

Macofar WM 8000

Washing Machines

Packaging - Processing

Bid on Equipment

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 **Romaco**
EXCELLENCE THROUGH INNOVATION

WM 8000

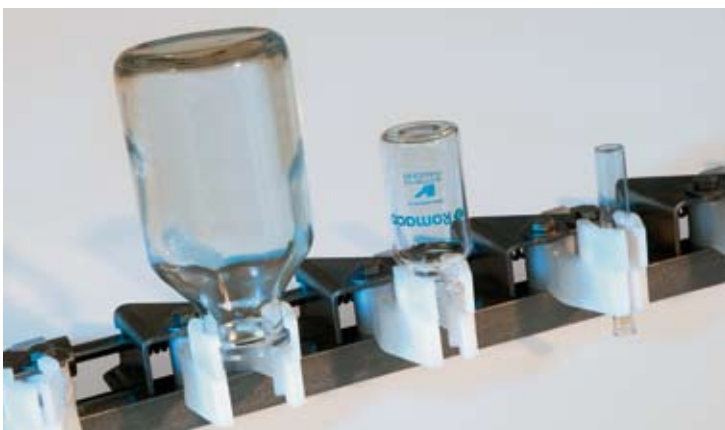
Washing Machines

The Macofar WM 8000 series of automatic washing machine operates on the intermittent motion principle. High performance and flexibility are the underlying principles of this balcony-design machine. The high performance transport system ensures precise and smooth handling of cylindrical containers even those of unstable design. Flexible, programmable washing cycles afford a thorough cleaning process that is easy to validate. Washing machines can be easily integrated in various production lines such as Macofar aseptic filling lines for powders and liquids.



Transport grippers

Macofar washing machines handle vials and ampoules through a special system of universal transport grippers, which ensure delicate but efficient holding even of difficult containers and which does not require any size changeover even in the case of different diameters for both vials and ampoules.



Transport grippers

Main Features

- Internal and external washing of containers by means of co-axial nozzles that allow combination of water and air
- Pre-washing of containers with ultra-sonic bath; completely removable to be easily sterilized with the transducers remaining inside the tank
- Automatic discharge unit at the end of washing
- Sterilization of washing circuit with fluent steam
- Spray siliconizing station
- Washing cycle program highly flexible and customizable

Key Benefits

- Special external jet nozzles
- Co-axial inner jet nozzles (patented)
- External nozzles move downwards to wash the whole external surface of the containers
- Pre-washing through ultrasonic bath, tank is integral part of machine structure
- Automatic elimination of possible laid down vials (90°)
- Automatic trapping of reversed vials (180°)
- Physical separation of each row of vials before lifting phase to washing cycle
- Optional siliconization of containers at the end of the cycle
- All water tanks can be located inside the machine frame. All pumps, filters, piping, mechanic components located on the back of the machine, easy accessible through transparent guards
- Positive, guided discharge of containers either onto a tray or directly to tunnel infeed conveyor
- Universal transport gripper system for both vials and ampoules
- Balcony-design

