E-Fill SW

Automatic filling, capping and labeling machine

SPEED: up to 50 products/minute (depending on packaging)

The E-Fill SW is equipped with :

- Mechanically welded 304 stainless steel frame on feet.
- CDA-designed 304 stainless steel conveyor with 82.5 mm ACETAL paddle chain.
- Induction motors on variable frequency drivers.
- 304 stainless steel watertight electrical box.
- Intuitive color touch screen with memory for up to 50 products and self-diagnostics.
- Timing star wheel for successive filling and capping.
- Dosing by peristaltic pump.
- Automatic distribution of caps.
- Check for presence of reducer in cap.
- Non-compliant cap ejection system (if reducer missing).
- Automatic capping station for one cap.
- Semi-automatic capping station for all other caps.
- Up to 2 labeling stations for cylindrical products (2nd station optional).
- 27.5” - 700 mm diameter rotating accumulation table for product outfeed.
- Plexiglas top cover.

Available options

- A container feeding system (rotating table, vial unscrambler or high-capacity vial unscrambler).
- A mass flow meter or electromagnetic flow meter.
- A centrifugal, positive displacement pump with flexible impeller or eccentric screw.
- A peristaltic pump.
- A piston (different dosing devices possible).
- An additional dosing nozzle (short, standard, swivel, etc.).
- VS400 screw capper.
- A VS500 capper (this has not yet been fitted to SW, but can be fitted on request).
- A VS600 capper
- A pneumatic pusher
- A crimping station.
- A container accumulation system (cylindrical table, rectangular table, transfer plate).

Limits of the E-Fill SW

- Dosing volumes from 1ml up to 8oz - 250 ml (in automatic mode)
- Dosage of volumes greater than 32oz - 1L (in semi-automatic mode)
- Labeling of tapered products

Before placing an order, we can carry out tests free of charge to ensure the feasibility of your project. Do not hesitate to contact us!

Technical characteristics E-Fill SW

APPROXIMATE MASS (LBS)	2,200 lbs - 1000 kg (depending option)
DIMENSIONS (WITH FRAME)	6 ft - 1800 mm in width 7 ft - 2100 mmin height 14 ft - 4300 mm of depth
POWER CONSUMPTION	5 kW
POWER SUPPLY	208-250V single phase 50Hz
FREQUENCY	~ 50 Hz 16 A
CONTROL	by digital display
IDEAL OPERATING TEMPERATURE	from 50°F to 90°F (10°C to 30°C)

Please note that this machine requires an electrical and pneumatic power supply.

Technical focus n°1

PNEUMATIC / ELECTRICAL CONNECTION

Pneumatic connection: 1 air connection on pressure gauge - Under 6 bars constant (Hose to be provided Ø Int/Ext = 8/10 mm).
Electrical connection: 1 Cable 208-250 volts single phase - length 18 ft - domestic plug to be supplied according to your wall outlet.

Technical Focus n°2

DIGITAL DISPLAY

The color touch screen allows easy adjustment of several parameters such as:

The selection of the station and the options.
Setting of time delays (label output, spacing).
Daily product counter.

Technical Focus n°3

ROTATING FEEDING TABLE

- 27.5" - 700 mm diameter rotating feeding table.
- Adjustable product infeed guide to suit product diameter.
- Variable frequency driver to modulate rotation speed.
- External HDPE strapping (optional).
- Infeed shelf (optional).

Technical focus n° 4

BOTTLE UNSCRAMBLER (UP TO 40Z)

The bottles are placed in bulk in the hopper through the upper hatch. A conveyor belt lift lifts them into the orientation bowl. Using a tooling system, the vials are automatically oriented and lined up on the downstream machine conveyor.

