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### BMII300 Mould Laser Welding Machine



This type laser welding machine was designed by our engineers and special for the big sizes mould repair .The mould size Max Diameter is 3000mm around .The working sizes is adjustable and as customers request to produce or designing .

#### Introduction

The laser deposition welding system (laser mould welder) is specially designed for the mould industry and used in repairing of precision moulds, such as mould manufacture for digital products, mobile phone, toy, automobile and motorcycle, and molding industry. Through the repairing of moulds, it is possible to reuse the moulds, save the production cost and improve the working efficiency significantly. This technology can also be used to modify the design or size of moulds to reduce the development period.

#### Features

The working principle of this laser deposition welding system is to use laser high thermal energy and the melting technology in spot to process the welding and repairing of minute parts. It makes up the shortage of traditional hydrogen arc welding in repairing precision surfaces, avoids the two difficulties of thermal strain and after-treatment, and saves the production period of mould.

#### Advantages

It is specially designed for the mould industry and the technology is imported from Germany. With unique structure design, it is suitable for repairing of large, medium and small moulds.

1. Ceramic converging cavity is imported from the Britain. It is corrosion resistant and high temperature resistant, and has 8-10 years service life. The life of xenon lamp is more than 8 million times.
2. Use the most advanced light shielding system to eliminate the irritation to eyes by light during working.
3. The laser head and optics part can be rotated for 360°, upward/downward lifting and forward/backward pushing, suitable for repairing of large, medium and small moulds.
4. The parameters are controlled by intelligent remote controller, which is simple and convenient.
5. The work bench can be lifted, and moved in three dimensions.
6. The size of light spot can be adjusted.

#### Suitable materials

The materials that can be welded are extensive: cold work alloy steel, hot work alloy steel, nickel tool steel, high grade steel, steel alloy, high tenacity aluminum alloy, etc.

#### Technical parameters

Model	BMI 300
3-axis stroke of work bench	X=300mm, Y=200mm (X, Y can be adjusted manually and Z-axis can be lifted)
Bearing of work bench	≤200kg
Device weight	300kg
Power supply	220V±10%/50Hz or 380V±10%/50Hz
Laser parameters	Laser parameters
Laser type	Nd:YAG pulse
Adjusting range of light spot	0.1-0.3mm
Size of light spot	0.2-3.0mm
Laser wavelength	1064nm
Pulse width	≤20ms
Maximum laser power	300W
Pulse frequency	≤50Hz
Laser output focus length	50mm/100mm/120mm (optional)
Laser cooling	Water cooling
Observing system	Microscope (360° adjustable)
Protection gas	One line (xenon)

Solder parameter	
Welding wire diameter	0.1mm-0.8mm