



Sora machine

AEROSOL & B.O.V FILLING
EQUIPMENT



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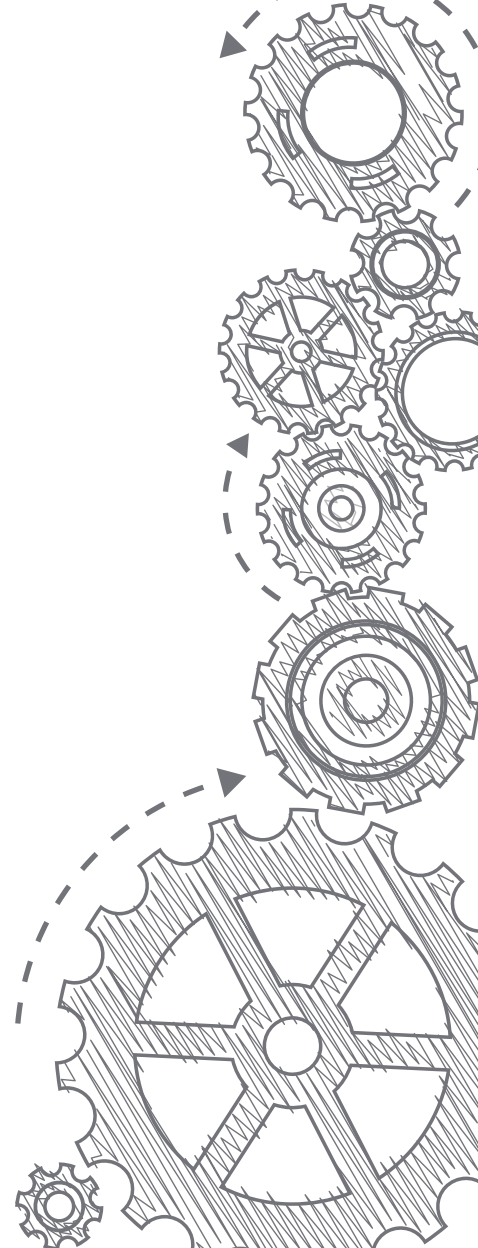
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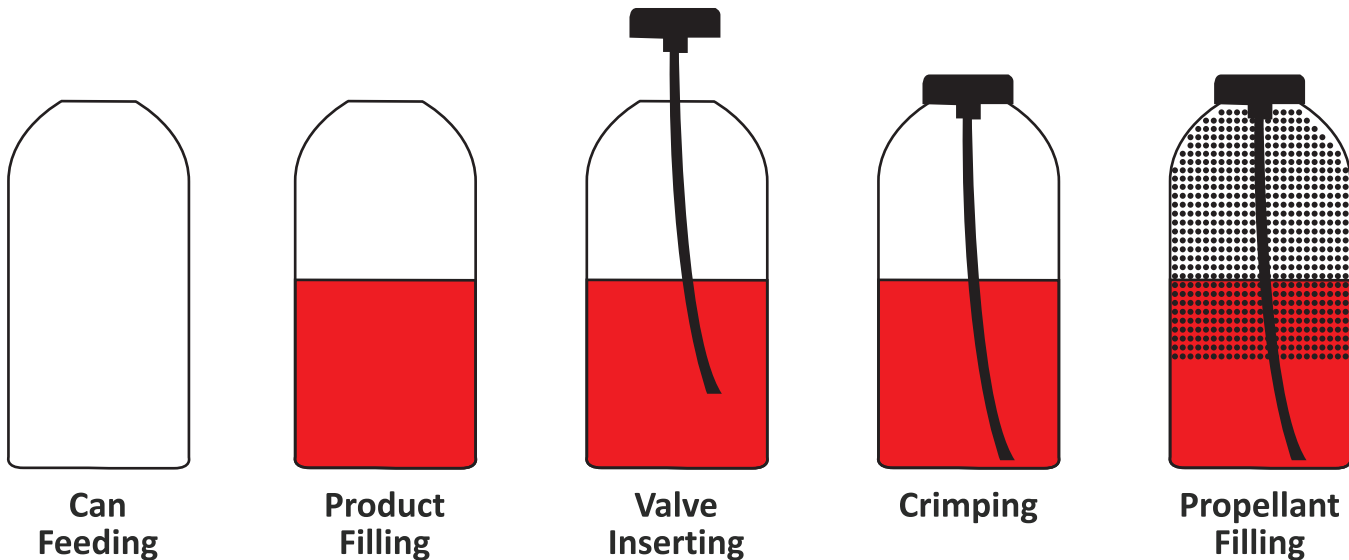
ABOUT US

Sora Machine was founded in 1981 by Mr. Yılmaz Kesme, the father of Barış Kesme, CEO of Sora Group. Sora Machine is the first manufacturer of aerosol product machines in Turkey, and has continued to offer innovative solutions to its customers using the most recent technology.

With over 40 years of experience in designing and manufacturing machinery, we have established a reputation for our expertise. Our team is able to promptly develop new projects for future products and offer high-quality services in various sectors. We are dedicated to providing flexible, timely responses to our customers' needs. Quality is at the forefront of everything we do at Sora Machine, and it plays a crucial role in all of our business processes. Our goal is to systematically produce faster units while maintaining the highest level of quality. In the 21st century, our focus is on maximizing production without compromising on quality.



Know-How: Sora is a group company consisted by 5 different companies; Sora Machine, Sora Cosmetics, Bebak Cosmetics, Alix Avien and Morfose Cosmetics. Thanks to our several production facilities, we are quite experienced in aerosol and liquid filling equipment. We can come up with the innovative solution you need, trusting our 40 years of know-how in the sector.



