



A Newport Company



## Academia-Industry Matching Event on High Energy Lasers

## Success Story: High Q Laser/ Spectra-Physics Rankweil

Klaus Madlener, General Manager

November 12th, 2014

# High Q Laser – History

1999

Company foundation as “High Q Laser” by Dr. Daniel Kopf

1999

Custom-Built Laser Systems

2006

Start of laser “high volume” production

2009

Opening of a new state-of-the-art facility in Rankweil/Austria

2011

High Q Laser becomes part of Newport Corporation – Spectra-Physics Laser Division

2014

15 years anniversary. High Q Laser brand replaced by Spectra-Physics brand.

2014



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# Spectra-Physics® Rankweil – Company Overview

## Spectra-Physics Rankweil

- >25% annual growth rate in the past 7 years.
- Located in the Rhine Valley (Rankweil, Austria)
- 70 clean room assembly stations;
- Thousands of our femtosecond lasers are in operation worldwide
- **ISO 9001** and **ISO 13485** certified



## Technology

- Ultra-short pulse laser (**picosecond** / **femtosecond**)
- Modular cavity concepts – oscillator and amplifier platforms
- Different wavelength offerings: IR, SHG, THG



## Markets

- **90% OEM/Industrial** business
- **10% Scientific** Business



# Newport at a Glance

## Company Highlights

- Over 40 years experience providing solutions to customers
  - Industry-leading technical capabilities
  - Strong and enduring customer relationships
- Broadest / deepest product & technology portfolio in the Photonics industry
- Family of industry-leading brands
  - Newport
  - New Focus
  - Ophir
  - Optimet
  - Corion Filters
  - Spectra-Physics
  - Oriel
  - Spiricon
  - Richardson Gratings
  - ILX Lightwave
- Low cost region manufacturing & supply chain
- Global sales and service capabilities
- Publicly held (NASDAQ: NEWP) with strong financial position

