

3D Dynamic Focus System Entry priority for the industry

- CNC shell,dust prevention,compact structure,easy to integrate.
- Integrated structure, dust prevention, and shielding design without space limitation, very easy to integrate.
- The adjustment knob is used to switch between different work fields without replacing any parts.
- Double driving Z axis dynamic focus module design, response frequency $\geq 100\text{Hz}$ @ $\pm 10^\circ$,easy to achieve Z depth 150mm @ $300\text{mm}\times 300\text{mm}$,applied to flat surface, 3D surface high speed processing.



3D Surface Processing

The FR10-U applies dynamic focus control technology, breaks the limitation of traditional marking, and can do no distortion marking in the large-scale surface, 3D surface, steps, cone surface, slope surface and other objects.

	Regular Scanhead	VS	FR10-U
Cylinder surface	 Can not cover focal points at two edges, distorted edge marking effect.		 Can cover focal points at two edges, no average marking.
Different steps	 Can not cover focal points on two different heights, no average marking.		 Can cover focal points on two different heights, no average marking.
Cone surface	 Can not cover focal points on the cone, distorted marking effect.		 Can cover focal points on the cone, distorted marking effect.
Slope surface	 Can not cover focal points on the slope, distorted marking effect.		 Can cover focal points on the slope, distorted marking effect.

Achieve 600x600x150mm curved surface application

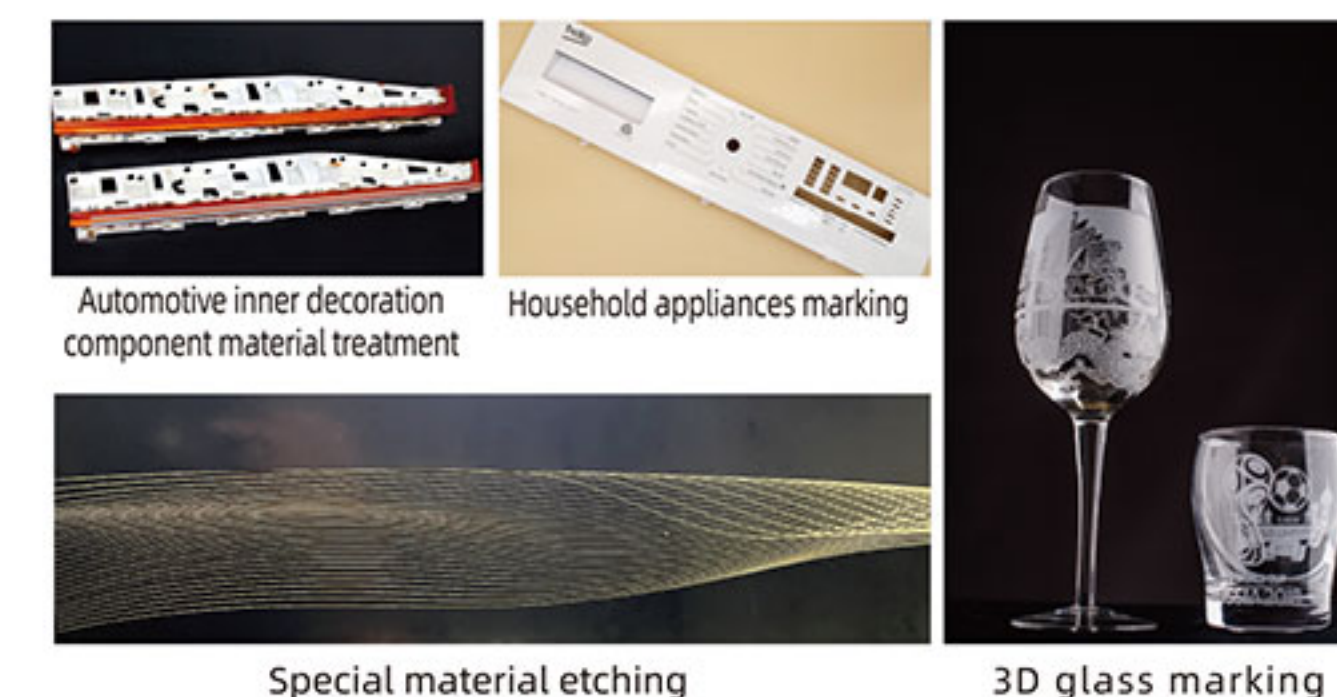
Through the 3rd axis control to reach larger work field, smaller spot size.

Regular Scanhead	FR10-U
 The closer to the edge, the bigger the spot is, the marking range is limited.	 Achieve 0.039mm spot size under 600*600*150mm.
 Deformation due to its characteristics.	 Marking with uniform effect under super large work field.

Application Highlight

APPLICATIONS

- Large field marking
- Curved surface etching
- 3D marking
- PCB marking



Product Technical Information

Technical Info.		Specifications					
Items	Output Voltage(VDC)	±15					
	Current(A)	10A					
	Protocol	XY2-100 Protocol					
	Weight (KG)	7					
	Size(mm)	292*115*152.8					
Optical Specifications	Aperture Size(mm)	10					
	Input beam diameter(mm)	6.5					
Galvanometer Specifications	Product line	Standard		Pro		P2	
	Scan Angle(°)	±10		±10		±10	
	Repeatability(μrad)	8		8		5	
	Max.Gain Drift(ppm/k)	100		100		50	
	Max.Offset Drift(μrad/k)	30		30		15	
	Long-term drift over 8h(mrad)	≤0.2		≤0.2		≤0.1	
	Tracking Error(ms)	≤0.13		≤0.13		≤0.13	
	Max.processing speed(characters/s)	600@100x100		600@100x100		600@100x100	
Working Field & Spot Diameter	Working Field(mm)	125x125x40	200x200x120	300x300x150	400x400x150	500x500x150	600x600x150
	The Min.Spot Diameter@1/e² (mm)	0.010	0.015	0.022	0.026	0.033	0.039
	Focal length(mm)	144	234	354	474	594	714