Fill your products with Sora machinery

Sora machine fills a variety of product forms, from aerosol to sprays and dispensing products;

Personal Care: *Deodorant, APA spray, shaving foam/gel, sun-screen*

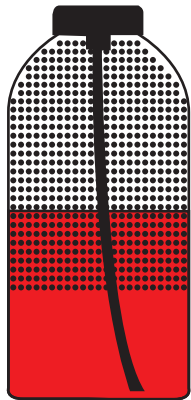
Hair care: *Hair spray, hair mousse*

Home care: *Room fresheners, insect killers, dust and spot removers*

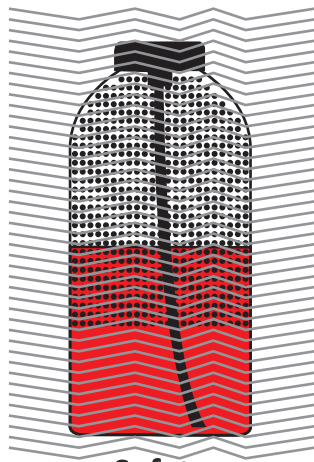
Technical: *Car repair products, paint spray, glue spray*

Pharmaceutical: *MDI*

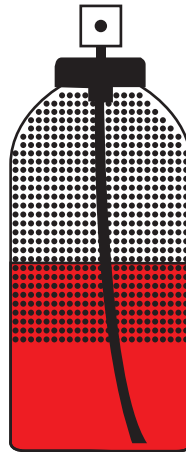
Food: *Edible oil spray*



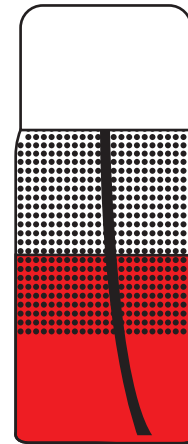
**Check
Weighing**



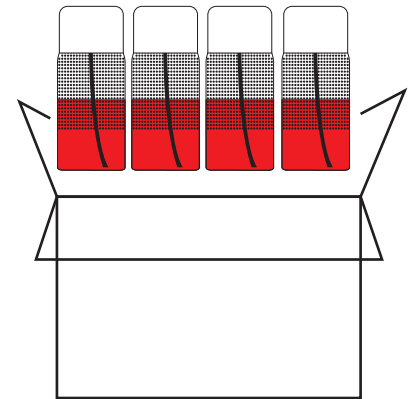
**Safety
Testing**



**Spray Head
Inserting**



**Cap
Placing**



Packing

AEROSOL

The classification of the machines are provided as below;

- Automatic continuous rotary filling machines **up to 120-300 cpm**
- Automatic rotary indexing filling machines **up to 60-120 cpm**
- Semi automatic rotary indexing filling machines **up to 40 cpm**
- Manual filling machines **up to 15 cpm**

GENERAL SPECIFICATIONS

Can diameter: 35-65 mm

Can heights: 70-320 mm

Product volume: 20-300 ml

Propellant volume: 20-400 ml

Gas in use: All liquefied propellant

Valves: Male & female

Valve crimping: Mechanical or vacuum

Dosing accuracy: +/-1%

Machine construction material: AISI 304

In contact with dosing material: AISI 316 (optional)

All conveyor motors: Ex-proof

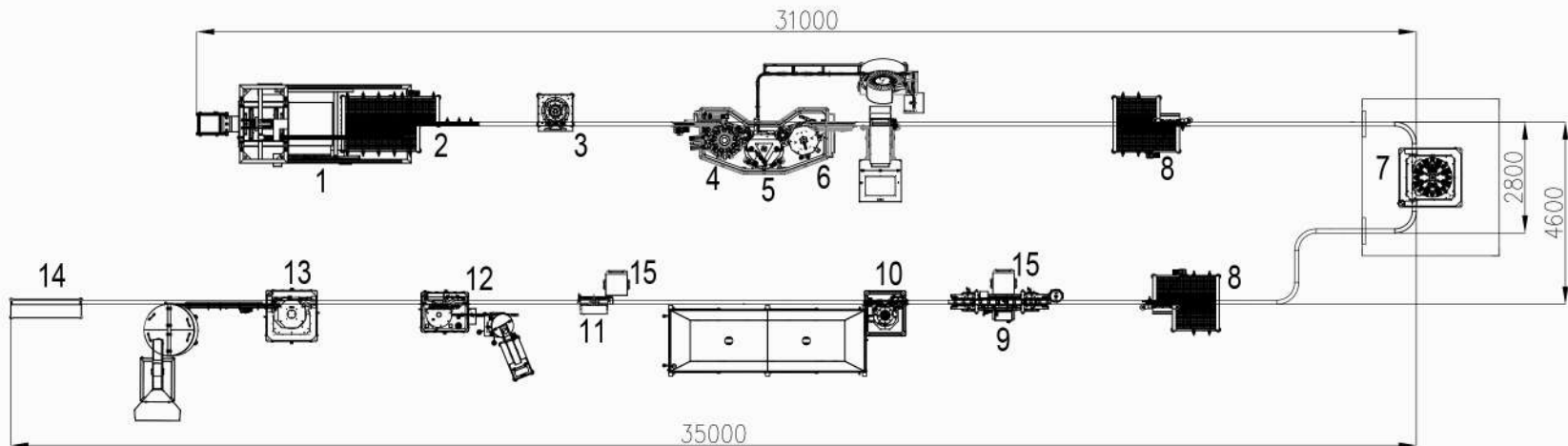
Antistatic conveyor belt, scroll, change part.

