ATLAS MARKING

Differences Between Three (3) Marking Machines

Feature	UV Laser Marking	CO_2 Laser Marking	Fiber Laser Marking
Laser Source	Ultraviolet (UV) Laser	Carbon Dioxide (CO_2) Laser	Fiber-Optic Laser
Wavelength	Short Wavelength (Typically 355nm)	Long Wavelength (Typically 10.6µm)	Near-infrared wavelength (Typically 1064nm)
Material Compatibility	Most Materials, Including Plastics, Glass, Ceramics, and Some Metals	Organic Materials, Plastics, Wood, Paper, Leather	Metals, Alloys, Plastics, Ceramics, and Most Organic Materials
Marking Speed	Moderate To High	Moderate	High
Marking Depth	Surface Marking to Shallow Engraving	Surface Marking to Moderate Engraving	Surface Marking to Deep Engraving
Precision	High	Moderate	High
Contrast	High	Moderate To High	High
Thermal Impact	Low	High	Low
Maintenance	Minimal	Moderate	Minimal
Typical Applications	Electronics Components, Medical Devices, Glass and Ceramics, Plastics with Sensitive Coatings	Packaging and Labeling, Paper and Cardboard, Rubber and Leather, Wood Engraving	Automotive Parts Marking, Aerospace Components, Metal Fabrication, Medical Instruments, Jewelry and Watchmaking
Pros	Suitable for marking the widest range of materials, great for delicate, accurate work, shallow power requirements, long-life and maintenance-free period	Can mark organic materials and glass, good engraving speeds, lower cost (excluding Galvo lasers)	Versatile range of applications, long-life and maintenance-free period, fast engraving speeds
Cons	Not very suitable for cutting or engraving, except for a few applications such as thin films, PCB, etc., more expensive than CO_2	It has a shorter lifetime, has difficulties marking metals, and is less accurate than the other technologies	More expensive than CO_2 lasers, less versatile for marking than UV, and unsuitable for some organic materials (wood, glass, fabric, etc.)