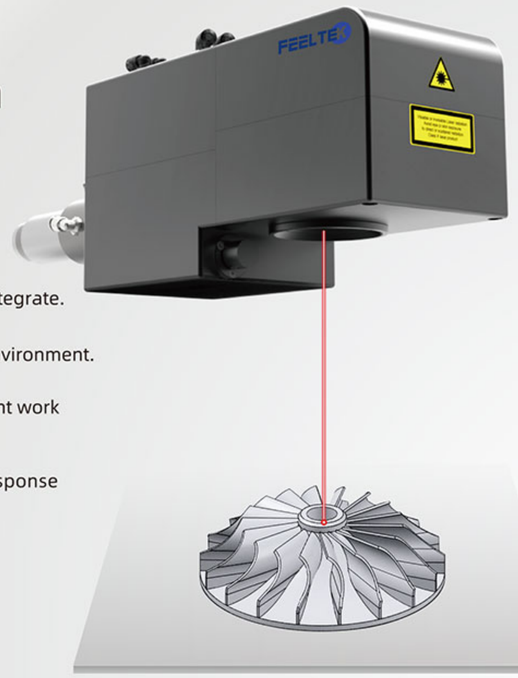
3D FR15-F

Support wavelength: 1064nm

3D Dynamic Focus System

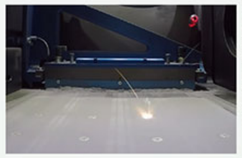
Specific for 3D printing industry



- CNC shell,dust prevention,compact structure,easy to integrate.
- Cooling design, support high-temperature precision environment.
- 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≥100HZ@±10°,easy to achieve Z depth 150mm@300mmx300mm,applied to flat surface, 3D surface high speed processing.

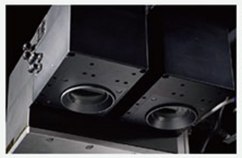
Highlight application: 3D printing

FR15-F applies with the dynamic focus system control, it can be applicated in SLS, SLM.



High Precision

As the number of processing layers increases, the dynamic axis coordinately adjust the focus and adjust the spot in real-time. The minimum spot of FR15-F can directly reach 0.018mm.



High Efficiency

To improve higher processing efficiency, FEELTEK develops the multi-scanheads solution, as well as its corresponding platform.

3D Surface Processing

The FR15-F 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		FR15-F
Cylinder surface	Can not cover focal points at two edges, distorted edge marking effect	VS	
Different steps	Can not cover focal points on two different heights, no average marking	VS	
Cone surface	Can not cover focal points on the cone, distorted marking effect	VS	
Slope surface	Can not cover focal points on the slope, distorted marking effect	VS	

Application Highlight

APPLICATIONS

- 3D laser marking
- Engraving
- Clearning
- Precision mould
- 3D surface treatment
- Texture processing
- PCB marking

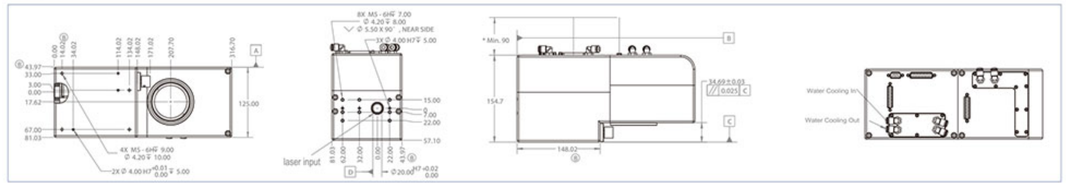
3D printing

Engraving

Product Technical Information

	Technical Info.	Specifications					
Items	Output Voltage(VDC)	±15					
	Current(A)	10A					
	Protocol	XY2-100 Protocol					
Optical Specifications	Aperture Size(mm)	15					
	Input beam diameter(mm)	8.5					
Galvanometer Specifications	Product line	Pro	P2				
	Weight（KG）	7.5	7.5				
	Size(mm)	316.7*125*154.7	333.7*125*154.7				
	Scan Angle(°)	±11	±11				
	Repeatability(μrad)	8	5				
	Max.Gain Drift(ppm/k)	100	50				
	Max.Offset Drift(μrad/k)	30	15				
	Long-term drift over 8h(mrad)	≤0.2	≤0.1				
	Tracking Error(ms)	≤0.23	≤0.15				
	Max.processing speed(characters/s)	560@200×200	650@200×200				
Working Field & Spot Diameter	Working Field(mm)	100×100×20	200×200×60	300×300×150	400×400×150	500×500×150	600×600×150
	The Min.Spot Diameter@1/e²(mm)	0.018	0.033	0.046	0.059	0.072	0.085
	Focal length(mm)	120	240	360	480	600	720

FR15-F Pro



FR15-P2