

Micro-Tubes Filling & Closing Machine FLR50/S-SAR



FOCUS ON DETAILS

Micro-Tubes Filling & Closing Machine

FLR50/S-SAR

The micro-vials filling and closing machines type FLR50/S-SAR are especially designed to process small and non stable plastic vials even when of conical shape, either under sterile conditions or not. Thanks to their compact foot print, the machines type FLR50/S-SAR fit to small rooms and are very easy to operate and clean.

A comprehensive list of optional features and accessories allows this machine to be customised to meet the individual requirements of each customer and application.



Standard equipment

- ~ Sorting and feeding of micro-vials
- ~ Product range: 0,01 – 10 ml
- ~ Maximum diameter: 20 mm
- ~ Output up to: 3.000/h
- ~ One filling station. Micro-dosing by means of special seal-less rotary piston pumps made of stainless steel 1.4404 (316L).
- ~ Change parts set for one micro-vial size
- ~ PLC control
- ~ Colour touch screen interface, with password and recipe management
- ~ Feature „No vial – no filling“
- ~ Feature „No vial – no screw cap“
- ~ Interlocking safety cabinet with stainless steel frame
- ~ Warning beacon
- ~ Outfeed chute to collect filled and closed tubes

Typical Options

- ~ Interlocked laminar flow hood
- ~ Processing counters
- ~ Batch protocol printer
- ~ 21 CFR Part 11 compliance



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Micro-tubes are fed in bulk in the stainless steel sorting bowl, which transfers them over a vibrating rail to the main star wheel of the machine.

The transport star wheel hands gradually the micro-tubes over the machine through the filling station, the cap pick&place and pre-screwing station, the servo-driven screw-capping station and finally exiting chute.

The micro-tubes are filled by mean of special stainless steel micro-dosing rotary piston pump that are able to dispense filling volumes down to 10 μ l with an accuracy better than $\pm 5\%$ and up to 10 ml with an accuracy better than 0,5%, thanks to a broad range of pumps:

- # 10 – 100 μ l
- # 40 – 200 μ l
- # 100 – 600 μ l
- # 0,2-2 ml
- # 1-5 ml
- # 2-10 ml

The machine design also allows an easy integration of peristaltic pumps, filling system especially suitable in case one-use product contact parts is requested.

After the filling station, tube closing is performed in two steps. A pick & place arm places the sorted screw cap onto the micro-tube and performs a pre-screwing in order to avoid the micro-tube losing its cap while processed to the final screwing station.

A servo-driven screwing head then seals the micro-tube with a predetermined torque (settable over the HMI). In case the screwing torque is out of the preset tolerances, the faulty tube is automatically directed to the corresponding rejection rail.

After the final screwing station, the filled and closed micro-tubes are gently pushed out of the transport star wheel by an exiting finger into an outfeed channel. The micro-tubes can then be collected in bulk in a collecting bin or a plastic bag.

Optionally, the outfeed of FLR50/S-SAR can be directly processed to the ROTA labeller RE50 using vibrating feeding rail for a secured transportation and synchronisation between the two machines.



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Technical data

	FLR50/S-SAR
Max. output (micro-tubes/h)	3.000
Number of filling station	1
Standard machine dimensions (mm)	1960L x 950W x 1900H
Power consumption	700 W
Power supply	400V , 50 Hz, 3-Ph (Alternates available on request)

Other machines available from ROTA

- “ Washing machines for ampoules and vials
- “ Hot Air Sterilisation Tunnels.
- “ Ampoule filling and sealing machines
- “ Combination filling and sealing machines for ampoules and vials
- “ Vial filling and sealing machines.
- “ Inspection machine for ampoules and vials
- “ Labelling machines for ampoules and vials
- “ Nested syringes filling and plunging machines
- “ Labelling and assembling machines for syringes

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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