

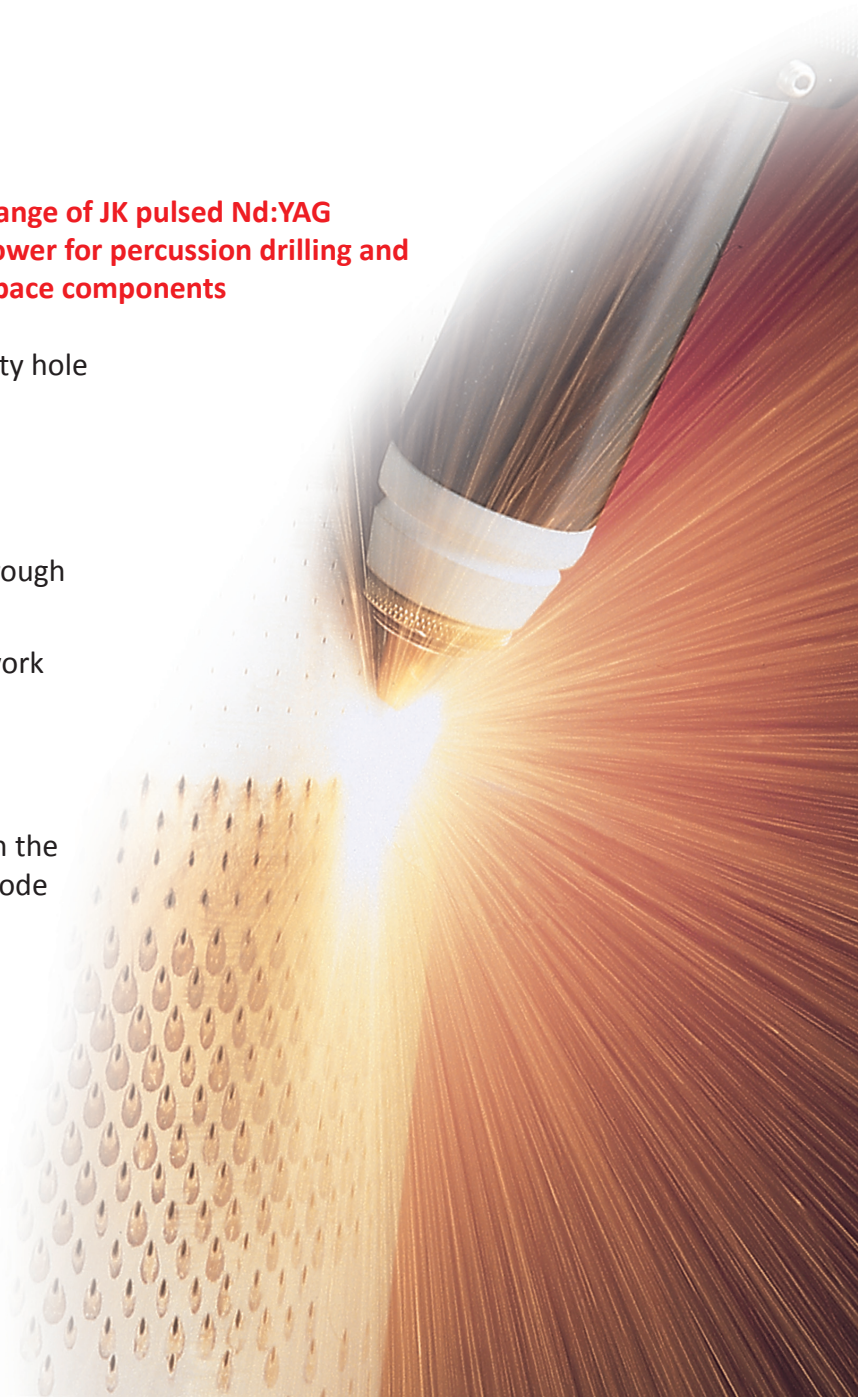
# JK604D

*The next generation of pulsed  
Nd:YAG drilling lasers*



**JK604D is the latest addition to the successful range of JK pulsed Nd:YAG lasers, providing a class leading level of peak power for percussion drilling and trepanning of a range of automotive and aerospace components**

- ▶ Class leading beam quality provides high quality hole profiles
- ▶ High intensity laser spot for fast removal rates
- ▶ Faster control interfaces and complete cycle programming triggered by a single command through our unique LaserView™ control technology
- ▶ Separate laser head for closer integration to work area and more flexible arrangements
- ▶ High speed, high performance drilling to meet demanding and unusual application needs
- ▶ Tighter process control and reduced costs with the pulse shaping feature via our patented switch-mode power supply



## Production proven technology, with important new field-tested enhancements.

The award winning JK700 series of Nd:YAG lasers has long been the benchmark by which pulsed Nd:YAG laser performance has been measured. In our new generation of JK lasers, GSI Group has combined over three decades experience in industrial laser manufacture with enhanced technologies for the best overall value, dependability and cost of ownership. The peak power specification of the JK604D at 16kW provides sufficient energy to percussion drill a wide range of automotive and aerospace components.