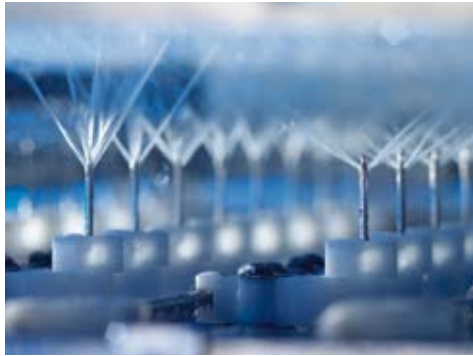


WM 8000

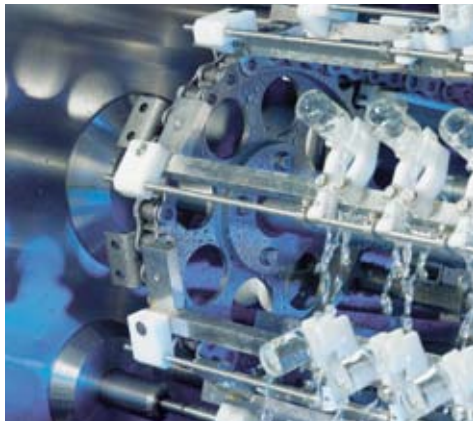
Grippers



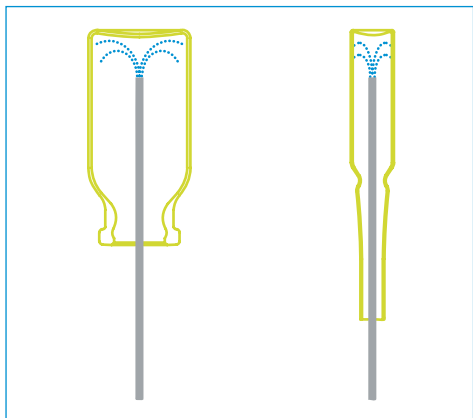
Vial separation and uploading



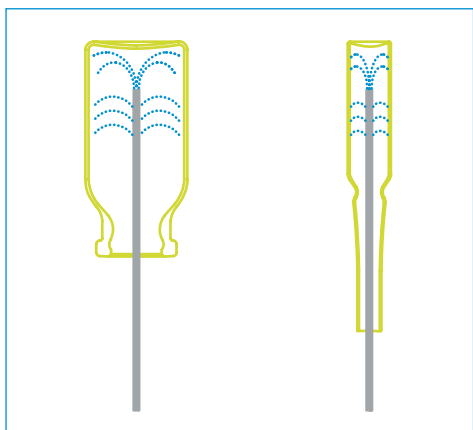
Nozzles with lateral slots



Vial transport



Standard nozzles



Nozzles with lateral slots

Washing cycle

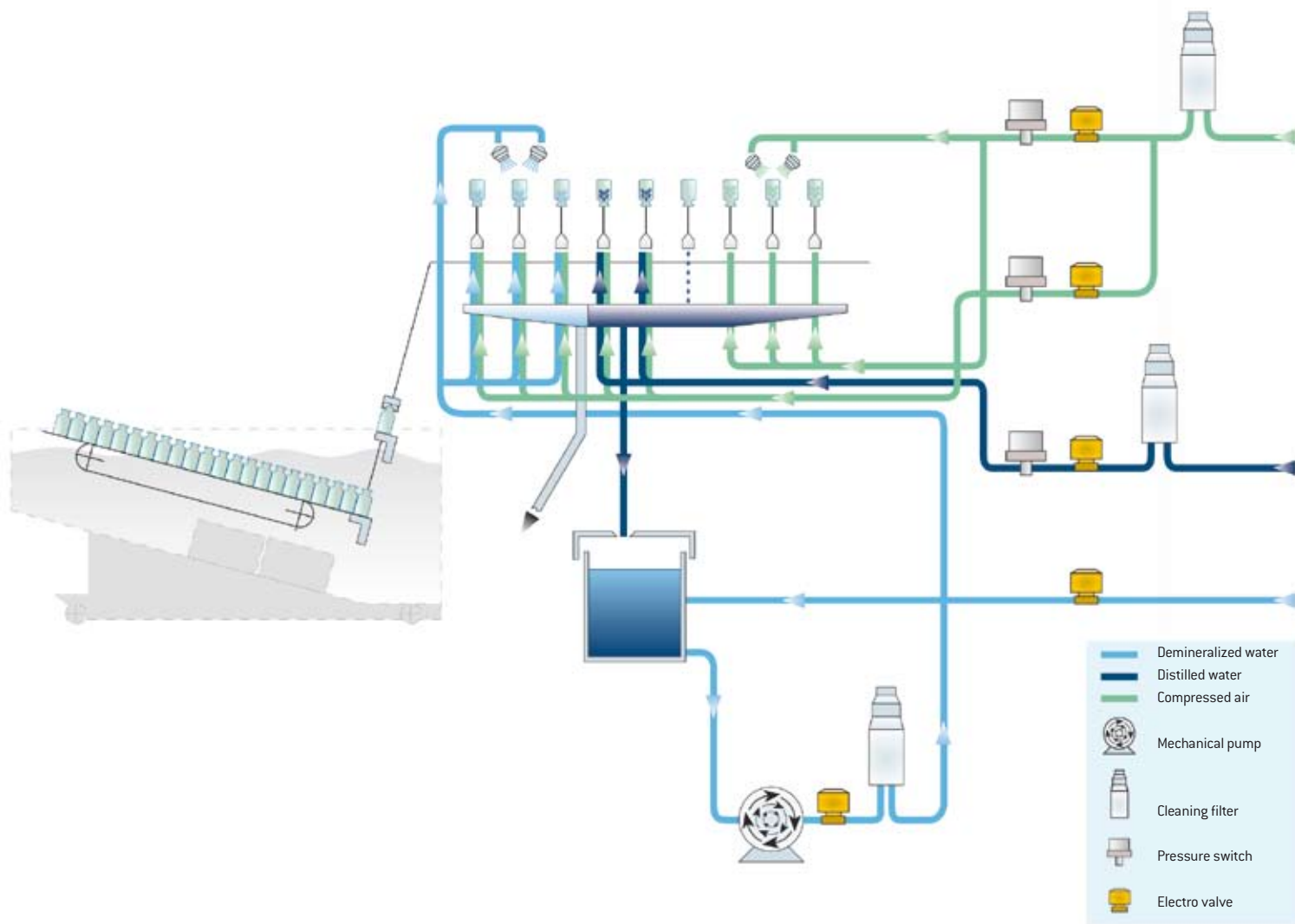
Standard washing cycle

The washing process is carried out in each station by means of a set of two special outer jet nozzles and a set of inner jet nozzles, that move upwards into the containers, to be washed. External jet nozzles remain stationary throughout.

Washing cycle with co-axial needles (optional)

The washing process is carried out in each station by means of a set of special outer jet nozzles and a set of co-axial inner jet nozzles (patent pending on co-axial circuits and nozzles). The inner jet nozzles move upwards and enter into the containers while the outer nozzles move downwards to wash the whole external surface of the containers. The jetting cycle can be customized from the control panel to optimize its performance in accordance with the container's shape and dimensions. The washing cycle consists of 8 stations which can be increased to up to 9 upon request (additional washing or drying or siliconisation).

