

# Si DRIE

High-precision Si DRIE systems for deep silicon etching with excellent anisotropy and uniformity. Engineered for MEMS, power devices, and advanced semiconductor applications.



## Predeus, Proxion

SPT offers two Si DRIE systems—Predeus and Proxion—designed for high-aspect-ratio deep silicon etching. Both platforms deliver stable, repeatable performance with excellent uniformity and process control, supporting a wide range of MEMS and advanced packaging applications.

### Applications:

- ✓ MEMS Devices
- ✓ Inkjet Printer Heads
- ✓ Through-Silicon Vias (TSVs)
- ✓ Power Semiconductor Devices
- ✓ Optical Devices

## FEATURES

### Why Choose SPT for High-Precision Si DRIE



#### Unmatched Etch Rate and Selectivity in Si DRIE

SPT's Si DRIE systems deliver industry-leading etch rates and selectivity while maintaining vertical profiles, low sidewall roughness, and minimal CD loss.



#### Extensive Process Library for Diverse Etch Profiles

Our systems support a wide range of deep silicon etching shapes through a robust process library, enabling fast recipe development and consistent results.



#### Compatible with Advanced Semiconductor Applications

Ideal for power MOSFETs, TSV formation on 200 mm and 300 mm wafers, and other advanced device architectures requiring deep, high-aspect-ratio features.

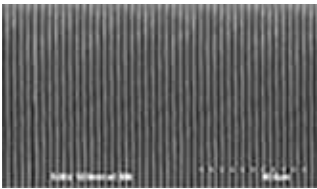


#### Flexible System Configurations from R&D to Mass Production

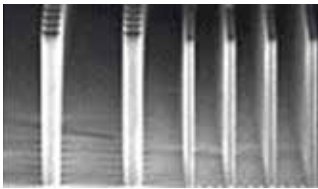
From compact vacuum load-lock tools to fully integrated cluster systems, SPT offers scalable platforms for both pilot and high-volume Si DRIE production.

PERFORMANCE

Si DRIE Performance for High-Aspect-Ratio, Speed, and TSV Etching Precision



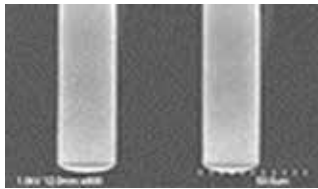
High-Aspect-Ratio Etching



Cylindrical Structure Etching



High-Speed Etching



Through-Silicon Via (TSV) Etching

Specifications



Predeus



Proxion

Process Module	Predeus	Proxion
Wafer size (mm)	200	200
Platform	APX, DPX, VPX, CPX	APX, DPX, VPX, CPX
Etching Rate	Moderate	High
Substrates	Si	Si
Application	MEMS Gyroscope, MEMS Accelerometer	MEMS Microphone, Inkjet Printhead Manufacturing



APX



DPX



VPX



CPX

Platform	APX	DPX	VPX	CPX
Intended Use	R&D	Prototype	Small Volume	Mass Production
Number of Chambers	1	2	3	4
Cassette Transfer Robot	-	Atmospheric	Vacuum	Vacuum
Robot Motion	2-Axis	2-Axis	3-Axis	3-Axis
Number of Cassette Stations	0	2	1	2

