

JK704

Pulsed Nd:YAG Laser



For high performance, deep penetration drilling, cutting, and welding.

- Up to 20kW peak power
- Low divergence resonator optics provides a high intensity laser spot
- Long depth of focus for deep drilling
- Can be used for high power welding



JK704 Process Flexibility

The JK704 laser combines 20kW peak power with low divergence (LD) resonator optics to produce a high intensity laser spot for:

- Drilling holes up to 75mm (3") in length
- Drilling 3mm (0.12") long holes at 10 holes/second on the fly
- Cutting at 3m (120")/min or to 20mm (0.8") in depth

A long depth of focus enables deep holes to be drilled with reduced taper. Special pulse-shaping techniques can be used to improve the geometrical quality of holes drilled by single laser shots "on the fly".

When the LD optics are removed this laser offers a welding performance in excess of the JK701.

Turnkey Machines

The laser can be fitted to a range of standard or customized turnkey multi-axis machining centers. Inquire for details.

While the JK700 Series are Class IV/4 lasers, when supplied complete with safety enclosure they can be to Class I/1 Safety Standards.

Standard Laser Fixtures	Laser Options
<ul style="list-style-type: none"> ■ Laser Head ■ Pre-aligned Optics ■ Ceramic Reflectors ■ Quick Change Flashlamps ■ High Speed Process Shutter ■ Microprocessor Control ■ Diagnostics ■ Pulse shaping ■ Single/Multipulse Selection ■ Modular Power Supply ■ Integrated Cooling ■ IP55/NEMA 12 Sealing ■ Color Coded LD Optics ■ RS232 Interface 	<ul style="list-style-type: none"> <input type="checkbox"/> CNC Interface <input type="checkbox"/> HeNe Laser*1 <input type="checkbox"/> CCD Camera <input type="checkbox"/> Remote Shutter Control <input type="checkbox"/> Machining Head <input type="checkbox"/> Trepanning Head <input type="checkbox"/> Galvanometer Head <input type="checkbox"/> Single Fiber <input type="checkbox"/> Energy Share Fibers <input type="checkbox"/> Time Share Fibers <input type="checkbox"/> Combined E-T Fibers <input type="checkbox"/> Fast Time-Share Fibers

*1 HeNe used for pointing only. Not required for alignment.

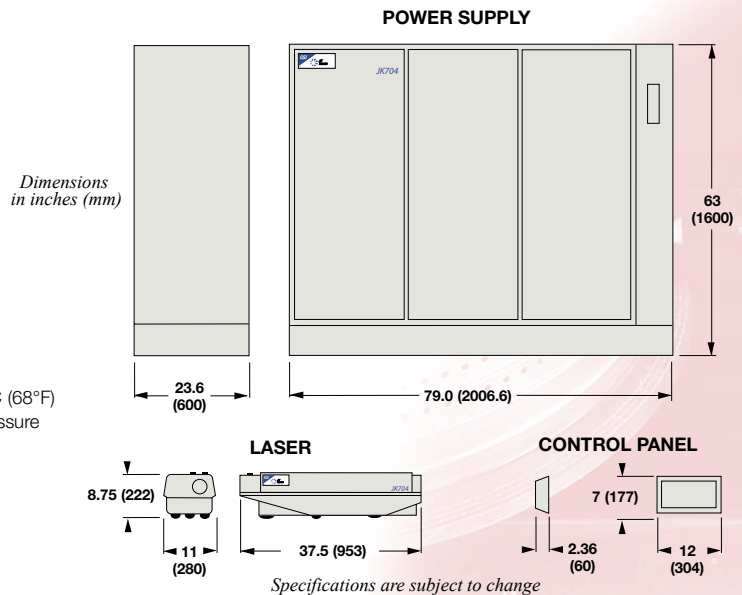
Laser Specifications

- Maximum mean power: 400W
- Maximum pulse energy: 50J
- Maximum peak power: 20kW
- Pulse width range: 0.3 msec to 20 msec
- Repetition rate: 0.2 to 500 Hz

Fitted with low divergence optics to intensify the beam as standard

Service Requirements

- Supply rating: 22kVA
- Maximum power consumption: 17kW
- Water requirements: 32 litres (8.5 gals)/min at 20°C (68°F)
2 bar minimum differential pressure
6 bar maximum inlet pressure
- Ambient temperature: 5-35°C (40-95°F) operating
95% at 15°C (60°F) derated
- Humidity: to 32% at 35°C (95°F)
- Control Weight: 4.4 lbs (2 kg)
- Laser Weight: 88 lbs (40 kg)
- Power Supply Weight: 2200 lbs (1000 kg)



Specifications are subject to change. Please consult Product Center for complete details.

www.gsig.com/lasers



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