Technical focus n°5

PERISTALTIC PUMP

- Dosing from 1 ml to 32oz (1L) with an accuracy of ± 0.5%.
- Keyboard and LCD screen control.
- Anodised aluminum pump head with 12 offset 304 stainless steel rollers mounted on ball bearings.
- Tools for use with silicone tubes Ø0.5 - 0.8 - 1.2 - 1.6 - 3.2 - 4.8 - 6.0 - 8.0 mm.
- Supplied with 1 x Ø4.5mm dosing needle with 2.1 certificate, 2 x 600mm 316L stainless steel suction nozzles and 100 ft (30 meters) of hose per pump head.
- Correction, re-suction, speed and acceleration control functions.

Technical focus n°6

FLOWMETER DOSING

Flowmeter dosing is generally used for fluid to slightly thick products without lumps in suspension.
Flowmeter dosing is carried out by the action of a rotary pump, a flowmeter and a dosing head (which can be of several configurations). The mass flowmeter is compatible with all types of product, while the electromagnetic flowmeter is only compatible with conductive products.

Technical focus n°7

PISTON DOSAGE

Piston dosing is generally used for packaging liquid to dense products or products in suspension.
Using a suction system, the product is introduced into the dosing chamber of the piston. When the magnetic sensors detect that the pre-set quantity has been reached, the piston pushes the product towards the valve and then towards the dosing head. In some cases, the piston can be fitted with a hopper to facilitate suction. Regulators are used to adjust the speed at which the piston moves. The piston cycle consists of dispensing, then suction until the next dose is dispensed.

Technical focus n°8

CAP DISPENSING

TECHNICAL DESCRIPTION :

• 1 automatic cap lifter to feed the orientation bowl.
• 1 single-format automatic orientation bowl.
• 1 automatic dispensing ramp for screw caps, including :

- A reducer presence control system.
- Pick and place for the cap.
- Bottle blocking under the Pick and Place.

CAP EJECTION SYSTEM :

System for checking the presence of the reducer inside the cap.
If the reducer is missing, the cap will be ejected.

Technical focus n°9

VS400

VS400 capping station including :

• A product detection and stopping device for manual capping with a cap presence control sensor.
• A product detection and stopping device under the screwing head, with a pneumatic cylinder with a 'V' tip and anti-rotation plate.
• Electrically height-adjustable screwdriver fitted with a screwdriving head for one cap format.

Technical focus n°10

VS500

VS500 capping station including :

• A bottle-holding and stopping device for manual capping, with a cao-presence control sensor.
• A bottle-holding and stopping device under the screwing head, with a pneumatic actuator with a «V» tip and anti-rotation plate.
• Screwing of the pump/caps with two belts (lateral movement of the belts).
• Tightening torque and screwing height adjustment.

Technical focus n°11

VS600

VS600 capping station including :

• Capping system with height-adjustable double guide.
• Capper with brushless motor.
• Tightening torque adjustable from the touch screen (0.7 to 3Nm).
• Capping pliers with 3 fingers.
• Capping unit mounted on electric jack.
• Capper finger tooling machined to match the geometry of your cap (diameter, height, type of grooves, etc.).

Technical focus n°12

PICK AND PLACE

• Bottle-locking system using a pneumatically guided cylinder with a cylinder head adapted to the product.
• Bottle-locking system using a pneumatically guided cylinder with a cylinder head adapted to the product and an anti-rotation device.
• Capping system with motorized axis for rotation and height translation, equipped with two cappers.
• Brushless positioning can be set from the touch screen.
• Low-voltage electric capper (320 rpm) with toolless adjustable capping torque (0.1 to 4.4 Nm).
• Capping unit mounted on a pneumatic cylinder.
• Capping head machined to match the geometry of your cap (diameter, height, type of grooves, etc.).

Technical focus n°13

PNEUMATIC PUSHER

Pushing station including :

• A bottle detection and stop device for manual capping.
• Cap presence control unit.
• A bottle detection and stopping device under the driving head, with pneumatic jack and centring V.
• A height-adjustable pneumatic cylinder to press the cap onto the neck of the bottle.

