



Manufacturing Customized Packaging Equipment Worldwide

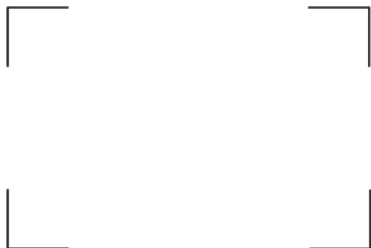


303-304 Washing Machine

303-304 machines are designed to clean Vials, Syringes, Cartridges & Ampoules

- Designed from high-grade stainless steel and pharmaceutical grade plastics
- Smooth container handling using coated grippers
- Cost-effective WFI recycling unit
- Different cleaning agents can be used
- Energy efficient cleaning needle design
- Needle movement allows for efficient cleaning of the entire inside of container
- No glass to glass contact during the cleaning cycles
- Optional siliconization with servo controlled needle movement allows customized silicone patterns

Technical Data	Type 303	Type 304
Output	up to 150 containers/ min	up to 125 containers/ min
Container Size Range	max. Ø 52 mm x H 140 mm	max. Ø 52 mm x H 100 mm
Electrical Supply	3 x 208 V, 50/60 Hz	3 x 208 V, 50/60 Hz



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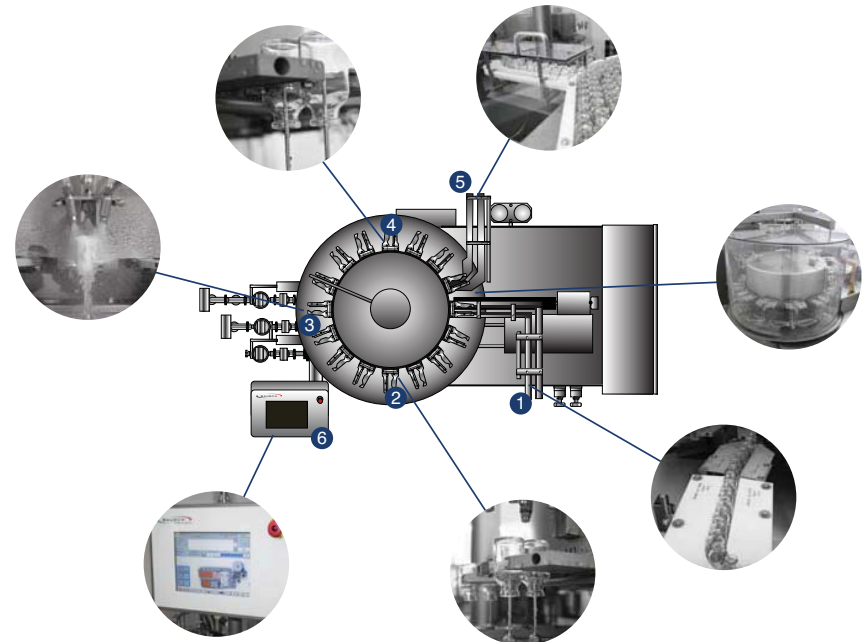
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Washing Machine for Vials, Syringes, Cartridges & Ampoules

Type 303-304 machines can be used as a stand-alone washer or integrated into a fully automatic line. The containers are washed and dried internally at several cleaning stations. External washing and drying complete the cleaning of containers achieving up to 3 log reduction. An optional recycling station, Type 705, provides cost-efficient reconditioning of used cleaning agents.



Grippers



Recycling Station



Siliconizing

- 1 Container Infeed
- 2 Internal Cleaning
- 3 External Cleaning
- 4 Station for Sterile Air
- 5 Discharge
- 6 HMI



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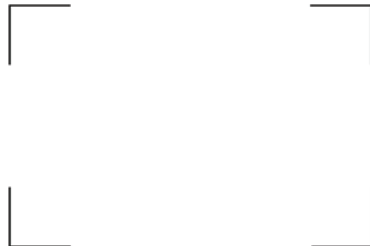


401-40X Depyrogenation Tunnel

Type 401-40X provide optimum hot air Depyrogenation within a short period of time

