



## Vials Filling Machines VFM

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# VIALS FILLING MACHINES

The modern design of STERILINE filling, stoppering machines takes into consideration the newest requirements of the filling process:

- In line transport and small width, suitable for the application of open RABS, closed RABS and isolators, reduce the volume to be monitored and sterilized, and make reachable, from the operator front, any point of the machine by gloves;
- Tight mechanisms, actuated from the mechanical volume, fulfil the closed RABS and isolators tightness requirements;
- Rotating table designed to achieve easily the unidirectional and laminar air flow, reducing the presence of particles on the table;
- Continuous monitoring of the viable and non viable particles;
- Filling by peristaltic pumps and/ or volumetric pumps actuated by brushless motors, that allow precise filling volume and easy adjustment of the pumps by means of the HMI;
- Nitrogen purging inside the vials before, during and after the filling;
- 100% IPC (In Process Control) of the weight and statistical Check Weighing system with feedback to the dosing pumps;

- Possibility of performing ready to use glassware in nests;
- Vibration generator for the bowl of stoppers inside the mechanical volume, below the process area;
- Capping designed to reduce particle generation, by rotating the glassware under the blades.

STERILINE filling machines **VFM** series handle from 2ml to 100ml vials, with minimal format changes and with production speeds up to 400 vials/ min, according to vial size and filling volume.

The filling machines are equipped with an infeed rotating table which feeds empty vials into the walking beam system.

The pumps in the filling section fill the correct dosage into the vials. Filling operations are carried one or two steps by means of a stainless steel dosing nozzle mounted on an AISI316L stainless steel support.

To avoid foaming, the filling system utilizes a diving nozzle that, during the filling operation, is retracted upward. Each vial can be individually weighed before and after filling to get the net fill weight. A feedback control loop can also be provided to automatically adjust the filling volume of each individual filling nozzle. For high speed filling machines, a statistical

check weighing system is foreseen.

Vials proceed to the stopper inserting station where stoppers are fed by a vibratory feeder bowl to the stoppering unit.

The vials are stoppered by a pick-and-place system, vacuum assisted.

A sensor detects the stopper presence; consequently the machine rejects the un-stoppered vials.

Stopper may be positioned in either a fully seated position or partially seated for products which require lyophilization. The machine can handle all standard stopper sizes: 13mm, 20mm, 28mm, 32mm.