Technical focus n°14

CRIMPING

Crimping station including :

• Bottle locking system using a guided pneumatic cylinder with a cylinder head adapted to the product.
• Crimping system on electrically height-adjustable double guide.
• Crimping assembly mounted on pneumatic cylinder.
• Crimping head adapted to the geometry of your cap (diameter, height, etc.).
• Crimping station can be dismantled.

Technical focus n°15

LABELLING STATION

3-POINT TECHNOLOGY :

The 3-point technology positively grips the bottle between 3 rollers as it rotates, ensuring better application and smoothing of the label on the body of the bottle, limiting bubbles, creases and other deviations.

TECHNICAL DESCRIPTION :

• Rotary labelling stations mounted on electric columns that can be controlled from the touch screen and fitted with asynchronous motors on frequency inverters.
• Adapter mandrel for label rolls from Ø40 to Ø76 mm.
• Industrial» product cladding system with interchangeable guided pneumatic cylinder. Rolls adapted to the material, shape and rigidity of the product to be labelled.
• Ø61 mm smoothing roller adapted to the product.
• Different time delays can be memorised and recalled from the touchscreen, depending on the desired finish.
• Detection of transparent labels by ultrasonic weeding cell (optional).
• Automatic height recall (optional).

WINDING DIRECTION: OUTSIDE LEFT

Roll dimensions :
• a : max. chuck diameter = 75 mm
• b : max. roll diameter = 12” - 305 mm
• c : max. labeling height = 6” - 155 mm
• d : label gap = 3-5 mm

Minimum quality of the tape used : 90g

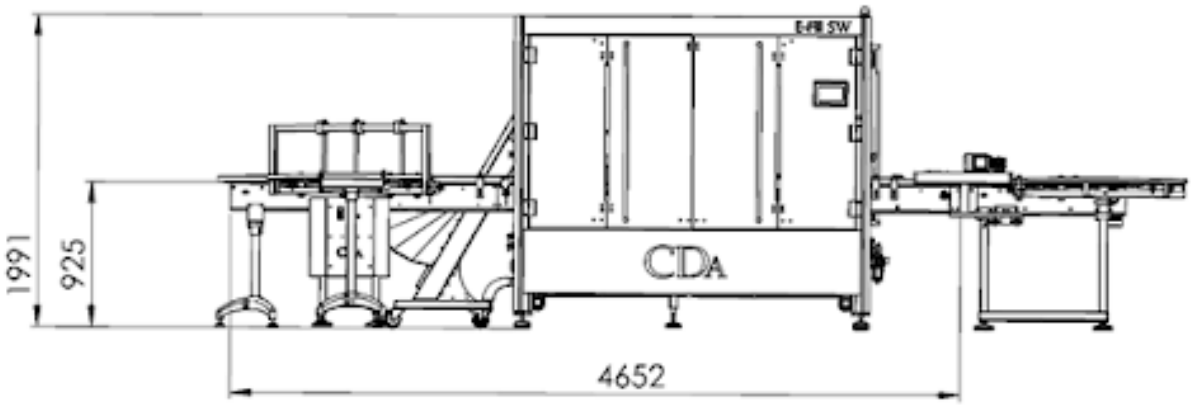
Important : Label reels should be stored in a dry place between 60F and 65F (15°C and 18°C).