- Air convection pre-heating and sterilizing zone for energy efficiency and gentle heating of the containers
- Integrated transport belt with monitoring features
- Temperature and differential pressure indicators
- Optimum temperature distribution is achieved by multiple control sensors
- System control and monitoring of all process relevant data via PLC
- Servo controlled baffles aiding cross flow regulation

Technical Data	Type 401	Type 404	Type 40X
Output	up to 75 kg/h	up to 175 kg/h	up to 610 kg/h
Conveyor Belt Width	500 mm	700 mm	700 - 1500 mm
Electrical Supply	3 x 400 V, 50/60 Hz	3 x 400 V, 50/60 Hz	3 x 400 V, 50/60 Hz



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Laminar Flow Tunnel for continuous Sterilization of Vials, Syringes, Cartridges & Ampoules

Containers are fed automatically from an upstream machine or manually using trays. Subsequently they enter the single frame tube divided in to 3 major zones: a) Pre-Heating, b) Depyrogenation, c) Cooling Zone. The depyrogenation is performed using hot air, which is heated by an electric heating coil and constantly recirculates. Heat resistant high-capacity particle filters guarantee a Class A (100) clean room specification. The filters are mounted without a gasket to minimize generation of particles. The cooling zone gently cools down the containers before they are automatically transferred to a machine downstream.



- 1 Infeed
- 2 Pre-Heating Zone
- 3 Sterilizing Zone
- 4 Transport
- 5 Cooling Zone
- 6 Discharge
- 7 Visual Monitoring
- 8 HMI

Visual Monitoring



Heat Exchanger



Baffle Plates



Transport System





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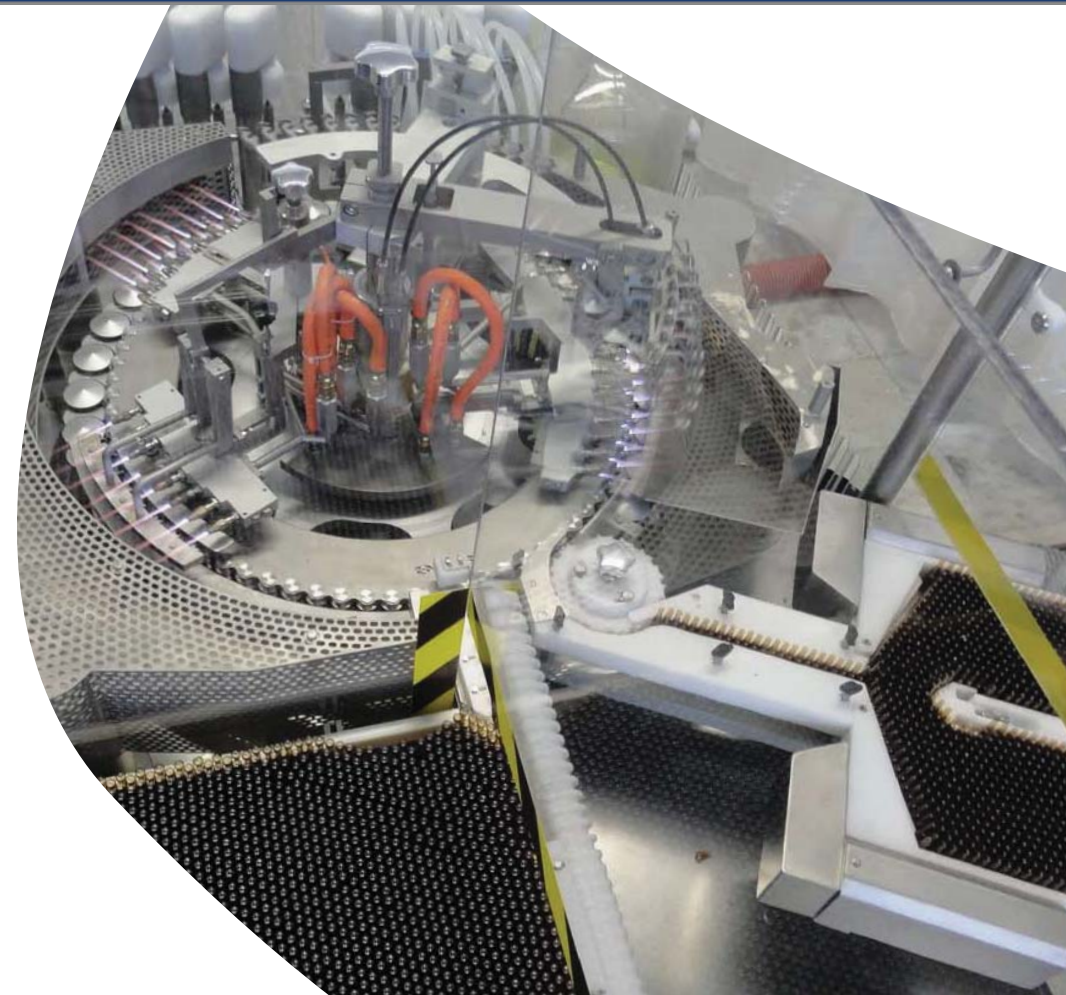


