SOLMATIC

MACHINE CATALOGUE 2022

Aerosols
Bag-On-Valve
Perfumes

SOLMATIC

20+ YEARS OF SUPPORT FOR THE INDUSTRY

We build machines for the industry

For years we at Solmatic have listened, analyzed and fulfilled the needs of our customers by delivering manufacturing solutions and a highly personalized service.
We have started as a small business producing machines for aerosol filling and have grown to become one of just a few companies delivering a wide range of integrated manufacturing solutions for **aerosols, bag-on-valve, perfumes and Cleaning-in-Place (CIP) and packing facilities** worldwide.

We are proud to be a family owned business where **Trust, Integrity, Reliability** accompany us both in private life and all business operations and we always aim to establish long lasting business partnerships with our clients instead of looking for a one-time sale.

Our values and over two decades of know-how in a variety of manufacturing areas allow us to offer machines combining the best solutions from different industries. We build our machines exclusively in Poland focusing on quality, simplicity and intuitiveness which have allowed us a privilege of supplying our solutions to well over **200 companies from 35 countries worldwide** so far.

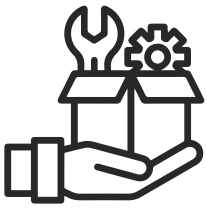
Understanding the value of the environment especially as a business operating in a manufacturing industry we are happy to say our factory is powered 100% from renewable energy sources.

We provide peace of mind so you can focus on growing your business.

Aerosols

Bag-On-Valve

Perfumes



Spare parts & service

Cleaning-In-Place

Dedicated solutions

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Aerosols & MDI

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PERFUME

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Check our online locations!

AEROSOLS BOV PERFUME

Aerosols & MDI

The core of our business are aerosol filling machines. This is where everything started for us. For years we have adapted our machines to changing industry environment, we cooperate with many valve and can suppliers so our clients have the latest technology when new solutions enter the market. Having simplicity and intuitiveness as guidelines we have improved our machines over the years so that except for superior mechanical performance they offer a wide range of software solutions for quicker retooling, reporting and production data analysis, just what you would expect in the 21st century.

Our aerosol filling lines are highly modular which allows us to deliver solutions tailored to any requirements from product' chemical and physical properties to expected production output. This also means great flexibility and certainty that you will always be able to upgrade your system easily when needed.

We serve industries such as: Cosmetics, Household, Car Care, Insecticides, Paints, Technical, PU Foam.

Solmatic offer includes:

- **Semi-automatic Machines with capacity of up to 20 cpm**
- **Automatic Filling Lines with capacity of up to 120 cpm**
- **Measuring and laboratory instruments**

We also offer a wide range of supporting machines that mainly work with our aerosol filling lines, but can also be installed individually or as part of existing lines of other suppliers.

Product Filling Machines

Filling machines are used to fill aerosol cans with liquid product in precisely measured doses. Solmatic offers semi-automatic product filler PT-51 and PT-51 for MDI.

Product Filler PT-51

The semi-automatic Product filler is a device designed to fill aerosol cans with liquid product in precisely measured doses. The device is capable of filling up to approximately 20 cans per minute (the actual output depends on many parameters - including the quantity and properties of the product or the size of the container). It is mainly used in small-scale production, in laboratories and test productions.

Thanks to its high precision and repeatability, the machine can be used in many industries and with products of different chemical and physical parameters. It is equally suitable for corrosive, low or high density and viscous substances. With the appropriate head, it can even pour polyurethane foam components. The unit is also flexible in terms of the containers it can handle - it can be adapted to a new diameter or height at any time.

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	**500 mm / 400 mm / 1170 mm**
WEIGHT	**48 kg**
CAN DIAMETERS	**Ø20 mm - Ø110 mm**
CAN HEIGHTS	**55 mm - 330 mm**
FILLING VOLUME RANGE	**5 ml - 400 ml**
POWER SUPPLY & CONTROLS	**pneumatic**

Product Filler for MDI PT-51 MDI

Semi-automatic MDI Product filler is a machine allowing for fast, repeatable and precise filling of MDI (Metered Dose Inhaler) containers with liquid product in measured doses. The device allows for filling up to approx. 20 cans per minute (the actual efficiency depends on many parameters, e.g. the amount and properties of the product or the size of the container). The machine - used mainly in small-scale production, laboratories and test runs - is flexible in terms of the containers it can handle - it can be adapted to a new diameter or height at any time.

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	**500 mm / 400 mm / 1170 mm**
WEIGHT	**~46 kg**
CAN DIAMETERS	**Ø20 mm - Ø110 mm**
CAN HEIGHTS	**30mm - 150 mm**
FILLING VOLUME RANGE	**5ml - 100 ml**
POWER SUPPLY & CONTROLS	**pneumatic**

Crimping Machines

Crimping machines are used to crimp 1" valves on filled aerosol cans. Solmatic's range of semi-automatic crimping equipment includes the PT-52 crimper and PT-52 crimper for MDI.

Crimper PT-52

The semi-automatic Crimper is one of the basic devices in aerosol production, equipped with a replaceable crimping head and pneumatically powered. The machine can crimp approximately 20 valves per minute (the actual speed depends on the operator's experience) and is mainly used for small-scale production, in laboratories or test runs.

How does the machine work? The pneumatic machine is operated by a pedal or two buttons. Both the height and diameter of the crimp can be adjusted so that the crimp parameters match those recommended by the valve manufacturer. The head rests on the can in which the valve was previously placed and then crimps the valve from the inside. When the cycle is complete, the head returns to its original position. The crimping head works with both steel and aluminum aerosol valves.

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	**400 mm / 400mm / 1170 mm**
WEIGHT	**~38 kg**
CAN DIAMETERS	**Ø20 mm - Ø110 mm**
CAN HEIGHTS	**55 mm - 330 mm**
VALVE DIAMETER	**1" aerosol valves (9 mm - 20 mm heads also available)**
POWER SUPPLY & CONTROLS	**pneumatic**

Crimper for MDI PT-52 MDI

The semi-automatic Crimper is one of the basic devices in MDI aerosol production, equipped with a replaceable crimping head and pneumatically powered. The machine can crimp approximately 20 valves per minute (the actual speed depends on the operator's experience) and is mainly used for small-scale production, in laboratories or test runs. How does the machine work? The pneumatic machine is operated by a pedal or two buttons. The head rests on the MDI container in which the valve was previously placed and then crimps the valve from the outside. When the cycle is complete, the head returns to its original position. The crimping head works with both steel and aluminum MDI valves.

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	**400 mm /400 mm /950 mm**
WEIGHT	**~42 kg**
CAN DIAMETERS	**Ø20mm - Ø110 mm**
CAN HEIGHTS	**30 mm - 150 mm**
VALVE DIAMETER	**standard 20 mm MDI valves**
POWER SUPPLY & CONTROLS	**pneumatic**

Propellant Gas Filling Machines

Gassing machines are used to fill aerosol cans with propellant gas in precisely measured doses. Solmatic's range of semi-automatic gassing equipment includes the PT-53 gas filler and PT-53 gas filler for MDI.

Propellant Gas Filler PT-53

The device allows for fast and precise filling of crimped aerosol cans with propellant gas. Its capacity is approximately 20 MDI cans per minute (the actual speed depends on the type and volume of gas, valve capacity, can size or operator experience). The machine is mainly used in small scale production, laboratories and test productions. The high precision and repeatability of the filling allows for work in various industries, with different gasses and cans. The machine is equipped with a head with a built-in „no can = no work" system, which prevents uncontrolled gas leakage. If you wish to work with soluble gasses such as N2O or CO2 it is necessary to use a head with a suitable adaptor. If the unit will be used for filling flammable gasses, it must be placed in a suitable room that complies with local regulations.

In our standard offer there are adapters for standard valves (1", 18mm, 20mm). Adapters for other valves are produced on request.

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	**500 mm /400 mm /1170 mm**
WEIGHT	**~56kg**
CAN DIAMETERS	**Ø20mm - Ø110 mm**
CAN HEIGHTS	**55 mm - 330 mm**
FILLING VOLUME RANGE	**5 ml - 420 ml**
POWER SUPPLY & CONTROLS	**pneumatic**

Propellant Gas Filler for MDI PT-53 MDI

The device allows for fast, precise and repeatable filling of closed MDI (Metered Dose Inhaler) containers with propellant gas. Its capacity is approximately 20 MDI cans per minute (the actual speed depends on the type and amount of gas, the capacity of the valve, the size of the can and the experience of the operator). The machine is mainly used in small scale production, in laboratories and test productions. The device is equipped with a head enabling high precision dosing and a built-in „no can = no work" system, which prevents uncontrolled gas leakage. In our standard offer there are available adapters for standard MDI valves - 20 mm. Adapters for other valves are produced on request.

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	**500 mm /400 mm /1170 mm**
WEIGHT	**~46 kg**
CAN DIAMETERS	**Ø20mm - Ø110 mm**
CAN HEIGHTS	**30mm - 150 mm**
FILLING VOLUME RANGE	**5 ml - 100 ml**
POWER SUPPLY & CONTROLS	**pneumatic**

Pumps

We offer our customers the PT-59 gas pump, a machine designed to supply low boiling point and high pressure liquid propellant required in aerosol production to gassing equipment.

