

CMP PAD CONDITIONER

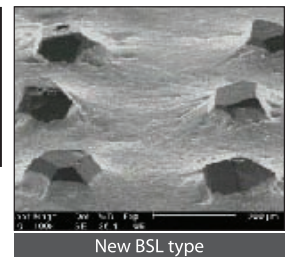


Advantages

- High precision thin with superior cutting efficiency
- Maintains free cutting action at high RPM and fast feed rates
- Eliminate chipping during the sawing operation

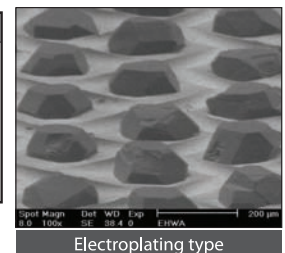
Applications

	Polished materials
New BSL type (Double metal layer)	· Oxide CMP : BPSG , TEOS , PSG · Metal CMP : Al , W , Cu
Electroplating type	· STI , PGI , Poly-si , TSV CMP → Cu , Poly-Si

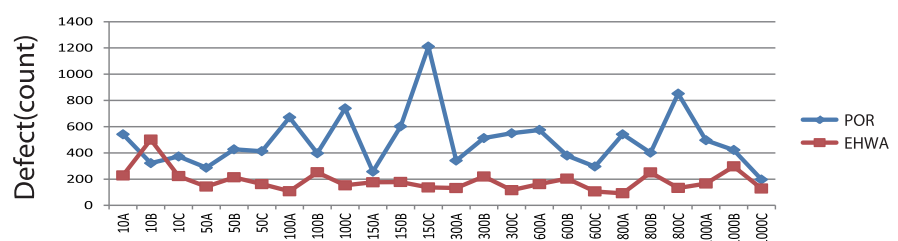


Available Product Spec.

Machines (model)	Pad cut rate
· AMAT (Mirra/Reflexion) · Ebara (F-Rex200/300 , EPO-222(H)) · Novellus (Auriga, CMP200/300, Avantgard 776 (676) , Momentum) · Strasbaugh (6DS-SP , 6ED) · Lam (Teres) , etc.	10 ~ 300 um/hr



Performance Data



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CVD CMP PAD CONDITIONER



CVD (Chemical Vapor Deposition) Diamond Coating Conditioner

CVD PAD CONDITIONER is totally different technology as the conventional disks which is using metal bonding technology such as electroplating or brazing. Diamond is coated on the patterned substrate using CVD technique with customized designs for each CMP process.

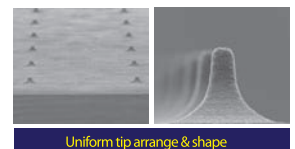
High Technology of CVD Diamond Conditioner

“Engineered quality control”

- Chemical stability : Zero corrosion & metal contamination
- Excellent disk flatness: Uniform tip size & tip exposure
- Working diamond design : PCR & Wafer removal rate tuning by tip size, number, exposure, shape, etc.
- PCR sustainability : Constant PCR over polishing time (Dia. tip size doesn't be changed during CMP process)

Features

- Various patterns can be arranged CVD diamond coated tips
- Apex of the CVD diamond coated tip is flat face
- Allows to engineer the critical pressure applied to each tip for pad conditioning
- EHWA has a patent on the tip size and number for pad conditioning
- The apex where contacts the pad has not changed over the conditioning time
- Pad cut rate is constant



Uniform tip arrange & shape

Application

Customized product depending on the customer's process conditions
(Polished material, Pad/Slurry type, etc).

Application	Oxide CMP	W CMP		Cu CMP	
Slurry / Pad	Ceria / Silica base	Bulk	Barrier	Bulk	Barrier
Close cell pad	●	●	●	●	●
Open pores pad	●	●	●	●	●

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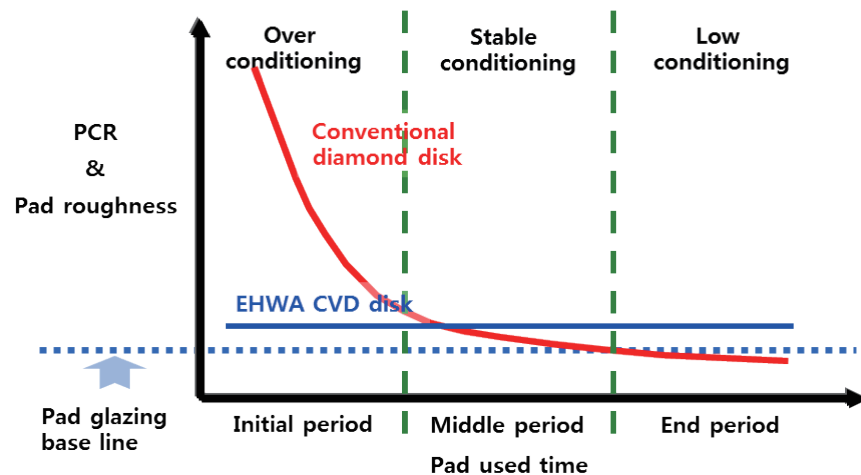
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Product Standards of EHWA CVD CMP Pad Conditioner

Contents	Values
Out diameter	2inch ~ 5inch 2inch ~ 5inch
Tip sizes	Free over 5 μ m
Tip numbers	Free under 30,000ea/disk
Tip height	Free under 100 μ m (Decision by tip size)

Performance

Conventional diamond disk shows a significant change of PCR and Pad roughness over time, but CVD disk maintains constant PCR and Pad roughness because the shape & size of tip is uniform.



Conditioning	Conventional diamond disk	CVD disk
Over Conditioning (Initial period)	 CMP pad	 CMP pad
Stable Conditioning (Middle period)	 CMP pad	 CMP pad
Low Conditioning (End period)	 CMP pad	 CMP pad