o Stable and reliable assembling and no deformation of the caps
- o Flexibility: easy and fast change-over
- o Fully-automatic or semi-automatic emptying of the machine
- o Multiple verification technologies: height measurement, artificial vision system, micro-hole detection through spark test, leak test, etc.
- o Automatic rejection of incorrect parts
- o Almost without maintenance
- o Tactile screen with detailed statistics and useful data in real time per lot, per box, per assembling unit or per verification device, etc.
- o Remote communications or by Ethernet
- o According to clean rooms and GMP requirements
- o According to CE security norms



Example of CVP-241 for 2 components cap



MODEL	CAPS/HOUR*
CVP-08	≤ 15.000
CVP-12	≤ 25.000
CVP-24	≤ 60.000

\*Orientation Values



Example of CVP-241 for vegetal oil cap

## caps lining (wadding) machine

### TVJ series

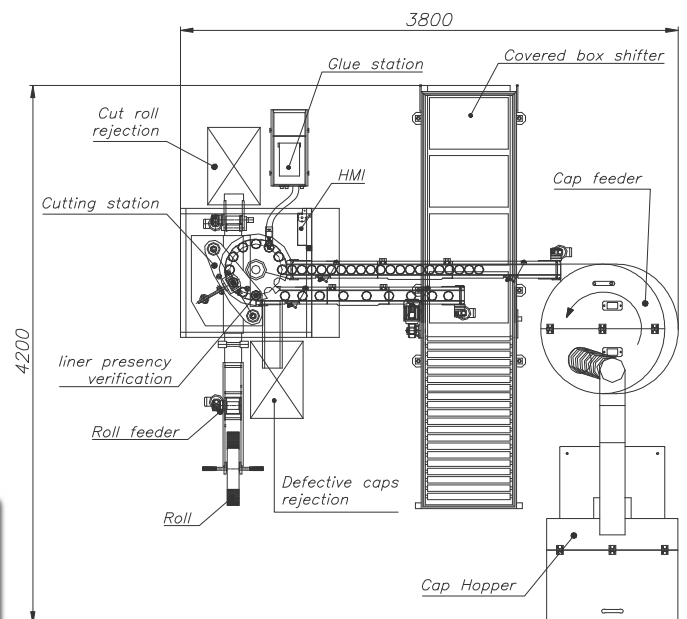
Lining machine to cut and insert sealing liners in caps from roll

- o Customized configuration for each project's necessities: 1, 2, 3 or more punches
- o Standard or customized layout according to the customer requirements
- o TVJ: mechanical robust power transmission for heavy duty requirements: high speed, high precision and high stability
- o TNJ: low cost lining machines for small productions
- o Die plate and punches made of high quality and strength steel
- o Single, double or motorized roll unwinder for higher autonomy
- o Motorized roll rewinder if necessary
- o Caps: round, square, conical, flip-top, oval, etc.
- o Types of liner: round, tri-tab, pull-tab, o-ring (donut), oval, etc.
- o Liner's raw materials : cardboard, PE, foam, aluminium, Lift 'n' Peel™, etc.
- o Gluing station if necessary
- o Stable and reliable assembling and no deformation of the caps
- o Flexibility: easy and fast change-over
- o Fully-automatic or semi-automatic emptying of the machine
- o Multiple verification technologies: presence of the sealing liner into the cap, height measurement, artificial vision system, gluing detection, etc.
- o Automatic rejection of incorrect parts
- o Almost without maintenance
- o Tactile screen with detailed statistics and useful data in real time per lot, per box, per assembling unit or per verification device, etc.
- o Remote communications or by Ethernet
- o According to CE security norms