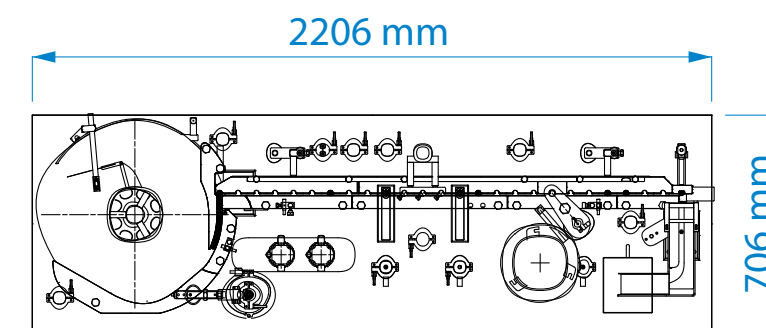


## VFM 50 INTERMITTENT MOTION



### Key features

- ◆ Narrow design
- ◆ Capacity max: 3000 pcs/h
- ◆ 100% IPC optional

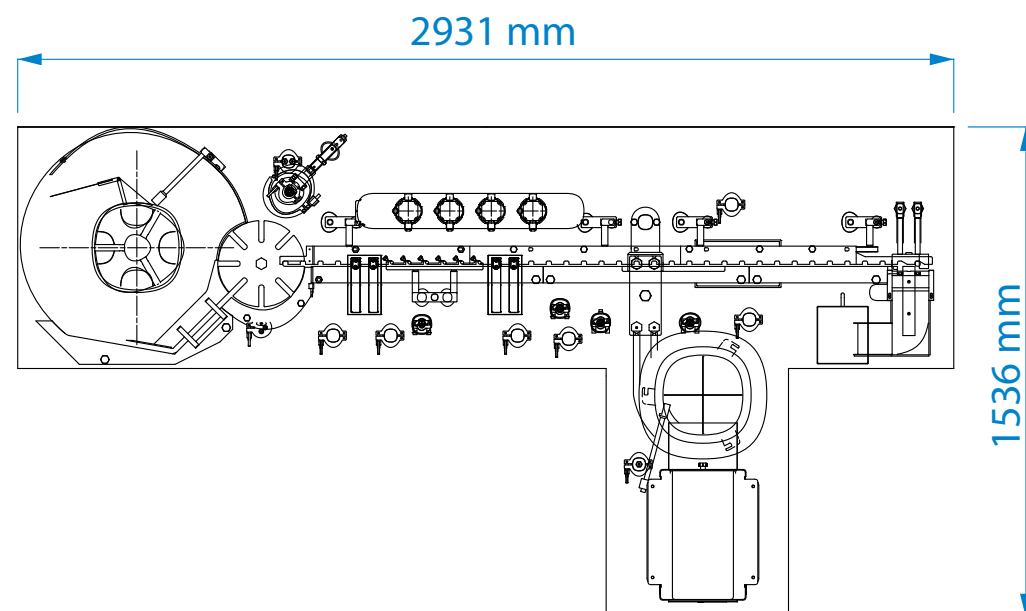


## VFM 100 INTERMITTENT MOTION



### Key features

- ◆ Narrow design
- ◆ Capacity up to 6000 pcs/h
- ◆ 100% IPC optional

