

## New Products

### 20 kW Fiber Laser

We, the Fujikura Group, are pleased to announce that our company have recently commenced production and sale of 20 kW fiber laser (FLC-20000M-W frame model), making us the first Japanese fiber laser manufacturer to achieve such a high level of laser output.

Multi-kW fiber lasers have been widely utilized in various processing fields, particularly in metal welding and cutting applications.

The increasing demand for high-speed and thick plate processing has driven the development of higher power fiber lasers.

However, technical issues such as nonlinear optical phenomena resulting from high-power operation have hindered the advancement of fiber laser power scaling.

We have successfully overcome these issues through the implementation of our proprietary technologies in the optical fibers and components that constitute the fiber laser.

This new product maintains the key characteristics of our previous models (laser output up to 12 kW), including high resistance to reflected light and long-term output stability.

Our 20 kW fiber laser can now easily process highly reflective materials such as copper and aluminum plates exceeding 10 mm in thickness, which were previously challenging to process with our conventional products. This expands the range of applications and improves processing speed and quality.



Figure. 1. Appearance of 20 kW fiber laser (frame model).

Table 1. Typical specifications of 20 kW fiber laser.

Items	Specifications
Output Power	20 kW
Wavelength	1070 nm
Oscillation Mode	CW , Modulated Wave
Modulation frequency	up to 10 kHz
Power stability	2 %
Core diameter	100 $\mu$ m
Beam quality (BPP)	3.9 mm $\cdot$ mrad
Size (W $\times$ D $\times$ H)	1157 $\times$ 519 $\times$ 605 mm
Fiber length	23 m (standard)
Cooling Method	Water cooling

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