

lasers
spectroscopy
micropositioning

GMP

GENERAL
MICROTECHNOLOGY
& PHOTONICS

since 1977

SYSTEMS FOR INDUSTRY & RESEARCH



Update April 2016



GMP

Since 1977, GMP has been active in the fields of lasers, spectroscopy, photonics and micropositioning. Thanks to an efficient sales and service organization, GMP has become not only a top distributor of high technology products, but is also able to propose turnkey solutions for equipment integration, developed by GMP's engineering department.

Customer advantages:

- Selection of products and top quality suppliers
- Updates on the latest advances in technology
- Consulting and purchasing advice
- Logistics, production follow-up, import, tracking
- Delivery, installation, commissioning, training
- Guarantee in Switzerland
- Maintenance and service
- Engineering on demand



Short form brochure






Containing information on each of the companies represented by GMP and the range of products that they manufacture.

Further details on products, such as datasheets, application notes, manuals, etc. can be found on www.gmp.ch.

GMP

**Creativity, Expertise,
Personal Service
and Support**



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TRLi – compact high energy and high repetition rate Q-switched pulsed Nd:YAG lasers

Twin Rod Birefringence Compensation and Stable Telescopic Resonator - For very low beam divergence and excellent uniformity.

- Pulse energies up to 850mJ at 1064nm. Repetition rates up to 200Hz
- Harmonics available – 1064nm, 532nm, 355nm, 266nm, 213nm.
- Gaussian-coupled resonators and TEM00 options are also available.
- Interchangeable plug and play bolt-on harmonic modules to 213nm
- Fully motorised hands free automatic harmonic tuning.
- Comprehensive 2 year warranty, long flashlamp lifetimes
- Rugged and sealed for use in industrial applications, not just research.



Aurora Integra OPO

Fully motorised, type II BBO OPO and Nd:YAG pump laser integrated into a single system.

- Tuning range 410-710nm and 710nm to 2.3 μm
- UV harmonic option for 205-419nm
- Linewidth $< 3\text{cm}^{-1}$



Nano Series - Ultra Compact Pulsed ND:YAG Lasers

Our most compact and rugged Q-switched High Energy Pulsed ND:YAG Lasers.

- Stable Resonator - most flexibility in output energy and repetition rate

Nano S - 130mJ at 1064nm, up to 50Hz
Nano L - 320mJ at 1064nm, up to 100Hz

The KEOPSYS logo, featuring the word 'KEOPSYS' in a bold, black, sans-serif font with a stylized orange and yellow graphic element below it that says 'THE LIGHT TOUCH'.

A black, rectangular Raman amplifier unit with a green LCD screen and various ports on the front. Two yellow fiber optic cables are plugged into the front.

Distributed Raman Amplification

Fiber amplifiers and lasers meet the rapidly growing demands of communications. These products are ideal for use in the next generation optical networks including Long-haul Transport, Metro, Fiber to the Premises (FTTP), CATV applications.

A silver, rectangular DPSS laser unit with four black fans on top. It has a yellow label on the front.

A small, silver, rectangular picosecond laser unit with a yellow label on the front.