504-505-506 Filling & Closing


Type 504-505-506 machines are designed for Filling & Closing of Ampoules & Vials

- Processes open and presealed ampoules
- Smooth continuous container transport minimizing breakage
- Rotation of the containers minimizes foaming
- Evenly heats ampoule stem leaving a perfect dome
- Compact design allows for easy integration within existing lines

Technical Data	Type 504	Type 505	Type 506
Output (Containers/min)	up to 200	up to 300	up to 400
Container Size Range	700 mm		
Dosing Range	0.1 - 28 ml		
Electrical Supply	3 x 400 V, 50/60 Hz		



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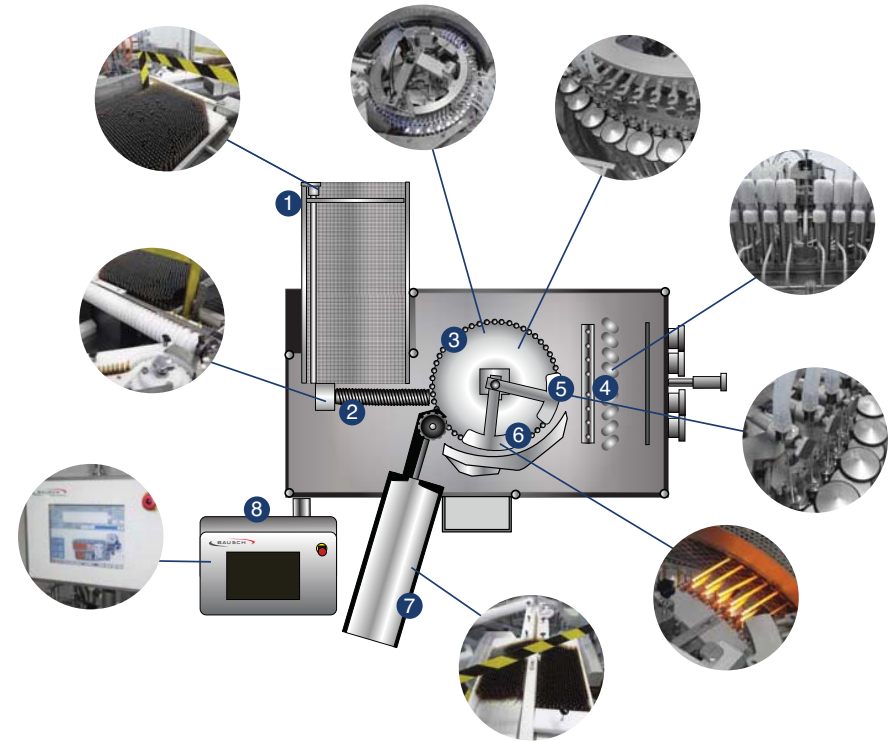
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Filling and Closing Machines for Ampoules & Vials

Type 504-506 machines fill and close open and pre-sealed ampoules as well as processing of vials at speeds of up to 400 containers/min. This design allows quick and easy change over from ampoules to vial processing. The rotary style machine provides a smooth and gentle continuous transport of the containers.



