



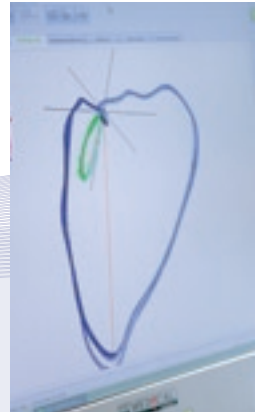
MEDICAL ENGINEERING FROM JENA

Prime Address in Respect of Health

Development of optical bench for the use in a laser system –
Asclepion Laser Technologies



Production of high quality contact glasses for use in refractive surgery – Carl Zeiss Meditec AG



People in Jena already knew a hundred years ago: Medical engineering is a growing market. From Gullstrand's slit lamp to electroencephalography (EEG) for measuring the electrical activity of the brain, they developed various devices and products for medical applications. This pioneer spirit remained here. Medical technology "made in Jena" is still in great demand worldwide because it provides innovative solutions for both diagnostics and therapy.

Top level research »made in Jena« ...

Important milestones of medical engineering were set in Jena. For example, in the beginning of the 20th century the Jena company Carl Zeiss developed in cooperation with the Swedish ophthalmologist Allvar Gullstrand an ophthalmoscope to examine the eyeground. Up to the present day, its main optical concept is still applied to modern examination instruments of ophthalmology.

Jena is an internationally established location for medical engineering. The local technology leaders include companies such as Carl Zeiss Meditec, Carl Zeiss MicroImaging, Analytik Jena, Jenoptik and as well a large number of medium-sized companies.

Jena is home to 'medways', a network of leading German research institutes, industrial enterprises and universities. They are dedicated to creating new processes for diagnostics and therapy in ophthalmology and to developing globally marketable products of medical engineering. 'Medways' initiated and organized the „German Conference on the Future of the Medical Engineering Industry“ („Zukunftskonferenz Medizintechnik“) in June 2009, which resulted in the „Jena Declaration on Medical Engineering“.

Jena's companies of the medical technology industry generate a worldwide turnover of 700 to 800 million euros each year – and counting. The local universities educate qualified junior personnel, who are taught for example at the Institute of Applied Optics and the Institute of Applied Physics of the Friedrich Schiller University Jena and as well at the Departments of Medical Engineering and Biology and SciTec of the University of Applied Sciences Jena.

The Beutenberg Campus hosts a large number of competencies in Jena under the principle „Life Science meet Physics“. It is home to BioCentiv, the Institute of Virology and Antiviral Therapy of the University Medical Centre, the Centre of Molecular Biomedicine of the Friedrich Schiller University Jena, the Leibniz Institute for Age Research (Fritz Lipman Institute), the Leibniz Institute for Natural Product Research and Infection Biology (Hans Knöll Institute), the Max Planck Institute for Biogeochemistry and the Max Planck Institute for Chemical Ecology, the Fraunhofer Institute for Applied Optics and Precision Engineering, the Institute of Photonic Technology and the Technology and Innovation Park Jena. The University Medical Centre is also an important project partner when it comes to innovative product development.

Precisely fitting solutions for high demands ...

In Jena, medical engineering benefits from the location's long-standing optics tradition. The resident companies offer a wide range of business activities to their international customers:

- Complete solutions for ophthalmology and eye surgery from diagnosis to therapy and aftercare
- Operating microscopes, visualisation solutions and future technologies for microsurgery, allowing for example intraoperative radiation therapy
- Development, production and distribution of individual and system solutions concerning analytics and the life sciences industry (for example atomic and molecular spectroscopy, PCR, mobile germ detection)

Examination with the
CARDIOLOGIC EXPLORESER – enverdis



Production of IOL Master in Jena – Carl Zeiss Meditec AG



Aesthetic treatment with the erbium laser
Dermablate Effect – Asclepion Laser Technologies



- Development and production of radiation sources, adaptation of laser systems used in medical devices to new medical indications, production lasers for industry, medicine and research
- Solutions for cardiovascular function diagnostics and methods for the molecular diagnosis of life-threatening infections

Success stories from Jena ...

Analytik Jena AG www.analytik-jena.com
 Asclepion Laser Technologies GmbH..... www.asclepion.com
 AST GmbH www.ast-jena.de
 biolitec AG www.biolitec.de

Carl Zeiss Vision www.vision.zeiss.com/
 Carl Zeiss Meditec AG www.meditec.zeiss.de
 Carl Zeiss MicroImaging GmbH.....www.zeiss.de/mikro

CCS Pawlowski GmbH www.ccs-imaging.de
 CLONDIAG GmbH www.clondiag.com
 dentognostics GmbH..... www.dentognostics.de
 enverdis GmbH www.enverdis.com
 ezono AG www.ezono.com

Jenoptik | Optical Systems www.jenoptik.com/os
 Jenoptik | Laser & Material Processing www.jenoptik.com/lm

LASOS Lasertechnik GmbH www.lasos.com
 Occlutech GmbH www.occlutech.de
 SIRS-Lab GmbH..... www.sirslab.de
 3di GmbH www.3di.de

Networks, Research and Education ...

Beutenberg-Campus Jena e.V. www.beutenberg.de
 BioCentiv GmbH www.biocentiv.com

Friedrich Schiller University Jena:

- Faculty of Biology and Pharmacy
..... www.uni-jena.de/en/Biology_and_Pharmacy.html
- Medical School and University Medical Centre
..... www.med.uni-jena.de
- Physikalisches-Astronomische Fakultät www.physik.uni-jena.de

medways e.V..... www.medways.eu

University of Applied Sciences Jena:

- Department of Medical Engineering and Biotechnology
..... www.mt.fh-jena.de
- SciTec Department www.scitec.fh-jena.de/

**Best testimonials worldwide speak
for medical engineering solutions
from Jena.**

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Would you like to contact Jena's companies or gather information on the location? We provide competent, discreet and free advice.

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»The large focal diameter improves stone fragmentation and reduces the chance of tissue damage...«*

Medical Engineering from Jena

Location for the advanced.



* source: AST GmbH