Propellant Gas Pump PT-59

We offer our customers the PT-59 Gas Pump, a machine designed to supply low boiling point and high pressure liquid propellant required in aerosol production to gassing equipment. The machine works with all standard gasses used in aerosol production, such as propane/butane (LPG), DME, HFA, CO2 and others.

The PT-59 Gas Pump is made of the highest quality materials, mainly stainless steel, while other components are constructed of corrosion-resistant materials. All moving pneumatic parts are protected by a built-in air preparation and automatic lubrication system.

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	300 mm /300 mm /700 mm
WEIGHT	~30 kg
POWER SUPPLY & CONTROLS	pneumatic
CAPACITY	1000 l/h

Sets of Semi-Automatic Machines

The offer of Solmatic semi-automatic machine sets includes the All in One Laboratory, the BOV Laboratory and Manual Crimper and Propellant Gas Filler.

Manual Crimper and Propellant Gas Filler RPT5253

Manual Crimper and Propellant Gas Filler is the most basic semi-automatic set in aerosol production perfect for very small scale productions or short test runs. The device allows for fast and precise crimping and filling of aerosol cans with propellant gas. It is equipped with a replaceable crimping head with a lever for manual crimping and pneumatically powered gassing unit. The machine can crimp and gas approximately 15 containers per minute (the actual speed depends on the operator's experience).

Both the height and diameter of the crimp can be adjusted so that the crimp parameters match those recommended by the valve manufacturer. The head is lowered and rests on the can with a valve to be crimped by movement of a leaver and then crimps the valve from the inside. The crimping head works with both steel and aluminum aerosol valves.

The amount of the gas to be filled into the can can be adjusted manually and the gassing process is initiated by a pedal or buttons.

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	500 mm /400 mm /1170 mm
WEIGHT	~68 kg
CAN DIAMETERS	Ø20mm - Ø110 mm
CAN HEIGHTS	55mm - 330mm
VALVE DIAMETER	1" aerosol valves (9mm - 20mm heads also available)
FILLING VOLUME RANGE	5 ml - 420 ml
POWER SUPPLY & CONTROLS	pneumatic

All in One Laboratory

This is a semi-automatic machine designed for small scale production, laboratories and test productions of products with all technologies used in the aerosol industry. The All in One Aerosol & BOV Laboratory is equipped with:

- product filling head
- single crimping head for Bag on Valve and regular aerosol valves (it is also possible to extend with PET outside crimping head)
- BOV product filling head with an option to integrate mixer for gel products (e.g. shaving foams)
- gassing head in a safety box with ventilation system

The high precision and repeatability of the filling allows for work in various industries, with different products, gasses, valves and cans. All machine heads are equipped with a built-in „no can = no work" system, which prevents uncontrolled product or gas leakages. The All in One Aerosol & BOV Laboratory is a perfect solution for anyone who has a wide range of products of different aerosol technologies, highly specialized laboratories or companies with product development departments or services.

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	**600 mm / 1700 mm / 1950 mm**
WEIGHT	**~430 kg**
CAN DIAMETERS	**Ø20 mm - Ø110 mm**
CAN HEIGHT	**55 mm - 330 mm**
VALVES DIAMETER	**standard 1" aerosol and BOV valves**
FILLING VOLUME RANGE (PRODUCT AND GAS)	**50 ml - 420 ml**
POWER SUPPLY & CONTROLS	**pneumatic & Siemens LOGO!**

Automatic Filling, Crimping and Gassing Machines

Automatic Indexing Modules are used in the technological process of aerosol production and are the most crucial machines of any aerosol filling line This is where all key processes of aerosol manufacturing take place, including:

1. Can positioning if valve has to be in the same direction in all cans
2. Ball dropping (optional for e.g. paint filling)
3. Product filling (including filling of multi-component products e.g. PU-foams)
4. Valve insertion and control of valve presence in the aerosol can
5. Crimping (including vacuum crimping e.g. gas cartridge filling)
6. Propellant gas filling (including filling of multiple gasses)

Solmatic Automatic Indexing Modules are built from stainless steel and are fully customized to meet customer and industry requirements.

For capacities up to 40 cans/minute we offer All-in-One Automatic Modules combining all processes in one compact machine. For capacities over 40 cans/minute we offer separate machines for Filling-Crimping and Gassing.

Automatic All-in-One Module up to 40 pcs/min

The Automatic All-in-One Module up to 40 pcs/min is a device that combines all key steps in the aerosol production process in one compact machine. How does the machine work? The scheme of operation is as follows: the cans enter the machine, whereupon they are guided towards successive working stations (filling -> valve insertion & checking -> crimping -> gassing).

Product and gas dosage can be adjusted manually or automatically, as can the height of the operating units. The machine also features pneumatic controls and drive to ensure optimum explosion protection and easy adjustment.

The Automatic All-in-One Module is controlled by switches and buttons on the control panel. These allow for the automatic and manual controls of all the working units. The machine can be switched off immediately in case of emergency with an emergency button.

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	1000 mm / 1300 mm / 1880 ± 50 mm
WEIGHT	~480 kg
CAN DIAMETERS	Ø35 mm - Ø110 mm
CAN HEIGHT	50 mm - 330 mm
VALVES DIAMETER	standard 1" aerosol valves
CAPACITY	up to 40 pcs/min
FILLING VOLUME RANGE (PRODUCT AND GAS)	50 ml - 420 ml
FILLING PRECISION	> 99%
AVAILABLE OPERATING MODULES CONFIGURATIONS	Ball dropper | 1-3 Product fillers | Valve inserter | Crimper | 1-3 Propellant fillers
POWER SUPPLY & CONTROLS	pneumatic

Automatic Filling and Crimping Module

The scheme of operation of Automatic Product Filling and Crimping Module is as follows: cans enter the machine, whereupon they are guided towards successive working stations (filling -> valve insertion & checking -> crimping). The setting of the product dose can be manual or automatic similar to height adjustment of the operating units. The type and number of filling heads depends on the expected line capacity, product properties and its volume. The machine has a safety system in the door which causes the machine to stop immediately if the door is opened. The cans are guided centrally under successive heads using interchangeable sets for each can diameter. The machine can be equipped with a single or double step pneumatic motor or an electric motor with variable index. Automatic Product Filling and Crimping Module can also be equipped with automatic Ball Dropper.

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	**1000 mm / 1300 mm/ 1880 ± 50 mm**
WEIGHT	**~380 kg**
CAN DIAMETERS	**Ø35mm - Ø110 mm**
CAN HEIGHT	**50 mm - 330 mm**
VALVES DIAMETER	**standard 1" aerosol valves**
CAPACITY	**up to 60 pcs/min**
FILLING VOLUME RANGE (PRODUCT AND GAS)	**50 ml - 420 ml**
FILLING PRECISION	**> 99%**
AVAILABLE OPERATING MODULES CONFIGURATIONS	**Ball dropper | 1-4 Product fillers | Valve inserter | Crimper**
POWER SUPPLY & CONTROLS	**pneumatic**

Ball Dropper

The Ball Dropper is part of aerosol filling lines mostly used in paint or technical products filling process. Its task is to insert an set number of balls into a container passing under the Ball Dropper. This process is performed automatically. The balls are used to mix the product in the container before use. The Ball Dropper should be mounted prior to or inside the Automatic Filling Module before filling the product into the container. Ball Droppers manufactured by Solmatic are capable of inserting between 1 and 4 balls with a capacity of up to 60 cycles per minute.

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	**190 mm / 165 mm/ 803 mm**
WEIGHT	**~12 kg**
CAN DIAMETERS	**Ø5mm - Ø12 mm**
CAPACITY	**60 cycles/min**
BASKET VOLUME	**~5l / 10 000 balls**
NUMBER OF BALLS DROPPED PER CYCLE	**1- 5/cycle**

Automatic Gassing Module

The Automatic Gas Filling Module – usually located in the Gas House - is suitable for use in explosive zones. The cans enter the machine and are then filled with a pre-set gas dose at the respective working stations. The gas dose setting can be manual or automatic similar to height adjustment of the operating units. The type and number of gassing heads depends on the expected line capacity, gas properties and its volume. The machine has a safety system in the door which causes the machine to stop immediately if the door is opened during operation. The cans are guided centrally under successive heads using interchangeable sets for each can diameter. The machine can have a single or double step pneumatic motor or an electric motor with variable index when working with multiple gasses.

For high speed production and gassing with a single gas we recommend Rotary Gassing Modules (with continuous motion), also to be placed in a safety Gas House.

