

# CASE STUDY

Expertise Resolves Demanding Sealing Solution for Large PFA Pipe Diameter

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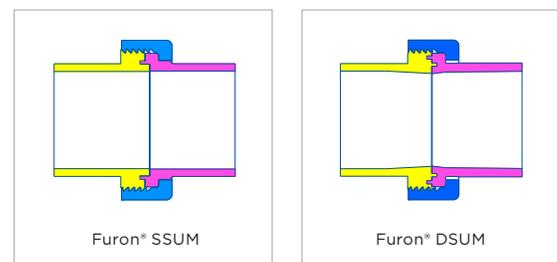
ASK AN ENGINEER

## The Challenge

In the process of working with Saint-Gobain, one of the world's largest chip manufacturers reported an issue they had on their large diameter HP PFA pipe installation for their bulk chemical delivery system and hook up (1 ½" or 2" pipe).

As a first step the manufacturer successfully transitioned from their existing flange system to Saint-Gobain's No O-ring union system (Furon® SSUM) which provided them with increased cleanliness (no gasket materials) and purity/safety (no metal tie rods that have a tendency to be chemically attacked).

As the customer became more confident with the design and skill set of Saint-Gobain's engineering team, they shared additional concerns with their installation. Faced with loosening connections, which are often found on large diameter installations due to high vibrations generate by the system, they needed a solution for the sealing interface to improve safety.



## Saint Gobain Expertise Resolves Demanding Sealing Solution for Large PFA Pipe Diameter

Discussions between Saint-Gobain application engineers and the customer resulted in a precise understanding of the concerns, which included the following:

- Loosening based on vibration
- Alignment issues when joining together two components
- Mitigating any damage caused to the sealing surface (scratch, torqueing, etc.)

Thanks to these constructive dialogues, Saint Gobain engineers improved the connection system by integrating and upgrading two main designs creating Furon® DSUM. The first was adding a locking tab system to resolve the vibration issue. The second was moving from a single tongue & groove design to a dual tongue & groove design (opposite orientation) to help overcome alignment issues as well as mitigate damage to the sealing surface.

## Customer Experience

Saint-Gobain tested the DSUM solution internally through a test protocol that was shared with the customer and underlined the benefits of the adjustments. Finally, samples were provided for use on existing installations to ensure that all similar issues be addressed by the new design solution for the long term as well.