Machine enclosures are equipped with safety door switches.

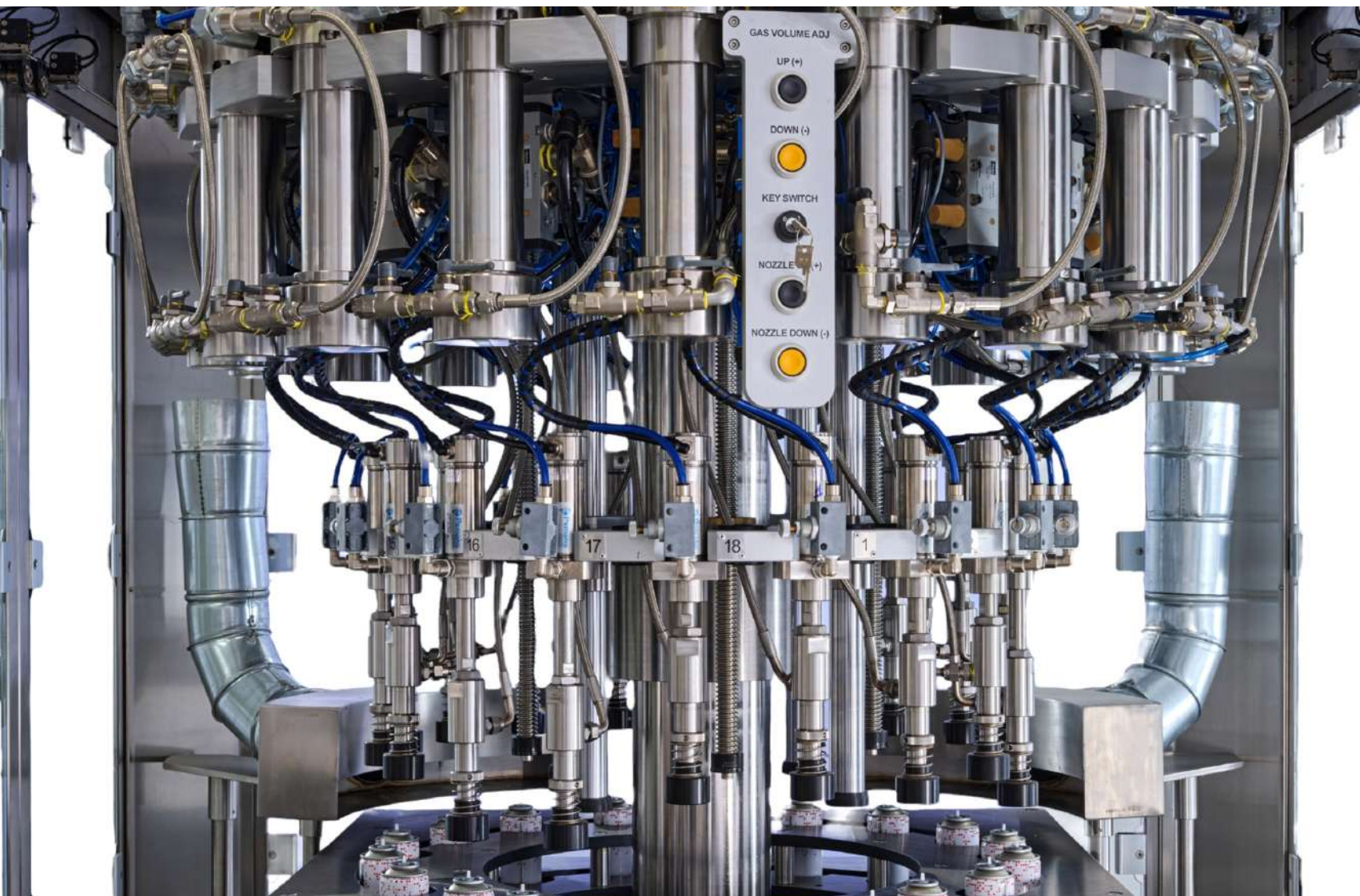
AEROSOL FILLING EQUIPMENTS

	SEMI-MAK	ALL-MAK	SIN-MAK	DUB-MAK	TWIN-MAK	MONO-MAK	ROT-MAK
Capacity	up to 10-15 cpm	up to 40 cpm	up to 60 cpm	up to 85 cpm	up to 100-120 cpm	up to 120-250 cpm	up to 170-300 cpm
Depalletizer	-	Optional	Optional	Optional	Optional	Optional	✓
Feeding	-	✓	✓	✓	✓	✓	✓
Conveyors	-	✓	✓	✓	✓	✓	✓
Ball dropping	-	Optional	Optional	Optional	Optional	Optional	Optional
Product filling	✓	✓	✓	✓	✓	✓	✓
Valve inserting	-	✓	✓	✓	✓	✓	✓
Crimping	✓	✓	✓	✓	✓	✓	✓
Propellant filling	✓	✓	✓	✓	✓	✓	✓
Gas house	-	Optional	Optional	Optional	Optional	Optional	Optional
Checkweighing	-	Optional	Optional	Optional	Optional	Optional	Optional
Waterbath	-	Optional	Optional	Optional	Optional	Optional	Optional
Leak detection	-	Optional	Optional	Optional	Optional	Optional	Optional
Ink-jet unit	-	✓	✓	✓	✓	✓	✓
Ink-jet printer	-	Optional	Optional	Optional	Optional	Optional	Optional
Spray head inserting	-	Optional	Optional	Optional	✓	✓	✓
Cap placing	-	Optional	Optional	Optional	✓	✓	✓
Collecting table	-	Optional	Optional	Optional	Optional	Optional	Optional
Shrink machine	-	Optional	Optional	Optional	Optional	Optional	Optional
Wrap around cartoner	-	Optional	Optional	Optional	Optional	Optional	Optional
Palletizer	-	Optional	Optional	Optional	Optional	Optional	Optional