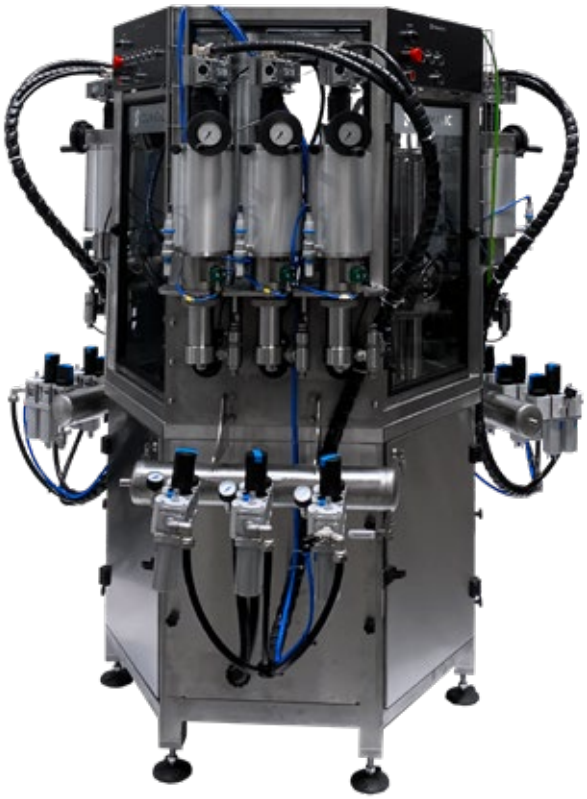
TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	1200 mm / 1300 mm / 1880 ± 50 mm
WEIGHT	~360 kg
CAN DIAMETERS	Ø35 mm - Ø110 mm
CAN HEIGHT	50 mm - 330 mm
CAPACITY	up to 60 pcs/min
FILLING VOLUME RANGE	50 ml - 420 ml
FILLING PRECISION	> 99%
AVAILABLE OPERATING MODULES CONFIGURATIONS	4-6 Propellant gas fillers
POWER SUPPLY & CONTROLS	pneumatic

Automatic Gassing Module with Increased Capacity and Variable Index

The Automatic Gassing Module with Variable Index is a machine used to fill propellant gas through a valve into aerosol cans with increased capacity thanks to a redesigned gassing system. Automatic Gassing Module with Variable Index is usually located in the Gas House and is suitable for use in explosive zones. How does the machine work? The cans enter the machine and are then filled with a pre-set gas dose at the respective working stations. The gas dose setting can be manual or automatic similar to height adjustment of the operating units. The type and number of filling heads depends on the expected line capacity, gas properties and its volume. The machine has a safety system in the door which causes the machine to stop immediately if the door is opened during operation. The cans are guided centrally under successive heads using interchangeable sets for each can diameter. The machine has an electric motor with variable index that allows for individual settings while working with multiple gasses with different parameters.

This machine offers supreme flexibility and has a capacity of 60 cans/minute for big gas volumes (which ultimately depends on the aerosol valve flowrate). It is mainly used in gas cartridge filling. For high speed production and gassing with a single gas we recommend Rotary Gassing Modules.



TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	1100 mm / 1100 mm / 1880 ± 50 mm
WEIGHT	~850 kg
CAN DIAMETERS	Ø35 mm - Ø110 mm
CAN HEIGHT	50 mm - 330 mm
CAPACITY	up to 60 pcs/min
FILLING VOLUME RANGE (PRODUCT AND GAS)	50 ml - 420 ml
FILLING PRECISION	> 99%
AVAILABLE OPERATING MODULES CONFIGURATIONS	6-10 Propellant fillersAvailable operating modules
POWER SUPPLY & CONTROLS	pneumatic & electric
REQUIRED ELECTRICITY SUPPLY	230VAC - 400VAC, 50Hz
POWER CONSUMPTION	~1,4kW
AIR USAGE	~180m³/h
REQUIRED AIR SUPPLY	8 - 10 bar (0,8 - 1,0 MPa)

Depalletization

Purpose of machines has always been to perform repetitive and physically demanding tasks so people don't have to. One of such tasks is unloading empty aerosol cans from pallets over to Feeding Tables. We already offer Magnetic Lifter that helps operators to carry the load and will soon introduce fully automatic aerosol cans depalletizer.

Only for metal cans

Magnetic Can Lifter

The Magnetic Can Lifter is designed to unload empty metal aerosol cans from a pallet over to the feeding table. The gripper is capable of transferring as much as ¼ of one pallet layer at a time. The lifter's rotating arm and spring balancer ensure a large operating range. The magnetic lifter has a detachable magnetic field and requires only a compressed air connection.

TECHNICAL PARAMETERS

DIMENSIONS OF LIFTER (WIDTH /LENGTH /HEIGHT)	1308mm (radius)/ 40mm/ 3100mm
DIMENSIONS OF MAGNETIC GRABBER (WIDTH / LENGTH / HEIGHT)	560 mm / 400 mm / 111 mm
WEIGHT OF GRABBER	13 kg
CAN DIAMETERS	Ø20 mm - Ø110 mm
NUMBER OF CANS GRABBED PER CYCLE	500 pcs for Ø20 mm; 45 pcs for Ø66 mm
ARM ROTATION ANGLE	270°

Automatic Can Depalletizer
COMING SOON

Feeding Tables

Slat Type Feeding Tables are one of the most elementary machines for any automatic aerosol, BOV or perfume filling line. Each table can be built to work in the food or pharma industry as well as to operate in the EX zone. The purpose of the Slat Type Feeding Table is to automate infeed of containers to the subsequent machines on the production line. They assure continuity of the production by providing a constant supply of empty containers and can be adjusted to match the capacity of the line. Each table can be equipped with a pneumatic can movement disrupting mechanism which prevents cans from getting stuck on the exit. Depending on the configuration exit can be side or central.

Central Feeding Table

Side Feeding Table

Enlarged Side Feeding Table

Also used in BOV production lines

TECHNICAL PARAMETERS

	SPO	SPP/SPL	SPZ
DIMENSIONS (WIDTH / LENGTH / HEIGHT)	1480 mm / 2650 mm / 1050 mm ± 50mm	1280 mm / 2300 mm / 1050 mm ± 50mm	1480 mm / 5000 mm / 1050 mm ± 50mm
WEIGHT	~300 kg	~250 kg	~450 kg
HEIGHT OF THE TRANSPORTATION SURFACE	900 mm ± 50 mm		
CAN DIAMETERS	Ø20 mm - Ø75 mm		
CAPACITY OF THE TRANSPORTATION SURFACE	~1500 pcs / Ø33 mm & ~400 pcs / Ø66 mm	~1300 pcs / Ø33 mm & ~350 pcs / Ø66 mm	~4000 pcs / Ø33 mm & ~1000 pcs / Ø66 mm
SLAT CHAIN PARAMETERS	EX / Metal / Anti static / FDA grade		
ELECTRIC MOTORS	1 x 0,37 kW	1 x 0,37 kW	3 x 0,37 kW
REQUIRED ELECTRICITY SUPPLY	230 VAC - 400 VAC, 50 Hz		
AIR USAGE (PNEUMATIC ANTIBLOCKING MECHANISM)	0,2 m^3/h		
REQUIRED AIR SUPPLY	4 - 10 bar (0,4 - 1,0 MPa)		

Gas House

The Gas House is a portable, outdoor structure built to the highest safety standards. The device – used in the technological process of aerosol components produced in the plants' production lines – separates the zone with the highest risk of explosion from the production hall, thanks to which the building and the personnel remain safe.

An Automatic Gassing Module is placed in the Gas House to fill the cans with gas. If the gas concentration increases, its supply is cut off. The entire construction is covered with sheet metal, while the structure and the center of the container is covered with a stainless steel layer. All ventilation ducts are made of stainless steel. Gas House has a lightweight roof construction so that in the unlikely event of explosion fire is directed upwards through the roof.

Gas House is designed to ensure safety when filling aerosols with gas by:

- two-stage ventilation to prevent the formation of explosive mixtures,
- use of EX-rated electrical equipment,
- construction of the container walls to ensure that the shock wave from the explosion is transmitted through the roof.

The device is equipped with:

- a highly efficient ventilation system with two fans that exchange the air inside the container several times a minute,
- heating system against freezing of the gas heads,
- gas shut-off valves with a sensitive gas detection system,
- CCTV monitoring to monitor separately what is happening inside the AMR and to be able to react to danger at an early stage.

TECHNICAL PARAMETERS

DIMENSIONS			2200mm x 3500mm x 3840mm
WEIGHT (WITHOUT GASSING MODULE)			~2800 kg
FANS	DH 400-D Ex (2 pcs)	Revolutions	1320 rpm
		Efficiency	1,4 m³/s
VALVES	AH-2c-MK		2 pcs
GAS SUPPLY CUT-OFF HEADS	G3-s		2 pcs
GAS SENSORS DEX-15 GAZEX4 PCS	DEX-15 GAZEX4 PCS		4 pcs

Safety Testing

Aerosol leak testing is an extremely important part of the production process. When dealing with flammable gasses, aerosol manufacturers cannot afford to use untested technologies. In order to provide our customers with solutions that guarantee the highest production quality and safety for their customers (the final pressure in an aerosol can is between 6 and 10 bar!), we offer safe and proven aerosol leak testing systems.

Automatic Test Waterbath

The use of Automatic Test Waterbath is one of the most popular methods to check the tightness of aerosol cans. The unit consists of a bath unit, drive unit, dryer and control cabinet and does not require an additional operator. The aerosol cans filled with the product, slowly passing through the bath, are immersed in water at 60°C for 3 to 5 minutes. If any of the cans is leaking, it should explode at this point. Leaking cans are removed from the production line. After leaving the bath, the containers are dried by a high-pressure air stream. Solmatic currently offers three automatic baths adapted to production lines with different capacities. Each unit is capable of performing leak tests on 60, 80 or 120 cans per minute. Such a system - although proven and effective - is, however, quite energy intensive. It requires about 1000-1500 litres of water to be brought to a high temperature and maintained at that temperature at all times.