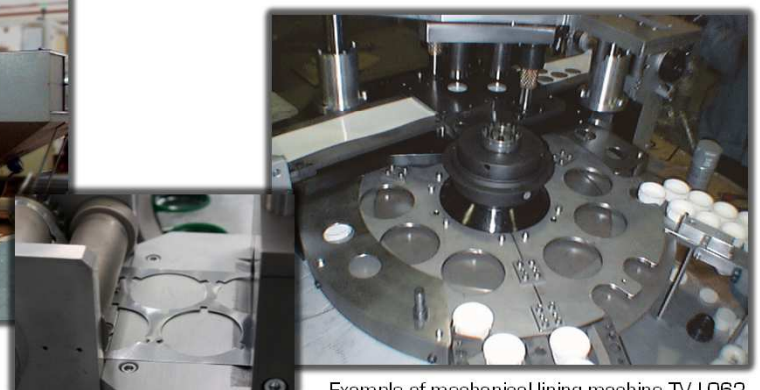


MODEL	CAPS/HOUR*
TNJ-1	≤ 3.000
TVJ-1	≤ 10.000
TVJ-2	≤ 20.000
TVJ-3	≤ 30.000
TVJ-4	≤ 40.000

\*Orientation values



Example of TVJ-121



Example of mechanical lining machine TVJ-062

## pre-cut wads insertion machine

### CVJ series

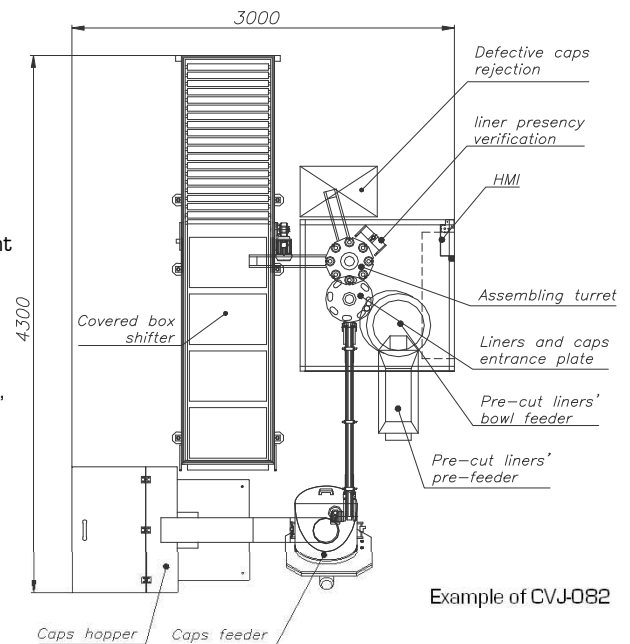
Lining machine to insert pre-cut wads into the caps from a hopper or vertical cartridges

- o Customized configuration for each project necessities: continuous motion machine for high productions, rotary indexed machine for wads with delicate aluminium foil or lineal indexed machine for small production.
- o Standard or customized layout according to the customer requirements
- o CVJ: mechanical robust power transmission for heavy duty requirements: high speed, high precision and high stability
- o CLJ: low cost wad insertion machines for small productions
- o Caps: round, square, conical, flip-top, oval, etc.
- o Types of wad: round, tri-tab, pull-tab, o-ring (donut), oval, etc.
- o Wad's raw materials : cardboard, PE, foam, etc.
- o Faced wads available
- o Minimal wad thickness : 1 mm approximately
- o Gluing station if necessary
- o Stable and reliable assembling and no deformation of the caps
- o Flexibility: easy and fast change-over
- o Fully-automatic or semi-automatic emptying of the machine
- o Multiple verification technologies: presence of the sealing liner into the cap, height measurement, artificial vision system, gluing detection, etc.
- o Automatic rejection of incorrect parts
- o Almost without maintenance
- o Tactile screen with detailed statistics and useful data in real time per lot, per box, per assembling unit or per verification device, etc.
- o Remote communications or by Ethernet
- o According to CE security norms



MODEL	CAPS/HOUR*
CLJ	≤ 2.000
CVJ-08	≤ 10.000
CVJ-12	≤ 15.000
CVJ-16	≤ 20.000

\*Orientation values



Example of CVJ-082



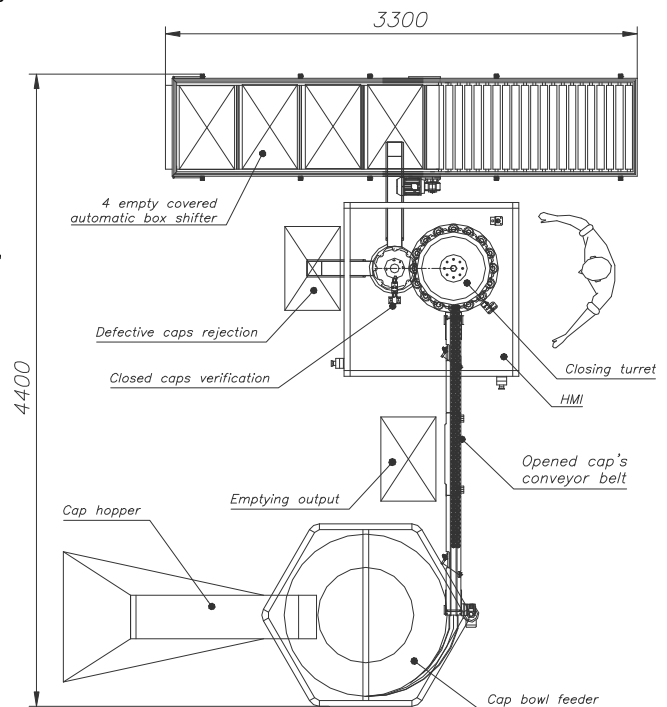
Example of insertion machine CVJ-122 for agro-chemical cap

