

GYLON BIO-PRO®

Case Study: Saturated Steam Autoclaves



Industry

Pharmaceutical OEM – Autoclaves and Sterilizers

Customer

The customer is one of the most well-known and qualified manufacturers of sterilization equipment, supplying major customers all over the world from its base in Italy. Design and construction standards usually exceed the customers' equipment requirements with the main purpose to protect their investments in critical industries such as Pharmaceutical, Bio-Processing, Medical Devices and Food Production.

Background

Before working with Garlock, the customer used virgin PTFE sanitary gaskets in all of their hygienic couplings. However, due to high content of saturated steam used in these systems, the gaskets were undergoing physical deformation and increased porosity. The result was rapid seal degradation with average performance life falling well shorter than their typical 18 months recommended replacement periods.

Challenges faced

As a global supplier it was vital for the customer to ensure that all of their construction materials met the full suite of compliance standards, including FDA and EC1935. Additionally the challenge was to ensure that the gaskets would perform well under the constant and difficult conditions presented by steam and high temperatures, so that the warranty period could be supported to meet customers' expectations.

Operating Conditions

1. Media: Saturated Steam
2. Size: 12.7 mm to 63.5 mm
3. Temperature: 152 °C
4. Pressure: Full vacuum 0.0 to 4 bar

Solution and Benefits

Garlock's global credibility was combined with local sales expertise in Italy to enable in-depth discussion and collaboration directly with the customer's engineering team. By understanding the challenging application as well as the critical end-use customers, it was determined that the best solution was to implement GYLON BIO-PRO® sanitary gaskets for Tri-Clamp connections. The GYLON® Style 3504 material of construction delivers the required level of compliance to industry standards, and the modified PTFE structure ensures compatibility to the temperature, pressure and mechanical demands of sterilization and autoclave processes. As a result, the company and their customers have experienced significant increase in seal life time from <18 months to more than 5 years, and GYLON BIO-PRO® is now specified as the standard solution in all of their hygienic couplings.

For more information, please visit:

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