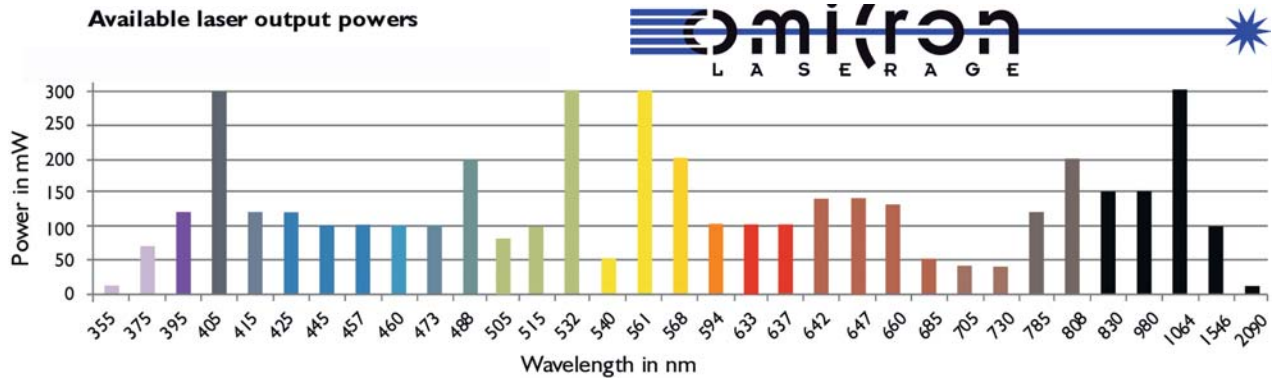
The Teem Photonics logo, featuring the word 'teem' in blue and 'photonics' in orange, with the tagline 'Composing with light' in a circular arc above it.

Passively Q-Switched Picosecond Lasers

Largest standard range of passively Q-Switched DPSS lasers at 1064, 532, 355 & 266nm. Up to 150kHz rep-rate and up to 280kW peak power, with pulses as short as 300ps. Wide ranging applications include scientific research, biomedical and environmental sciences, industrial material processing and ablation, micro-electronics, telemetry and mapping.

Scientific Lasers/Optics and Lab. Mechanicals

Available laser output powers



Diode Lasers & LED

Compact design and high performance diode lasers for Microscopy, Microlithography, Machine Vision, Raman and many more.

LuxX+ Series with powers up to 300 mW and wavelengths from 375-830 nm.

BrixX Series with powers up to 2.5W and wavelengths from 532-1083 nm.

Compact Laser Combiners LightHUB and SOLE for up to 6 DPSS or diode lasers.

LEDMOD Series temperature stabilized, high power LED modules from 255-950nm for applications in biotech, medical technology, microscopy and many more.



CW Lasers

Broad range of CW Lasers: Direct-Diode, DPSS, HeNe and Argon lasers in the UV-Visible-NIR spectral range.



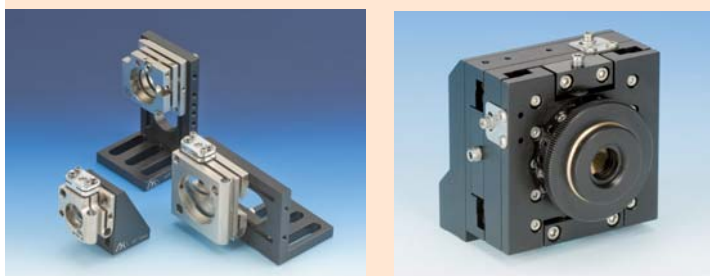
Catalogue & Custom Optics

Range of nearly 5000 different catalogue stock optical components for visible, UV and NIR use. Components can also be supplied to customer drawings and specifications.

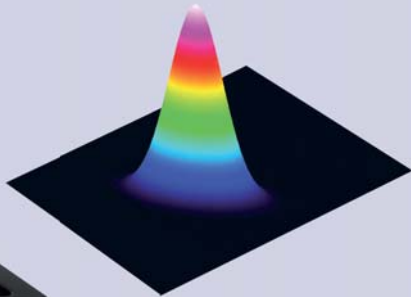


Laboratory Mechanicals

Full range of highest quality modular opto-mechanical components and building blocks for life science and photonics researchers. Micro-manipulators, microscope sample positioners, motion control systems and multi-dimensional stages.