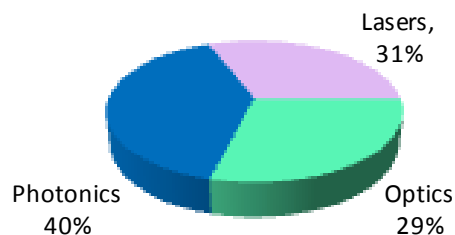
## Revenue

**10 Year CAGR = 16.8%**

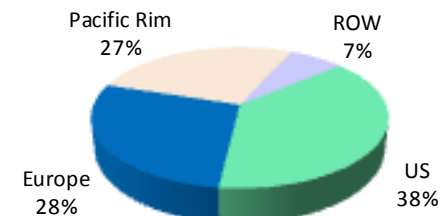


## Revenue Mix (LTM through Q2-2014)

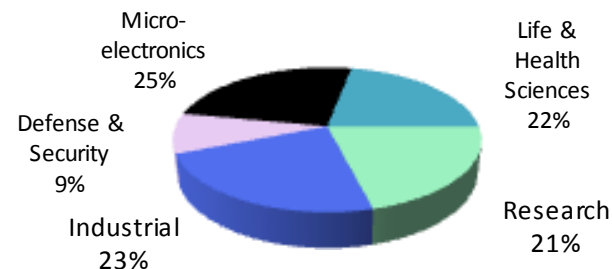
### By Business Group



### By Region



### By End Market

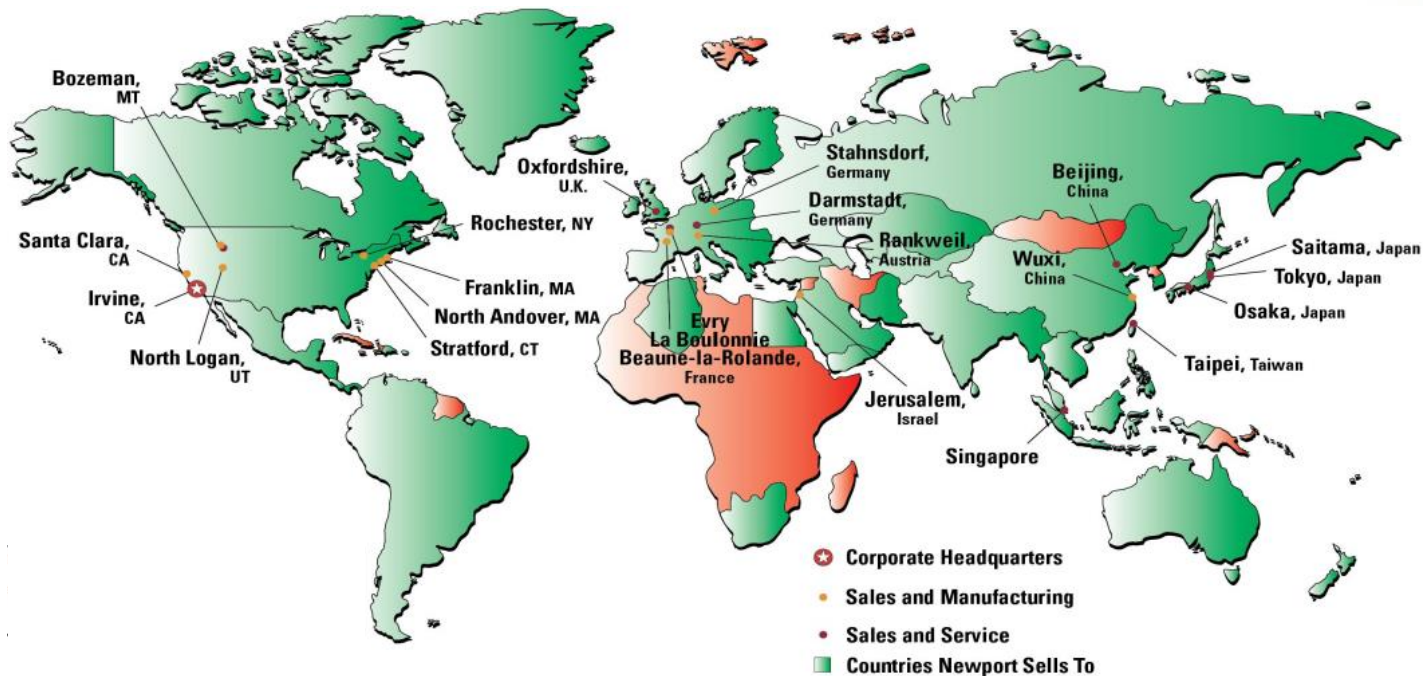


# Newport – Global Sales and Operations

## 16 Factories

- Irvine, CA
- Santa Clara, CA
- Beaune La Rolande, France
- La Boulonnie, France
- Stahnsdorf, Berlin
- Stratford, CT
- Franklin, MA
- North Andover, MA
- Rochester, NY
- North Logan, UT
- Bozeman, MT
- Jerusalem, Israel
- Tel Aviv, Israel
- Rankweil, Austria
- Bucharest, Romania
- Wuxi, China

**Global footprint with 16 manufacturing locations and an international network of direct sales & service support offices**

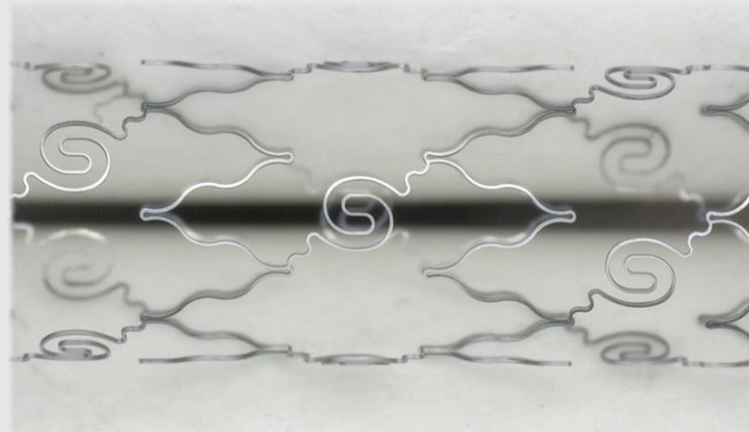
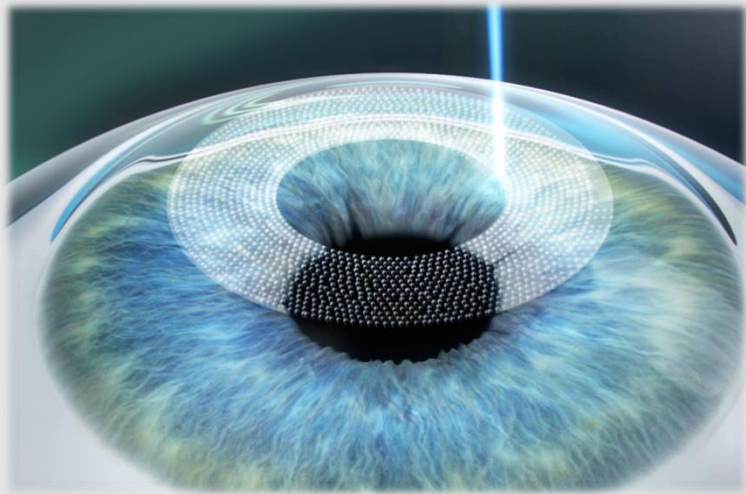