ROT-MAK / MONO-MAK UP TO 300 CPM

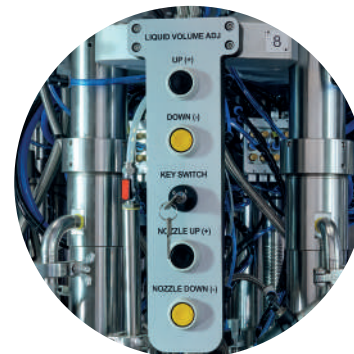


- | | |
|------------------------|---------------------------|
| (1) Depalletizer | (9) Checkweighing |
| (2) Feeding table | (10) Water bath |
| (3) Ink-jet unit | (11) Leak detection |
| (4) Product filling | (12) Spray head inserting |
| (5) Valve inserting | (13) Cap placing |
| (6) Crimping | (14) Collecting table |
| (7) Propellant filling | (15) Reject bin |
| (8) Accumulation table | |



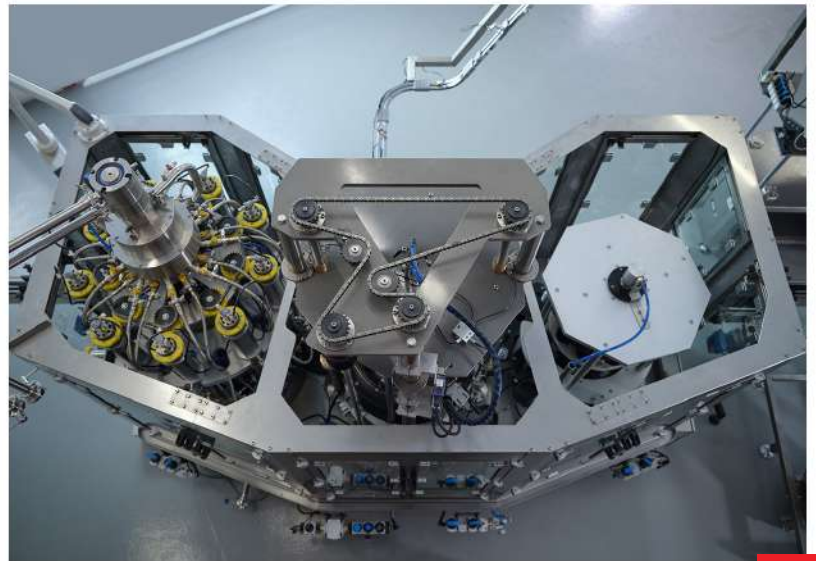


Easy switch from APA filling to alcohol-based filling. Pull the red knob, rotate the nozzles and it will be automatically aligned