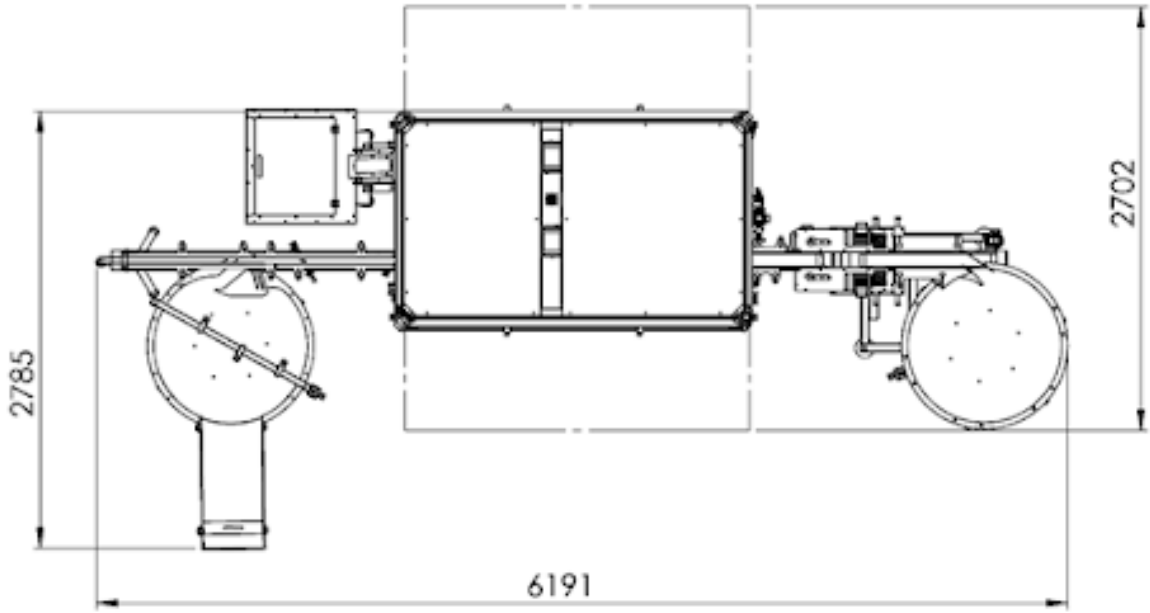
Technical Focus n°16

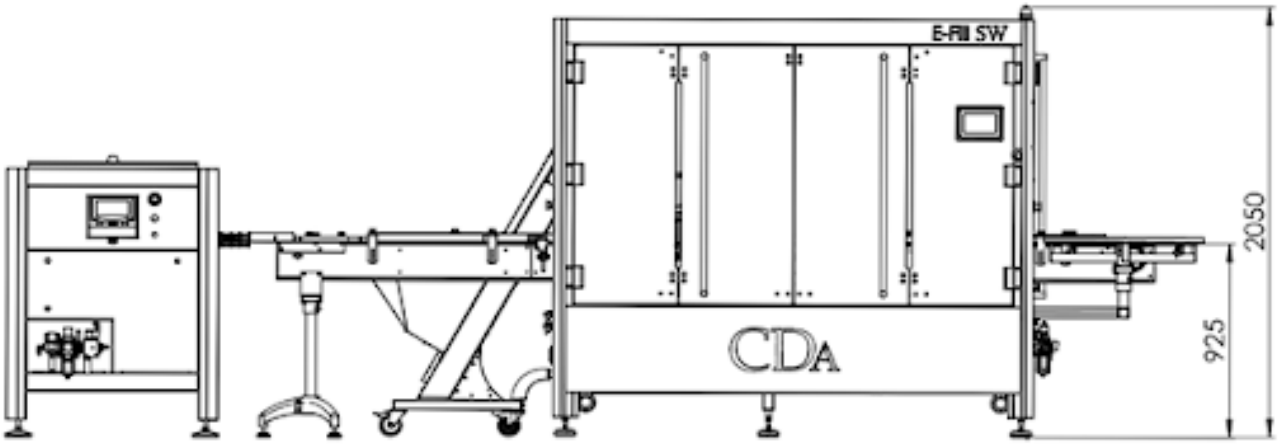
ACCUMULATION TABLE

The accumulation table is installed at the machine exit to collect the labeled bottles. The 27.5” - 700 mm diameter table can receive up to 60 bottles. The accumulation table saves the operator a considerable amount of time.

Technicals Drawings







Pictures, production rates and technical descriptions for information.

Technicals Drawings