

Washing. Sterilising.  
Filling. Closing.  
Inspecting. Labelling



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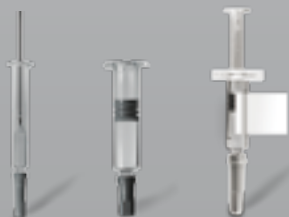
## Inspecting | Page 12/13



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## Syringe processing | Page 16/17

Machines or automated lines to fill and close pre-sterilised nested syringes, to insert plunger rods, to label and assemble back-stops or safety devices



## Integrated lines | Page 18/19

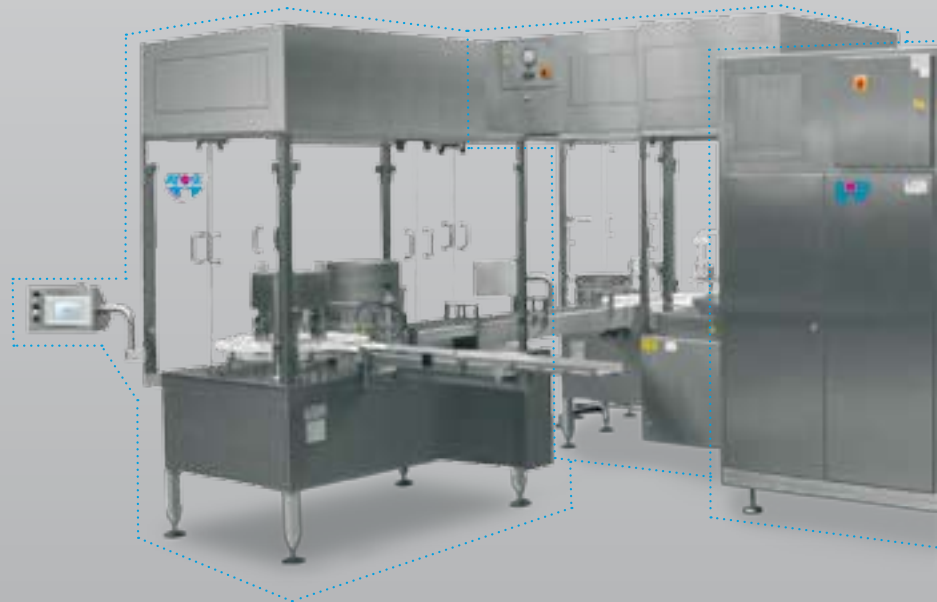
Integration and synchronisation of individual machines for process automation and optimisation in the pharmaceutical industry  
- Designed to the needs of our customers

## Closing | Page 8/9, 10/11

Machines to close glass or plastic vials with stoppers, alu-caps, droppers, screw caps, etc ...

## Filling | Page 8/9, 10/11

Machines to fill ampoules and glass or plastic vials



## Inspecting | Page 12/13

Machines for visual or optical inspection on particles or cosmetic defects



## Labelling | Page 14/15

Machines to label ampoules, vials and syringes

# Dedicated solutions and complete lines

Individual machines and integrated lines for washing, sterilising, filling, closing, inspecting and labelling of ampoules and vials

## Sterilising | Page 6/7

Hot air tunnel to sterilise and depyrogenate containers



## Washing | Page 4/5

Machines to wash containers for aseptic processing in the pharmaceutical industry



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# Pharma conform cleaning

Washing of ampoules and vials



## Efficient and gentle washing ...

In parenteral packaging, open containers have to be washed before they can be sterilised. Already at this first stage, quality in washer design and construction pays off. Issues in the washing process will downstream process steps. ROTA washing machines are suited best for an efficient and gentle washing of ampoules and vials.

## High security standard ...

The transportation of the containers by means of precision pincers and latest servomotor technique guarantees a high security standard with respect to glass breakage and cross-contamination. The design of the machine provides not only the capability to process a wide range of object sizes at high speed, but also the possibility of an ultrasonic pre-washing bath as well as custom-made versions.



## Up to 24.000 per hour

A comprehensive variety of models guarantees an optimal adaption to the capacity range as needed.

## From 9 mm to 68 mm container diameter

Thanks to simple changeover of size parts and user-friendly recipe management, ROTA washing machines highlight shortest change-over times assuring highest productivity for our customers.



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# Reliability up to 350°C



## Low energy consumption ...

Sterility of containers and closures is the essential criteria for filling of solution for injection. Consequently our high-level technology approach is to achieve the necessary high temperatures at constant level by using the principle of heated air flow. The continuous depyrogenation is guaranteed by re-circulated hot air sterilisation in the treatment zones of the tunnel.

