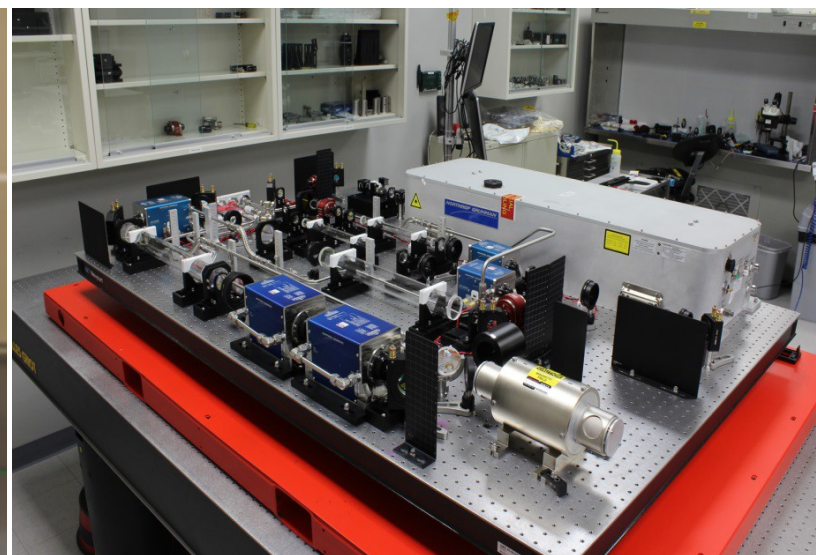




LSP Technologies, Inc.

# Procudo<sup>®</sup> Laser Peening System

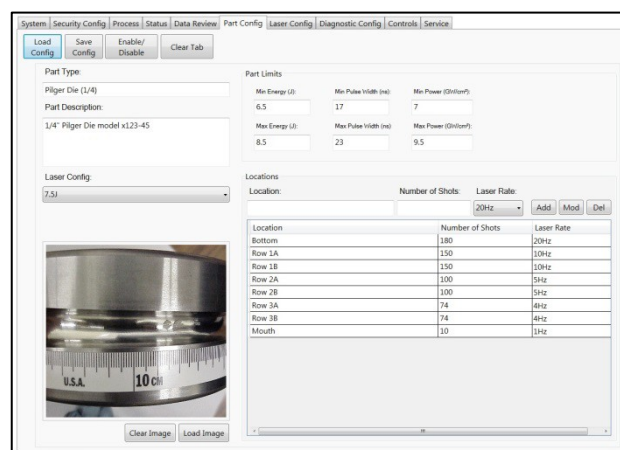


**POWER** FOR THE TOUGHEST APPLICATIONS  
**SPEED** TO MEET PRODUCTION DEMANDS

# System Advantages

The Procudo® Laser Peening System is designed for rapid integration with the utmost focus placed on laser peening throughput, reliability, and usability. The system can be integrated with a wide variety of automated part-handling robots and CNC machines, creating a turn-key laser peening facility that enables laser peening parts of any size and shape. LSPT's custom control system and diagnostics package, based on our 20 years of laser peening experience, allows the user full control over the system with real-time data analysis and feedback. By

integrating the Procudo® Laser Peening System into existing equipment lines, manufacturing efficiency is improved and logistical costs are reduced.



# System Features

The Procudo® Laser Peening System is a seeded diode pumped pulsed YLF laser that operates in the infrared at a wavelength of 1053 nm. The laser is capable of a repetition rate of 20 Hz and is able to emit a 8-16 ns pulse containing 10 Joules of energy. The pulse is selectable to attain discrete pulse rates depending on process parameters. The 200 Watt average power is the highest power pulsed laser available for laser peening.

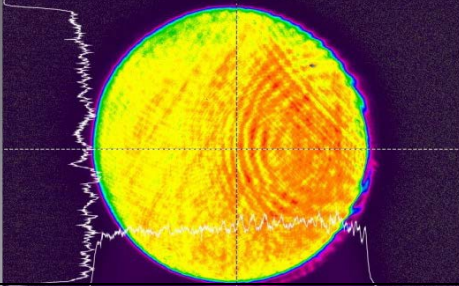
## Key Features

- **Maximum Energy: 10 J**
- **Wavelength: 1053 nm**
- **Pulse Width: 8-16 ns**
- **Pulse Rate: up to 20 Hz**
- **Diode Pumped**
- **Low Maintenance**

