



ADHESIVE WORKHOLDING®

A UNIVERSAL PART GRIPPING SOLUTION



APPLICATIONS

ONE WORKHOLDING SOLUTION. MULTIPLE APPLICATIONS.



MILLING (5-Axis, Horizontal, & Vertical)

Blue Photon's Adhesive Workholding® system delivers secure, distortion-free workholding for milling applications from aggressive roughing to high-speed finishing. Precision grippers replace traditional clamps to eliminate overtightening and maximize part access. In 5-axis environments, the system provides critical clearance for unobstructed 5-sided - and in some cases 6-sided - machining with minimal interference.



ADDITIVE

Many additively manufactured parts require post-process machining, and the Blue Photon system is ideally suited for securing these net-shaped, often highly complex geometries. Cost savings are achieved through quickly designed, low-cost fixtures, and the elimination of the need to print clamping features into the printed part.



EDM

The Blue Photon workholding system securely holds EDM components while eliminating the need for cumbersome fixtures with moving parts that can foul in the EDM environment. When used in conjunction with a zero-point system, shim checking can be completely eliminated, simplifying setup and improving process reliability.



GRINDING

BlueGrip™ Workholding Adhesive® dampens vibration commonly encountered in grinding applications, significantly reducing chatter and improving process stability. When paired with a zero-point system, automated part loading is simplified and repeatability is enhanced.



TURNING

During turning operations, the Blue Photon system eliminates the need for traditional chuck jaws that introduce excessive clamping forces, while securely holding delicate workpieces that are susceptible to distortion.



WHY CHOOSE ADHESIVE WORKHOLDING®

MORE ACCESS. LESS DISTORTION. BETTER RESULTS.



The Blue Photon workholding solution is a patented, photo-activated adhesive fixturing and workholding solution that improves part quality, reduces waste, and saves on labor in workholding applications that have traditionally challenged precision part manufacturers.

STRONG BOND, LIGHT TOUCH

- Patented, load bearing, light transmitting grippers replace clamps
- BlueGrip™ adhesive provides outstanding holding power
- Standard and custom fixtures integrate with existing systems, simplify part loading and increase spindle up-time

BENEFITS

- Reduces or eliminates part distortion
- Requires fewer operations
- Lowers cost and scrap
- Increases efficiency
- Increases machine access
- Improves accuracy
- Stands up to oils and cutting fluids
- Withstands heavy machining

MATERIAL VERSATILITY

- Ferrous and non-ferrous metals
- Ceramic
- Glass
- Composites
- Laminates

and more!

IMPROVED PRODUCTIVITY

- Integrates with existing automated tooling
- Integrates with standardized tooling
- Improves part access
- Decreases operational steps
- Reduces time spent engineering the workholding/fixturing process

MARKETS WE SERVE

VERSATILE WORKHOLDING FOR DIVERSE INDUSTRIES



AEROSPACE/DEFENSE

Aerospace and defense components demand precision and repeatability, while often requiring the machining of complex, high-value materials such as titanium, Inconel, and advanced composites. Blue Photon delivers secure, distortion-free fixturing that improves access, simplifies setup, and reduces cost and turnaround time.



OPTICS

Optical components are delicate, high-value and require exceptional dimensional accuracy and surface quality. The Blue Photon system helps to eliminate part distortion, improves part access, supports fragile components, and allows for tighter tolerances.



MEDICAL

Medical components present unique machining challenges like delicate features, tight tolerances, complex geometries and demanding surface finish requirements. Blue Photon provides secure, distortion-free part holding for precision medical manufacturing.



PRODUCTION/AUTOMATION

Blue Photon Adhesive Workholding® provides consistent, repeatable setups that integrate easily into existing systems, improving reliability, reducing handling variability, and minimizing inaccuracies in automated production.



JOB SHOP/PROTOTYPING

Ideal for job shops and prototyping, Blue Photon provides a flexible, cost-effective solution for holding ordinary to complex parts while reducing setup times and supporting faster iteration from design to finished part.



ENERGY

Blue Photon Adhesive Workholding® provides secure, distortion-free fixturing for complex energy components, improving access, reducing setups, and supporting high-precision machining of intricate geometries and difficult materials.

HOW IT WORKS

AN EASY & EFFECTIVE PROCESS

1



Clean dirt and oil from grippers and workpiece.

2



Apply enough adhesive to the grippers to fully fill the gap between the part and gripper.

3



Polymerize the adhesive by applying UV light for 60 seconds.

4



Machine the workpiece.

5



Separate the fixture from the workpiece with a 1/4 inch turn twist or hot water soak.

6



Remove and peel away residual adhesive with steam, hot water spray, dry ice blasting, or machine cleaning tool.



ABOUT BLUE PHOTON

WORKHOLDING WITHOUT LIMITS

Blue Photon's revolutionary Adhesive Workholding® technology provides secure, stable grip on complex parts while eliminating common challenges such as part distortion and limited machine access.

Engineered for precision and efficiency, Blue Photon offers a superior alternative to traditional clamping methods - improving machining accuracy, reducing setup times, and enhancing flexibility in manufacturing operations.

From simple components to the most demanding geometries, Blue Photon helps manufacturers achieve better results with greater confidence.

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