- 1 Container Infeed
- 2 Infeed Scroll
- 3 Transport System
- 4 Dosing Station
- 5 Filling Station
- 6 Two Step Sealing Process
- 7 Discharge
- 8 HMI



Vision System



Reject



Gassing



Opening of Closed Ampoules



Size Parts



Gassing



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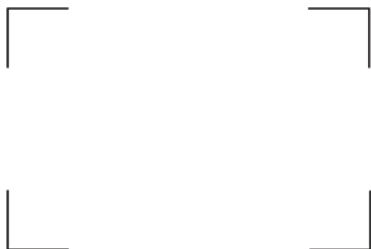
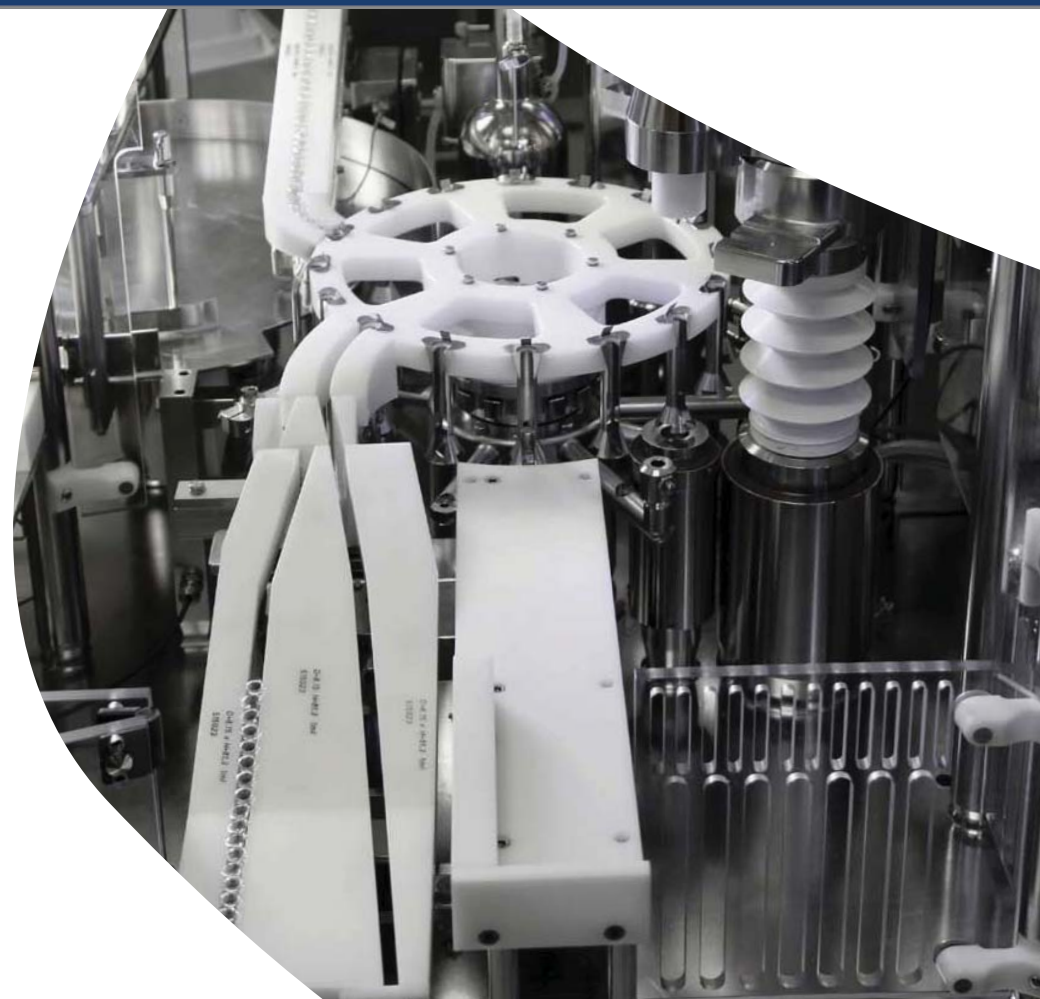


