PGR- Pellicle Glue Remover System

Eliminates photomask glue lines

Why automated Pellicle Glue Removal is critical -

- Automated pellicle glue removal eliminates the damage and ultimate scrapping of photomasks that results from the hand removal of the pellicle glue string
- Use of harsh chemical cleaners required for hand removal processes impact phase and transmission of attenuated masks
- Use of harsh chemicals needed for hand removal of glue lines exposes the photomask to future haze causing amines
- Use of harsh chemicals needed for hand removal processes contributes to wet process tool contamination, and future product cross contamination
- Glue residuals left behind by the hand removal processes add to increased costs

PGR benefits:

- Fully automated pellicle glue ring removal with repeatable results
- Works on any rectangular pellicle glue line
- FFU/ULPA protected clean environment
- Eliminates the need for sulfuric acid cleans
- ESD path to ground and ionic protection are provided within the processing chamber
- Actively protects the active pattern area during process
- Adjustable PLC controlled process parameters, i.e nano roto speed, force, run cycle and chemistry dispense volume
- Equipped with preset parameters for all major pellicle types, as well as customizable recipe setup
- Dramatically reduces cleaning time with a typical processing time of 15 minutes

POZZETTA
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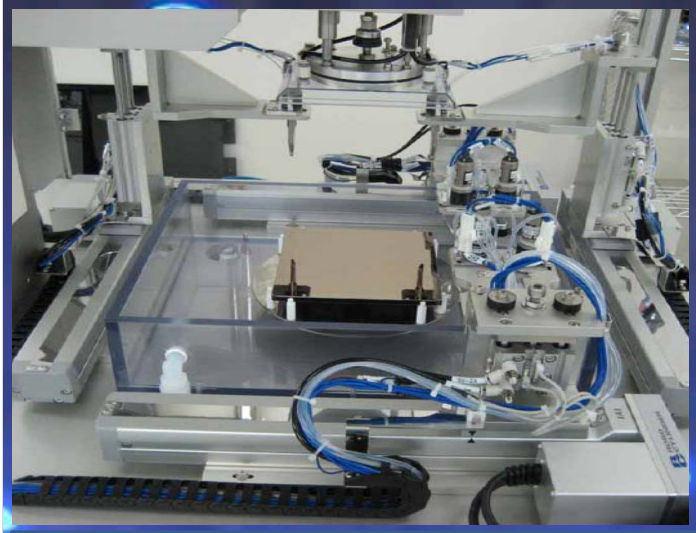
Creating Secure Environments

Pozzetta Products Inc. - Pellicle Glue Remover **PGR**



Mitsui Pellicle- Case Study

Initial **Post PGR** **Post O3-water**

Is there any residue after the PGR process?

Answer: Sometimes, but the mostly clean surface is easily cleaned by "light" wet cleans processes, like ozone water, and residuals can be minimized by additional process optimization on site.

PGR Process Overview-

The mask is placed in the ESD protected process chamber. The PGR measures the X & Y address on the actual glue line. A small amount of an ether based chemistry is placed around the glue ring, causing it to dissolve,while the active protective air curtain keeps particles and the chemistry away from the mask active area. Utilizing up to three specifically designed nano rotors and wipers, the PGR mechanically removes any residual glue on the mask. The glue line is automatically traced by the nano rotor, procesing each corner twice to ensure the maximum amount of glue material is removed. The PGR also provides the operator real-time cleaning feedback by CCD camera and mapping.

The PGR system is an important labor and cost saving tool that will prove to be an asset to any mask shop that needs to de-mount and re-pelliclize photomasks. Industry surveys indicate that 1-2% of the reticles that have the glue line removed by hand result in serious scratch damage to the mask active area, requiring repair measures or the mask having to be scrapped. Use of the PGR tool provides users with a state-of-the-art process that saves labor and material costs by greatly increasing operational efficiency. The PGR tool is a proud addition to Pozzetta Products' fifteen years of experience in providing low cost, high value solutions for the photomask industry.

Tool & Process Highlights	
Pellicle Types and Sizes	Any rectangular pellicle. Comes with Preset Recipes with manual adjustment options.
Removal Process	Dissolution with Special Ether Chemistry + Nano Rotor wiping with adjustable pressure, Recommended Ozone water rinse following
Pattern Protection	Active air curtain over pattern, with ESD path to ground and ionization in chamber
Control Method	Touch Panel operation of PLC Control, Adjustable recipe Rotor rotations speed and run time. CCD camera and Mapping for quality assurance
Facilities Requirements	General Exhaust, Standard Power, Solvent drain (optional)
Options	SMIF Load/unload System
Tool Dimensions	
Length	39.3 inches (100 cm)
Width	39.3 inches (100 cm)
Height	78.7 inches (200 cm)

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