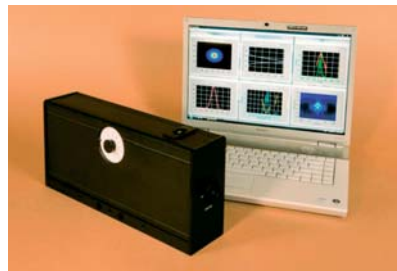
Laser Measurement



gentec-EO

Laser Characterisation

Pyroelectric, thermopile & photo-detector based laser power and energy meters, from fW to kW & fJ to kJ. Pyroelectric products for THz sources and high rep-rate (200kHz) pulse-to-pulse energy measurement. Full range of monitors with touch-screen display or PC interface. Beam diagnostic tools for complete beam analysis such as real-time M^2 measurement and beam profile characterisation.



Swamp Optics

Ultrafast Laser Pulse Characterisation

Compact, convenient, and inexpensive devices for measuring ultrafast laser pulses completely and in real time. Also offers custom devices for nearly every pulse-measurement problem as well as an elegant pulse compressor.



Laser Modulation Systems

Electro-optical laser phase and intensity modulators, beam deflectors, laser noise-eaters and optical isolators.

CONOPTICS INC.
Electro-Optic Components & Systems

ASAHI SPECTRA



Xenon Light Sources and Filters

Optical filters are used to remove the IR heat of the powerful xenon lamp in this light source. Also available are monochromatic light sources and a complete range of band-pass interference filters.

Laser Safety / Electronic Instruments



Honeywell

Laser Protection

Solutions to cover all wavelengths. Laser protection goggles with a large selection of frame styles to suit all applications.

Laser-Gard Barrier System to securely enclose any laser set-up on an optical table.



Electronic Instruments



Vacuum and analytical instruments

Melting point apparatus, quartz crystal microbalance, nitrogen laser, ion gauge controller, residual gas analyzers, high pressure sampling systems up to atmospheric pressure.



Time & frequency instruments

Frequency standards/oscillators, time interval and frequency counters, distribution amplifiers.



Scientific instruments

Laser diode controller, temperature controller, small instrumentation modules, lock-in amplifiers, optical chopper, optical shutter systems, preamplifiers, digital delay generators, high voltage power supplies up to 20kV, gated integrators and boxcar averagers, photon counters.



Test & measurement instruments

Clock generators, synthesized function generators, FFT spectrum analyzers, LCR meters, thermocouple monitor, dual channel programmable filters, audio analyzers.

GMP

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Vibration Isolation Systems

Active and passive vibration isolation systems for sensitive research and manufacturing processes.

Optical Tops, Breadboards and Supports "Standard and custom design"

CleanTop® spill-proof design with all-steel construction.



AMETEK
ULTRA PRECISION TECHNOLOGIES



Vibration Isolation Tables and TableTop™ Platforms

Gimbal Piston™ Air Isolators, ideal for microscopes, AFMs and other small precision instruments.



Faraday Cages

TMC's Faraday cages are designed to shield against electromagnetic interference. They can be mounted onto standard 63 series lab-tables or used as a stand-alone solution.

Mag-NetX™ – Magnetic Field Cancellation

Mag-NetX™ provides active compensation of magnetic field fluctuations. Designed both for point-of-use and OEM applications, Mag-NetX is ideal for SEMs and TEMs, electron beam lithography systems, ion beam instruments and any tools that incorporate a charged beam.

