

# Silicone hoses – frying without risk

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**Fryer oil 70 degrees Celsius hot is dangerous for the person who is handling it. In awareness of the burn risks for kitchen personnel, the Frifri SA company, in close collaboration with Angst+Pfister, developed a system for changing fryer oil that employs a UNISIL™ R silicone hose. This solution is as safe as it is easy, and it is embraced enthusiastically by kitchen staff.**

Frifri SA develops and assembles renowned “cooking systems with oil” that are very highly regarded in the food-service industry. The company specializes in manufacturing tabletop, free-standing, and built-in fryers. Frifri SA is a subsidiary of the US-based Middleby Corporation, a global leader in the professional foodservice equipment industry and famous worldwide for the quality of its products. The fryers are welcome fixtures not just in the kitchens of employee cafeterias, restaurants and fast-food outlets, but also in the haute-cuisine sector, where they are praised first and foremost for their versatility. Frifri SA works together with Fabio Tachella, one of the great Italian master chefs. The Frifri kitchen appliances are more than just fryers – they are true giants in the foodservice world.

The system used to change fryer oil is very important because fryer oil must be changed regularly. This was previously done by means of a drain valve connected to a rigid pipe. The waste oil was drained into a catch container, which was then emptied by hand into a metal drum. This task was very dangerous because the container was very heavy and the oil was hot. In its quest for a better solution, Frifri turned to Angst+Pfister. Both companies had already been working closely together for years and maintained excellent relations. So it's only natural that Frifri decided to involve Angst+Pfister in the project to optimize the oil-changing system.

After studying the specification book, it was decided to attach a hose to the back side of the fryers. The hose not only had to be flexible, but also FDA-compliant, resistant to fryer oil at a temperature of +70°C, easy to clean and simple to handle. It goes without saying that handling safety was the top priority.

The system proposed by Angst+Pfister consists of an emptying-and-filling unit composed of a UNISIL™ R silicone pressure hose and an inlet bend with an integrated pipe. The hose is equipped at both ends with quick-release couplings. The unit enables oil to be drained from the fryer well without risk. The hose assembly is attached to the fryer well, and the oil is pumped out of the fryer by means of a practical manual control mechanism affixed to the inlet bend. This new system eliminates having to handle the hot catch container! The emptying-and-filling unit can also be used to rinse the interior walls of the fryer well and the heating element. Reusable oil is pumped back into the fryer well. Waste oil can be pumped directly from the fryer well into an external container using the same system. At the end of the oil-changing process, only the emptying-and-filling unit needs to be disassembled and cleaned.

The UNISIL™ R silicone hose is not only FDA-compliant, but is also tasteless,



odorless and heat-resistant to temperatures up to +180 °C (or brief temperature spikes up to +250 °C). In addition, it is easy to clean and simple to handle because its exterior surface is smooth. The sleeve of the quick-release coupling is equipped with a stop valve and is thus completely dripless.

The number of components in this system is kept to a minimum to ensure easy handling and to minimize costs. Angst+Pfister proposed a hose with press-fitted stainless steel rings because hose clamps can injure operating staff and might damage the hose. The press-fitting is performed by experienced technicians in Angst+Pfister's workshops. The customer thus benefits from traceability of the press-fitting and consistent quality of the end-product.

The new oil-changing system presents a very good value proposition for the reasons cited above. It is dependable and safe, and is thus also highly regarded by Frifri SA's customers. The new solution that is supplied for all models with one or two fryer wells has become practically a must-have.

The UNISIL™ R silicone hose has a wide array of uses. Its excellent thermal resistance and good electrical insulating properties make the hose very suitable for conveying water in the vicinity of induction stoves. It is also readily used in industrial refrigeration and in the

food industry because the UNISIL™ R hose also conveys hot air very well.

Frifri SA has been a synonym for quality for more than 60 years. Frifri always works at the technological cutting edge to meet the needs of an ever more demanding market. Frifri found a reliable and powerful partner in Angst+Pfister. Put our experience to work for you as well! We would be happy to advise you.

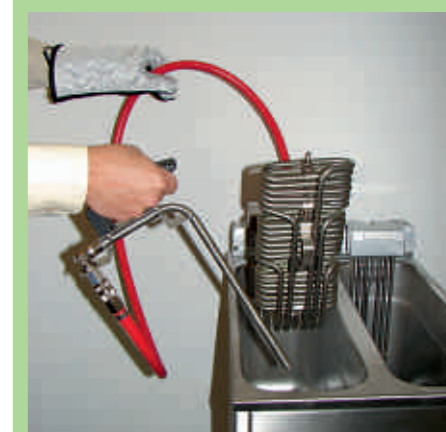
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The hose is stowed away practically.



Connection to the fryer



The fryer well is rinsed and filled.



The hot oil is pumped out of the fryer.

UNISIL™ R is a registered trademark of Angst+Pfister.

Editor's note:  
The Middleby Corporation has since decided to close the Frifri plant in Switzerland and to incorporate all of its operations into its Giga Grandi Cucine subsidiary in Italy. The Frifri story in Switzerland thus drew to a close at the end of January 2009.

