

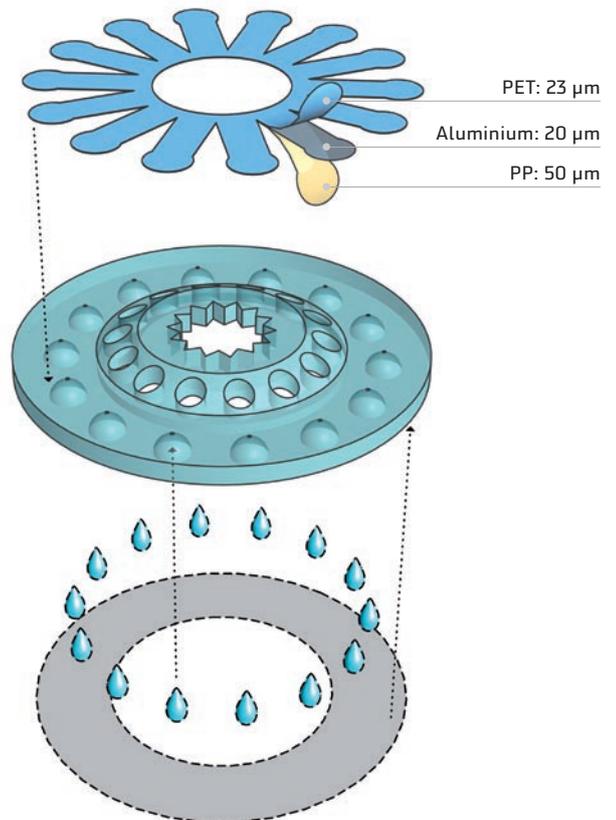
# MEDICINES: FLOWER DISC FOR OPHTHALMOLOGY

Rychiger developed and implemented a sealing machine with a complex, multi-layer punching and sealing process for a flower disc, a new type of application system for ophthalmological medicines developed by a leading international supplier of primary packaging.

## PROCESS SEQUENCE

The flower discs are delivered in bulk and sorted by means of an ascending conveyor. On the conveyor belt the discs are cleaned from above and below with ionised air and fed into the buffer area. The pick-and-place system loads the discs onto a single-lane carousel where they are aligned and checked for accurate positioning. Then comes the punching and sealing process: The cover foil, which is pre-punched with the inner geometry is then fed into the punching and sealing tool, where the complex outer geometry is punched and sealed in a single step with our unique «One-Stroke» technology precisely bonding the seal to the disc. In the following station the ends of the 14 capillaries are sealed (outer sealing). The inner sealing then takes place at a separate station. Finally the discs are stacked by a pick-and-place system. Defective discs are automatically discharged to a separate area by the same system.

Following this process the flower discs are ready for filling with the active agent and the subsequent bottom sealing (outsourced process).



## THE DECISIVE ADVANTAGES

**Rychiger's Leading Sealing Technology:** Highest seal integrity even with highly complex processes (1. punching inner geometry, 2. crimping, 3. punching/sealing outer geometry, 4. inner sealing).

**Punching Technology:** complex geometry is punched from a roll.

**Hygiene:** Cleaning of discs by ionisation.

**Customer-specific Implementation:** Setting new standards in the development and implementation of custom-made sealing machines.

