

RELY ON EXCELLENCE

FDA-compliant, safe, and flexible - SeccoLip is now compatible with side entry drives

Use of SeccoLip in cheese production



Container with agitator

Very few seals can effectively handle a large axial displacement and significant shaft deflection. One of these is SeccoLip with its proven and patented lip design that can reliably compensate for shaft deflection.

The machine builder GEA CMT (formerly CMT S.p.A.) in Peveragno, Italy, supplies customers across Europe with systems for the production of pasta filata cheese. A new machine concept for cheese production required a new type of seal. GEA CMT first put the SeccoLip seals from EagleBurgmann through their paces in a test system. After the very successful test operation, 12 machines were equipped with 24 SeccoLip seals: one on the drive side and one on the non-drive side.

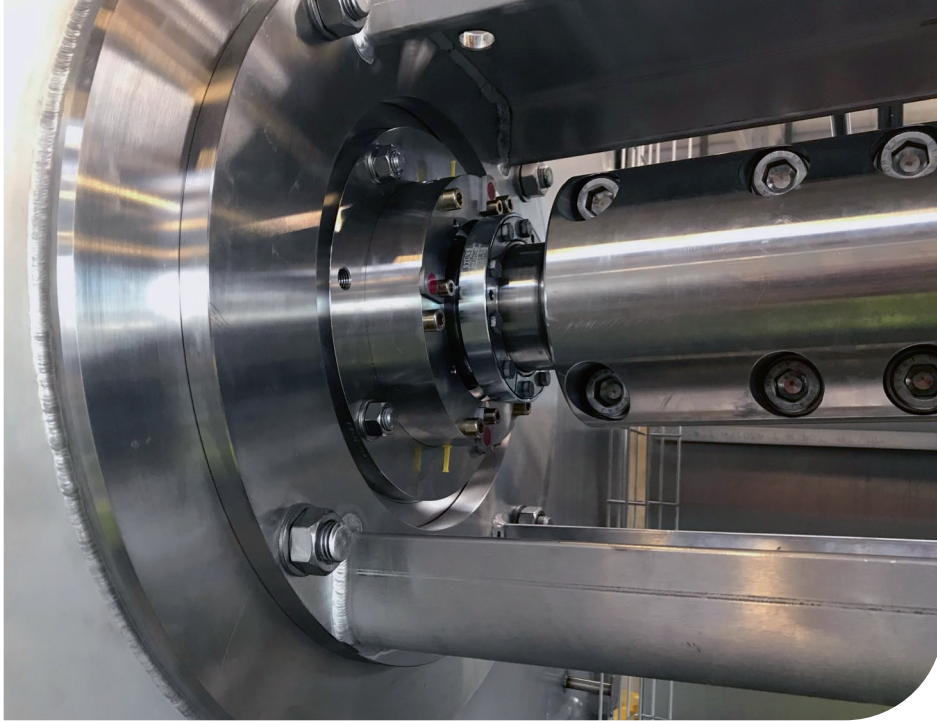
The seals had to meet a wide range of requirements. For instance, they had to comply with all FDA requirements and be easy to clean (CIP: cleaning in place). This was important to prevent the accumulation of milk in the area of the seal. Without appropriate cleaning, the machine could even fail, resulting in high costs and significant time to repair.

The new SeccoLip seal was developed because dry running was expected under the given operating conditions. The two-lip model of the SeccoLip seal has a cartridge design without a rolling bearing. This version with its simple and compact design is particularly suited for applications with

moderate requirements and minimal space. Optional monitoring of seal leakage provides additional protection.

Both lips are installed in the housing facing toward the product. This allows the seal to be operated with an unpressurized quench fluid between the two lips. The accumulation of milk residue in the seal is prevented in this way. The lip in contact with the product is also completely flushed during the cleaning process to ensure optimal function. This reliably avoids contamination in the sealing gap.

The container is cleaned (CIP) after every unloading. There are three cleaning steps: first



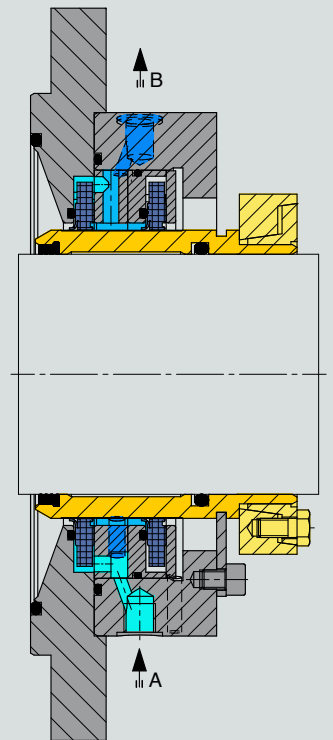
Installing the seal in the side drive at GEA CMT

water, then caustic water, and finally water again. This process takes about 15 to 20 minutes. The main cleaning of the container (CIP) takes place at the end of the production day. This cleaning sequence consists of water, caustic water, water, saltpeter and then water again. The entire procedure takes a little less than one hour.

During the initial test runs, a leak was discovered on one seal. After an inspection, however, the actual problem was quickly identified. A heavily skewed machine shaft resulted in a leak at the SeccoLip seal. After realignment, the shaft ran much truer and the leak was eliminated.

Apart from this, further experience with SeccoLip was consistently positive. The lips and coating do not produce wear particles. SeccoLip lived up to all expectations and has been in successful operation since the end of 2019.

Half section view of SeccoLip481-2/100-E1,
A = Flushing intake (quench with water)
B = Flushing discharge



Operating conditions

- Shaft diameter: $d = 100 \text{ mm}$ (3.94")
- Pressure: 0.1 bar(g) (1.4 PSIG)
- Temperature: $t = \text{Max. } 80 \text{ }^\circ\text{C}$ (176 °F)
- Speed: $n = 20 \text{ rpm}$
- Medium: Milk, serum pH 5.5, mineral salts (phosphorus and calcium)

EagleBurgmann – at the leading edge of industrial sealing technology

Our products are used wherever safety and reliability count: in the industries of oil & gas, refineries, petrochemicals, chemicals, pharmaceuticals, food, energy, water and many more. About 6,000 employees contribute their ideas, solutions and dedication every day to ensure that customers around the globe can rely on our seals. With our modular TotalSealCare Service, we emphasize our strong customer orientation and offer custom-tailored services for every need. [Rely on excellence.](#)

eagleburgmann.com
info@eagleburgmann.com