## flip-top caps closing machine

### CVB series

#### Closing machine for flip-top caps (hinged closures)

- o Customized configuration depending of each type of hinged cap: continuous motion closing machine for standard caps, rotary indexed machine for very special designed caps or lineal indexed machine for small production
- o Standard or customized layouts according to the customer requirements
- o Complete lines for transport and cooling of the caps from injection machine up to the machine.
- o High accuracy adjustment of the pressure and vertical stroke of the closing units
- o No deformation of the cap during the process
- o Flexibility: easy and fast change-over
- o Fully-automatic or semi-automatic emptying of the machine
- o Multiple verification technologies: height measurement, artificial vision system, micro-hole detection through spark test, leak test, etc.
- o Automatic rejection of incorrect parts
- o Almost without maintenance
- o Tactile screen with detailed statistics and useful data in real time per lot, per box, per assembling unit or per verification device, etc.
- o Remote communications or by Ethernet
- o According to clean rooms and GMP requirements
- o According to CE security norms



Example of CVB-161

MODEL	CAPS/HOUR*
CVB-08	≤ 10.000
CVB-12	≤ 15.000
CVB-16	≤ 20.000

\*orientation values



Ejemplo CVB-121 para el cerrado de tapa de champu

## tamper evident band folding machine

### CVA series

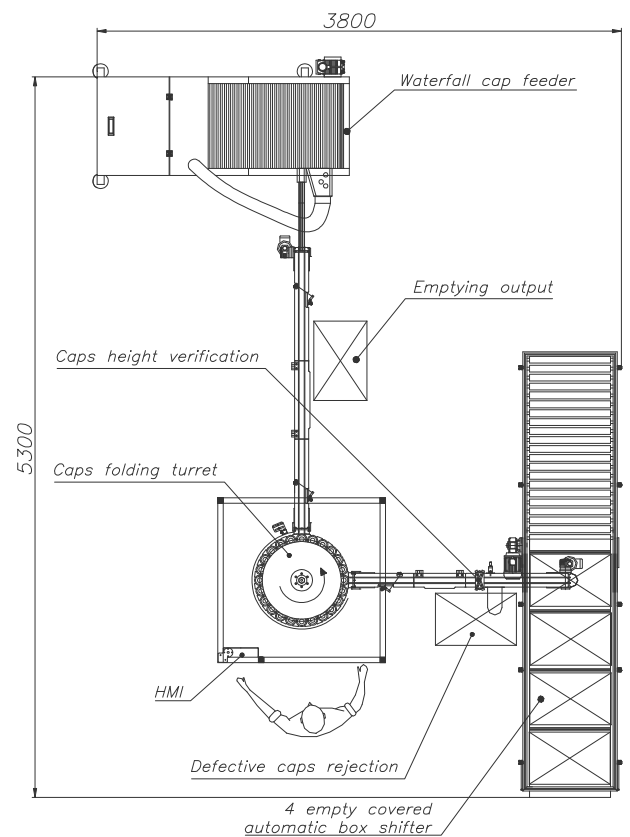
#### Tamper evident band automatic folding (inverting) machine

- o Customized configuration depending of each type of cap or tamper evident band to fold: continuous motion folding machine for standard caps, rotary indexed machine for very special caps or lineal indexed machine for small production.
- o Standard or customized layouts according to the customer requirements
- o Complete lines for transport and cooling of the caps from injection machine up to the machine.
- o High accuracy adjustment of the pressure and vertical stroke of the folding units
- o Flexibility: easy and fast change-over for similar kind of caps
- o No deformation of the cap during the process
- o Fully-automatic or semi-automatic emptying of the machine
- o Multiple verification technologies: height measurement, artificial vision system, micro-hole detection through spark test, leak test, etc.
- o Automatic rejection of incorrect parts
- o Almost without maintenance
- o Tactile screen with detailed statistics and useful data in real time per lot, per box, per assembling unit or per verification device, etc.
- o Remote communications or by Ethernet
- o According to clean rooms and GMP requirements
- o According to CE security norms



MODEL	CAPS/HOUR *
CVA-04	≤ 10.000
CVA-12	≤ 40.000
CVP-24	≤ 70.000

\*Orientation values



Example of CVA-241



Example of folding machine CVA-041 for pharmaceutical cap



## customized machines

### Design and fabrication of customized assembly machines or other kind of applications

Proyecma manufactures several kind of machines, not only for the plastic caps industry or bottle plants. We make customized projects for different industries: handling systems, complete feeding cells, refurbishing of old machines for new products or complete new machines for assembling, testing or others.

Proyecma can supply different kinds of machines: mechanical power transmission for high precision, production and robustness; pneumatic machines for economical projects for small productions; or servo-drive machines for high flexibility, precision and speed.



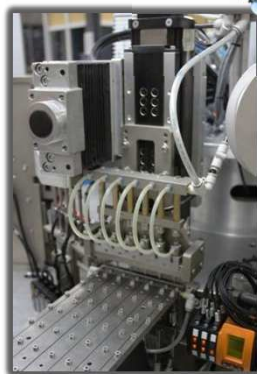
CIP-121 indexed assembling and testing machine for ophthalmic dripper at 3,000 pph



AC-101 Jet-air stream with accumulation turn table for caps at 100.000 cph



CIP-166 indexed assembly and leak testing machine for lighter at 16,000 pph



CIP-081 indexed machine 2 oriented components vinegar cap at 10,000 cph