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	4810 mm / 1850 mm / 1830 ± 50 mm
WEIGHT	~2100 kg
CAN DIAMETERS	Ø20 mm - Ø110 mm
CAPACITY	60, 80 or 120 pcs/h
WATERBATH VOLUME	~ 2000 l
TEMPERATURE ADJUSTMENT RANGE	30°C - 75°C
POWER CONSUMPTION (WITHOUT HEATING SYSTEM)	3kW
REQUIRED ELECTRICITY SUPPLY	400 VAC, 50 Hz
AIR USAGE	100 m³/h
REQUIRED AIR SUPPLY	4 - 10 bar (0,4 - 1,0 MPa)

Laboratory Test Waterbath

The Laboratory Test Waterbath (manual) is the equivalent of the Automatic Test Waterbath, which carries out tests on a smaller scale. The unit is operated by a single operator. The unit holds eight product-filled aerosol cans. The operator uses a lever to immerse the test cans into the heated water to visually detect leaks in the test cans and eliminate defective units from the production line.

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	1030 mm/ 450 mm/ 845 mm
WEIGHT	~82 kg
CAN DIAMETERS	Ø20 mm - Ø90 mm
NUMBER OF CANS TESTED AT ONCE	8 pcs
WATERBATH VOLUME	~ 125 l
TEMPERATURE ADJUSTMENT RANGE	30°C - 75°C
POWER CONSUMPTION	6 kW
REQUIRED ELECTRICITY SUPPLY	230 VAC - 400 VAC, 50 Hz

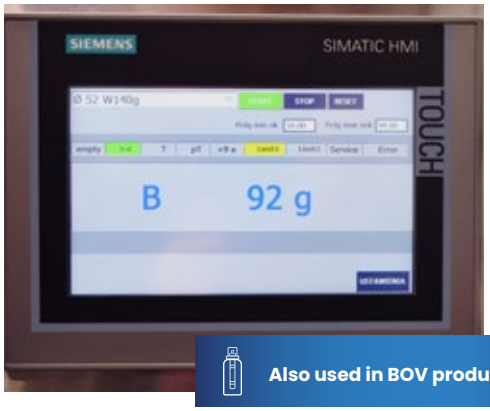
Weight control

Weight control is one of the key elements in the quality control process, which we are able to perform in the production line itself. This ensures that containers which do not meet the predetermined requirements are automatically removed from the line. Continuous weight checks therefore allow for both product control and the verification of proper filling machine operation.

Automatic Checkweigher

The Automatic Checkweigher is a device designed for individual weighing of filled containers. The mass of the weighted container is compared with the value range set by the operator. In case the container deviates from the accepted value, it is removed from the production line.

The device is positioned on a Slat Type Conveyor feeding and receiving containers from the Automatic Checkweigher. The construction of the machine is adapted to the direction from which the containers enter the device. The Automatic Checkweigher has interchangeable centering sets for each can diameter. A large panel with a touch screen display for the operator is mounted at eye level, where weighting parameters can be set and subsequent scale readings and graphs can be controlled. Data from the scale can be exported and stored on a USB stick or uploaded directly to the customer's server. for quality control archive. The machine is able to weigh up to 60 containers per minute.



Also used in BOV production lines

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	900mm/781mm/1850 ± 50mm
WEIGHT	~328 kg
CAN DIAMETERS	Ø20 mm - Ø110 mm
CAPACITY	60 pcs/min
WEIGHT MEASUREMENT RANGE	0 kg - 3 kg
MEASUREMENT ERROR	< 1%
POWER CONSUMPTION	0,6 kW
REQUIRED ELECTRICITY SUPPLY	230 VAC - 400 VAC, 50 Hz
REQUIRED AIR SUPPLY	2 - 10 bar (0,2 - 1,0 MPa)

Cappers & Placers

Cappers & Placers are used in aerosol filling lines. Solmatic's product range includes: Spray Head Placers, Cap Placers and a Flat-Cap Placer.

Also used in BOV production lines

Indexing Spray Head Placer with a Vibrating Sorter

The Spray Head Placer is an indexing device with a speed of up to 50 pieces per minute. The Spray Head Placer works in conjunction with a Vibrating Spray Head Sorter. The Spray Head Placer can be left or right handed, depending on the side from which the containers enter the machine.

The machine is equipped with a system for guiding cans and guiding spray heads, consisting of starwheels and rims. The head is placed on a can in a working station equipped with a single ram with a tapping block.

Spray Head Placer is equipped with an additional sensor system that ensures smooth operation, guarantees the sufficient queue of cans at the entrance, prevents overfilling of cans on exit and provides an adequate supply of Spray Heads.

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	1250mm/965mm/1880 ± 50mm
WEIGHT	~350 kg
CAN DIAMETERS	Ø35mm - Ø110mm
CAN HEIGHT	50mm - 330mm
CAPACITY	up to 60 pcs/min
POWER SUPPLY & CONTROLS	pneumatic & electric
POWER CONSUMPTION	~1,4kW
REQUIRED ELECTRICITY SUPPLY	230 VAC - 400 VAC, 50 Hz
AIR USAGE	~80m³/h
REQUIRED AIR SUPPLY	8 - 10 bar (0,8 - 1,0 MPa)

Pick & Place Cap Placer

The Pick & Place Cap Placer is designed to automatically place caps on aerosol cans previously filled with product. Despite being an indexing machine, it differs from a standard indexing Capper in terms of cap placing technology itself. In the case of an standard indexing Cap Placer, the caps are guided over the can by a guide system and then placed by an actuator. The Pick & Place Cap Placer is equipped with a rotating arm with grippers attached at the end, which take the caps from the feed slot and then place them one by one on the cans. The grippers are equipped with a cap forming system, which allows even deformed caps to be placed. The machine can operate with a capacity of up to 50 pieces per minute.

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	625 mm /960 mm/1760 ± 50 mm
WEIGHT	~645 kg
CAN DIAMETERS	Ø35 mm - Ø110 mm
CAN HEIGHT	50 mm - 330 mm
CAPACITY	up to 50 pcs/min
POWER SUPPLY & CONTROLS	pneumatic & electric
POWER CONSUMPTION	~0,4kW
REQUIRED ELECTRICITY SUPPLY	230VAC - 400VAC, 50Hz
AIR USAGE	~75m³/h
REQUIRED AIR SUPPLY	8 - 10 bar (0,8 - 1,0 MPa)

Also used in BOV production lines

Indexing Cap Placer

The Cap Placer or a Capper is an indexing device with a speed of up to 50 pieces per minute. It is designed to automatically place caps on aerosol cans previously filled with the product. The Cap Placer works in conjunction with a cap sorter and a cap feeding conveyor between the two. The Capper may be left or right-handed depending on the side from which the containers enter the unit.

The machine is equipped with a can guiding and cap guiding system consisting of starwheels and rims. The cap is placed on a can in a working station equipped with a single ram with a tapping block.

Indexing Cap Placer is equipped with an additional sensor system that ensures smooth operation, guarantees the sufficient queue of cans at the entrance, prevents overfilling of cans on exit and provides an adequate supply of caps.

Also used in BOV production lines

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	600mm/700mm/2000 ± 50mm
WEIGHT	~120kg
CAN DIAMETERS	Ø35mm - Ø110mm
CAN HEIGHT	50mm - 330mm
CAPACITY	up to 60 pcs/min
POWER SUPPLY & CONTROLS	pneumatic
POWER CONSUMPTION	~1,4kW
AIR USAGE	~8m³/h
REQUIRED AIR SUPPLY	8 - 10 bar (0,8 - 1,0 MPa)

Rotary Cap Placer

The Rotary Cap Placer or a Rotary Capper is a device that works continuously with a speed of up to 120 pieces per minute. It is designed for automatic placing of caps on aerosol containers filled with the product. The Rotary Cap Placer cooperates with the cap sorter and the cap feeding conveyor between them. The Rotary Capper can be right or left, depending on the side from which the containers enter the device.

The device is equipped with a can and cap guiding system consisting of starwheels, rims and a set of 6 or 8 tapping blocks, which fix caps on cans. The cap is placed while the can moves through the machine. This allows for a much greater output of caps placed as compared to indexing solutions adapted to production lines with a capacity of more than 60 pieces per minute.

The Rotary Cap Placer is equipped with an additional sensor system that ensures smooth operation of the device, guarantees the sufficient queue of the cans at the entrance, prevents overfilling of cans on departure and provides an adequate supply of caps.

Also used in BOV production lines

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	**600 mm /800 mm/ 1880 ± 50 mm**
WEIGHT	**~470 kg**
CAN & CAP DIAMETERS	**Ø35 mm - Ø110 mm**
CAN HEIGHT	**50 mm - 330 mm**
CAPACITY	**up to 120 pcs/min**
POWER SUPPLY & CONTROLS	**electric**
POWER CONSUMPTION	**~0,8 kW**
REQUIRED ELECTRICITY SUPPLY	**230VAC - 400VAC, 50Hz**

Rotary Flat-Cap Placer

The Rotary Flat-Cap Placer is a machine that works continuously with a speed of up to 120 pieces per minute. It is designed for automatic placement of flat-caps on aerosol containers with crimped threaded valves. The Rotary Flat-Cap Placer works with a vibrating flat-cap sorter. The Rotary Flat-Cap Placer can be right or left, depending on the side from which the containers enter the device.