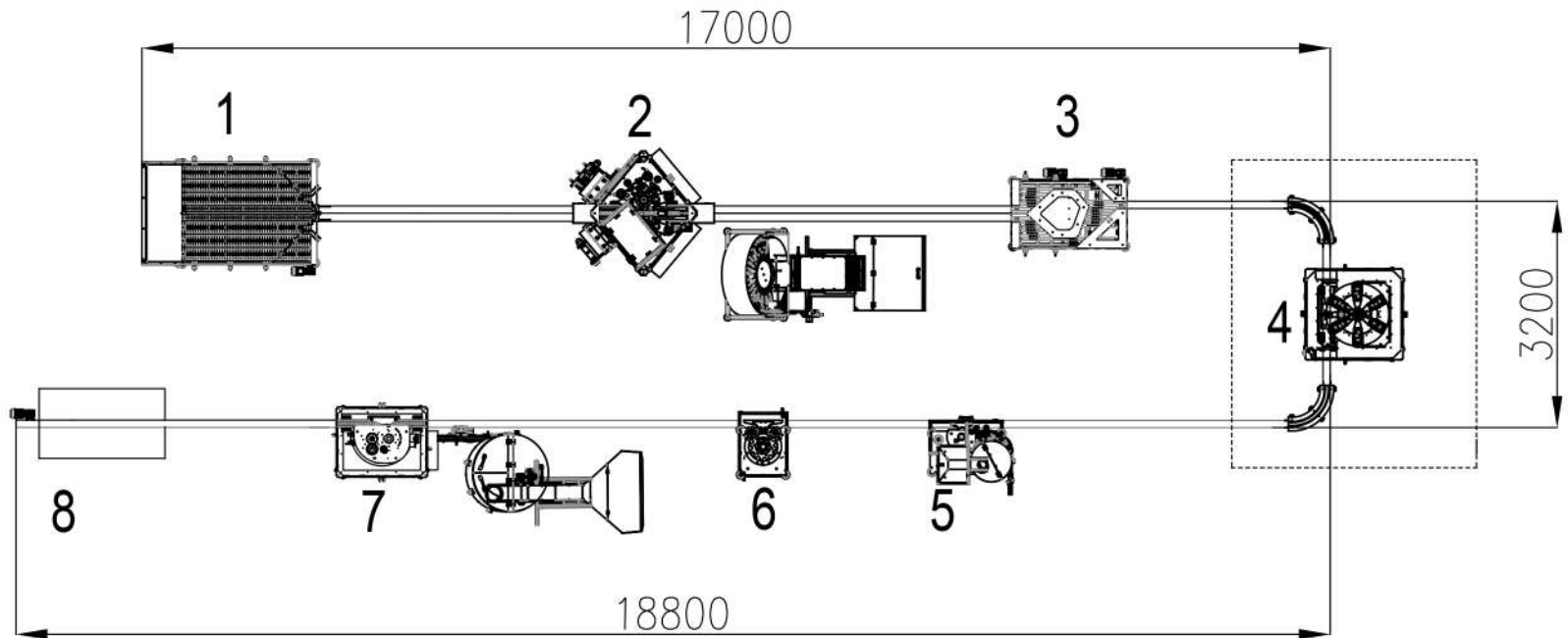


Automatic filling volume adjustment with pneumatic motor





TWIN-MAK UP TO 120 CPM



- | | |
|----------------------------|--------------------------|
| (1) Feeding table | (5) Spray head inserting |
| (2) Product filling | (6) Ink-jet unit |
| Valve inserting & Crimping | (7) Cap placing |
| (3) Conveyor combiner | (8) Collecting table |
| (4) Propellant filling | |

Liquid filling Valve inserting & Crimping

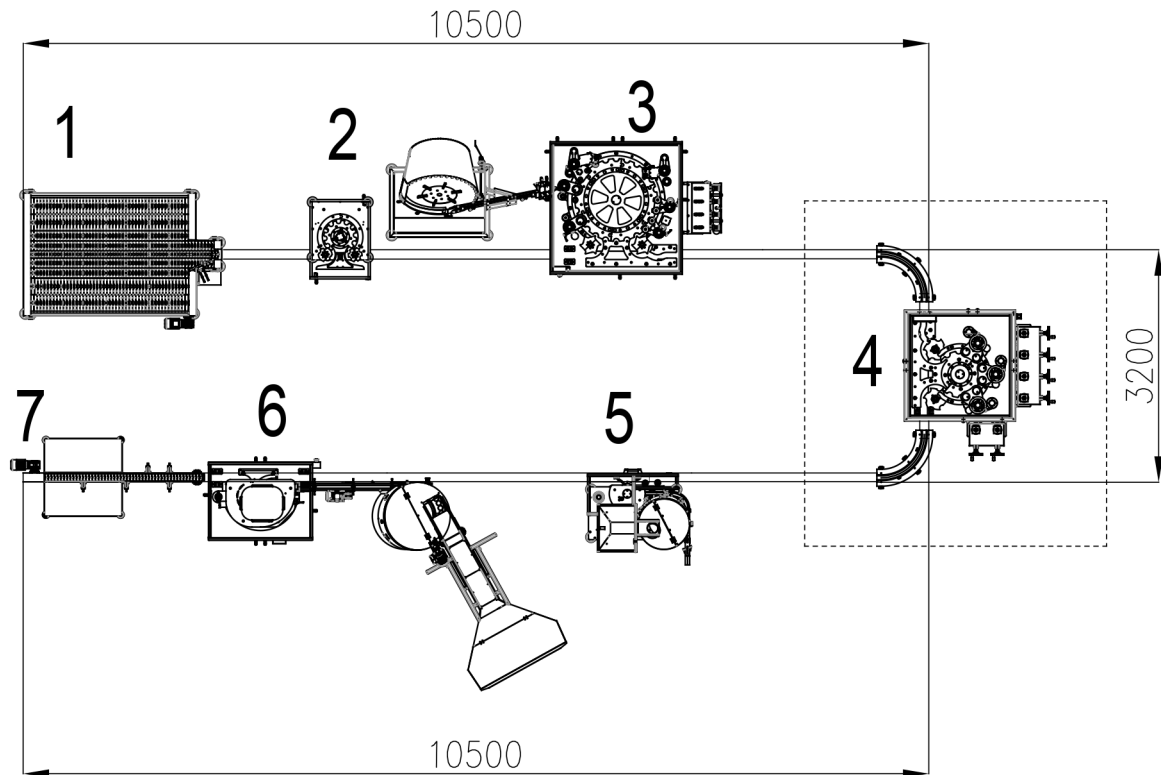


Propellant filling



- Scrolls, change parts and plastic covers on guide rails are anti-static
- Dosing accuracy: $\pm 1\%$
- Machine construction: AISI 304
- Product contact parts: AISI 304 or 316
- All the machine cabinets are equipped with on/off switches
- Clutch system in case of any jamming cans