# Procudo<sup>®</sup> Laser Peening System

## Diode Pumped Laser

Diode pumped lasers maintain high quality beam profiles over billions of shots because they do not deteriorate as quickly as flashlamp pumped lasers. The diode pumped laser provides a longer lifetime with less downtime and low maintenance

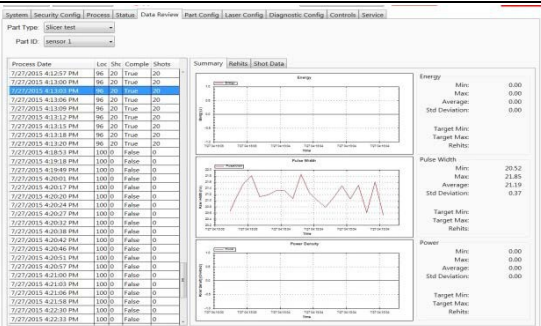
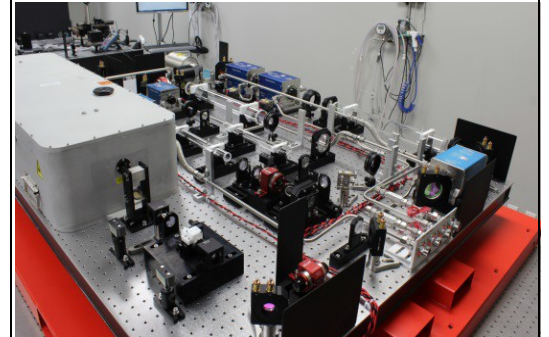


## Flat-Top Beam

The flat-top beam provides a smooth distribution of energy for consistent processing results. The even energy distribution creates uniform stress waves, optimizing the laser peening capability while minimizing surface roughness.

## Seeded Oscillator

The laser employs a seeded Master Oscillator-Power Amplifier (MOPA) configuration to obtain a smooth distribution of energy in the laser pulse (between 8-16 ns). Ultra-long life quasi-continuous-wave (QCW) pump diodes allow the laser to operate for billions of shots, before needing replacement.

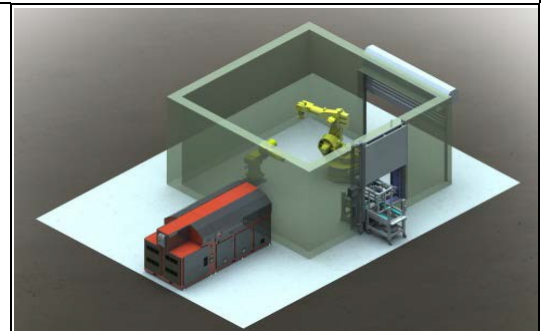


## Selectable Pulse Options

The Procudo<sup>®</sup> LSP System allows you to change pulse widths, between 8-16 ns, giving you precise control over residual stress profiles and depths. Each pulse is tuned to your application.

## Peening Cells

LSPT offers standard and customizable peening cells to best fit your product requirements and manufacturing line. The Procudo<sup>®</sup> Laser Peening System is fully integrated with the cell. The peening cells are designed for maximum throughput and high efficiency part handling.





# LSP Technologies, Inc.

Established in 1995, LSP Technologies has over 250 years of combined laser peening experience. LSPT is the only company selling, installing, and integrating fully licensed, state-of-the-art laser peening equipment into customer facilities around the world. LSPT uses and manufactures patented, custom designed and fabricated laser peening systems for laser peening production, application development, contract research & development, and laser peen forming.

LSP Technologies is dedicated to building long lasting partnerships with our customers by providing quality products and services, a commitment to excellence, and exceeding expectations.

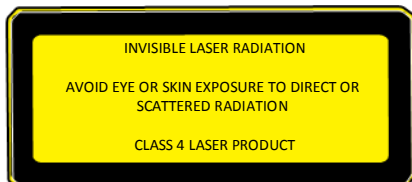
LSP Technologies' Quality Management System has been registered to AS9100 and ISO 9001 since 2004 for Laser Processing Services and Equipment Design.

LSP Technologies, Inc.  
6145 Scherers Place  
Dublin, OH 43016 USA

T: (614) 718-3000  
F: (614) 718-3007

[www.lsptechnologies.com](http://www.lsptechnologies.com)

Copyright© 2015 LSP Technologies, Inc.



Laser Class 4 in accordance with FDA 21, IEC 60825-1, EN 60825-1. SCATTERED RADIATION CLASS 4 LASER PRODUCT FDA 21CFR CH.1, 1040

U.S. installations must meet ANSI Z136.9