The device is equipped with a system for guiding cans and flat-caps, consisting of a starwheel, guidingrim and a flat- cap clamping arch.

- Rotary Flat-Cap Placer is equipped with an additional sensor system that ensures smooth operation of the device, provides an appropriate queue of cans at the entrance, prevents overfilling of cans on departure and provides an adequate supply of flat-caps.

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	**600mm/800mm/1880 ± 50mm**
WEIGHT	**~420kg**
CAN DIAMETERS	**Ø35 mm - Ø110 mm**
CAN HEIGHT	**50 mm - 330 mm**
CAPACITY	**up to 120 pcs/min**
POWER SUPPLY & CONTROLS	**electric**
POWER CONSUMPTION	**~0,8kW**
REQUIRED ELECTRICITY SUPPLY	**230VAC - 400VAC, 50Hz**

Sorters

Sorters are one of the most popular machines used in aerosol filling lines. There are usually various types used in a single manufacturing line. Sorters allow for a selection of sorted elements such as aerosol valves, spray heads or caps which are then fed to either Filling Modules or Cappers and can be properly inserted or placed on aerosol containers.

Cap Sorter with Cap Feeder

The Cap Sorter with Cap Feeder is used in the aerosol manufacturing process. The device serves to properly orientate and transport aerosol caps to the Cap Placer so that it can place them on filled aerosol cans. The device can operate at a capacity of up to 120 pieces per minute.

Caps are orientated by a cap sorter basket with a rotating replaceable wheel and a set of air nozzles. Feeding of caps is carried out by guides integrated into the feeder. The cap sorter is made of stainless steel and high quality plastics. The appropriate amount of caps in the sorter basket is regulated automatically by a system of sensors and an integrated cap elevator. The sorter can be retooled for caps of other diameters by replacing the sorting wheel.

Also used in BOV production lines

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	600 mm / 800 mm / 1850 ± 50 mm
WEIGHT	~120 kg
CAP DIAMETERS	Ø20 mm - Ø74 mm
CAPACITY	up to 150 pcs/min
POWER SUPPLY & CONTROLS	pneumatic & electric
POWER CONSUMPTION	~0,4 kW
REQUIRED ELECTRICITY SUPPLY	230 VAC - 400 VAC, 50 Hz
AIR USAGE	~24 m³/h
REQUIRED AIR SUPPLY	6 - 10 bar (0,6 - 1,0 MPa)

Magnetic Valve Sorters

Magnetic valve sorters are used to correctly orient, sort and feed aerosol valves to the aerosol filling line in a continuous manner.

The valves from the in-feed hopper via the sorting system and guides are fed to the pneumatic ejector which then ejects oriented valves through the transport pipe to the Valve Inserter tube mounted in the AMR Automatic Filling and Crimping Modules. The design of the magnetic valve sorter allows the use of steel body valves only. Sufficient supply of aerosol valves in the sorter basket is regulated by the sensor system and valve elevator integrated with the sorter.

Our offer includes magnetic valve sorter SMD-28 with output of 100 pieces per minute and SZM-08 with output of 60 pieces per minute.

Also used in BOV production lines

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	1000 mm / 930 mm / 1250 mm
WEIGHT	~200 kg
VALVES SORTED	standard 1" aerosol valves with and without tubes
CAPACITY	up to 100 pcs/min
POWER SUPPLY & CONTROLS	pneumatic & electric
POWER CONSUMPTION	~0,4 kW
REQUIRED ELECTRICITY SUPPLY	230 VAC - 400 VAC, 50 Hz
AIR USAGE	~10 m³/h
REQUIRED AIR SUPPLY	8 - 10 bar (0,8 - 1,0 MPa)

Vibrating Sorters

Vibrating sorters are used for proper orientation, sorting and continuous feeding of valves, spray heads, caps, atomisers for aerosol containers and perfume bottles on the manufacturing line. Sorted elements are transported from the hopper by means of variable frequency vibrations to a chute connected to a suitable placing machine. The appropriate amount of sorted elements in the vibrating basket is ensured by a system of sensors and an elevator integrated with the sorter.

Also used in BOV production lines

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	800 mm / 800 mm / 1590 ± 50 mm
WEIGHT	~180 kg
TYPE OF ITEMS SORTED	valves, caps, spray heads, flat caps
CAPACITY	up to 80 pcs/min
POWER SUPPLY & CONTROLS	pneumatic & electric
POWER CONSUMPTION	~0,4 kW
REQUIRED ELECTRICITY SUPPLY	230 VAC - 400 VAC, 50 Hz
AIR USAGE	~24 m³/h
REQUIRED AIR SUPPLY	6 - 10 bar (0,6 - 1,0 MPa)

Elevators

The elevator is a component of most aerosol production lines. The device is used to transport components required in aerosol production technology (caps, valves, spray heads, atomisers) to sorters and vibrators. It is most often integrated with the sorter by a system of sensors and is designed to automatically refill elements sorted in required quantities. The elevator hopper is capable of providing a sufficient supply of elements for several tens of minutes of production.

Also used in BOV production lines

ESN/EWN/ESW/EWW

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	800 mm / 1700-2100 mm / 2100-2800 ± 50 mm
WEIGHT	~150 kg
TYPE OF TRANSPORTED ITEMS	valves, caps, spray heads, flat caps
POWER SUPPLY & CONTROLS	electric
POWER CONSUMPTION	~0,4 kW
REQUIRED ELECTRICITY SUPPLY	230 VAC - 400 VAC, 50 Hz

Receiving Tables and Conveyors

The RSO-65 and the RSB-22 Rotary Receiving Table

Rotary Receiving Tables are output devices for aerosol filling lines. Solmatic's offer includes the RSB-22 and RSO-65 Rotary Receiving Table. They are used to receive, group and pack filled containers from the aerosol filling line. Both types of equipment are designed to be operated by a single operator and have a convenient, static top shelf for easy collection and packing of cans by the operator.

Also used in BOV production lines

TECHNICAL PARAMETERS

	RSO	RSB
DIMENSIONS (WIDTH / LENGTH / HEIGHT)	600 mm / 1250 mm / 1000 ± 50 mm	1950 mm / 1650 mm / 1000 ± 50 mm
HEIGHT OF THE TRANSPORTATION SURFACE	900 mm ± 50 mm	
WEIGHT	~128 kg	~150 kg
TABLE DIAMETER	Ø990 mm	Ø1500 mm
CAN DIAMETERS	Ø20 mm - Ø110 mm	Ø20 mm - Ø110 mm
CAPACITY OF THE TRANSPORTATION SURFACE	~620 pcs / Ø35 mm & ~170 pcs / Ø66 mm	~1400 pcs / Ø35 mm & ~400 pcs / Ø66 mm
ELECTRIC MOTORS	1 x 0,37 kW	
REQUIRED ELECTRICITY SUPPLY	230 VAC - 400 VAC, 50 Hz	

Slat Type Conveyor

The Slat Type Conveyor is a device for transporting containers between subsequent machines of an aerosol filling line. The standard length of the Slat Type Conveyor is 2 m and its multiples e.g. 4 m, 6 m, 8 m. SOLMATIC also manufactures conveyors with non-standard dimensions, e.g. 1 m, 1.5 m, 3 m, 5 m or with non-standard shapes (curves, passes).

Also used in BOV production lines

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	510 mm / 2000 mm / 900 mm ± 50mm
WEIGHT	~25 kg/m
AVAILABLE LENGTHS	2m & 3m as a standard, possibility to expand up to 10m
CAN DIAMETERS	Ø20 mm - Ø110 mm
MATERIAL OF THE SLAT CHAIN	as required by client industry (metal, plastic, FDA approved)
POWER SUPPLY & CONTROLS	electric
AIR USAGE	0,4 kW

Packing Machines

Packing may not be considered specific for aerosol and BOV production and it is true it can be found in most manufacturing facilities, however packing in the aerosol industry needs a unique approach. In consultancy with our clients we have designed and built machines that are tailored to the packing requirements of the aerosol filling plants. Our offer includes: semi-automatic packing machine and automatic packing machine for aerosol cans and caps.

Semi-Automatic Can Packing Machine

The Packing Machine is the final device in the aerosol production process line. It is used to semi-automatically pack finished aerosol cans into 4x3 or 4x4 boxes. The machine's manual process involves placing cartons on the containers grouped by the machine and removing filled cartons from the machine. The packer is operated by a single operator.

Also used in BOV production lines

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	1160mm /685mm /1300mm
WEIGHT	~140 kg
CAN DIAMETERS	Ø20mm - Ø110mm
CAPACITY	up to 40 pcs/min
CANS LAYOUT	4x3 by default; other layouts also available
REQUIRED AIR SUPPLY	8 - 10 bar (0,8 - 1,0 MPa)

Automatic Can & Cap Packing Machine

Automatic Can and Cap Packing Machine is an end-of-the line solution that is equipped with a sensor system allowing to automatically group and pack aerosol cans or caps into boxes which then are automatically sealed and can be transported to the palletizing unit. The machine is equipped with a servo motor with a grabbing plate that moves an entire layer of packed products at once and safely puts it into the box. The grabbing plate can be easily changed depending on products layout in the box. Automatic Can and Cap Packing Machine can be extended with a Cartoon Feeding Unit.