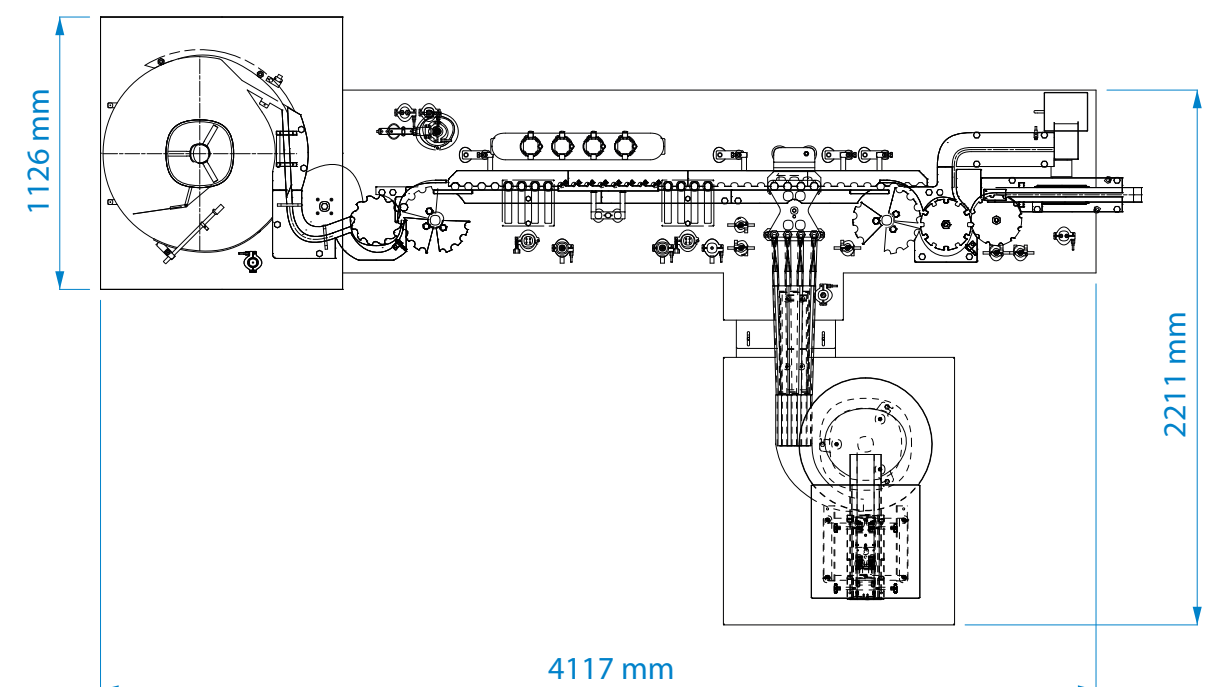


## VFM 200 INTERMITTENT MOTION



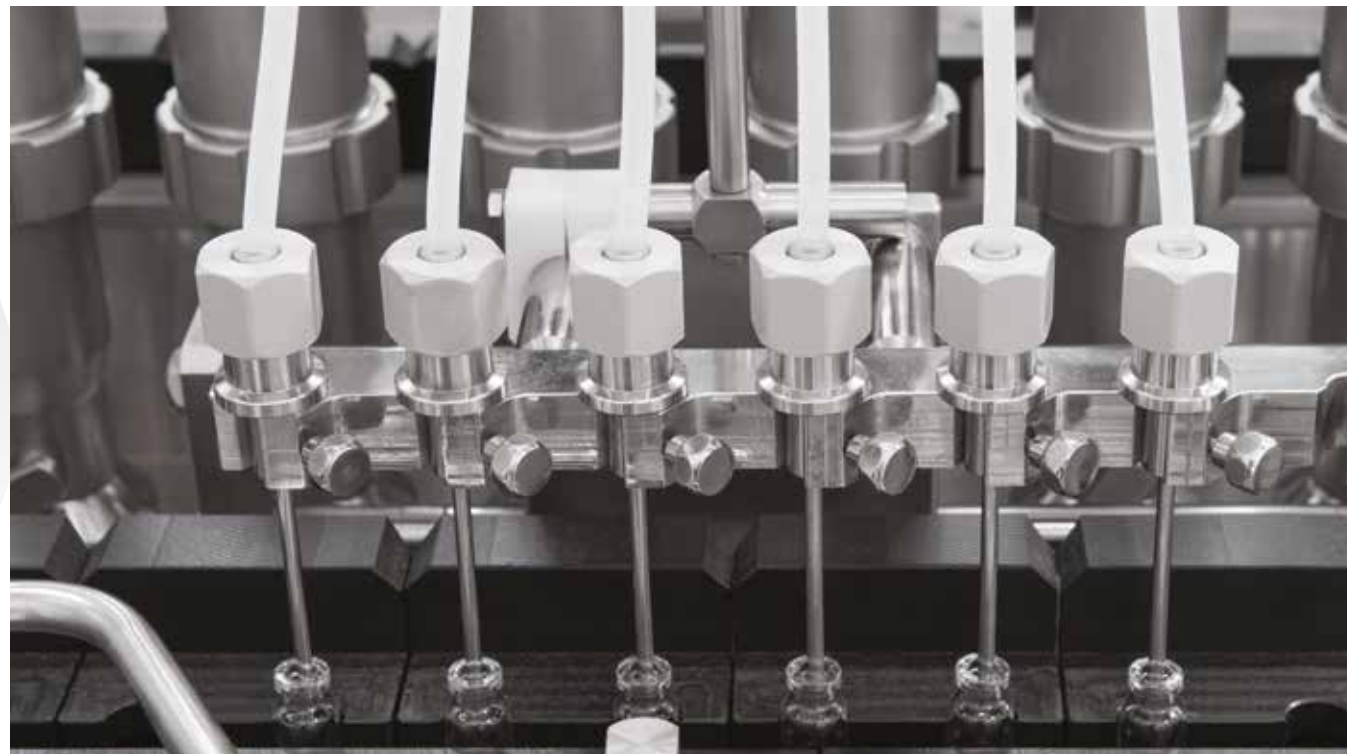
### Key features

- ◆ Intermittent motion
- ◆ Capacity up to 12000 pcs/h
- ◆ 100% IPC optional



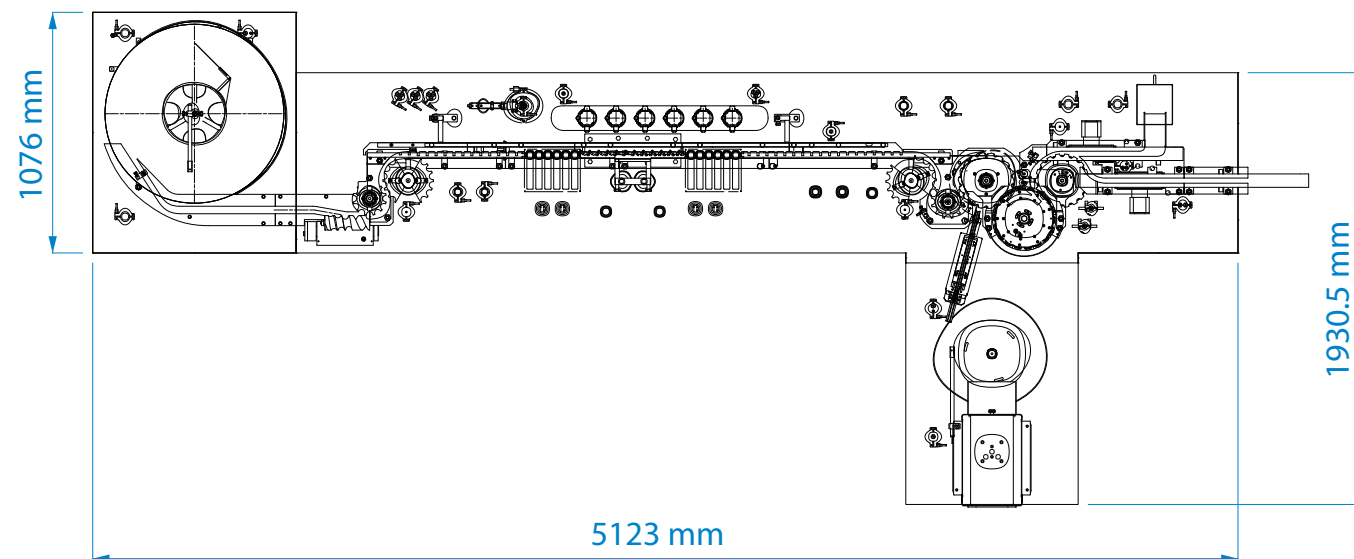


## VFM 300 INTERMITTENT MOTION



### Key features

- ◆ Intermittent motion