DUB-MAK UP TO 85 CPM



(1) Feeding table

(2) Ink-jet unit

(3) Product filling

Valve inserting & Crimping

(4) Propellant filling

(5) Spray head inserting

(6) Cap placing

(7) Collecting table

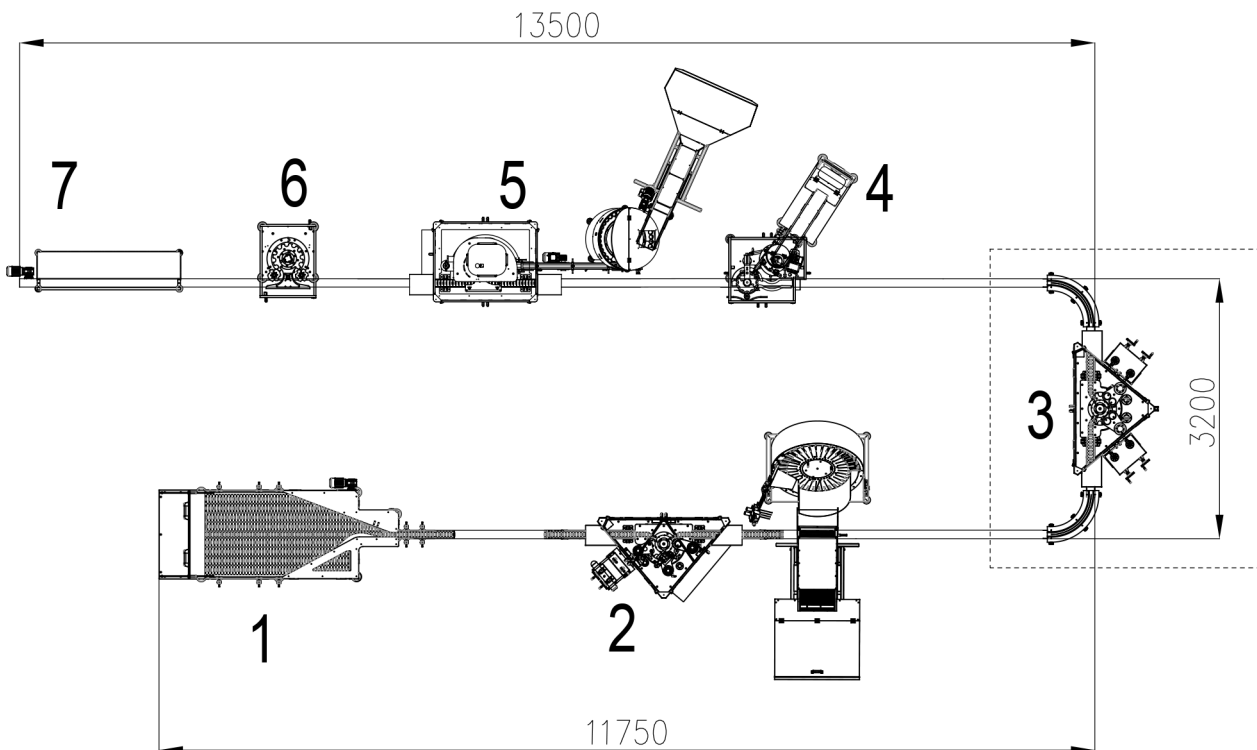
- Extraction duct connection point on top of each machine
- Developed and easy usage PLC control system
- HMI touch panel
- Quick setting for different diameter of can
- Tool free change parts
- Easy service and maintenance
- Machine enclosure safety switches

Liquid filling Valve inserting & Crimping



Propellant filling

SIN-MAK UP TO 60 CPM



- | | |
|----------------------------|--------------------------|
| (1) Feeding table | (4) Spray head inserting |
| (2) Product filling | (5) Cap placing |
| Valve inserting & Crimping | (6) Ink-jet unit |
| (3) Propellant filling | (7) Collecting table |

Propellant filling



Liquid filling Valve inserting & Crimping

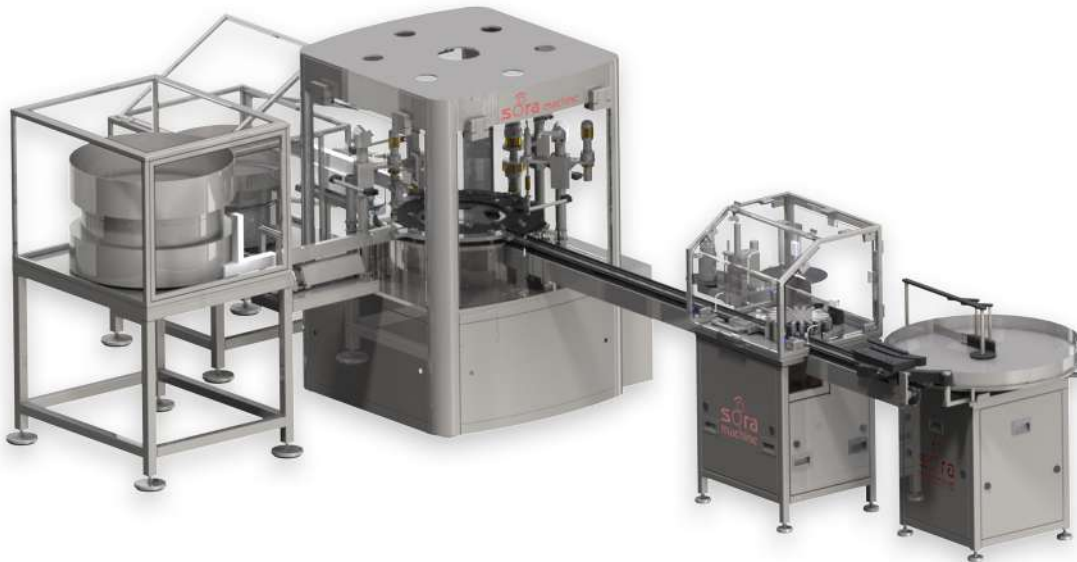
ALL-MAK UP TO 40 CPM

- 304 SS construction and product related parts
- 35-65mm diameter cans
- No can / No fill feature
- Two heads product filling cylinders up to 300 ml capacity
- Single head valve fitting for both tin and aluminum valves
- Single head valve crimping with vacuum on/off option and valve control
- Machine stops in case valve is missing
- Single head propellant filling cylinder up to 400 ml capacity
- +/- %1 filling accuracy
- Operating air pressure 8-10 bar
- Required propellant pressure 10-12 bar
- Suitable for all type of aerosol cans
- Machine enclosure
- Pneumatic or locked machine safety switches
- Infeed / outfeed protection tunnels in order to avoid workers to reach mobile parts
- ATEX HMI control panel
- ATEX button control box