Vibration Isolation Systems



SEM-Base™ Active Piezoelectric Vibration Cancellation Floor Platform

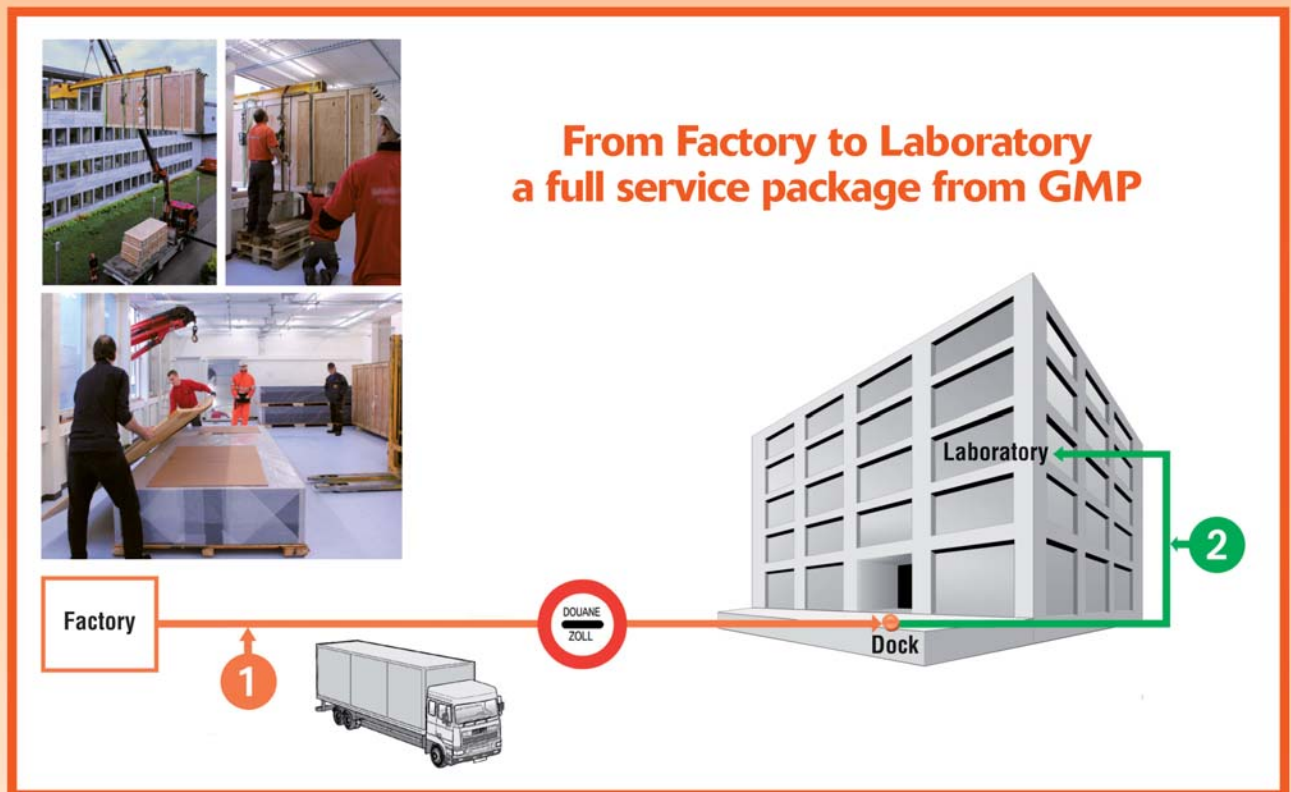
For scanning electron microscopes. Compatible with all SEM internal vibration isolation systems.



STACIS® Active Piezoelectric Vibration Cancellation

For the most advanced vibration cancellation commercially available, starting at 0.6 Hz.

Installation



Package 1 Sales and delivery

- comprehensive requirement study
- shipping, customs clearance
- import duties and insurance
- transport cost to the final destination loading dock
- guarantee and service support directly from Switzerland