## More than just hot air ...

ROTA tunnel with integrated control and electronics are characterised by a small footprint. The optimised air handling based on measurements of pressure differences guarantees a very high reliability of the sterilisation process even under difficult room pressure regimes.





## Up to 350 kg / h

ROTA tunnels are suitable for sterilisation and depyrogenation of ampoules, vials and bottles. The availability of various tunnel sizes with different capacities allows optimal matching to your application needs.



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# From small scale batches to mass production

Ampoule filling and sealing machine

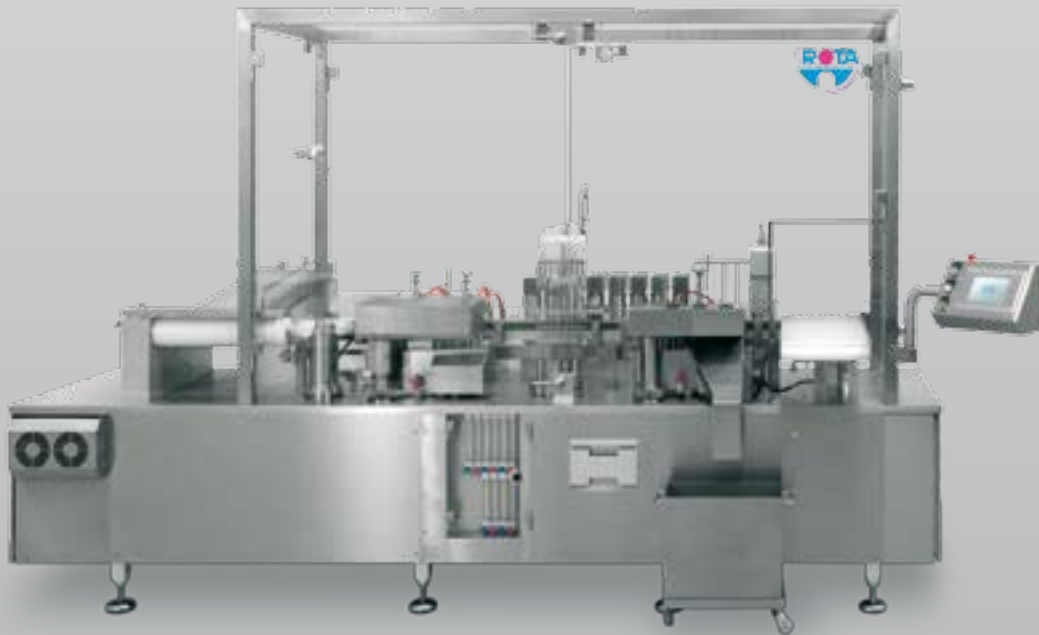


## Virtually zero breakage ...

Ampoules - the perfect container to store parenteral fluids. It is self-evident that the filling and sealing may only take place under optimal sterile conditions. In order to achieve the high level of safety and process reliability, the appropriate technical solution and decades of experience are required.

## Highest flexibility for the best conditions ...

A comprehensive list of optional features and accessories allows our machines to meet your individual needs. Combination machines in which ampoules, vials and bottles can be filled and closed with minimal changeover work underline our flexible and wide machine port-folio.



## Up to **24.000** per hour

With its ampoule filling and sealing machines ROTA is a leading manufacturer in this field. From small scale batches to mass production, ROTA has with its know-how and the performance range of its machines the right answer for your application.

## For ampoules from **0.2 ml to 30 ml**

ROTA's own rotary pumps guarantee high filling accuracy in continuous operation without re-adjustment. Ease of handling unburdens cleaning and sterilisation of the filling system, whether manually or with automatic CIP/SIP systems.



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# Application versatility

Vial filling and closing machines



## Reliable and cost-effective processing ...

Vials and bottles - the most common containers to preserve liquid medicines - regardless whether parenteral or not. Versatile applications call for a variety of vial sizes and closures. All of them must be processed reliably and economically. ROTA provides such solutions for you.

## For highest performance ...

Variety characterises the ROTA vial filling and closing machines program. From small machinery to high speed applications, ROTA is able to provide a wide spectrum of customised solutions for you.



## Up to 24.000 per hour

ROTA vial and bottle machines range from one to eight filling stations with one or two closing stations. Whether small or large glass or plastic vials, whether diagnostic tubes or injection vials, whether manual or automatic feeding, you will find the appropriate ROTA model.

## Filling volumes from 10 $\mu$ l to 250 ml

Whether rotary piston pumps, time-pressure filling system, peristaltic pumps, or single-use systems: ROTA provides the suitable filling concept for your liquid. And all of this with high reproducibility and accuracy, what may be monitored and documented by means of selectable in-process control.