- ◆ Capacity up to 18000 pcs/h
- ◆ 100% IPC optional

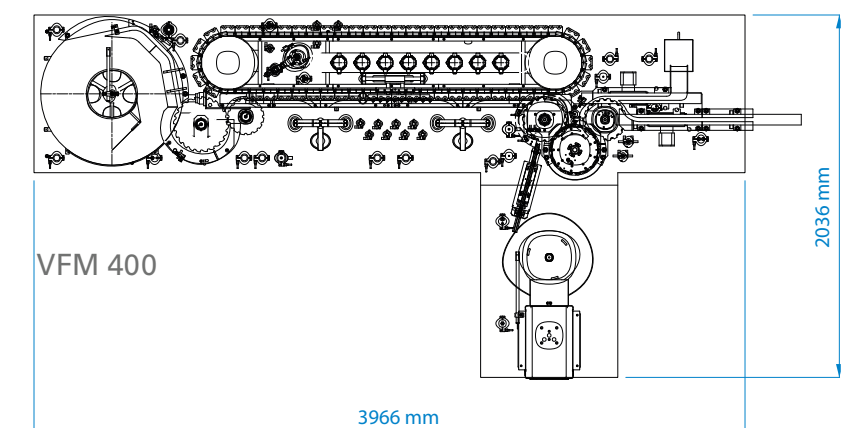
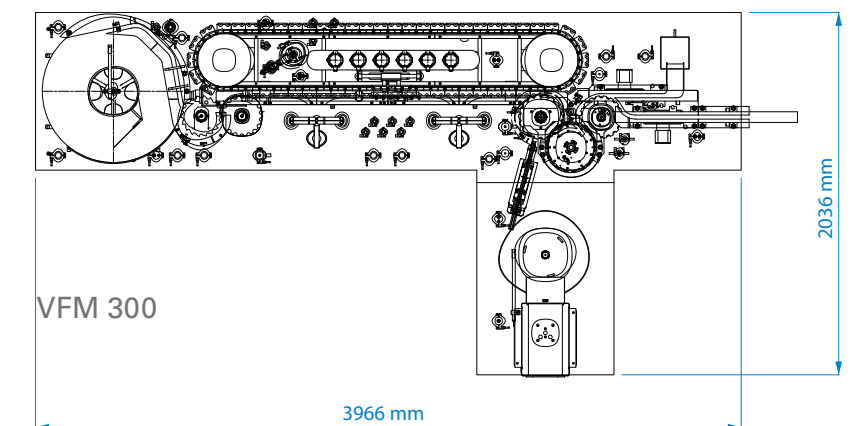


## VFM 300 - 400 CONTINUOUS MOTION



### Key features

- ◆ Capacity up to 18-24000 pcs/h
- ◆ Statistical IPC
- ◆ Quick changeover





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