**Ergonomic Construction:** Convenient machine operation and easy cleaning.

**Cleanroom Class:** ISO 6 (nach ISO 14644-1)

## TECHNICAL DATA

**Packaging substrate:** Disc of Polypropylene (PP), Foil from roll PET/Aluminium/PP.

**Disc Dimensions:** Ø 50.5 x 2.2 mm

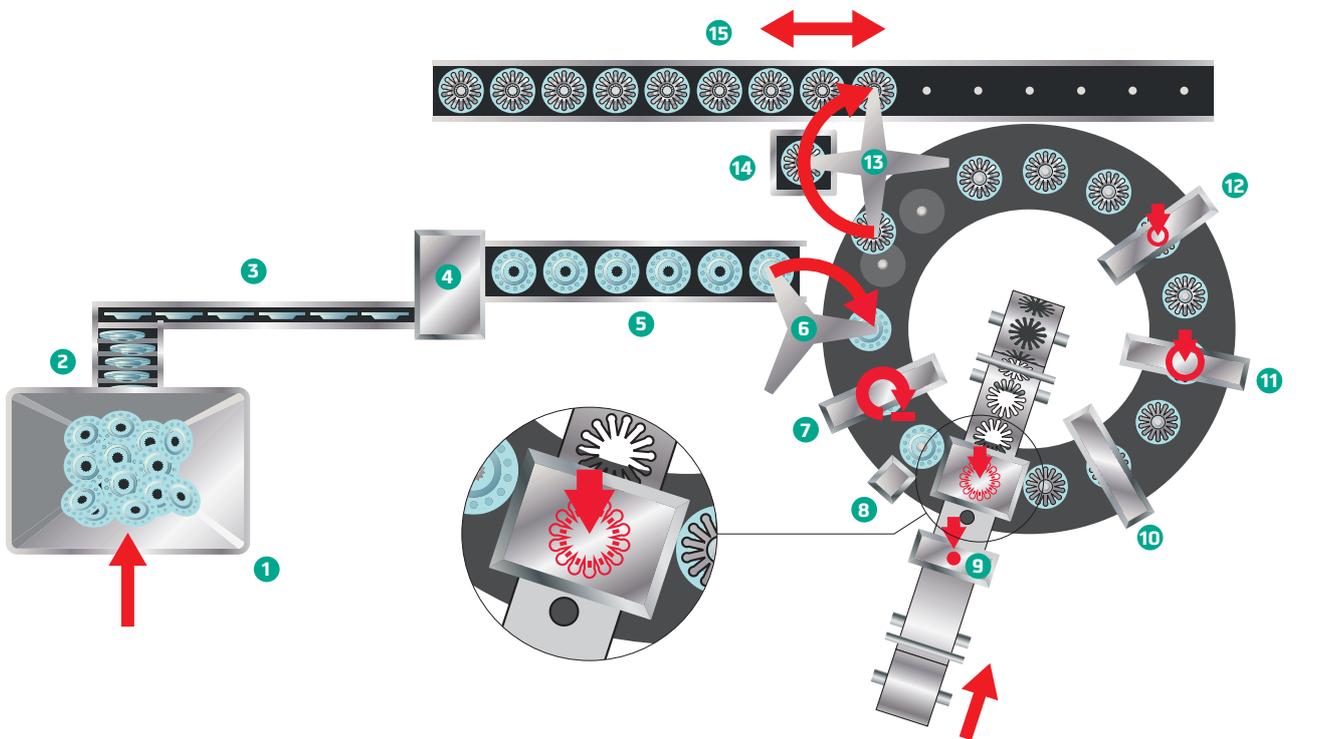
**Number of lanes:** 1

**Cycle Time (Cycle/Min.):** 42

**Control:** OMRON

**Modul Dimensions:** 3700 x 1600 x 2300 mm

## OPERATION SEQUENCE



- |  |   |  |
|--|---|--|
| 1 Filler   | 6 Pick-and-place system (loading to carousel)                       | 11 Sealing station (outer seal)  |
| 2 Ascending conveyor                                   | 7 Alignment station (orientation of disc)                           | 12 Sealing station (inner seal)  |
| 3 Infeed track   | 8 Inspection station (checks presence and position of discs)        | 13 Pick-and-place system (discharge)                                   |
| 4 Cleaning station (cleaning of disc with ionised air) | 9 Punching and sealing tool incl. cover foil from roll (crimping)   | 14 Reject station  |
| 5 Buffer zone  | 10 Inspection station (checks foil readiness, accurate positioning) | 15 Stacking of discs incl. storage capacity (max. 16 storage stations) |

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