G&P TECHNOLOGY

POLI-500 CMP Tool

AXUS TECHNOLOGY

Your source for leading-edge surface processing solutions

Standard configuration includes membrane carrier and ring control.

The G&P Technology POLI-500 is used for the planarization of dielectric, conducting, and semiconducter thin films on silicon wafers and other substrate materials. This polishing tool is an excellent choice for processing 6" (150mm) and 8" (200mm) wafers. This tool is available in several different configurations depending upon the customer's need for the carrier type, pad conditioning technology, pad profiling capability, and process measurement and monitoring control systems. In the tradition of all G & P Technology tools and equipment, the POLI-500 is a versatile and flexible process tool already chosen by R&D laboratories, university research centers, consumables suppliers, substrate manufacturers, and chip developers.

FEATURES

Programmable control of:

- Polishing pressure
- Rotational speed of the polishing platen & wafer carrier
- Carrier membrane pressure
- Downforce of the pad conditioning disk
- Sweep speed of the conditioning arm
- Oscillation of the wafer carrier on the polishing pad
- Polishing process time
- Slurry wetting time on pad
- Flow rate of the polishing slurry
- Buffing/rinsing time
- Flow rate of D.I. water during buffing/rinsing cycle

The POLI-500 Swing Arm Conditioning System for optimized CMP processing

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POLI-500 CMP Tool

STANDARD CONFIGURATION - Model POLI-500		
Wafer size capacity	Up to 200mm	Up to 8″
1 polishing platen	Hard Anodized Aluminum with Teflon	
Diameter	508mm	20″
Speed range	30 - 200 rpm	
Number of wafer carriers	1	
Speed range	30 - 200 rpm	
Standard type	Membrane style; floating ring	
Oscillation range	±12mm	±0.5″
Pad conditioner	(optional on 1-spindle version)	
Slurry pumps	3	
Downforce calibration system	To calibrate carrier and conditioner	
Table rinse spray	High pressure spray arm	
Operator interface	Intuitive touch screen	
Loading system	Manual load/unload	

OPTIONS AVAILABLE	
Conditioner path simulator	Software to optimize conditioner recipe
Additional Polishing Platen	Teflon coated, 20″ diameter (508mm)
Second wafer carrier	N/A with pad conditioning
Pad conditioner system	N/A in 2-spindle/carrier model
Type	Swing arm
Feature	8-zone conditioning control
Pad profiling system	To control pad shape
Low pressure polishing system	For copper & low K applications
End point systems	Frictional force
	Temperature
Platen temperature control	Customer provides chiller
Semi-auto wafer loading system	Load/Unload station with D.I. water rinse

DIMENSIONS		
Metric	1200W x 1160D x 1960H	
Inches	47.5W x 46D x 77H	
Weight	~1250 kg	2750 lbs

FACILITIES	
Power	220VAC, 3 PH, 30A
DI Water	2 l/min avg, 10 l/min peak
CDA	5 SCFM
Exhaust	100 CFM

CONDITIONING ARM OPTIONS

Swing Arm Conditioning (radial sweep - optional)

- 100mm end effector (standard), 0-200 rpm range
- Downforce range, .45 - 9.1kgf (1 - 20 lbf)
- Sweep zone control, 12 segments
- Sweep rate, 0 - 20 sweep/minute
- Conditioning disk clean station

Oscillating Arm Conditioning (linear sweep - standard)

- 240mm end effector, segmented or pellet
- Downforce range, 3 - 10 kgf (6 - 22 lbf)
- Sweep rate, 0 - 12 sweep/minute

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