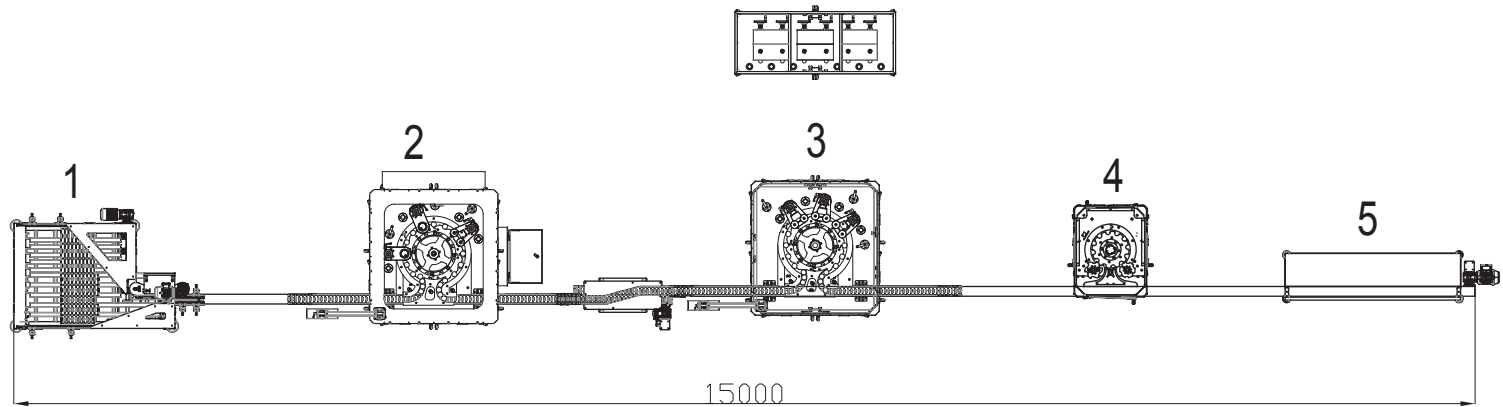


MDI-MAK UP TO 40 CPM

- Dosing accuracy: +/- 1%
- Machine construction: AISI 304
- Product contact parts: AISI 316L
- All the machine cabinets are equipped with on/off switches
- Two heads filler
- 22 mm diameter cans
- Liquid cylinder capacity: 0-6,5 ml
- Gas cylinder capacity: 0-27 ml
- Operating air pressure: 8-10 bar
- Anti-static conveyor belt
- Scrolls, change parts and plastic covers on guide rails are anti-static
- High position machine inlet-outlet sensors help to avoid fallen cans on conveyor



BOV-MAK UP TO 30 CPM



- (1) Feeding table
- (2) Compressed air filling
B.O.V crimping unit & Pressure control
- (3) Product filling
- (4) Ink-Jet unit
- (5) Collecting table

LABORATORY EQUIPMENTS

Semi-automatic BOV filling machine (up to 8-10 cpm)

- Suitable for 35-65mm diameter aerosol cans
- Dosing accuracy: +/- 1%
- One head standard 1" valve crimping
- During crimping, the can is filled with a required amount of air
- 304 Stainless Steel construction and equipment
- Easy and adjustable can height setting
- Two heads product filling, liquid cylinder with 300 ml capacity
- Full pneumatic piston pressure groups
- Automatic can transfer with scroll
- HMI control panel



Semi-automatic aerosol filling machine (up to 10-15 cpm)

- Suitable for 35-65mm diameter aerosol cans
- Dosing accuracy: +/- 1%
- One head standard filling up 300 ml, 1" valve crimping and propellant filling up to 400 ml
- 304 Stainless Steel construction and equipment
- Easy and adjustable can height setting
- Easy weight adjustment
- Automatic can transfer with helix conveyor
- Full pneumatic system

SAFETY TESTING EQUIPMENT

Hot Water Bath

- Water level sensors
- Infrared gas detector
- Temperature sensors for high/low alarm
- Thermostat control
- Isolation for the heating energy system
- HMI control panel
- Resistance or steam heating system
- Machine enclosure safety door switches
- Drying tunnel is mounted at the end of water bath
- The containers will be lifted automatically in case the water is heated up over 55°C
- System is ex-proof



Test Baths are designed for pressure testing tinplate and aluminium containers. The latter may be handled with or without pucks, depending on size, shape and stability. The machine is constructed in two sections, the turret and the tank. Containers are fed into the machine turret through either an infeed worm, or a flight rail system to ensure they enter the infeed starwheel correctly. The infeed starwheel and flight rail feed the containers into the center starwheel, which then carries the containers round and up a ramp, where they are fastened onto clips which grip the valve cups. The clips are attached to an endless chain conveying system. Suspended from these clips, the containers are transported into the test tank which is filled with water at 131°F [55°C], where they are immersed for a period of 2-3 minutes at the nominal rate for the tank. On emerging from the water, the containers receive a preliminary air blast to remove excess trapped water before they return to the drive base, where they are released from the clips by a nip roller, and are carried back onto the conveyor via the outfeed starwheel