Calculated with the price of the table

Package 2 Optional full installation

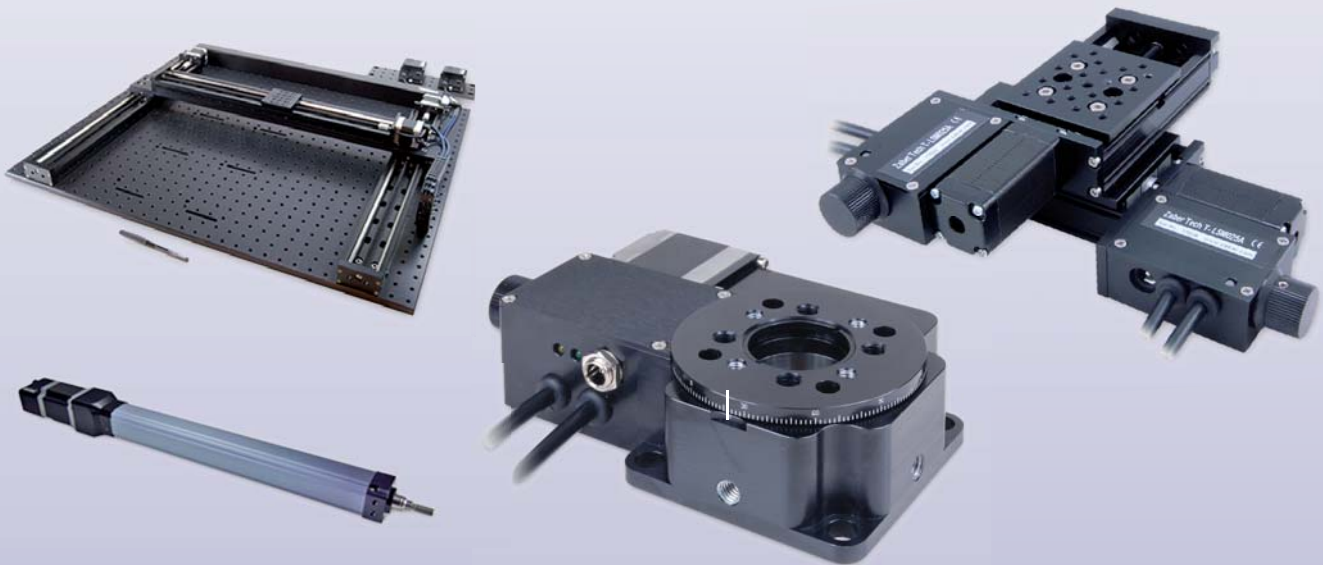
- pre-delivery transport inspection of site
- rental of crane if necessary
- floor protection
- transfer into the laboratory
- unpacking and installation by a product specialist
- table setup and optimisation for level and control
- removal and disposal of all packing materials

Quotation price depends upon location, size, weight and complexity of delivery

Positioning Systems

Motorised Positioning Systems with Built-in Controllers and Drivers

ZABER



Cost effective entry-level motorised linear and rotary stages, linear actuators, long travel linear slides and motorised mirror mounts with integrated controllers and drivers. Multi-axis systems, miniature devices, and vacuum compatible versions also available.

Systems come with all the necessary accessories for operation, so set-up is as easy as one, two, three.



Installing Zaber devices is as easy as 1, 2, 3:



Step 1

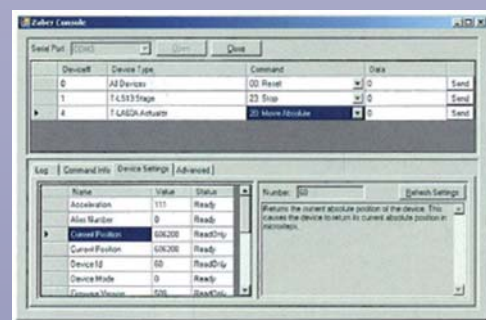
Connect the Zaber controller (built on to the device or stand-alone) to an RS-232 port using the T-DSUB9 adaptor, included with the order of an accessory kit.

Step 2

Connect the power supply to the Zaber device.

Step 3

Send instructions or automate the set-up using Zaber Console, a free, open-source software package, or write applications based on existing source code.



Positioning Systems / Cameras & Photon Counters



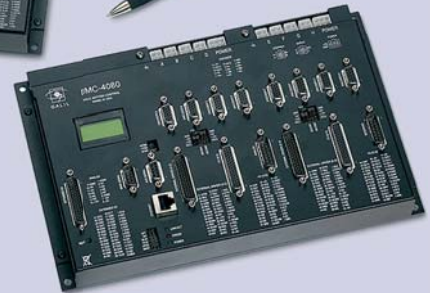
Ceramic Servo-Motors and Stages

High performance linear, rotary and spherical motion modules and complete positioning systems in an extremely compact, direct drive configuration. Standard and custom multi-axis systems, tilt stages for applications in photonics, microscopy and instrumentation. Vacuum, ultra high vacuum and non-magnetic configurations available.