In the case of Automatic Aerosol Caps Packing the machine allows to fit up to 30% more caps in a single cartoon box compared to random packing! It also prevents caps from getting deformed in transport.

Also used in BOV production lines

TECHNICAL PARAMETERS

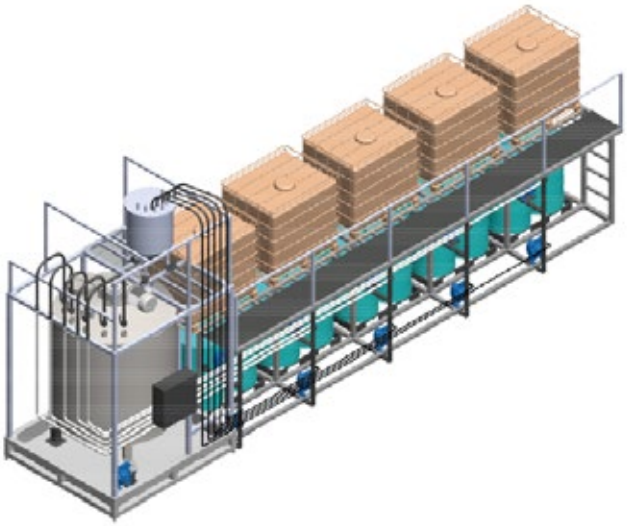
DIMENSIONS (WIDTH / LENGTH / HEIGHT)	900mm /3000mm /2450mm
WEIGHT	~980kg
CAN DIAMETERS	Ø20mm - Ø110mm
CAPACITY	up to 100 pcs/min
CANS LAYOUT	inquiry specific
POWER SUPPLY & CONTROLS	pneumatic & electric
POWER CONSUMPTION	~0,7kW
REQUIRED ELECTRICITY SUPPLY	230VAC - 400VAC, 50Hz
REQUIRED AIR SUPPLY	8 - 10 bar (0,8 - 1,0 MPa)

Polyurethane Foam Machines

Production of Polyurethane Foams is very challenging for machines and due to the product specification it requires modules unique for this production profile. Solmatic has originated from this demanding niche and offers a complete range of machines and components specific to PU production including Product Mixing Stations, Can Shakers (Rotomix), Sorters and specially designed filling heads (non-contact).

Product Mixing Station

Product Mixing Station can be used in all aerosol production, however it has been so far mostly installed in PU-Foam filling facilities. The Station is equipped with a mixing tank and a system of pipes connecting to a number of Mauzer tanks with product components. Precise amounts of components are mixed and added to the mixing tank by means of pumps according to product technology. Product components are mixed in the mixing tank until set product parameters are met. The Product Mixing Station is equipped with a software and a panel that allows to install and define procedures for a number of products. The mixing tank can be isolated or heated depending on the product technology. Mixing history including measured parameters data can be stored on an USB flash-drive or on an online server.



Can Shaker / Rotomix

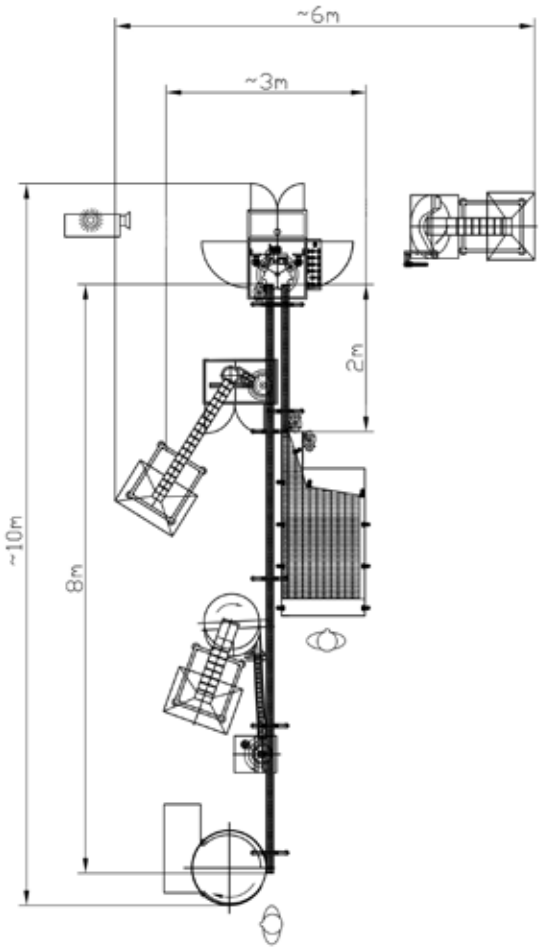
PU Foam consists of multiple components which once filled and combined in the can need to be very well mixed within a matter of minutes. This requires the PU Foam filling line to be equipped with a machine that would handle this task. Can Shaker or Rotomix is placed over a Slat Type Conveyor and consists of a grabbing arm that is able to shake over 25 cans at a time. Shaking time can be adjusted to individual product technology. Rotomix is equipped with a system of sensors that allow cans to enter and exit the machine.

TECHNICAL PARAMETERS

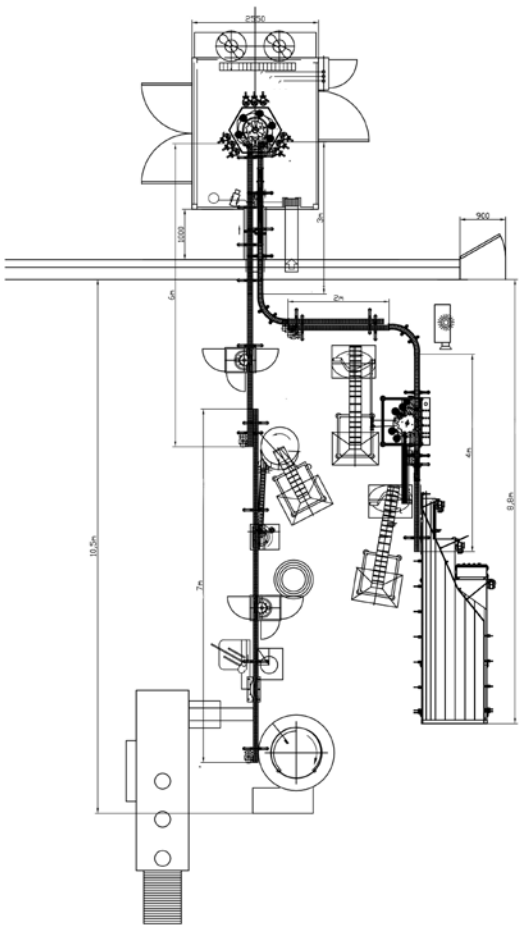
DIMENSIONS (WIDTH / LENGTH / HEIGHT)	**1720 mm/ 1400 mm/ 1380 mm**
WEIGHT	**~550kg**
CAN DIAMETERS	**Ø35mm - Ø110mm**
CAPACITY	**60 pcs/min**
POWER CONSUMPTION	**3 kW**
REQUIRED ELECTRICITY SUPPLY	**230VAC - 400VAC, 50Hz**

Examples of Aerosol Filling Lines

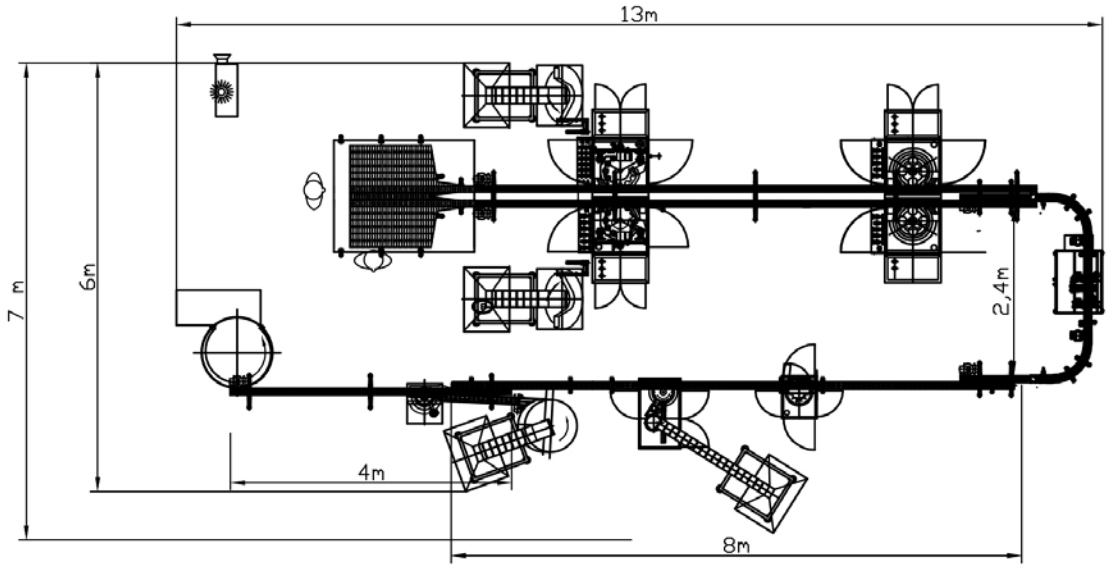
Compact Aerosol Filling Line up to 40 cans per minute



Gas Filling Line up to 60 cans per minute



Standard Aerosol Filling Line up to 120 cans per minute



Bag-On-Valve

We build machines not only for standard aerosol filling but also offer a wide range of machines for Bag-On-Valve (BOV) technology, which aims to improve the quality of cosmetics, medical products and food. By using BOV technology, the product retains all its values while being separated from the propellant. Products filled using BOV technology are emptied up to 99%. They can also be sprayed in any direction (even holding can upside down).

