



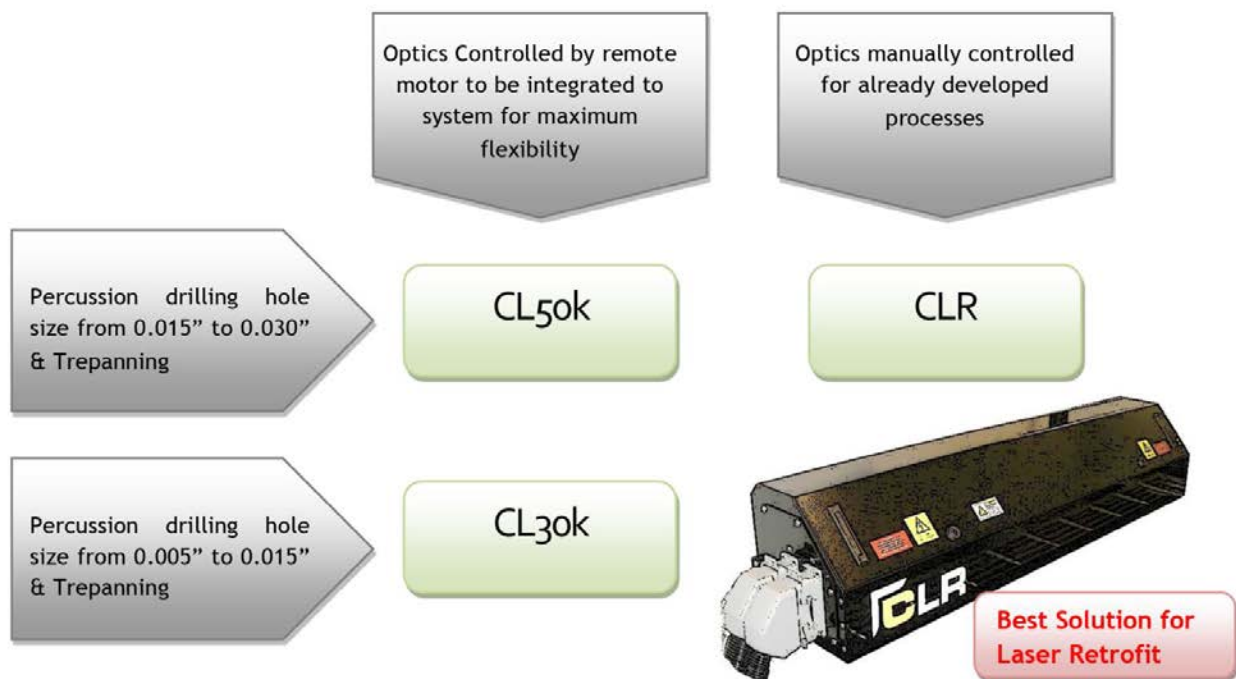
## CL Series Nd:YAG Lasers

Today, world's 50% of laser drilling is performed by Convergent Photonics served Nd:YAG lasers. Our laser source is proven to work by various industries, including aerospace and land based turbine manufacturers and excel in percussion drilling and trepanning where very high peak power pulses up to 50kW are demanded.

Convergent Photonics **CL Series Nd:YAG Pulse Lasers** are specifically designed for laser drilling with features perfectly suited for drilling of cooling holes of turbine vanes, blades, shrouds, and combustor liners. CL Series lasers are also utilized in exotic aerospace material cutting.

Main features of **CL Series** are:

- High Peak Power Output for laser Drilling
- Drilling Spot Size Control
- Solid State Driving Flashlamp Power Supply



3 models are offered to meet user demands on percussion drilling and trepanning.

- **CL30k** best suited for small aerospace hole drilling as small as 0.1mm diameter with high profile.
- **CL50k**, 50kW peak power capable of drilling 25mm deep turbine blades and vanes cooling holes, as well as percussion drilling, trepanning, and cutting of combustion chamber.
- **CLR** is designed as upgrade for users' aging Nd:YAG laser.



## Specifications

	<b>CL30k</b>	<b>CL50k</b>	<b>CLR</b>
<b>Laser Type</b>	High Peak Power Pulsed Nd:YAG		
<b>Excitation Source</b>	Xenon Flashlamps		
<b>Rated Maximum Output Power</b>	150W	200W (HBICT) 250W (MBICT & LBICT)	
<b>Rated Maximum Output Energy</b>	30J	45J (HBICT) 50J (MBICT & LBICT)	
<b>Rated Maximum Pulse Peak Power</b>	30kW	45kW (HBICT) 50kW (MBICT & LBICT)	
<b>Power Stability</b>	+/-5%		
<b>Pulse Width Range</b>	0.25 - 9.00msec, 0.01msec resolution		
<b>Repetition Rate Range</b>	1 - 200Hz, 0.1Hz resolution for < 50Hz, 1Hz > 50Hz		
<b>Beam Propagation Ratio</b>	M2<10	M2<20 (HBICT) M2<35 (MBICT) M2<40 (LBICT)	
<b>Optics Control</b>	Motorized (Stepping Motor)		Manual Thumb Wheel
<b>External Dimensions</b>	Power Supply Unit: 1800 x 640 x 1650 mm (W x D x H) Laser Head Unit: 1250 x 250 x 230 mm (L x W x H)		
<b>Electrical Power Requirement</b>	Voltage: 380 to 480VAC, +/-10%, 50/60Hz Number of Phase: 3 Current: 40A Maximum power consumption: 16kW		
<b>Cooling Requirement</b>	External Cooling: Distilled water, 10 - 20 °C, 40 Liters/Min		