Optical Tweezers and Miniature Stages

High-resolution miniature slides, precision XYZ flexure stages and automated alignment solutions for fiber launch, waveguides and other devices. Laser tweezer systems and retrofits; standard and custom products for optical table layouts.



Motion Controllers

Full range of single and multi-axis motion controllers designed to solve any kind of motion control application. PC based solutions and stand-alone controllers with RS232, PCI, USB & Ethernet connectivity.

Cameras & Photon Counters

Single Photon Avalanche Diodes



For photon counting and timing applications. Silicon, InGaAs detectors and CMOS with photon detection efficiency up to 60%. Single pixel detectors or arrays of up to 1024 pixels. State of the art timing capability with FWHM performance in the order of 30ps.



Low-Light Cameras



High performance CCD, EMCCD, Scientific CMOS and InGaAs cameras for scientific, surveillance and industrial applications including fluorescence imaging, single molecule detection, range finding and X-ray tomography.

X-Ray Camera - Eagle XO

One of the most sensitive CCD cameras in the World. Using a back-illuminated 4MP CCD sensor from e2v, and putting into Raptor's proprietary PentaVac vacuum enclosure and cooling it to a delta of greater than -110°C, the Eagle XO is an open front detector with a range of flanges available.



Optical Spectroscopy



Miniature Spectrometers

Covering the range from below 180nm to 2600nm with resolutions as small as 0.02 nm and a quantum efficiency of up to 90%, Ocean Optics miniature spectrometers are versatile instruments for lab, field, process and OEM environments. Supporting techniques including transmission, reflectance and emission; Raman and fluorescence analysis; near infrared spectroscopy; colour and irradiance measurement. Custom and high-volume OEM options are available.



Micro and Portable Spectrometers

The Jaz range of stand-alone modular spectrometers can incorporate internal batteries, memory cards and light sources and is uniquely suited for field applications, remote sensing and quality assurance.

The UV, VIS and NIR range of STS micro spectrometers for OEM applications offers a footprint of only 40 mm x 42 mm.



Optical Sensors

pH and O₂ optical sensors in probe format or as patches for integration into packaging. Applications are found in life sciences, pharmaceutical, quality control, food and beverage testing,...

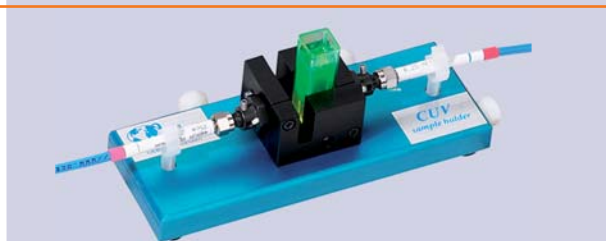


ID Raman Systems

IDRaman mini handheld is the smallest, most powerful handheld Raman instrument available today for rapid and accurate measurements in the field.

IDRaman micro is a Raman microscope optimised for high-sensitivity measurements.

IDRaman reader is a fully integrated Raman spectrometer system featuring Raster Orbital Scanning technology (ROS).



Optical Fibers and Accessories

A complete range of optical fibers and accessories is available for absorption, transmission, reflection, irradiance, colour and Raman measurements on any type of substance.



Light Sources

Deuterium, Halogen & Xenon lamp systems available to cover the entire range from UV to NIR, as well as LED sources for fluorescence and Raman covering the region from DUV to VIS. Radiometric and wavelength calibrations available.



Thin Film Metrology

NanoCalc Thin Film Reflectometry System - Analyze the thickness of optical layers from 1nm to ~250µm.

SpecEL Ellipsometer System - Measure polarized light reflected from the surface of a substrate to determine the thickness and refractive index of the material as a function of wavelength.



