

# Barrier Bonded Slit Valve Door

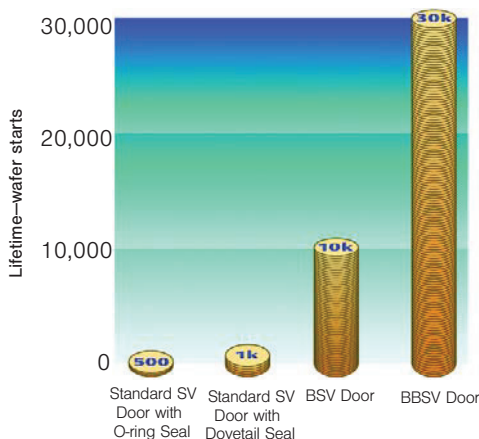
## Extends Life Expectancy in Plasma Chambers

### Engineered Components

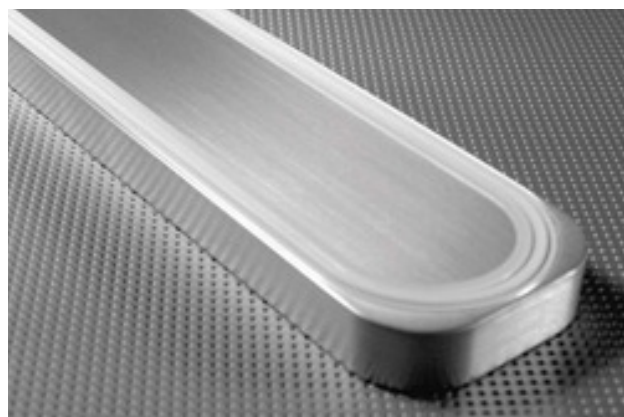
The Barrier Bonded Slit Valve Door (BBSV) significantly increases the life expectancy and performance of the door's seal during semiconductor plasma processing. Made from Greene Tweed's proprietary high-purity PTFE compound, Avalon®, the shield enhances our unique BSV (Bonded Slit Valve) door design.

In the past, when o-ring replacement was the only option, cleaning the gland and installing a new o-ring was difficult. Greene Tweed's introduction of the BSV Door in 1997 extended seal lifetime by an order of magnitude. Installation requires only removing and replacing a few bolts when replacing the complete BSV door assembly. The highly aggressive nature of plasma radicals in both plasma etch and post-CVD chamber clean applications physically erodes the bonded seal over time.

With the BBSV door design, the Avalon® shield protects the bonded Chemraz® seal from direct plasma attack. Therefore, a barrier bonded-gate design can provide up to a 30-fold increase in seal life during wafer production as compared to standard gate valve designs.



Note: representative customer data



### Features and Benefits

- Avalon® shield increases slit valve door lifetime by protecting bonded Chemraz® seal from plasma radicals
- Designed to eliminate movement in gland for improved seal integrity and less wear
- Prevents over compression of the seal and metal-to-metal contact of the door to the mating surface, which can cause particle generation
- Durable Chemraz® withstands dynamic use to increase life expectancy of slit valve doors
- Limited particle generation for lower contamination
- Designed to fill gland for improved seal integrity and elimination of potential leaks
- Minimal compression set for improved seal integrity and life
- Seal bonded to aluminum or stainless steel door to decrease replacement downtime, simplify installation, and ensure proper seal orientation without twisting
- No traditional molded parting lines for improved seal integrity

### Contact Us

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