Filling and Closing Machines

Rotary and Inline Machines
Today the WALDNER group of companies consists of the following individual branches:

- Hermann WALDNER GmbH & Co. KG
- WALDNER Laboreinrichtungen GmbH & Co. KG
- WALDNER Labor- und Schuleinrichtungen GmbH

The quality of WALDNER has been setting standards – for a whole century now. According to our customers’ requirements we intensively use our potentials and exceed the limits of our business fields. Thus, the three WALDNER branches stand for stability, experience and continuity referring to their size and integration into the whole group of companies.

The WALDNER filling and closing machines are outstanding due to their advanced technology, great flexibility, enormous capacity and above-average efficiency.

The machines are designed for an output range between 1.000 and 100.000 packages per hour, depending on the customer’s requirements.

The DOSOMAT rotary machine of the types 1, 2, 7, 10, 12 as well as the DOSOMAT 16 AS for the sterile filling of sensitive products are especially appropriate for small and mid range outputs and for the use of different types of packages and container sizes. Due to the ergonomic quick release system the change-over to another cup or lid format can be achieved easily in a few minutes.

For larger output ranges we recommend our high-performance inline machine, type DOSOMAT 20, which is also available as an “AS” version for the sterile filling of high quality products.

Another member of the DOSOMAT family is the UNIMAT, a fully automatic dosing unit, which can be accessorised or fully integrated as an additional filling unit to existing closing machines (e.g. cupping plants).

An overview of the range of machines:

- DOSOMAT rotary machine
- DOSOMAT inline machine
- DOSOMAT AS for sterile filling
- End-of-line packing machines
Fully automatic cup filling and closing machine for filling a variety of different products into pre-made cups, which may be of plastics, aluminium, carton, coex, tin or glass. The filling range extends from liquids to high viscosity, powdery products or products with particulates. Also cosmetic and technical products are packed into pre-made cups. The closure of the cups is effected by pre-made aluminium foils, snap-on-lids or by sealing a plastic or aluminium film from rollstock with integrated cutting unit. The DOSOMAT Inline machines cover an output range between 4,000 – 100,000 packs per hour.

Machine design
The basic frame of the machine is of a modular construction. The frame houses the driving groups and the gear box which are easily accessible. All product leading parts are made of stainless steel or plastics suitable for food.

Dosing systems
- Piston dosing systems
- Inductive flow measuring
- Mass flow measuring
- Weighing dosing systems (e.g. for fruit or meat pieces, powders etc.)
- Pocket fillers (muesli, chunks)
- Auger fillers
- Robotic systems / pick-and-place of technical articles, etc.

The appropriate dosing method is available for any product.

Drive versions
- Servo motor via ELAU PacDrive
- Frequency-controlled motors
- Mechanical drive
- Pneumatic drive
- Or combinations of these features

The drive train is by servo motor or by frequency-controlled motor-gear-combinations. For the main drive the highest priority is given to smooth acceleration and deceleration for any product.

Closing Systems
- Heatsealing
- Special heatsealing for aluminium cups (sterilisable)
- Hot-melt (cosmetics)
- Snap-on-lidding, with or without tamper-proof closure
- Ultrasonic sealing
- Inductive sealing
- Sealing from rollstock and lid-cutting
- Sealing from rollstock with integrated lid cutting

DOSOMAT 20 – Inline

DOSOMAT 20.10 AS incl. sterilisation of packaging material
Capacity: 25,000 cups/hour
The integrated case packer of the DOSOMAT 20 inline assembles, according to the packaging arrangement, the cups from the slat conveyor and places them into the pre-made carton or tray.
Fully automatic case packer

The integrated case packer takes the collation of single cups and stacks them automatically into the pre-erected cartons.

DOSOMAT 20 – Compact

This machine is equipped with a sealing from rollstock including print registration.

The sealing film is unwound, adjusted by means of the registration marks and sealed to the tray. In the further process longitudinal and traverse knives cut out the single-portion cups without leaving residual material.

Fields of application are:

Dressings

This machine is primarily used for filling dressings, mayonnaise or similar products into single-portion cups.

Capacity:

10,000 – 40,000 cups/hour

The single-portion cups are destacked into a tray with 24 cells, inserted into the DOSOMAT machine, filled with product, separated and finally packed in cartons.
The delicatessen industry trusts in WALDNER DOSOMAT machines when it comes to the careful filling and packing of salads or similar products. In this case the filling range extends from single-portion cups up to large bins, which can be filled with herring salad, shrimp salad, bean salad, coleslaw, potato salad etc.

