High performance welding and cutting with low process cost.

- Next-generation design for increased reliability and reduced cost of ownership
- Tested in 24/7 production environments
- Unique modulation technique widens process window and increases capability
- 1000 W average power/2000 W maximum modulated power
- Remote diagnostic access for increased support efficiency
A New Laser, Focused Squarely on Real Needs

The JK1002 laser from GSI Lumonics is a fourth-generation laser system. When we designed it, we made it adaptable, cost-effective, and easy to use as possible. We started with proven technologies and drew upon thousands of hours of operating experience, then refined, simplified, and tested until we got it just right. This new laser will perform from part one and reduce your project costs – both today, and over the full life of the laser.

Modulation: More Speed, More Control

With GSI Lumonics’ patent-pending laser power modulation technique, you get more performance from less raw power. Modulation works by momentarily increasing the laser’s output intensity from 1000 W to up to 2000 W, enabling precise and powerful welding without heat distortion, cleaner and more controlled cutting of complex shapes, better focus on and processing of reflective materials, and other advantages.

Easy to Use, Easy to Care For

We started with proven technologies and drew upon thousands of hours of operating experience, then refined, simplified, and tested until we got it just right. This new laser makes parts – period.

Worldwide Support and Service

Across the globe, our applications engineers develop new solutions in step with evolving application challenges. Their expertise is available to you, from the earliest stages of your project, through process development, to after-sales support.

These improvements address one real need: to maximize your manufacturing potential through the best uptime and easier maintenance. The JK1002 makes parts – period.

Specifications

Laser Specifications

- Average laser power: *1000 Watts
- Maximum modulated power: 2000 Watts
- Beam quality: 25 mm.mrad
- Laser response time: 1.5 msec.
- Modulation frequency: 300 Hz - 500 Hz
- Output modes: CW, sine or square modulation

Fiber-Optic Beam Delivery

- Fiber core diameter: 600 microns
- Spot size range: 0.24 mm - 0.9 mm
- Max. fiber length: 50 m
- Timeshare switching time: 200 msec.
- Timeshare option: Up to 2-way
- Focus head options: straight or right angle
- Process tools including: CCTV viewing, welding nozzles, auto-focus cutting nozzles and a wide range of special options

Control Technology

- Remote Interface Options:
  - Parallel PLC compatible
  - Serial interface
  - OPC interface, TCP/IP interface
  - Analog input/output control
  - Shutter interface
  - Emergency stop interface

- Laser Specifications:
  - Max. Modular Interface Options:
  - Graphical local or remote interface
  - Windows® based PC
  - Multiple program storage
  - Full modulation control
  - Data logging of all laser parameters
  - On-board DPC data collection
  - Mod 1000 parameters monitored
  - Numerous data collection types
  - On-board SPC data collection

Facility Requirements

- Cooling Water:
  - Max. pressure at inlet: 7.5 bar
  - Max. pressure drop: 6.5 bar
  - Max. flow rate: 75 litres/min. (19.8 gal/min.)

- Electrical and Connections:
  - Voltage/frequency: 380 V - 480 V at 50 Hz/60 Hz, +/- 10%
  - Supply rating: 40 kVA
  - Max. power consumption: 38 kW
  - Ambient temperature: 5º C - 40 º C
  - Cooling capacity: 38 kW

- Dimensions and weights:
  - W x H x D: 2450 mm x 1105 mm x 610 mm
  - 600kg (1323 lbs)

- Windows® -based PC
- Graphical local or remote interface
- Multiple part program storage
- On-board SPC data collection
- On-board process in view options
- Over 1000 parameters monitored
- Multiple part program storage
- Data-logging of all laser parameters
- Ambient temperature: 5º C - 40 º C
- Multiple part program storage
- On-board SPC data collection
- On-board process in view options
- Over 1000 parameters monitored
- Multiple part program storage
- Data-logging of all laser parameters
- Ambient temperature: 5º C - 40 º C

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More Control

and over the full life of the laser.