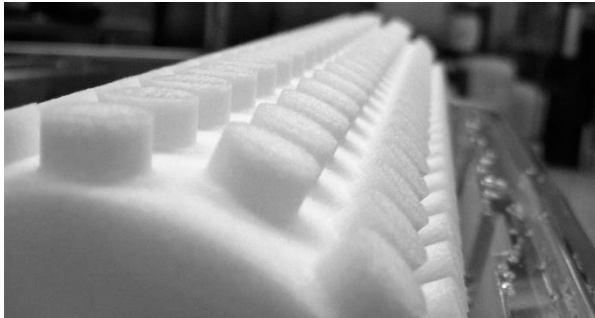


nanoShear PVAc Brushes

for post-CMP critical cleaning applications

STI • PMD • Poly-Si • Metal Gate • Contact • ILD • Copper

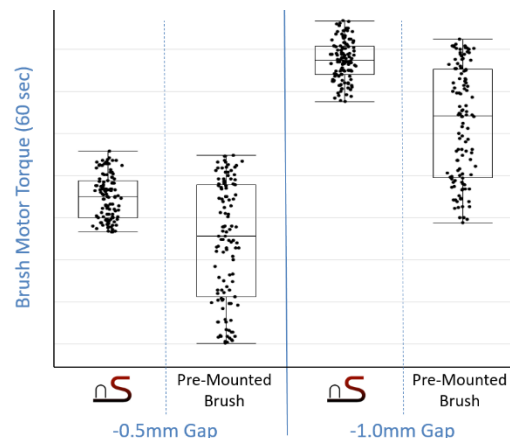
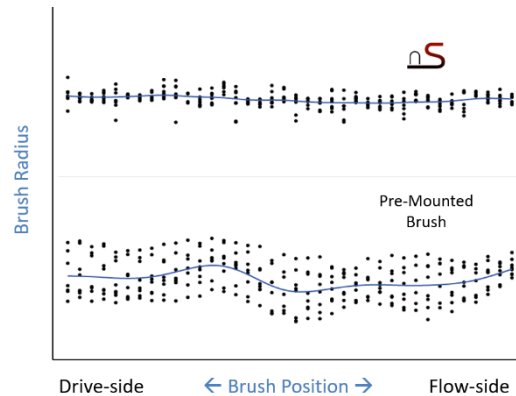


Description

Designed specifically to meet the rigid demands of $\leq 28\text{nm}$ post-CMP cleaning, nanoShear cast-to-mandrel disposable PVAc brushes provide unprecedented dimensional uniformity, product consistency, and on-tool reliability. nanoShear brushes are available in any commercially available PVAc formulation and incorporate Rippey's proprietary flow-through cleaning process.

Features

- **Brush Uniformity**
Superior dimensional uniformity enables small gap processing without compromising particle removal efficiency.
- **Torque Stability**
Stable inter-locked brush-mandrel assembly provides low vibration and predictable, consistent torque performance.
- **Uniform Fluid Distribution**
Uniform contact pressures result in more uniform fluid distribution which reduces point-of-use chemical concentration gradients across the wafer.





Applications

Rippey nanoShear brushes are compatible with all major CMP OEMs. Mandrels and tool interfaces are designed for quick and simple exchange.

To prevent bacterial growth and ensure long shelf-life, brushes come preserved in H₂O₂ or NH₄OH, or can be e-beam sterilized.

Depending on the application and cleaning requirements, nanoShear brushes can be customized with various nodule formats.

OEM	Applied Materials		Ebara
System	Reflexion® LK, LK Prime™	FREX 300S(2)	FREX 300X(3SC)
PN	*1F*N-70-31NM-0317	*1F*N-38-18NM-0310	*1F*Y-60-32NM-0310

NOTE: nanoShear brushes are only available in 300mm

★ 1 F ★ N	Preservation	(H) 1.00%wt. H ₂ O ₂ (M) 0.25%wt. NH ₄ OH (E) e-beam
	PVAc Formulation	(S) Symmetry (2) F2 (E) Eclipse (C) Eclipse HCS

Quality

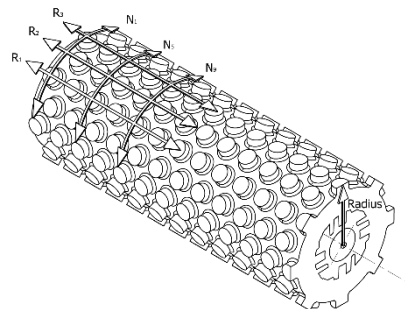
Every nanoShear brush is measured and characterized to assure 100% conformance of all products shipped.

Every nanoShear brush is individually processed on Rippey's proprietary flow-through cleaning systems. The cleanliness of each brush is quantified by effluent Liquid Particle Counts (LPCs).

All nanoShear brushes are shipped with a QR bar code label. This code uniquely defines the characteristics (CoA data) of that particular brush by its brush number.

Metric	unit	Specification	Method
Radius Range	mm	<0.7	vCMM
Torque Variation	%	<10%, 1σ	Rippey
Final LPC	-	<1000, Sum >0.2μm	Effluent

NOTE: Brush physical properties and ionic contamination are PVAc formulation dependent. Contact Rippey Sales or Applications for specific product inquiries.



nanoShear™



43467.63542

nanoShear™

Rippey (a division of ITW Contamination Control)
5000 Hillside Circle • El Dorado Hills • California • 95762
916.939.4332 • customer.service@rippey.com