**DOSOMAT 20 – Delicatessen**

**Cup feed:**

The cup setter is loaded from the linear buffer magazine, in a stand-alone version or integrated on the machine, from a cup carousel or from an alternative storage magazine specified by the customer. Depending on the cup material up to 1.500 cups per lane can be stored in the linear magazine. There cups are fed in stacks to the cup setter. The system assures an optimal buffer time dependant on the machine speed.

**Fields of application are:**

- delicatessen

Hygienic design and full flexibility are the main requirements of the delicatessen industry.

**DOSOMAT 20.6**

Filling of 1 kg cups with tamper-proof snap-on-lids

Capacity: 16.000 cups/hour

**Lid magazine/ lid setter**

The pre-made and embossed sealing lids are taken from the magazine via vacuum suckers and placed onto the cups. The destacking of the lids is effected by means of special scrolls, in order to guarantee a correct separation. Automatic lid scan on missing lid = machine stops and displays fault message.
Fields of application are: Paté, Luncheon Meat

The product is conveyed to the dosing unit by vacuum filler including compensation cylinder and filled into the cups through a proven piston dosing system, which includes a specially designed rotary cutter. In order to obtain a minimum content of residual oxygen it is possible to equip the machine with a closed chamber for evacuating the cup head space and for a subsequent flush of protective gas.

DOSOMAT 20 – Paté, Luncheon Meat

WALDNER DOSOMAT machines are the market leaders in the innovative filling and packing of Paté, meat-spread, liver sausage etc. into plastic cups with re-closable lids. Engineering, construction and service of the machines are given special attention by WALDNER. Due to perfect quality assurance systems can be traced back and hence the highest quality level becomes a standard feature.

DOSOMAT 20.5 with sealing from rollstock, cup evacuation and gas flushing with residual oxygen content of ≤ 0.3 %
CIP cleaning / SIP sterilisation

Execution:
This version includes a closed hopper with spray ball and electric level control. The entire dosing unit can be cleaned in place without dismantling. To initiate the cleaning procedure, the circuit is closed by means of an automatic locking cleaning adapter.

All components and seals meet the requirements for food products and can be adjusted to the specific requirements at the customer’s location (3A, EHEDG). The WALDNER standard which applies to all CIP/SIP relevant parts avoids dead legs and other points of contamination. The sterilisation procedure of the dosing unit is controlled through safety checks (time and temperature). This means that the dosing unit is only returned to production, when cleaning and sterilisation is successfully achieved.

DOSOMAT 20 AS –
With Sterilisation of Packaging Material

Fields of application are: dairy products

For the DOSOMAT 20AS machine the cups and lids are sterilised with the most advanced technology. The subsequent stations are covered, hermetically sealed and flushed with sterile air so as to avoid any recontamination of the packaging.

Cup sterilisation

The sterilising agent hydrogen peroxide $\text{H}_2\text{O}_2$ is sprayed through specially manufactured nozzles. The atomised cleaning agent is mixed with a flow of hot sterile air and blown into the cups via delivery nozzles. This process ensures good spraying of the cups without forming drops, while an optimal reactive temperature is reached.

The cups are dried with hot sterile air on the following machine stations.

The air loaded with $\text{H}_2\text{O}_2$ is discharged externally and safely away from the building. All cleaning media are completely prepared in a separate module.

Exact control and dosing of all components guarantee optimal degeneration rates, while the machine surroundings will be largely free of contamination through the sterilising agents.

Lid sterilisation

The aluminium film lids are taken from the lid magazine, sterilised with strong ultraviolet radiation and placed on the filled cups. For this sterilisation non-ozonic projectors are used.

A sophisticated aeration system using sterile air allows the use of even plastic film lids on the machine.

Optionally, infrared or $\text{H}_2\text{O}_2$ systems are available for sterilisation.

The subsequent stations of DOSOMAT 20 Inline are covered, hermetically sealed and flushed with sterile air so as to avoid any recontamination of the lids.
DOSOMAT 1 – Rotary Machines

DOSOMAT rotary machines are adequate for an output range of 2,500 – 30,000 cups/hour. They are appropriate for filling liquids, high viscosity and powdery products or products with particulates.

DOSOMAT 1
Rotary machine for 1 – 4 lanes with laminar airflow cabinet.
Capacity: 2,500 – 10,000 cups/hour

DOSOMAT 1.1 Compact

The DOSOMAT 1 Compact machine is a robust, easy to handle, fully automatic cup filling and closing machine which is the ideal solution for small and medium capacities. The basic version is based on the execution of the proven DOSOMAT machine, type 1. The mechanical speed reaches 50 cycles/minute. However, the actual speed of the machine depends on the product, volume, cup size and cup head space.

This machine is appropriate for pre-made, stackable cups with a maximal format diameter of 125 mm for round cups and 130 x 90 mm in case of rectangular cups.

