

## New liquid filling machine for sterile ophthalmic products Oftalmica by Romaco Macofar

Romaco Macofar's Oftalmica was specially developed for aseptic filling of sterile eye drops, nasal sprays and injectables. Meeting all GMP requirements for safe processing of highly viscous, oily and foaming liquids, the machine additionally offers fast format changes and short cleaning times

The Oftalmica is Romaco Macofar's latest technology for aseptic filling of sterile eye drops. This newly launched liquid filling machine is the pharmaceutical machinery manufacturer's answer to the growing demand for ophthalmic products with no added preservatives. Much stricter GMP regulations apply when these modern pharmaceutical formulations have to be filled under sterile conditions, and the Oftalmica fulfils them all – especially where the sterility assurance level is concerned. The machine is therefore fitted with an oRABS barrier system (either passive or active) and can also be supplied with isolation technology if required. The Oftalmica is also prepared for bio-decontamination with vaporised hydrogen peroxide (VHP). Glove ports provide full access to all critical components without having to open the doors of the liquid filling machine, meaning the permissible SAL values for cleanroom class A are reliably maintained inside the machine. This facilitates process validation and production can be resumed more quickly.

### Easy handling of highly viscous, oily suspensions and foaming liquids

The Oftalmica is used to fill all kinds of liquids, including sterile, highly viscous and oily suspensions as well as foaming fluids. The machine can be equipped with up to eight separately filling pumps individually controlled on the HMI, be they ceramic or stainless steel rotating piston pumps or peristaltic pumps, depending on the features of the products and needs of the customer. The Oftalmica's dosing station also

enables a two-phase filling process to achieve a constant, high filling capacity while at the same time reducing the load on the pumps. This approach is especially recom-

mended for products with poor flow properties. In addition, filling in two steps has proved successful for bottles with very small necks, because ultra-fine filling needles with a corre-

spondingly lower flow rate are used here. The same applies when filling foaming products whose flow rate is limited solely by their physical properties. Thanks to the two-phase

filling technology, the Oftalmica by Romaco Macofar has a maximum output of up to 12,000 bottles per hour – regardless of the specifications of the liquids being filled or the



The Oftalmica aseptic liquid filling machine by Romaco Macofar



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dimensions of the containers.

Suspensions can also be managed easily with complete recirculation circuit by means of an additional peristaltic pump connected to the main manifold, avoiding the separation and sedimentation of the compounds.

### High quality for different products, containers and closures

The Oftalmica processes a vast range of plastic and glass bottles with a filling volume between 1 and 30 ml and can be used to apply the entire range of ophthalmic closures: from standard three-piece droppers with cap to two-piece containers like Nemera or Aptar. Depending on the type of closure, the machine can also be configured with up to three closing stations to assure the final torque control on 100% of the screw caps. The lightweight plastic bottles are held on the belt by vacuum as they travel through the machine, which leads to optimal process stability. For filling, the bottles are transported to the dosing sta-

tion in clusters by a walking beam transfer system. The machine can also be equipped with a weight control system to check 100% of the filled products and automatically set up the filling volume at the beginning of the batch.

The empty and full bottles can be inerted on request for oxygen-sensitive products. As an option, the Oftalmica can also be utilised to fill nasal sprays with the centering unit to manage the deep tube or sterile injectables, applying the standard bromobutyl stoppers and alu caps.

All steps are constantly monitored by the PLC using sensors, cameras and lasers, each of which selected for the specific application to ensure high quality throughout the entire process.

### Fast product changes, short cleaning times

Overall, the Oftalmica offers numerous advantages whenever frequent product changes are common. To reduce the time for retooling, the formats were designed for a wide range

of container sizes. All parts additionally support plug & play removal and installation in a few simple steps. What's more these handy format parts can be autoclaved, which makes them easy to clean. On request, the dosing pumps too can be cleaned fully automatically using a CIP (cleaning in place) or SIP (sterilisation in place) system. GMP-compliant, easy to operate and high performing – these are the hallmarks of the new Oftalmica liquid filling machine by Romaco Macofar.

For more information on Romaco, visit our website and social media channels: [www.romaco.com](http://www.romaco.com) – [Showroom](#) – [LinkedIn](#) – [YouTube](#)

### Romaco Group

Romaco is a leading international supplier of processing and packaging equipment specializing in engineering technologies for pharmaceutical products. The Group provides individual machines, lines and turnkey solutions for manufacturing, filling and packing powders, granulates, pellets,

tablets, capsules, syringes, liquids and medical devices. The company also serves the food and chemical industries. Through its various technologies, Romaco is committed to sustainable production and to systematically reducing CO2 emissions.

The Romaco Group has its headquarters in Karlsruhe (Germany) and is part of Truking Technology, a globally operating high-tech enterprise based in Changsha (China). Truking's core competency is handling and filling pharmaceutical liquids.

Romaco operates from six production sites worldwide, with a broad portfolio comprised of seven established product brands. Noack and Siebler (Karlsruhe, Germany) supply blister, heat-sealing and rigid tube filling machines. Macofar (Bologna, Italy) markets technologies for filling sterile and non-sterile powders and liquids. Promatic (also Bologna, Italy) specializes in cartoners, track & trace systems and case packers. Kilian (Cologne, Germany) is a lead-

ing manufacturer of tablet presses. Innojet (Steinen, Germany) is in the business of granulating and coating fine solid particles. Tecpharm (Barcelona, Spain) offers tablet coating technologies.

More than 930 highly skilled and committed Romaco employees are dedicated to the development of future product technologies and to the continuous implementation of internal improvement processes. The Romaco Group's multi-brand system solutions are sold worldwide through nine Sales & Service Centers and a dense network of local agent organizations. Over 12,000 installations delivered by Romaco are currently in use in more than 180 different countries.

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# 20 years of X20

The X20 has transformed industrial automation with its small size and potent features, enabling machines all around the world to function accurately and effectively

The X20 system has been an essential component of countless industrial applications for the last 20 years, providing dependable performance and pushing productivity to unprecedented levels. The X20 has transformed industrial automation with its small size and potent features, enabling machines all around the world to function accurately and effectively. Its innovative technology and sturdy design have continuously outperformed expectations, making it the preferred option for machine manufacturers in a variety of sectors.

The thoughtful details and sophisticated ergonomic



design make the X20 System a complete control solution. Depending on the user's demands and individual application requirements, the X20 System family makes it possible to combine the exact components necessary. The X20 system is extremely compact, has a large selection of modules, and its 3-slice design makes it very easy to wire and maintain. Marking 20 years of reliability and the epitome of excellence, B&R Industrial Automation marks this milestone with customers and partners for their trust and support.

Here's to 20 years of success, innovation, and unparalleled performance with the B&R X20 system.