## Global Sales and Service Support Offices

- USA, Canada, Japan, Taiwan, Singapore, China, Germany, UK, France, Italy, Benelux
- Distribution Partners in most other countries

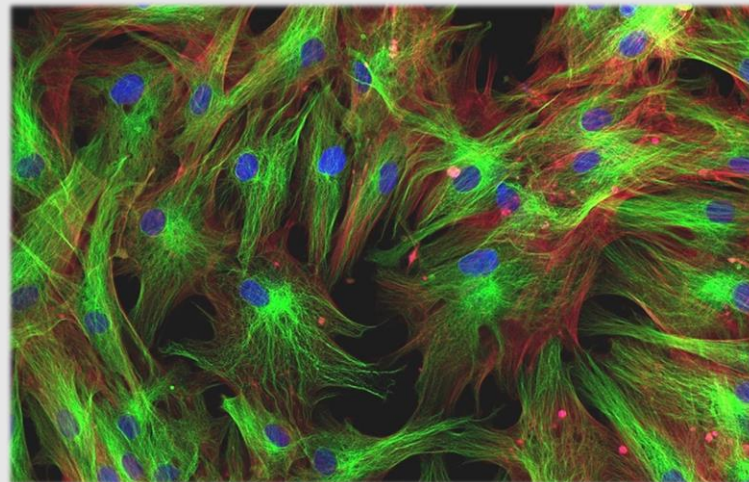
# Spectra-Physics® Rankweil – Application & Markets

Medical / Surgery



Medical Devices

Industry



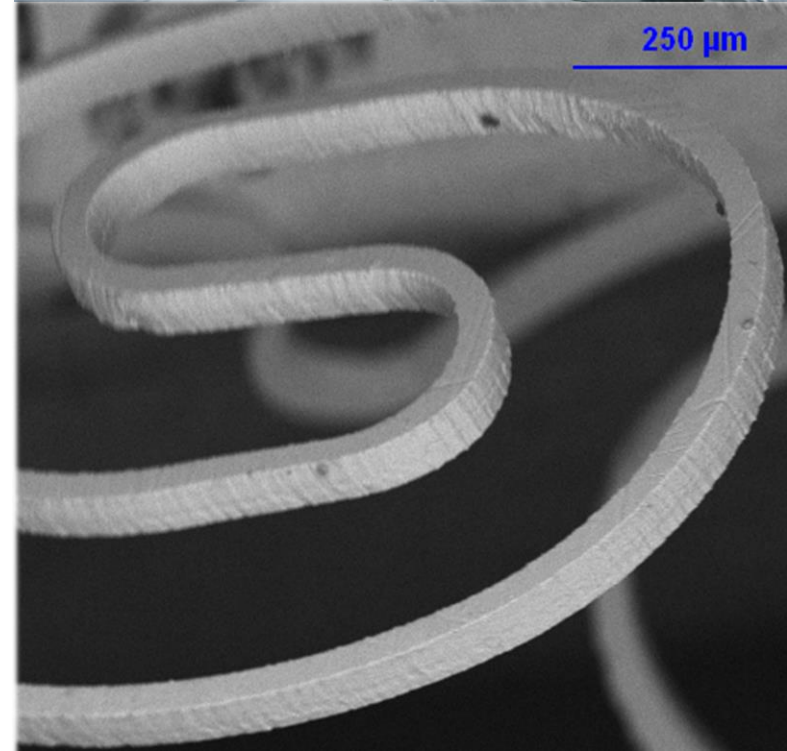
Science

# Application Labs



5 Application labs

Collaboration with several research institutes world-wide.