515 Vial & Syringe Filling & Closing

Type 515 machine is designed for Filling and Closing of Vials and Syringes on one machine

- Quick and easy size changeovers from Vials to Syringes
- Laminar flow friendly design for aseptic application
- Suitable for installation into an isolator
- Compact machine design with an integrated control cabinet
- Can be used as stand-alone machine or integrated in a complete processing line
- Provides optional In Process Check for Filling Accuracy

Technical Data	Type 515 Combo
Output	up to 60 containers/ min
Container Size Range	Ø 5mm - 30mm, H 10 - 130 mm
Dosing Range	0.1 - 100 ml
Electrical Supply	3 X 208 V , 50/60 Hz



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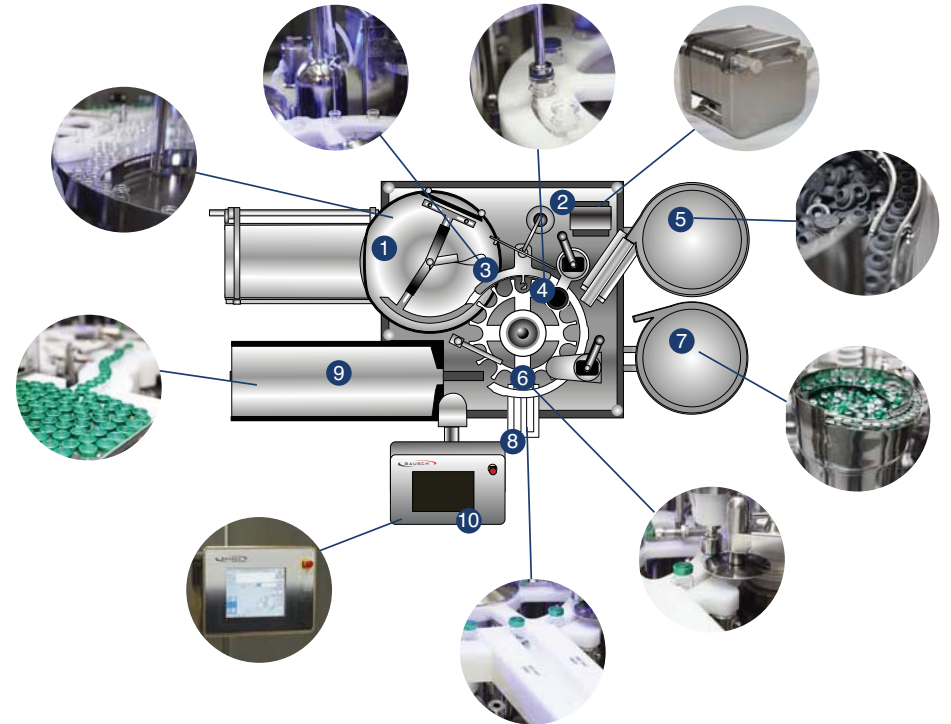
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Filling and Closing Machine for Vials & Syringes

Type 515 is a combination processing machine for vials and syringes. Both vials and syringes are processed in similar ways but have separate size parts that will need to be changed in order to achieve the correct routine. Containers are transported into a star wheel that will move them to the dosing system. Filling needles are controlled by a servo drive for fast and accurate dosing range. Stoppering is fed through a sorting bowl, picked up by a vacuum tool and precisely inserted. Crimp capping is performed and closing monitored through precise torque.