Washing





Full aseptic line competence

Built on Macofar's early reputation as an expert in aseptic powder handling by developing a range of equipment to complement its superb microdosing machines, Macofar is now a recognized global supplier of technologically advanced and highly innovative aseptic lines for both solids and liquids. Macofar does not only offer a machine, but full lines for aseptic filling. We can offer lines including washers for vials and ampoules, sterilizing tunnels, filling and dosing equipment for both liquids and powders as well as capping machines. And to complete the line, we can also offer cartoners and case packers.

Romaco is your single source supplier for fully customized, state of the art aseptic lines. Starting from the first project meeting, integration into existing equipment, set up, training qualification, validation and service Romaco is your partner.



1 Washer

Macofar automatic washing machines, which have a mechanical speed of between 9.000 and 24.000 vials/ampoules per hour, handle vials and/or ampoules through a unique system of universal grippers to ensure stable, reliable and efficient transport of cylindrical containers. The key features of the balcony design machine includes separated working and mechanical areas, modular washing cycles and self draining washing circuits.

2 Depyrogenation Tunnel

Macofar depyrogenation tunnels are designed to sterilize and depyrogenate ampoules, vials, bottles and other glass containers based on the laminar flow principle using hot sterile air (max. 340 °C).

3a Powder Dosing Micro 9/18

Macofar offers a range of intermittent motion machines, with mechanical speeds of 9.000 and 18.000 vials per hour, featuring volumetric vacuum/pressure dosage for filling sterile antibiotic powders into round glass vials closed by rubber stopper.



3b



4

5

3b Liquid Filling VF 18

(alternative to powder dosing machine)

Macofar offers an aseptic liquid filling machine with speeds up to 18.000 vials per hour. This slim design machine features outstanding performance and reliability and is the benchmark in aseptic liquid filling.

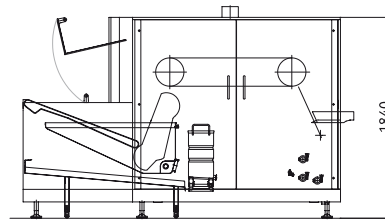
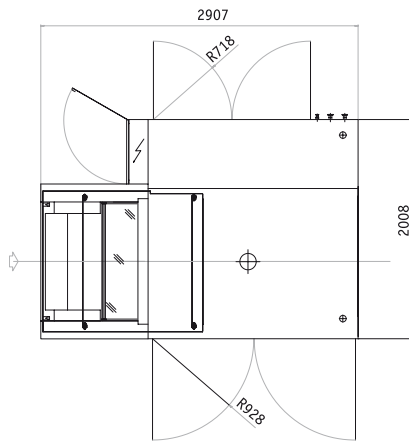
4 Capping Machine

The automatic continuous motion capping machine offers a mechanical speeds up to 10.000 and 24.000 vials per hour. The range of capping machines is suitable to close cylindrical glass or plastic containers with simply flanged alu-caps with or without plastic cover (FLIP-OFF), pilfer-proof caps, press-on plugs or screw caps (with proper equipment).

5 Cartoning Machine

With speeds up to 400 cartons per minute Promatic cartoners deliver optimum performance and versatility. In combination with the Promatic case packers, this is the perfect solution for secondary packaging.

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Key Technical Data

	WM 8200	WM 8300	WM 8400/16	WM 8400/8
Cleaning station	9	9	9	9
Containers per row	8	12	16	8
Max. output/h	12.000	18.000	24.000	12.000
Container diameter, in mm	52	52	25.4	52
Container height, in mm	150	150	150	150
Container height, in mm (with ultrasonic tank)	120	120	120	120
Distilled water pressure, in bar	2.5	2.5	2.5	2.5
Air pressure, in bar	5	5	5	5
Rated power, in bar	15	15	16	16
Rated power with ultrasonic tank, in kW	25.3	25.3	25.3	25.3
A, in mm	2.145	2.145	2.145	2.145
B, in mm	2.995	2.995	2.995	2.995
C, in mm	1.850	1.850	1.850	1.850
Net weight, in kg	2.400	2.400	2.400	2.400

Note: consumption values are defined on the basis of container dimensions and machine model.

Pharmaceutical expertise

Romaco Macofar has built its reputation in over 30 years of outstanding performance, with over 1.800 installations worldwide and an exceptional record in service and support. Macofar is a recognized global

supplier of capsule fillers, liquid fillers, powder microdosing machines, powder macrodosing machines, aseptic liquid fillers, vial and ampoules washing machines as well as sterilization tunnels.

Macofar is the expert partner to assist any pharmaceutical company in the process of installing a new aseptic filling line, from feasibility study to validation. Our Romaco Macofar team is looking forward to the next challenge.

Romaco
Macofar

Romaco S.r.l.
Via Marzabotto, 5
40065 Pianoro Bologna – Italy

Phone +39 051 620 2611
Fax +39 051 620 2600

macofar@romaco.com
www.romaco.com

A Unit of Robbins & Myers, Inc.