



## Beijing Boao Laser Tech. Co., Ltd.

Room1904,No.1, Huihuang International Center, 10th Street of Shangdi, Haidian District, Beijing,  
China,100085

Tel:86-10-59741782 Fax:86-10-59741783

Email: andy@boaolaser.com sales@boaolaser.com

www.boaolaser.com

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### BMI180 Mould Laser welding Machine



#### Profile

The deposit welding system is especially designed for the mould industry, and it is applied to repair of precision moulds, for example, digital products, handsets, toys, autos, and motors mould making and modeling. The mould repair can make full use of the original moulds, which will greatly reduce the production cost, and improve the working efficiency. The technology can also be applied to modification of mould design or size, thus reducing the development cycle of the product.

## **Characteristics**

The operating principle for the laser deposit welding system is as follows: the melting and jointing technology centralized by laser energy effectively handles welding and repair of fine parts, thus compensating for the deficiency of the traditional argon-arc welding technique in repairing and welding fine surfaces. By avoiding thermal strain and postprocessing, it greatly saves the production cycle of moulds.

## **Applicable materials and industries**

It is applicable to metallic materials such as cold working high alloy steel, hot forging high alloy steel, nickel tool steel, high grade steel, copper alloy, beryllium steel, and high flexibility aluminum alloy. The remote controller or the touch operation panel can be used to select the laser output power, frequency, pulse width and other parameters. The moving speed of the workbench can be set to manipulate the workbench moving, so that the welding parameters match the welding requirements, and thus producing optimal effect of smooth welding joints and points.

## **Advantages**

The product is customized for the mould industry by introducing German technology, with unique structural design, and applicable to repair of large, medium and small-sized moulds.

1. The ceramic focusing cavity is corrosion and high temperature resistant, and the service life is 8 to 10 years, while the service life of the xenon lamp is over 8 million times.
2. World-leading automatic light shielding system is employed to remove stimulation of light on eyes during operation.
3. The laser head can be turned for 360 degrees, and the whole optical path can be turned 360 degrees too, up and down by motor, front and after adjustable, especially suitable for repair of large, medium and small-sized moulds.
4. Intelligent remote controllers are employed for adjusting parameters, with simple and convenient operation.
5. The workbench can be adjusted up and down with three-dimensional moving.
6. The light spots can be adjusted in size

Models	BMI 180	BMI 200		
Machine Size (mm)	1170x590x1250	880x350x1700		
Worktable Size(mm)	500x350	500x350		
Travel Path(X, Y, Z)	X=300mm ,Y=200mm,Manually adjust the X and Y Axis .Manually adjust Z Axis.			
Worktable Bearing Load	200KG			
Machine Weight	300kg	500kg		
Power Supply	220V ± 10%/50Hz or 380V ± 10%/50Hz			
Laser Parameters				
Laser Type	Nd:YAG Pulsed			
Laser Spot	0.2-0.3mm			
Wavelength	1064nm			
Pulse Width	0.5-25ms			
Max. Average Power	180W	200W		
Pulse Frequency	0-20Hz			
Focusing Size	80mm/100mm/120mm or optional			
Chiller	Water Cooling System			
Observing System	Microscope (360° Rotating )			
Protective Gas	Argon			
Welding Wire Dimension	0.1-0.8mm			