Most of the supporting machinery used in aerosol filling lines can be used for BOV lines as well, provided they are customized and adapted according to industry specific regulations including special materials.

How do BOV machines work?

The BOV consists of a 1"valve with a bag attached to it. The container is filled with a non-flammable gas (usually air or nitrogen) and the bag with the product through the valve. The product is dispensed as the bag is squeezed by the gas when the dispenser is pressed.

We also make machines for the BAB (Bag-and-Bag) technology.

Solmatic offer includes:

- **Semi-Automatic Machines with capacity of up to 20 cpm**
- **Fully Automatic Lines with capacity of up to 80 cpm**
- **Measuring and Laboratory Instruments**

Semi-Automatic Crimping and Filling Machines

Semi-automatic BOV machines are designed mainly for small scale production and laboratory use. They are built in compliance with requirements of the client's industry. We offer semi-automatic BOV Crimper with Pre-Gassing PT52 BOV and BOV Product Filler PT-53 BOV.

BOV Crimper with Pre-Gassing PT-52 BOV

The semi-automatic crimper is a basic device for Bag-On-Valve production. It is equipped with an exchangeable pre-gassing and crimping head. The machine can crimp approx. 20 valves per minute (the actual speed depends on the size of the container, the target pressure in the can and the experience of the operator) and is mainly used for small scale production, in laboratories or test productions. How does the machine work? The pneumatic machine is operated by a pedal or two buttons. Both the crimp height and diameter can be adjusted so that the crimp parameters match those recommended by the valve manufacturer. The head settles on the can, then lifts the valve and forces a specified amount of air into the can. When the appropriate pressure is reached, the head seats the valve back on the can and then crimps it. All operating parameters (as well as final parameters) can be easily set. After the work cycle is completed, the head returns to its original position. The head crimps both steel and aluminum valves.

BOV Product Filler PT-53 BOV

The semi-automatic BOV filler is a device for filling precisely measured doses of liquid product into aerosol cans using the BOV (Bag-On-Valve) technology. The machine is capable of filling up to approximately 20 cans per minute (the actual output depends on many parameters - including the amount and properties of the product, the size of the container or the capacity of the valve). It is mainly used in small scale production, in laboratories and test productions. Thanks to its high precision and repeatability, the machine can be used in many industries and with products of different chemical and physical parameters. It will perform equally well whether used to pour dense cosmetic products or loose pharmaceutical or food products. The machine is also flexible in terms of the containers it can handle - it can be adapted to a new diameter or height at any time, and can also be extended with a special module for mixing the gel before filling.

TECHNICAL PARAMETERS

	PT-52 BOV	PT-53 BOV
DIMENSIONS (WIDTH / LENGTH / HEIGHT)	400 mm / 400 mm / 950 mm	500 mm / 400 mm / 1170 mm
WEIGHT	~ 62 kg	~ 53 kg
CAN DIAMETERS	Ø35 mm - Ø110 mm	
CAN HEIGHT	30 mm - 150 mm	
VALVES DIAMETER	standard 1" BOV valves	N/A
FILLING VOLUME RANGE	N/A	50 ml - 420 ml
POWER SUPPLY & CONTROLS	pneumatic & Siemens LOGO!	

Sets of Semi-Automatic Machines

The offer of Solmatic semi-automatic sets includes the BOV Laboratory.

BOV Laboratory

This is a semi-automatic machine designed for small scale production, laboratories and test productions of products filled with BOV technology, so mainly cosmetics, food or pharma industries. The BOV (Bag on Valve) Laboratory is equipped with a BOV crimping head, BOV product filling head with product pressure control and a valve cleaning head. It can be additionally equipped with a system of static mixers for gel products. The high precision and repeatability of the filling allows for work in various industries, with different products, valves and cans. All operating units are equipped with a built-in „no can = no work" system, which prevents uncontrolled product leakages.

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	850 mm / 1630 mm / 2200 mm
WEIGHT	~ 375 kg
CAN DIAMETERS	Ø20 mm - Ø110 mm
CAN HEIGHT	55 mm - 330 mm
VALVES DIAMETER	standard 1" BOV valves
CAPACITY	up to 20 pcs/min
FILLING VOLUME RANGE	50 ml - 420 ml
FILLING PRECISION	> 99%
POWER SUPPLY & CONTROLS	pneumatic & Siemens LOGO!
AIR USAGE	12 m³/h
REQUIRED AIR SUPPLY	8 - 10 bar (0,8 - 1,0 MPa)

Automatic Crimping and Filling Machines with Pressure Control

Automatic Indexing Modules are used in the technological process of BOV production and are the most crucial machines of any BOV filling line. This is where all key processes of Bag-on-Valve manufacturing take place, including:

1. Can positioning if valve has to be in the same direction in all cans (option)
2. Can purging with filtered jet air (option)
3. Valve insertion and control of valve presence in the can
4. Pregassing followed by crimping once required pressure in the can is reached
5. Product filling through the valve (including products requiring component mixing during the filling process e.g. gel & isopentane in shaving foams)
6. Final pressure checking (this can be done either as the last step of the filling process or on a separate station)
7. Valve or stem cleaning

Solmatic Automatic Indexing Modules for BOV are built from stainless steel and materials approved by strict regulations. They are fully customizable to meet customer and industry requirements. Our BOV machines are used among others in the food and pharmaceutical industries.

For capacities up to 25 cans/minute we offer All-in-One Automatic Modules combining all processes in one compact machine. For capacities up to 40 cans/minute we offer All-in-One Automatic Module with Double Starwheel and operating units.

Automatic Indexing Module All-in-One BOV up to 25 pcs/min

The All-in-One Automatic Indexing Module BOV up to 25 pcs/minute is used in the BOV production process and is one of the most crucial machines in the Bag on Valve filling line. It combines all key steps of the aerosol production process in one compact machine.

The number of working modules is adjusted to the type of product parameters and expected output.
The All-in-One Automatic Indexing Module BOV is built from four main parts: the base, the casing, the product cylinder cabinet and the control panel. Adjustment of the product dosage can be carried out manually or automatically, as can the height of the heads. It also features pneumatic control and drive to ensure optimum explosion protection and easy adjustment.

The All-in-One Automatic Indexing Module BOV is controlled by switches and buttons on the control panel. These allow the automatic and manual controls to be switched on and off and the unit to be switched off by means of an emergency button. The control panel also allows the operation of single operations of all the working units.

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	1000mm/1300mm/1880 ± 50mm
WEIGHT	~490kg
CAN DIAMETERS	Ø35mm - Ø110mm
CAN HEIGHT	50mm - 330mm
VALVES DIAMETER	standard 1" BOV valves
CAPACITY	up to 25 pcs/min
FILLING VOLUME RANGE	50ml - 420ml
FILLING PRECISION	> 99%
AVAILABLE OPERATING MODULES CONFIGURATIONS	Valve inserter | BOV Crimper | 1-3 Product fillers | Valve cleaning
POWER SUPPLY & CONTROLS	pneumatic & Siemens LOGO!
AIR USAGE	~50m³/h
REQUIRED AIR SUPPLY	8 - 10 bar (0,8 - 1,0 MPa)

Automatic Double Starwheel Module All in One up to 40 pcs/min

The Automatic Electric Module All in One with Double Starwheel up to 40 pcs/min is used in the aerosol and BOV production process and is one of the most important machines in the BOV filling line. It combines all the key steps of the aerosol production process in one compact machine. In its standard configuration for increased productivity, the Automatic Electric Module All in One with Double Starwheel is equipped with duplicate modules.
The number of working modules is adjusted to the type of product parameters and expected output.
The Automatic Electric Module All in One with Double Starwheel is built from four main parts: the base, the casing, the product cylinder cabinet and the control panel. Adjustment of the product dosage can be carried out manually or automatically, as can the height of the heads. It has a pneumatic control and a variable index electric drive and is equipped with a table top with a set of two guide wheels for more working modules and capacity.

The operation of the Automatic Electric Module All in One with Double Starwheel is controlled by switches and buttons on the control panel. These allow the automatic and manual controls to be switched on and off, and the machine can be switched off using the emergency button. The control panel also allows the operation of single operations of all the working units.