# Product – Platform: HighQ-2™



[www.spectra-physics.com](http://www.spectra-physics.com)



# Product – Platform: femtoTRAIN<sup>®</sup>



[www.spectra-physics.com](http://www.spectra-physics.com)

# Product – Platform: SPIRIT®



[www.spectra-physics.com](http://www.spectra-physics.com)

# Spectra-Physics® Rankweil – Platforms

**femtoTrain™**



**HighQ-2™**



**Spirit®**



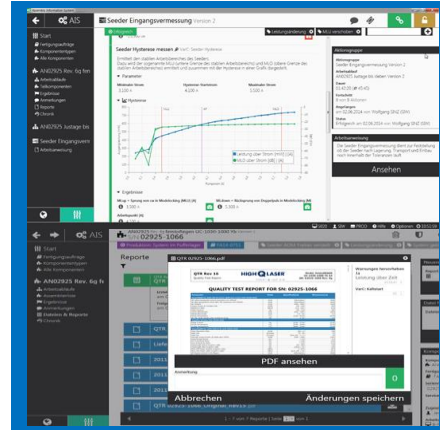
|                               |            |                  |                        |
|-------------------------------|------------|------------------|------------------------|
| <b>Cavity Type</b>            | Oscillator | Oscillator       | Amplifier              |
| <b>Average Power @ 1040nm</b> | 3.5 W      | 1,5 W            | 8 W (fs) / 10 W (ps)   |
| <b>Max. Pulse Energy</b>      | 350 nJ     | 20 nJ            | 40 μJ                  |
| <b>Repetition Rate(s)</b>     | 10 MHz     | 63 MHz           | Single pulse ... 1 MHz |
| <b>Pulselength</b>            | <350 fs    | <250 fs          | <400 fs / 15 ps        |
| <b>Wavelength(s)</b>          | 1040 nm    | 1040 nm / 520 nm | 1040 nm / 520 nm       |
| <b>Laser Head Cooling</b>     | Water      | Air              | Water                  |

# Spectra-Physics® Rankweil – Operations Principles

## Clean Room



## Adoption / Tailoring of Mass Production Methods



## Clean Room Work Environment

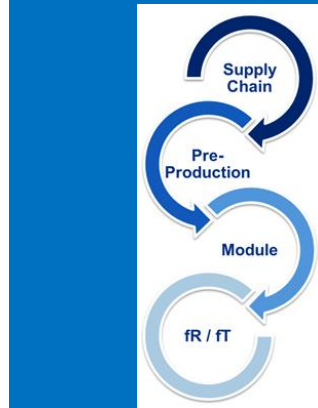
## „HASS“ Testing

## Assembly Information System

## Automated Testing & Reporting

# Spectra-Physics® Rankweil – Operations Principles

## Agile Organization & Leadership



“SCRUM” and  
“Tiger Teams” in  
Production

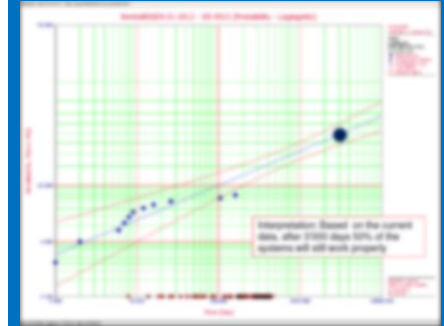
Self Organization  
& Pull Principle

## Integrated Quality Management



Since 2009

Since 2012



Certified Quality  
Management

Statistical  
Methods

# Reason for Success

- We act in a **growing market**
- We have a strong team & strong partners **worldwide!**
- We have invested early in production processes and technologies. **We have shown several times that we are capable to ramp.**



# Summary

- Spectra-Physics Rankweil (former High Q Laser) transitioned from a „custom-built laser“ supplier to a **strong partner for OEM / Industrial customers, interested in reliable ultrafast laser solutions.**
- As part of the Newport / Spectra-Physics family we have access to a **global sales, service and support infrastructure.**
- We are looking into a promising future and are also in preparation for **another 25% growth** in 2015.



# Questions?

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