

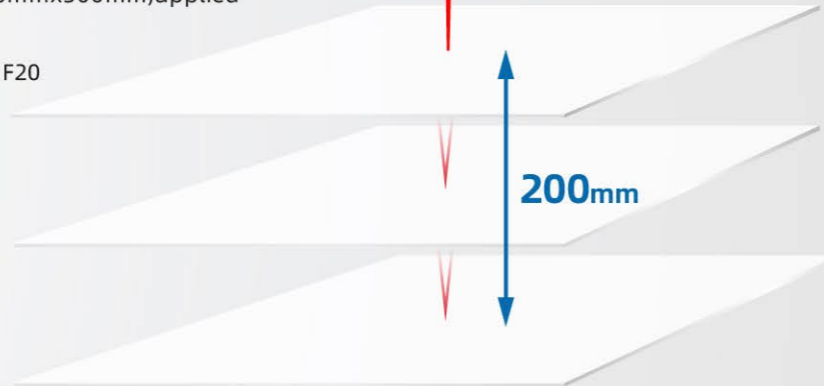
20 FR20-F(F20)

Support wavelength: 1064nm

3D Dynamic Focus System Flexible Z-depth



- The adjustment knob is used to switch between different work fields without replacing any parts.
- Focal length data preservation when switching work field.
- Double driving Z axis dynamic focus module design, reponse frequency $\geq 100\text{HZ} @ \pm 10^\circ$, easy to achieve Z depth 150mm @ 300mm x 300mm, applied to platform, 3D surface high speed processing.
- The optional accessory of on-axis CCD module for F20 could support positioning, framing, inspection, evaluation on automation line.



Large Z-depth curved surface processing

Through the dynamic focus system control, the Z-depth can reach 200mm with fine spot quality under 300*300mm to 600*600mm work field. It is specifically suited for the environment of large height differences as well as large curved surface processing and is widely used in automotive interior and exterior accessories.



3D Surface Processing

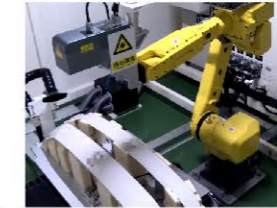
The FR20-F(F20) applies dynamic focus control technology, breaks the limitation of traditional marking, and can do no distortion marking in the large-scale surface, 3D surface, steps, cone surface, slope surface and other objects.

	Regular Scanhead	FR20-F(F20)
Cylinder surface	<p>Can not cover focal points at two edges, distorted edge marking effect</p>	
Different steps	<p>Can not cover focal points on two different heights, no average marking</p>	
Cone surface	<p>Can not cover focal points on the cone, distorted marking effect</p>	
Slope surface	<p>Can not cover focal points on the slope, distorted marking effect</p>	

Application Highlight



- Large field marking
- 3D engraving
- Welding
- Scribing
- Precision Mould
- 3D surface treatment



Large field curved surface



Automotive headlight surface treatment



Precision laser welding

Product Technical Information

Technical Info.		Specifications					
Items	Input Voltage(VAC)	100V60HZ / 220V50HZ					
	Output Voltage(VDC)	$\pm 24\text{VDC}$					
	Current(A)	5A (2 Sets)					
	Output Interface	XY2-100 Protocol					
	Input Interface	Communication interface USB					
	Weight (KG)	12.5					
	Size(mm)	346*134*183.5					
Optical Specifications	Aperture Size(mm)	20					
	Input beam diameter(mm)	7、8.5					
Galvanometer Specifications	Product line	Standard	Pro	P2			
	Scan Angle($^\circ$)	± 11.25	± 11.25	± 11			
	Repeatability(μrad)	8	8	5			
	Max.Gain Drift(ppm/k)	100	100	50			
	Max.Offset Drift($\mu\text{rad}/\text{k}$)	30	30	15			
	Long-term drift over 8h(mrad)	≤ 0.3	≤ 0.3	≤ 0.1			
	Tracking Error(ms)	≤ 0.28	≤ 0.28	≤ 0.27			
	Max.processing speed(charaters/s)	350@200x200	350@200x200	350@200x200			
Working Field & Spot Diameter	Working Field(mm)	100x100x40	200x200x150	300x300x200	400x400x200	500x500x200	600x600x200
	The Min.Spot Diameter@1/e (mm)	0.0156	0.0257	0.0362	0.0462	0.0565	0.0661
	Focal length(mm)	120	240	360	480	600	720

