AdValue Photonics
Innovative & Reliable

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From As-Grown Diamond to a Controlled Pre-Polish Blank

Automated slicing, precision cutting and configurable laser shaving for high-value diamond materials

As CVD diamond expands into thermal management, optics, advanced tools and semiconductor-related applications, post-growth processing becomes a critical production step. **The objective is not simply to cut diamond—it is to recover usable material and deliver a controlled starting condition for the next finishing step.**

TWO CRITICAL PROCESSING STEPS. ONE AUTOMATED PLATFORM.

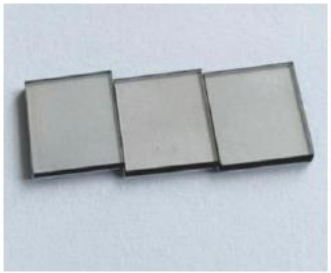
1. **SLICE —** Separate single-crystal or polycrystalline diamond with application-optimized laser processing and controlled cut geometry.
2. **SHAVE —** Remove excess material and correct thickness or surface condition before final lapping and polishing. Performance is application-dependent.

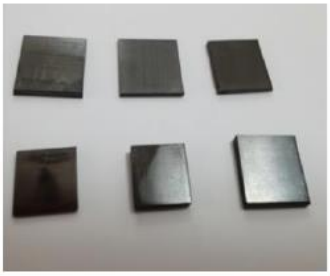
AUTOMATE — Use vision-assisted alignment, recipe control and automated pick-and-place handling for repeatable, low-touch production.

AP-DC-08G
View product datasheet

Published AP-DC-08G system highlights

UNATTENDED PRODUCTION	MATERIAL UTILIZATION	CUT-SURFACE QUALITY
Automated pick-and-place; manual, semi-automatic or fully automated 24/7 operation.	Kerf ≤30 µm for material thickness below 1 mm; application results vary.	Published post-cut surface roughness Ra <200 nm; final finishing may still be required.






Have a diamond slicing or pre-polish challenge?

Send the material type, starting dimensions, target thickness, flatness/TTV, surface requirement, finishing allowance and production volume. Our applications team can propose a sample-validation plan.

Discuss your diamond application | Explore laser processing systems

Results depend on diamond type, orientation, thickness, geometry, process sequence and acceptance criteria. Sample validation is required.

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