The JK604D can be used for:

- ▶ Fast trepanning of 0.3 - 0.8mm holes in less than one sec.
- ▶ Deep drilling using long depth of focus.
- ▶ Shaped hole drilling.
- ▶ On-the-fly drilling.

Typical applications include drilling of film cooling holes (effusion) holes in jet engine and gas turbine components such as nozzle guide vanes, blade and combustor liners. The JK604D also includes pulse shaping capability which can be used to improve hole geometrical quality.

The JK604D maintains the unique JK features via LaserView™ complete cycle programming triggered by a single command, increased process benefits from pulse shaping capability for tighter process control and a faster shutter interface for quicker response in parameter changes.

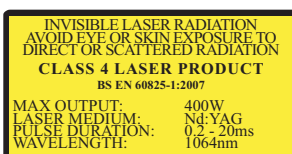
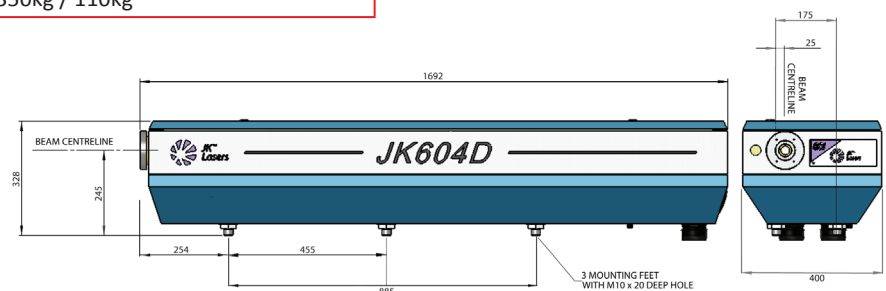
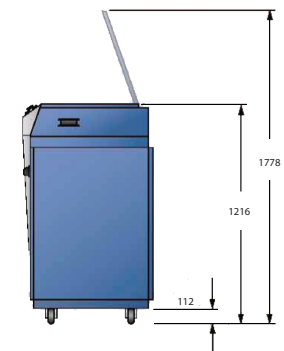
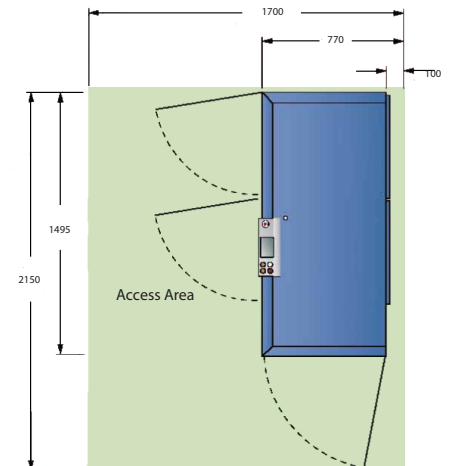
Backed by GSI Group's industry-leading applications expertise and worldwide support network, these reliable lasers will work harder than ever for you.

### Performance Data

Model	JK604D
Max. Average Power	190 W
Working Power Range	120 W - 190 W
Max. Peak Power	16 kW
Max. Pulse energy	35 J
Repetition Rate Range	0.2 - 500 Hz
Pulse Width Range	0.2 - 2.5 ms
Beam Quality (Half-angle. Radius)	4 mm.mrad
Shutter Opening Time	<50 ms
Pulse to Pulse Stability	±3%

### Environmental Data

Cooling Water Requirements @ 15°C input	17 l/min
Cooling Requirement	10 kW
Max. Pressure Drop	2 Bar
Max. Inlet Pressure	6 Bar
Electrical Requirements	380-415 V, 3 Phase +/- 10%, 50-60 Hz
Supply Rating	16 kVA
Max. Power Consumption	9 kW
Ambient Temperature	5 - 40°C
Humidity	95% RH at 20%
Weight (PSU / Head)	350kg / 110kg



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