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# At the first glance

Inspection of ampoules, vials and bottles



## Nothing is left unchecked ...

No parenteral liquid drug is marketed without a 100% particle inspection. Nothing checks more reliable than a human being. However, semi and fully automated inspection machines with state of the art camera systems are cost-effective, reproducible and can also become subject to systematic validation.

## Nothing checks more reliable ...

ROTA provides semi-automatic machines for visual inspection at medium batch sizes. Application range covers standard ampoule sizes as well as vials and bottles.



## Up to 6.000 per hour

Cameras grab images of the objects to be inspected and send these magnified up to 10 times on the LCD screen. Up to six objects are presented to the operator at once, allowing him to decide quickly whether the liquid is free of particles or not.



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# Tailored and efficient solutions

Labelling machines for ampoules, vials and bottles



## So you know what's inside ...

Labels are the signboard of all products. Drugs may be marketed only with properly attached and error-free labels. A particular requirement to labelling therefore is the outstanding focus on product safety and quality. There the labelling machine becomes part of the quality control system.

## Focus on safety ...

ROTA labelling machines for self-adhesive labels meet all requirements of the pharmaceutical industry in an optimal manner. And this with top precision at high speeds. Compact design, precise label handling and state of the art on-board electronic controls are the guarantee for your investment.





## Up to 24.000 per hour

A variety of machine models assures an optimal match to the requirements of your production performance. Upright transport of all containers, whether of glass or plastic, guarantees a high precision application of labels. Flexible solutions at in-feed and out-feed of the labeller allow its integration into packaging lines from other manufacturers, as well.

## Like a tailor-made suit

ROTA labelling machines are ideal for integration of any kind of control and printing features from various manufacturers. You as customer inform us of your requirements and preferences; we deliver the fully integrated solution as well in hardware as in software.



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# Easy and fast like the pre-filled syringes

Processing machines for pre-sterilised syringes



## Evolved technology ...

The ROTA processing machine for nested and pre-sterilised syringes is a translation and integration of ROTA's decades of experience as supplier for the pharmaceutical industry. The machine concept is based on careful analysis of customer expectations. The machine program meets the customer needs both for the start-up of syringe production as well as for mass production.

## Convincing precision ...

The ROTA syringe machines feature the use of the latest servo motor technology and machine components of the latest generation. Serial kinematics robotics (SCARA) and advanced control programming allow the precise execution of each individual processing steps. As customer you will therewith take advantage of an automated, trouble-free processing in combination with high product quality.



## Manually or fully automatic

ROTA provides both machines for manual handling as well as for fully automated conveying of the tubs. Therein automated systems for debagging, lid and fleece inlay removal are provided. The machine capacities cover a range of up to 22.000 syringes per hour.

## Labelling and assembling

De-nesters and machines for labelling and assembly (plunger rod insertion, assembly of back-stops and Safety Devices) offer the opportunity to our customers to get the full range from one source and from the same manufacturer. You benefit from a unified technology, similar operation and the service of our experts.



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# When high process reliability matters

Integrated lines for ampoules, vials and bottles



## Process concepts for minimal operating personnel intervention ...

The manufacturing of large quantities requires highly automated process concepts. To achieve this goal, machines for the basic processing steps like washing, sterilising, filling and closing are integrated in a production line. The large throughput capacities allow for low manufacturing costs. The reduced operator impact on the objects leads to even improved process quality of the sterile filling.

## With engineers and technicians at your hand ...

All automated ROTA machines can be linked and integrated into compact processing lines. Even ampoules, vials and bottles can be easily processed on the same system. Large and complex machinery of this type is commonly designed and built to specific customer needs. Already in the design phase an experienced team of engineers and technicians is supporting our customers.



## Starting from 3.000 per hour

The application field is almost unlimited. Be it standard products, serums, antibiotics or freeze-dried products - there is a suitable ROTA line available. Furthermore cRABS or isolator technology can be implemented as well.

## From Ø 9 mm to Ø 68 mm

Our systems are characterised by their compactness and low utility consumption. Your manufacturing also benefits from the high flexibility and the ease of use of our machines. Particularly of interest are our flagship combination lines where ampoules, vials and bottles are processed on the same system. For ampoules, the filling and sealing machine can be linked to our colour ring coding machine.



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... substantially derived from the rotary transport technology of containers during the filling process, has been in business for more than 80 years.

What started with a simple machine for filling and closing ampoules has developed into a comprehensive range of equipment for the pharmaceutical industry.

Send us your request or specifications.  
We will be pleased to meet your requirements.

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