Vision System



In Process Control



Laminar Flow



Vials & Syringes

- | | |
|------------------------|--------------------|
| 1 Infeed | 6 Sealing Station |
| 2 Dosing Station | 7 Cap Sorting Bowl |
| 3 Filling Station | 8 Reject Station |
| 4 Stopper Placement | 9 Discharge |
| 5 Stopper Sorting Bowl | 10 HMI |



Combo Filling & Closing Machine Type 515 for Vials and Syringes

Type 515 is a combination processing machine for vials and syringes. Both vials and syringes are processed in similar ways but have separate size parts that will need to be changed in order to achieve the correct routine. Containers are transported into a star wheel that will move them to the dosing system. Filling needles are controlled by a servo drive for fast and accurate dosing range. Stoppering is fed through a sorting bowl, picked up by a vacuum tool and precisely inserted. Crimp capping is performed and closing monitored through precise torque.

More information contact:

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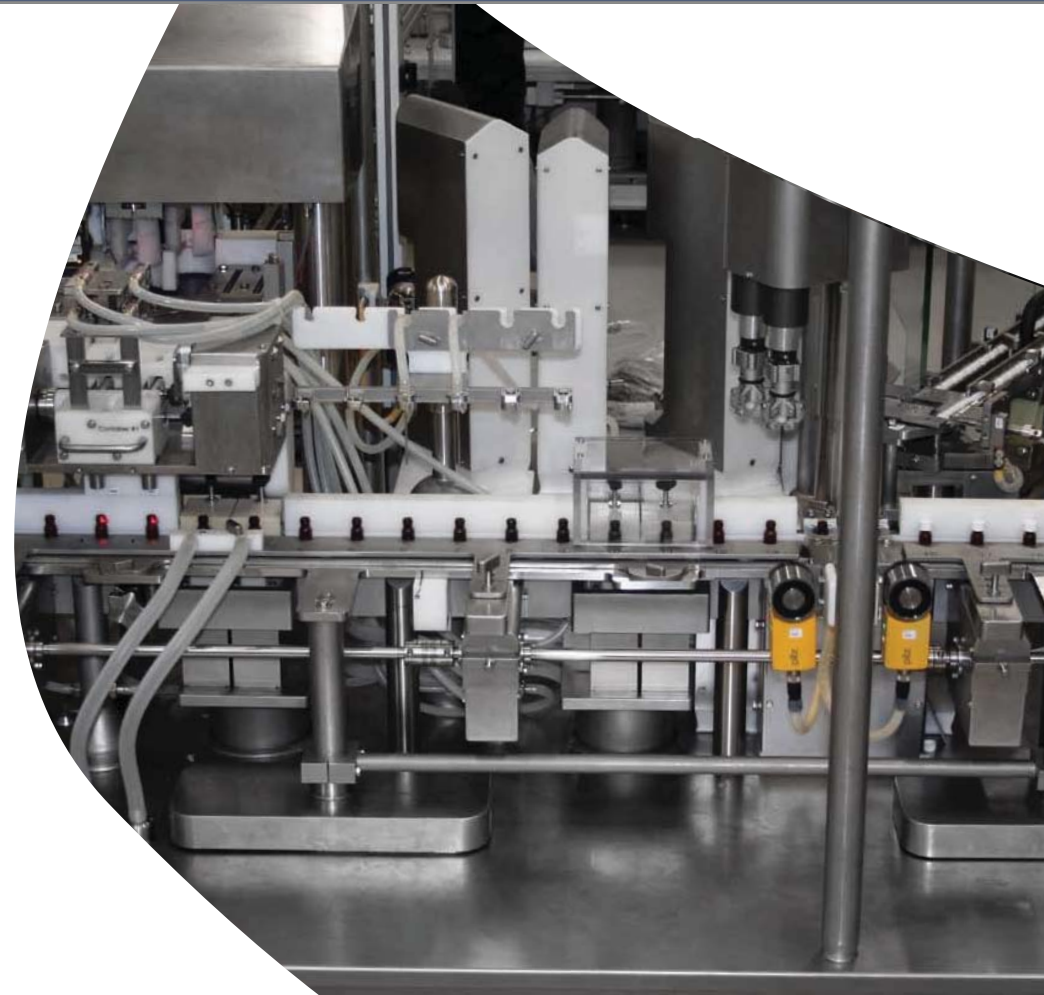