Leak Detection

- **Line Speed** : Up to 150-300 Cans Per Minute
- **Can Dimensions** : Up to 80mm Diameter, 400mm High
- **Sensitivity** : Covers Both Standard Micro Leak : 8×10^{-3} mbarls-1 And Water bath
- **Alternative Leak** : 2×10^{-3} mbarls-1
- **HMI** : Wall Mountable VESA HMI Floor Mountable Stand Optional
- **User Interface** : 24V DC Input/Output Signals
- **Remote Connection** : Available as standard
- **Data Recording/ Logging** : Available as standard
- **Line Space** : 1.0m for straight track
- **Compressed Air Supply** : 4 Bar, Dry & Oil Free
- **Operating Voltage System** : 24V DC 5A
- **Sampling Blower** : 110V /220V AC, 3A
- **Operating Temperature** : 10 to 40°C
- **Hazardous Area** : ATEX Zone II

Checkweighing

- **Specifications System**: Non-Stop Precision Weigh Scale
- **Construction**: Steel Construction, Covers AISI 304 Quality
- **Weighing range** : 1500 g
- **Measuring Accuracy** : $\pm 0,5\%$
- **Electrical Requirements** : 0,8 kVA @ 3 Phases, 230V AC/115V AC, 50Hz/60Hz
- **Air Requirements** : 3 lt/min @ 6-8bar
- **Dimensions** : W 550 * L 700 * H 1600 mm
- Rejection system for products out of range
- Precise and fast measuring suitable for high speed systems
- Control every easy to use single display

Gas House

- **Type:** Standard Transportable Hydrocarbon Filling Room
- **Construction:** Container
- **Rating:** ATEX II 2G Compliant
- **Design Pressure:** 4,8 kN/m² on all four insulated walls
- **Explosion Relief:** Roof Area
- **Roof:** Fire retardant sheet PVC roofing cover and secured on the roof with fastening rope or chain
- **Paint of structure:** Flameproof and flame delayer
- **Lighting:** Explosion proof zone 2 fluorescent strip lighting
- **Egress doors:** 2 pcs on sides
- **Ventilation:** Primary ventilation for gasser, primary and secondary ventilation for gas house
- **Windows:** 2 laminated
- **Fire fighting:** One fire extinguishing ball is mounted inside the gas house
- **Flame detector:** 1 infrared
- **Gas detector:** 2 pcs infrared (gas house) , 1 pcs infrared (gassing machine)

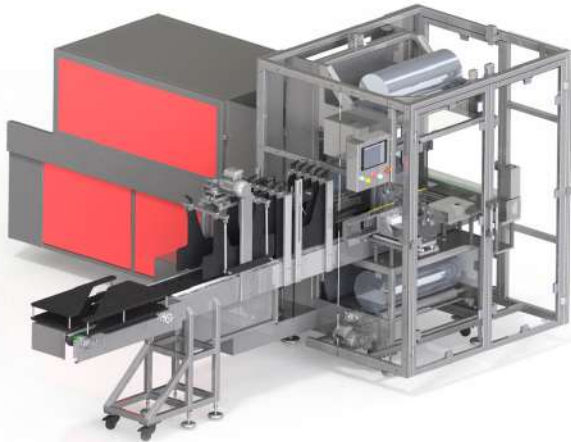


- UPS system in case electricity cuts
- One automatic and manual isolation at the outside of gas house (as close as possible), one manual isolation valve inside the gas house
- The pressure inside the gas house and gasser will be kept in negative pressure



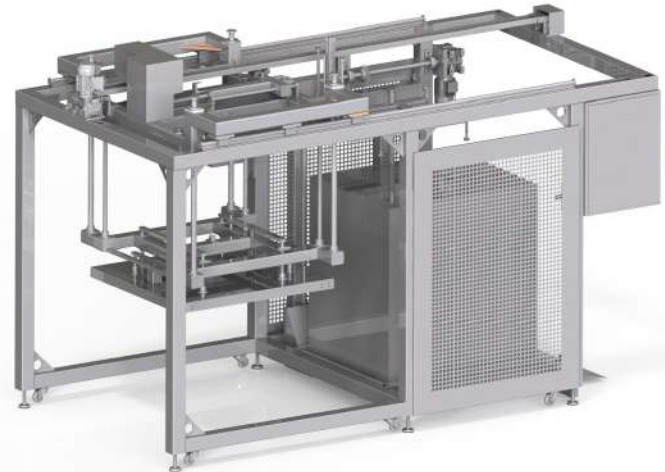
PACKING AND PALLETIZING

Shrink Wrapping Machine



- Temperature of blade is 0-200 °C
- Speed: 10-12 boxes /min
- Power supply 3PH 220V/380V 50/60 Hz
- Wicker wire band inside the shrink tunnel
- Tunnel band with speed control unit
- Cast stone wool for tunnel isolation
- Furnace paint is used
- Fire fighting system along with CO2 tubes
- Sensitive flame detector
- Buzzer warning system

Depalletizer



- 304 L construction
- PLC control system
- Magnetic table or vacuum table
- Vacuum Separator, carton separation system
- HMI control panel
- Synchronous working system with feeding table

GAS TANK FARMS

We offer turn-key solutions for the research, design, and assembly of aerosol/dispensing factories. Our comprehensive, single-source approach includes project management, gas installation systems (such as pipe fittings, purification, and gas storage tanks), and auxiliary equipment (such as compressed air systems, product preparation tanks, mixers, and pumps). We also provide support for development and research, formulation, and the entire equipment necessary for a turn-key plant. Our commitment to performance objectives and customer satisfaction make us the perfect partner for your project. From needs analysis to on-site support, we are dedicated to helping you every step of the way.



BUSINESS PARTNERS



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Sora
machine

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