The closure can be effected by sealing an aluminium film lid, a snap-on-lid or combinations of these lid types.

Quick change-over to another cup format is achieved by simply changing the cup magazine.

A new quick-release system of cup cells within the rotary table for a simple toolless format change. Sealing station with quick-action closure can be folded upwards, again toolless.

Appropriate for two different cup diameters, exchange of the sealing plate is not necessary.
DOSOMAT 7

Rotary machine for 1 – 6 lanes
Capacity: 2,500 – 15,000 cups/hour

Carriage for format parts
Outstanding features are:
• Quick change-over to another cup size
• The possibility to run a variety of different cups
• Simple and elegant operation

Simple change of cups through quick-release format parts

Outstanding features are:
• Dosing systems without dirt traps
• Hose-down execution
• Optimized CIP/SIP systems
• Laminar airflow cabinet in pharmaceutical execution
• Sterilisation of packaging materials to the latest state of art
• Energy conduits (for air, power, water) are led through the corner pillars

DOSOMAT Rotary Machines

DOSOMAT machines are based on the latest technology and constant development. The quality of our products, an excellent manufacturing know-how and the flexibility to meet the customers’ requirements through individual solutions are the basic principles of our success.
The following examples show some products that can be filled: natural and fruit yoghurt, yoghurt with muesli, cream, quark, fresh cheese and processed cheese; a variety of salads, soup and sauce paste, dressings, mayonnaise, mustard, butter, margarine, spreads, honey, jam, pâtés, petfood, cosmetic creams, gels…

**DOSOMAT Rotary Machines**

Dosing systems:
- Piston dosing systems
- Inductive flow measuring
- Mass flow meter
- Weighing dosing systems (e.g. for fruit or meat pieces, powders, etc.)
- Pocket fillers (muesli, chunks)
- Auger fillers
- Robotic systems / pick-and-place of technical articles

The appropriate filling valves are available for any product, e.g. a special rotary cutter for stringy petfood, or tappet valves for very liquid and thin products.
Almost all filling units are available in CIP/SIP.

Available in different variations with:
- Pneumatic drive
- Mechanical drive
- Servo motor
- Frequency-controlled motors
Or combinations of these features

Sealing from rollstock

**DOSOMAT 10**

Rotary machine for 2 – 8 lanes with sealing from rollstock and laminar airflow cabinet
Capacity: 5.000 – 20.000 cups/hour
Packaging material

Widely differing packaging materials can be handled by the DOSOMAT machines: the cups or lids may be of paper, plastic, coex, aluminium, tin or glass.

Discharge of closed cups:

The cups are lifted out of the cup cells and pushed onto a belt conveyor respectively transferred to a subsequent machine or to an integrated end-of-line packaging unit.

Integrated case packer

The case packer which is integrated in the DOSOMAT machine, takes, according to the packaging arrangements, the cups out of the cup cells and places them into the pre-made carton or tray.

DOSOMAT 12

High performance machine for 2 – 12 lanes with laminar airflow cabinet
Capacity: 5,000 – 30,000 cups/hour
The DOSOMAT 16 AS machines are suitable for filling cups and buckets and utilise an integrated system for sterilisation of the packaging material. Capacity depending on machine version: 3,000 – 15,000 cups per hour.

**DOSOMAT 16 AS – Rotary Machine With Sterilisation of Packaging Material**

**Requirement profile:**
- Accurate feeding systems,
- Clean room technology,
- Sterilisation of packaging material,
- Precise dosing units,
- Reliable closing technology.

**Fields of application:**
- Dairy industry (yoghurt, milk, cream, kefir, quark etc.)
- Fruit processing (jam, plum and apple purée, etc.)
- Food industry (mustard, spreads, delicatessen, etc.)
- Non-food (pastes, gels, creams)

**Laminar airflow cabinet with the specified filter classes combined with the sterilisation of packaging materials give a clean room which is particularly suitable for the following applications:**
- Use of packaging material where contamination may be present
- Use in rooms with air contamination where moulds and other bacteria spread through the air
- Use in rooms with low ceiling and with a high air circulation rate
- Use in rooms where traffic passes through (loading trucks, transport of goods)

**Bucket sealing from rollstock**

**Cup sterilisation with H₂O₂**
Our References

Yoghurt/Desserts

Cream Cheese
Our References

Butter / Margarine

Delicatessen Salads
Our References

Meat Pies

Pet Food
Our References – Coffee/Jam/Fruits/Technical Articles

Filling of Cosmetic Products

DOSOMAT rotary machine with buffer rotary table and in-feed conveyor for filling cosmetic products into plastic or glass cups.