534 Filling & Closing Machine

Type 534 machine is designed for Filling and Closing a wide variety of stable or unstable containers

- Suitable for 100% IPC and 100% torque verification
- Various different filling systems can be integrated such as Rotary Piston Pump, Peristaltic Pump and Time Pressure Dosing
- Offers great flexibility for processing containers such as Vials and Bottles of various shapes, sizes and materials
- Modular machine design allows for easy customization to customer specific requirements

Technical Data	Type 534
Output	up to 200 containers/ min
Container Size Range	Ø 16 - 52 mm, H 30 - 130 mm
Dosing Range	0.01 - 1,000 ml
Electrical Supply	3 X 400 V , 50/60 Hz



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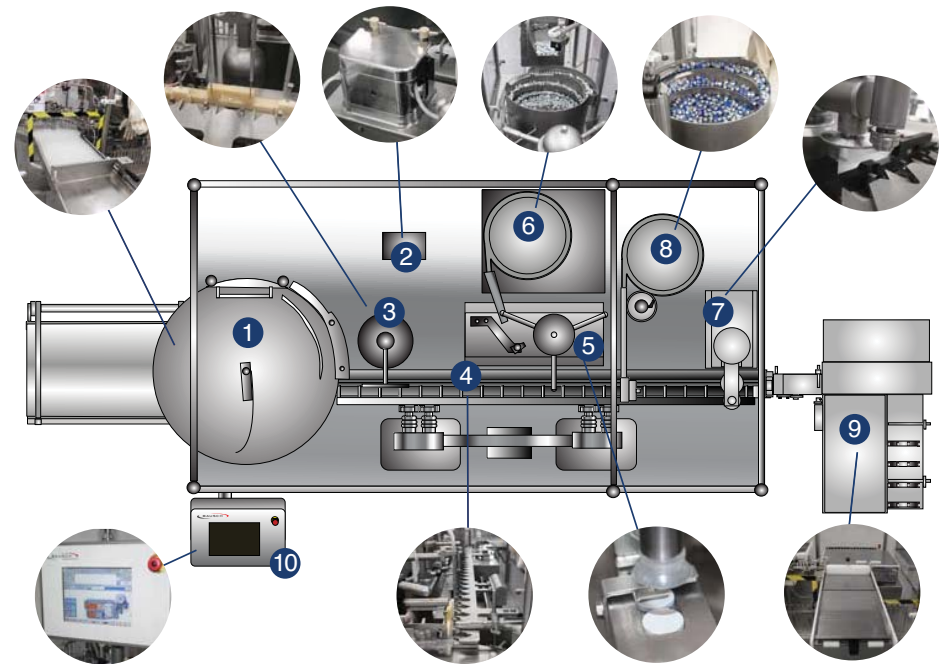
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Filling and Closing Machine for Vials, Bottles, Syringes, Cartridges and Other Containers

This walking beam transport system machine can process a wide variety of products and components. Due to its modular approach it can be easily customized based on customer specific requirements. Proven assemblies such as the in-feed turntable, high accuracy filling stations, various closing modules for screw and crimp caps, as well as different discharge models are available. The linear machine design is best suited for the installation of RABS and isolators.



- | | |
|--------------------------------|----------------------------|
| 1 Infeed Turntable | 6 Stopper Sorting Bowl |
| 2 Dosing Station | 7 Closing Station for Caps |
| 3 Filling Station | 8 Cap Sorting Bowl |
| 4 Transport | 9 Discharge |
| 5 Closing Station for Stoppers | 10 HMI |