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	**1400 mm / 1400 mm / 1880 ± 50 mm**
WEIGHT	**~ 750 kg**
CAN DIAMETERS	**Ø35 mm - Ø110 mm**
CAN HEIGHT	**50 mm - 330 mm**
VALVES DIAMETER	**standard 1" BOV valves**
CAPACITY	**up to 40 pcs/min**
FILLING VOLUME RANGE	**50 ml - 420 ml**
FILLING PRECISION	**> 99%**
AVAILABLE OPERATING MODULES CONFIGURATIONS	**2 Valve inserters | 2 BOV Crimpers | 4-8 Product fillers | 2 Valve cleaning**
POWER SUPPLY & CONTROLS	**pneumatic & electric**
REQUIRED ELECTRICITY SUPPLY	**230 VAC - 400 VAC, 50 Hz**
POWER CONSUMPTION	**~ 0,7 kW**
AIR USAGE	**~ 120 m³/h**
REQUIRED AIR SUPPLY	**8 - 10 bar (0,8 - 1,0 MPa)**

Measuring and Laboratory Instruments

Any plant producing aerosols or products using BOV technology should be equipped with at least one set of basic measuring instruments, which include:

- Instruments for measuring crimping parameters
- Pressure Test Gauge
- Aerosol Probe

These instruments allow precise setting of production parameters so that they comply with the recommendations of component manufacturers and product development departments. They are also an excellent tool for random quality control of individual batches during production.

Used for Aerosols & BOV

Instruments for measuring crimp parameters

A set of crimp gauges from the German brand Kroeplin allows for very precise measurement of crimp diameter and depth (to hundredths of a millimeter) and is a key accessory for any aerosol or BOV plant. To ensure a pressurized product can be sealed, it is essential that the crimp parameters are correctly selected. Each pair of valve and can should undergo special tests to determine the recommended parameters. Most often valve manufacturers provide recommended parameter ranges for their valves.

Pressure Test Gauge

Pressure Test Gauge is an instrument designed for laboratory use and for random quality control during production, it is a pressure gauge with a set of two specially designed and manufactured tips allowing for reliable and precise pressure measurement on both male and female valves . Pressure measurement is performed by pressing the measuring tip tightly against the valve. The Pressure Test Gauge has an analogical meter.

Used for Aerosols & BOV

Used for Aerosols & BOV

Glass Aerosol Probe

The Glass Aerosol Probe is an instrument designed for laboratory use, it is a simulation of an aerosol can with a transparent casing, which allows observation of chemical processes and reactions occurring inside the aerosol can between product components. The Glass Aerosol Probe is also available in version for BOV technology.

Perfume

We manufacture perfume filling machines based on individual customer needs. We advise on the best, personalised solutions, explain the application and possible ways to use and modify the machines, and present useful operating practices to increase the efficiency of the production process. Our machines are capable of producing up to several dozen products per minute. Most of them have functional components – interchangeable wheels or crimping heads, which are able to work with valves of different diameters.

Our offer includes:

- **Manual Machines**
- **Fully and Semi-Automatic Machines**

Manual Machines

Our range of manual perfume filling machines includes a pneumatic perfume filling machine and a pneumatic atomiser crimper.

Pneumatic Perfume Filler

The pneumatic perfume filler is a pneumatic device with a single filling vacuum head. The machine allows filling bottles of virtually any shape to a predetermined level with surgical precision and repeatability. At the end of the filling cycle, excess liquid is sucked into a reservoir.

The machine is ideal for small scale production and laboratory use due to its high flexibility and very low running costs. We recommend its use for filling primarily glass or metal containers – plastic only if the neck is made of thick plastic. All parts of the device which come into contact with the product are made of stainless steel or certified silicone.

Also available with two filling heads

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	200 mm / 340 mm / 360 mm
WEIGHT	~5 kg
CONTAINER HEIGHT	20 mm – 330 mm
DOSING TECHNOLOGY	Vacuum
CAPACITY OF THE OVERFLOW CONTAINER	4 l
AIR USAGE	<1 m³/h
REQUIRED AIR SUPPLY	6 – 8 bar (0,6 – 0,8 MPa)
CAPACITY	up to 25 pcs./min

Pneumatic Atomiser Crimper

The pneumatic atomiser crimper is a device powered solely by compressed air. It is equipped with a single head for external atomizer crimping on containers.

Thanks to the convenient „press to crimp" system, the operator can operate the machine with only one hand. It is possible to order crimping jaws for atomisers with different diameters, which can be replaced in no time. Crimping is very fast and reproducible, making it possible to close a large number of containers in a short time.

The machine has additional holes for attaching to the tabletop for even greater stability. It is particularly suitable for small-scale production and laboratory use due to its high flexibility, efficiency and very low running costs. All mechanical components are made of stainless steel.

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT)	260 mm / 300 mm / 510 mm
WEIGHT	~ 7,5 kg
CONTAINER HEIGHT	20 mm – 330 mm
SUPPORTED ATOMIZER DIAMETERS	13 mm – 22 mm
AIR USAGE	2-3 m³/h
REQUIRED AIR SUPPLY	6 – 8 bar (0,6 – 0,8 MPa)
CAPACITY	up to 25 pcs./min

Automatic Machines

Automatic Perfume Filling Machine MR-15/MRP

We offer our customers an automatic perfume filling machine MR-15 – a pneumatically driven machine for filling containers with liquid substances, powered solely by compressed air. It is a perfect solution for small and medium scale production plants and places with a lot of short production series which require frequent and quick changeovers. The machine can produce up to 30 pieces per minute.

The machine can be equipped with a volumetric or vacuum pouring system, atomiser dropper, pre-crimping head, crimper and stopper seating system. The bottle transport discs adapt to several shapes, and new ones can be printed on a 3D printer. The MR-15 is highly configurable with several options available, depending on the size and production profile, and can be configured to be operated by 1-4 operators.

Additional MR-15 equipment includes:
- feeding and receiving table,
- feeding and discharging conveyor,
- automatic system of removing cans from transporting discs,
- vibrating sorter,
- automatic atomizer dropper.

TECHNICAL PARAMETERS

DIMENSIONS (WIDTH / LENGTH / HEIGHT) WITHOUT SAFETY BOX AND CONVEYOR	1140 mm / 1250 mm / 1450 mm
WEIGHT	~500 kg
CONTAINER SIZES (UNIVERSAL HOLDING PUCKS)	Ø20 mm – Ø110 mm
DIAMETER OF THE ROTARY STARWHEEL	Ø1100 mm / 16 slots
DOSING TECHNOLOGY	Volumetric + Vacuum
SUPPORTED ATOMIZER DIAMETERS	13 mm – 22 mm
AIR USAGE	15-35 m^3/h (depending on configuration)
REQUIRED AIR SUPPLY	6 – 8 bar (0,6 – 0,8 MPa)
ELECTRIC MOTORS	2 x 0,37 kW
REQUIRED ELECTRICITY SUPPLY	230 VAC - 400 VAC, 50 Hz
CAPACITY	up to 40 pcs/min

Spare Parts & Service

Continuity of production, repeatability of processes and stability in terms of maintaining quality are key issues for production plants. In order to meet these conditions, efficient and tailored equipment is required. That is why periodic machine inspections are so important. We offer our customers spare parts for machines, maintenance and service, taking care to act as quickly as possible and to the greatest possible benefit for the customer.

It is normal for the most intensively used machine parts to wear out. We keep the majority of our wear parts in stock, and in our largest markets we have partners who are close to our customers. All of this is done in order to deliver parts in the shortest possible time, subject to availability. We also have parts compatible with machines from other manufacturers. Most parts are dispatched in less than 24 hours. If we do not have a part in stock, we produce it as a priority.

Solmatic offer

- Remote service
- Service at the customer's site
- Refurbishments

Cleaning-In-Place

We are a manufacturer of modern systems for cleaning and disinfecting production lines. Cleaning-In-Place systems are a solution that allows to increase profits and at the same time to maintain cleanliness in a production plant, which is inherently contaminated with production residues or bacteria.

How do CIP systems work?

Cleaning-In-Place systems guarantee that most elements of production lines – such as pipes, filters and containers – are kept clean. They are used in places where strict sanitary rules require the highest level of care for hygiene and safety of product manufacturing, i.e. in:

- food processing,
- beverage manufacturing,
- dairy products,
- manufacture of cosmetics,
- manufacture of pharmaceuticals.

During operation, CIP systems use cost-effective solutions – such as filtering several times or using the same water to clean the machines. Cleaning with CIP stations usually consists of the following steps:

- rinsing to remove residues,
- alkaline washing to remove grease and proteins,
- rinsing again with water,
- acid washing to remove mineral residues and neutralisation,
- final rinsing with water.

Solmatic offer

- mobile Cleaning-In-Place stations
- stationary Cleaning-In-Place stations
- innovative washing machine for conveyor belts

Dedicated Solutions

We create customised production machines, providing a personalised proposal that fully meets the customer's expectations and maximises the efficiency of the production process in a given plant. Furthermore, in addition to designing and building entirely new production solutions, we make improvements and modifications to the machines already in use by our customers, bearing in mind how demanding an investment it is to purchase a new machine.

How do I place an order?

- Contact our representative.
- During the conversation you will tell us your expectations (what you need, what you want to achieve) and we will tell you what the possibilities are. Knowing your main goal, we will talk about your expectations regarding the device itself. During the consultation, we will discuss issues such as: the performance of the device, the type of power supply, how to use it and additional modifications.
- Once we have drawn up a list of the most important parameters, we create a quotation and present preliminary diagrams and drawings that illustrate the future design of the machine.
- We can provide a portfolio with sample projects on request.

Check out our sample projects

Looking for a custom solution? **Contact us!**

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