

# CASE STUDY

Accurate Dosing Solution  
Requiring a Longer Pump Life

**FURON**<sup>®</sup>  
Pure Performance

ASK AN ENGINEER

## The Challenge

Saint-Gobain strives to work with our customers to solve their equipment and process challenges, and most importantly, create a safer work environment for their staff. A well-known Korean chip manufacturer was using a syringe pump to dose a highly corrosive chemical in their chip fabrication process. They experienced an issue with the short lifetime of their pump. Looking for a reliable dosing pump that efficiently dispenses small amounts of liquid, we proposed the **Furon<sup>®</sup> MDP 50 Pump**, suitable for use with highly corrosive media.

## Saint-Gobain Combined Premium Product & Problem Solving Services

From the inception of this project, Saint-Gobain's engineers collaborated closely with the customer's engineering team. The wetted flow path of the syringe pump the customer was using is not constructed exclusively of high purity material and is driven by a step-motor system. The Furon MDP 50 Pump is designed with a 100% fluoropolymer wetted flow path of virgin PTFE and PFA, suitable for ultrapure applications. Pneumatically driven, pilot air is applied to the actuator, the pump dispenses the desired volume. Manual adjustment knobs allow for easy setting of the dispense volume (shot size), dispense speed and may be locked into position to save setting. The patented PTFE rolling diaphragm technology assures high dispense accuracy and repeatability  $\pm 1\%$  which the customer required in their application.

Saint-Gobain provided the customer a sample of the pump for a field test. The customer was very satisfied with the high purity material which can withstand highly corrosive chemicals. Also, they were pleased with the air driving system, rolling diaphragm technology and the ease to adjust and lock the dispense volume setting, unlike the syringe pump. The customer tested to dose 0.3 ml, 0.4 ml and 0.5 ml by one shot using DI water and were very pleased with their results. The compact design of the MDP 50 pump was able to meet the small footprint they required.

## Customer Experience

The Furon MDP 50 pump achieved positive results in the testing completed by customer. The high purity, chemical resistant construction of the pump provided the long life capacity needed. Additionally, the operational benefits provided an efficient solution for their need to easily dispense small amounts of liquids accurately.



Furon MDP 50 Pumps are an ideal solution for accurately dosing of liquids in Semiconductor wet processes.