Vision System

In Process
Control

Welding

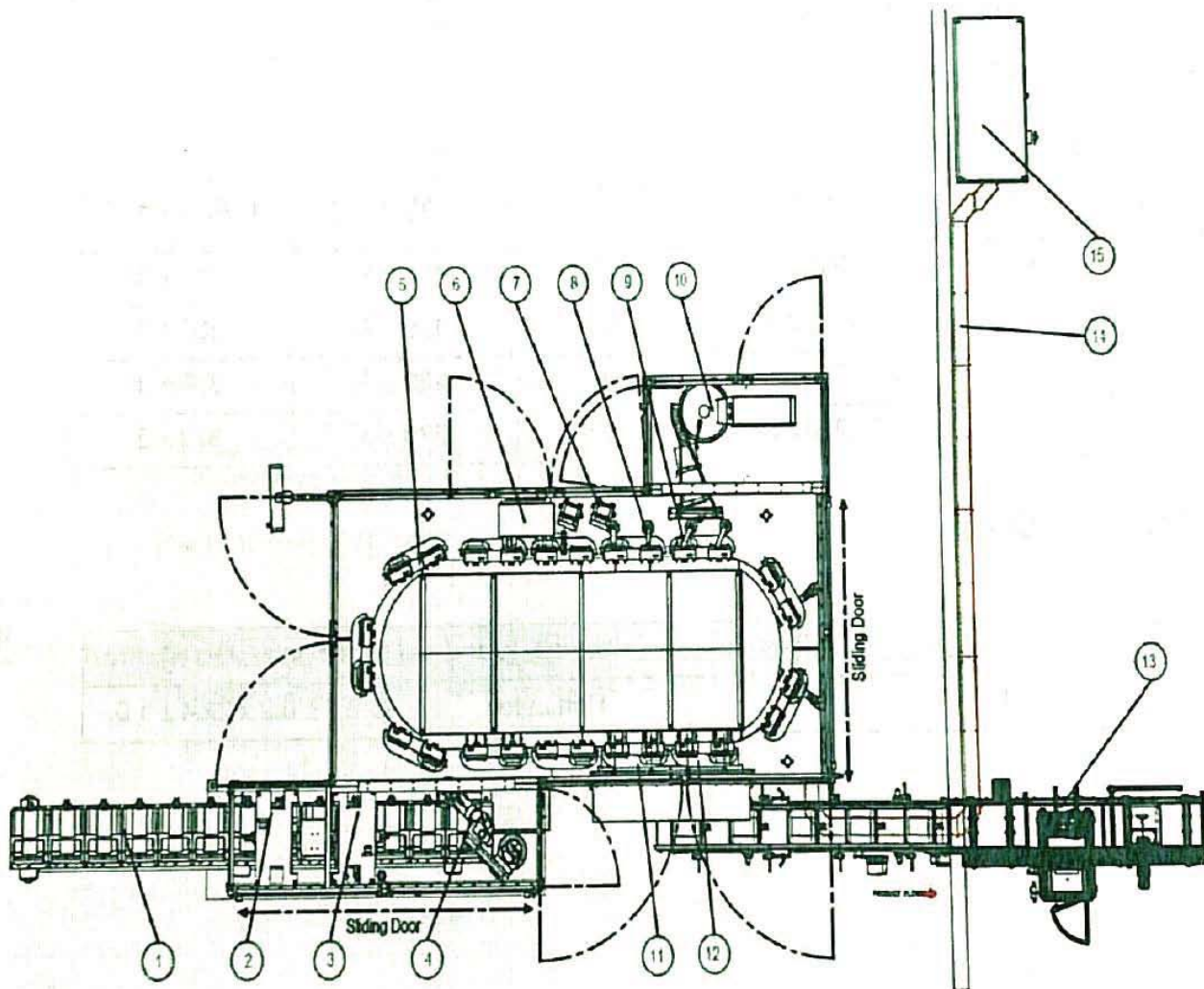
Laminar
FlowReject
DischargeProduct
Recirculation

Size Parts

Hopper
Elevator

Machine Details

Overview and Description of the Station



1. Infeed bags	9. Stoppering station
2. Printing station	10. Sorting equipment
3. Camera system	11. Reject station
4. Loading station	12. Discharge
5. Transport system	13. Check weigh system
6. Cut off station	14. Electrical channel
7. Peristaltic pumps	15. Electrical cabinet
8. Needle movement	