G8 Sphere

The G8 Integrating Sphere has been developed for the absolute measurement of the quantum efficiency on small quantities of solid samples or solutions (60 µL). The GMP G8 Integrating Sphere allows the determination of Quantum Yield with a reproducibility of a few percent and a precision better than 10%.



fluoroSENS & M-Series

The fluoroSENS is a versatile, high-performance bench-top fluorimeter with single-photon counting sensitivity. It smashes the established price – performance ratio for a high-sensitivity fluorimeter. Water Raman SNR >3000:1

The M-Series is the successor to the popular fluoroSENS fluorescence spectrometer. The M-Series is a fully automated, modular and flexible fluorescence spectrometer for both fundamental research and routine laboratory applications.



High Performance Measurement Systems

Monochromators: 150mm / 300mm / 500mm / 750mm / SGM 100 / OEM designs / Customized designs.

Light Sources: A variety of different light sources for UV-VIS-NIR-FIR operation.

Photodetectors: Spectral coverage from UV-VIS-IR spectrum.



Industrial Lasers



Industrial Fiber Lasers

Industrial Fiber Lasers are easy to use with next to no maintenance and minimal setup times. Available in up to 1kW single-mode systems and 6kW multi-mode systems, these units are ideal for cutting, welding and drilling of all types of metals, ceramics and other materials.



Welding & Cutting Heads, Scanners, Fibers

As well as high power industrial lasers, we supply a complete range of fibers and process heads to deliver the laser power exactly where it needs to be.



Industrial CO₂ Lasers

Industrial CO₂ lasers offer up to 400W of laser power in the far-infrared for a wide range of applications and an equally wide range of materials, from marking glass to cutting plastics and even cardboard.



When a comprehensive solution is required, GMP can provide a turn-key system to meet the specifications and requirements of the proposed application. Working with its in-house engineering team, GMP undertakes the design, assembly and testing of the complete solution.

GMP can put together custom built turn-key systems in the areas of:

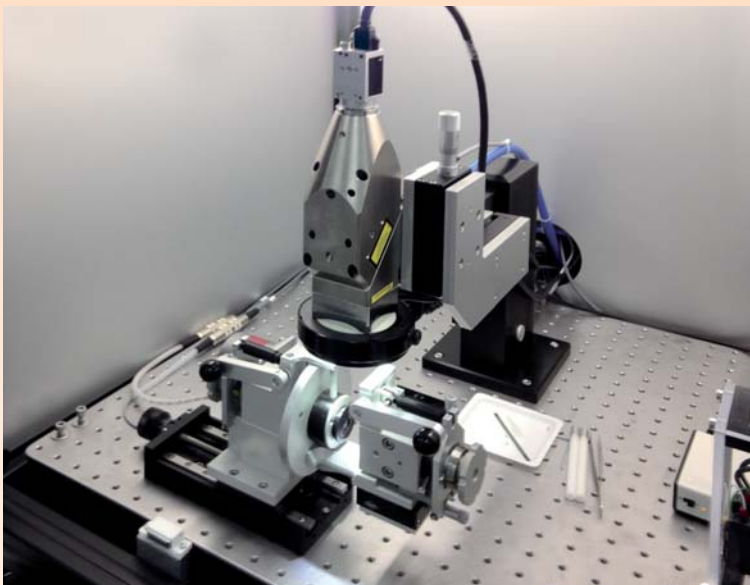
- Photonics
- Electronics
- Precision mechanics
- Software engineering

Mechanical components >



Automated lens positioning system

Fiber Laser 200W Welding System



Components:

- 200W Fiber Laser with welding head
- Motorized micro-positioning tooling
- Integrated software for laser process cycle, motor driver & vision
- Protective gas flow
- Fume extraction
- Water circulation chiller
- Laser safety cabinet

www.gmp.ch

**Visit the website
or contact GMP
for more information !**

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