

## Rychiger – ahead of the curve

Development in the beverage industry over the past decade or two has been remarkable. Single serve beverage packs which started out as a trend have become an established convenience in the daily routines of more and more people who demand maximum convenience and superior quality. The ever-expanding variety of hot and cold beverages and the increasing number of market players add to a very dynamic sector.

Development continues to be shaped by industry leaders with the support of strategic partners constantly striving to meet the ever-changing challenges in the market. Among these pioneering partners, Rychiger stands out for its innovation and reliability. From the early days of the first portion pack for R&G coffee -Nespresso - to today's multi-layered capsules the market has changed dramatically, but one thing has remained constant - our leadership in filling and sealing machine construction.

Today, beverage extraction technology is increasingly engineered into capsules themselves rather than into the extraction machine. The advantages with this type of system are numerous. A protected and proprietary closed system with brand distinction for the manufacturer; quality, safety and convenience for the consumer. Capsules allow high extraction pressure and therefore deliver a true Espresso, American coffee or wide variety of other hot or cold drinks in excellent quality with total ease of use.

Rychiger has remained on the forefront of this technology providing important contributions to the design of the capsule from a manufacturing point of view. The rapid progress in the industry demands we work in close collaboration with customers under extreme time pressure. In this respect, Rychiger has proven its reliability by reducing the time between project conception and delivery of custom-made machines for the biggest names in the industry.

Important advancements in the technology have been engineered by Rychiger experts to help meet cost and efficiency targets. For example, to preserve the contents, the entire filling and sealing operations on our machines, from the coffee inflow to the final lid sealing, take place in a modified atmosphere. This keeps harmful residual oxygen out of the capsules. Correct weight, consistent extraction time and beverage quality are all ensured by weighing each capsule in line on the filling machine. Data is constantly collected and used to automatically adjust the filling heads or reject over/under fills.

Our filling machines use special sealing technologies that ensure that the various seal that can be existing in one capsule open, or do not open at the right pressure. Barrier materials such as aluminium or multilayer plastics are used for the container as well as the seals and lids. This guarantees freshness and full flavour in every cup regardless of how many different products are used with one machine. Devices inserted into the capsules and/or multiple seals control the liquid flow or create foam. For example, a distributor membrane ensures proper extraction by creating a number of streams through the beverage and avoiding a channelling effect.

Rychiger has developed the special knowledge needed to ensure the seals remain absolutely tight over a long period and also to withstand high internal overpressure as a result of desired partial de-gassing of the coffee inside a capsule. Special heat sealing or ultrasonic technologies are used to create the seals. Leakage is further prevented by maintaining the sealing area free from product.

These are just a few of the many reasons leading beverage companies depend on Rychiger machines for performance and reliability, from the drawing board to the production line.

Established in 1918, Rychiger was the first company to supply filling and sealing machines for single serve beverage packs to the tea and coffee industry in the early nineties. Custom-built machines with variable production outputs from 50 to 1500 capsules per minute are offered on flexible platforms allowing integration of a variety of functions.