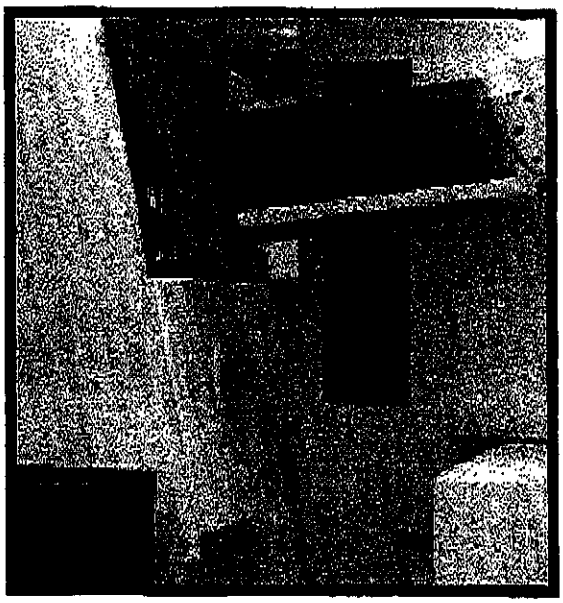
Application: Polymer Removal



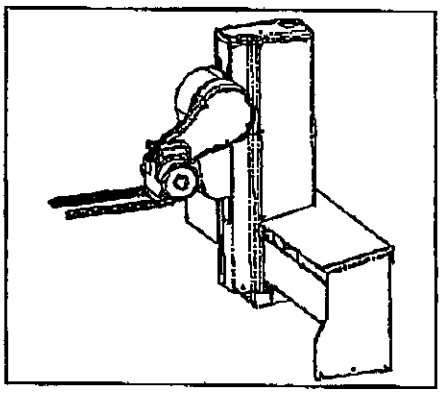
The Semitool **SPECTRUM™** is a leading edge surface preparation technology tool. **SPECTRUM™** is an automated chemical process platform which links different on-axis spray, immersion chemical processing and enabling technologies with dedicated material transfer and WIP storage. The system is based on mature, proven technology and provides the most process and throughput flexibility in the industry today. **SPECTRUM™** provides low cost of ownership through low chemical and DI water consumption, low exhaust consumption, small footprint, and high reliability and availability. The **SPECTRUM™** meets customer needs by providing a leading edge automated cleaning system with profitable solutions. The **SPECTRUM™** design supports industry objectives for performance and cost effectiveness of tool sets.

1. Spectrum™ System Description

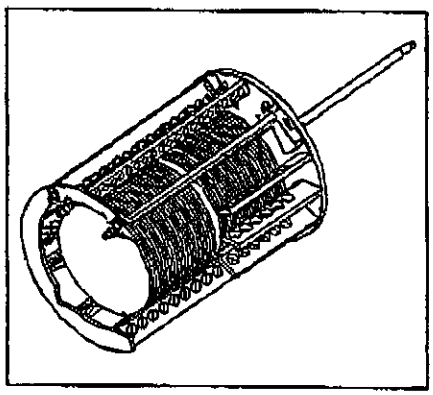
1.1 Automation

Automation & Robot Features: State-of-the-art ANSI compliant, 2nd generation, four (4) axis, linear tracking robot that reliably handles 50 wafers in a carrierless configuration. The class 1 mini-environment WIP stocker meets S-8 ergonomic guidelines and provides storage for 12 wafer cassettes or 300 wafers. The stocker permits user-definable lot selection, which adds flexibility and includes a "Hot Lot" processing feature.

- Offset-mounted end effector allows wide range of motion with a compact package, including vertical EERD move
- Integrated robot/process module for precision wafer handling
- Automation has direct structural tie to process module
- Integrated motor/absolute encoder unit for reliable operation
- Absolute encoding on all four (4) robot axes
- Robot unit includes driver amps for all 4 motion axes
- Linear axis readily expandable to accommodate additional process modules
- Robot "automation off" switches
- 50-Wafer Carrierless Rotors
- Teach Pendant
- Wafer Mapping and Counting



Robot and Track Configuration



Spectrum™ Carrierless Rotor

1.2 Process Hardware

1.2.1 Module 1

Cabinet Material: Stainless Steel Anneal

Chemical Handling System:

Process Chambers

Chamber	Material	Injected Components
50-Wafer SRD	Stainless Steel	CO2
50-Wafer CPC Solvent	SEP21 Stainless Steel	CO2

Process Chemical Tanks

#	Chemistry	Components	Composition	Temp (°C)	Filter	Tank Material
1	EKC 265	EKC265	0	Up to 65	0.1µ, 10" W/PFA housing	SEP 21 Stainless Steel
2	EKC 265	EKC265	0	Up to 65	0.1µ, 10" W/PFA housing	SEP 21 Stainless Steel
3	IPA	IPA	0		0.1µ, 10"	EP Stainless Steel
4	IPA	IPA	0		0.1µ, 10"	EP Stainless Steel
5						

Auxiliary Systems

Chamber	Description
EERD	End Effector Rinse Dryer

2. Spectrum™

Total system price as per below configuration:

(All dimensions given as (w x d x h) or (w x d)

Model #:	SP-S-200-SSC		
Tool Dimensions (in):	84 X 78 X 92	**Load Ports (in):**	38 X 20
Load Size:	50 wafers	**Wafer Diameter:**	200 mm
WIP:	SMIF I/O; Dual-Load Port		
Voltage:	415 Volt, 3 Ph, 5 Wire, 50hz with neutral		

Process Hardware	**Module 1**
Top Level #:	000S0030
Facility #:	460P0030
Fluid Flow #:	360P0030

Features:

EERD Station	End Effector Rinse/Dry (EERD) station
SEMY	Supervisory Workstation Software
Air Handling	Mini-environment: ISO Cl. 2; ioniz.; PTFE filters
Mylar Layout	Footprint for facility layout prep. and validation
48 Credits	48 training credits: Operation, Programming, GM
FireSuppression	CO2 Fire Suppression: meets SEMI S2-93, NFPA 12 req'mnts
SECSII	SECSII interface & software
EP Lines	Electropolished stainless steel solvent lines
Wafer Mapping	Wafer mapping hardware and software
UPS Interface	Interface for customer supplied UPS

Included Options: