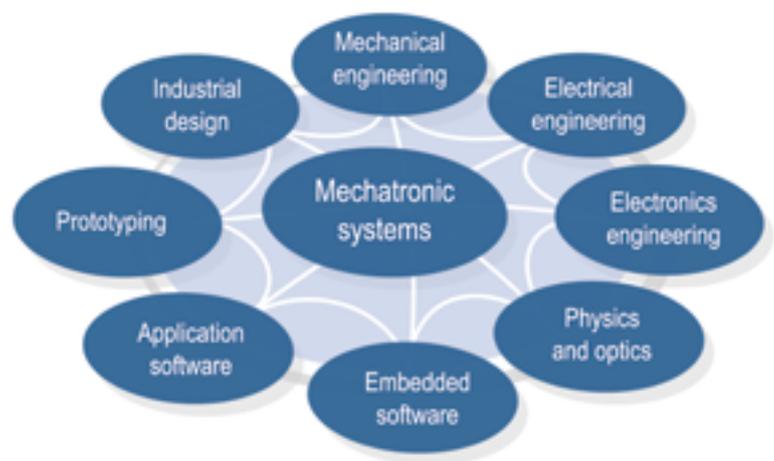




High-end supplier of technology and
dedicated to the development
and production of medical systems.

For the development of medical systems, DEMCON combines all engineering disciplines and certification skills under one roof.

- Engineering facilities
- Prototyping workshop
- Electronics laboratory
- Mechatronics and optics labs
- Clean room
- Production facilities
- Quality



ExSilent Q



The ExSilent Q is a hearing aid that is worn in the ear canal, making it virtually invisible and offering good directivity.

The design of a so-called soft-tip, in three dimensions, makes a tailored housing unnecessary. Besides the actual design, DEMCON has also assisted in the certification process and the start of production. Due to its knowledge regarding the design, optimization work in production by DEMCON led to a reduction in assembly time and a significant cost reduction.

EVA

Design and produce an intelligent pump for procedures on the extremely vulnerable eye: that was the assignment that DEMCON received from D.O.R.C., an international supplier of eye surgery appliances and instruments. This assignment was part of the development of a new operating system known as EVA.

DEMCON developed a completely new concept: a valve pumping system with several suction units and pressure sensors. For this design DEMCON made full use of its experience with complex high-tech systems. During the development process DEMCON built the first EVA and afterwards established series production of the core component of EVA in Enschede.



HandScan

For Hemics DEMCON developed and realized the prototype of the HandScan which supports rheumatologists in the monitoring and treatment of Rheumatoid Arthritis. DEMCON was aided by partners in the optical and industrial design. A series production line was established at the premises of DEMCON and the first produced HandScans were used for clinical trials.

The HandScan measures blood flow through the joints in the hands and wrists using diffuse optical transmission in combination with blood flow modulation. The use of optical technology makes the system safe for the patient and fast to use: a measurement session only lasts 2.5 minutes. A pressure cuff temporarily restricts blood flow in the patient's lower arm, leading to blood accumulation. The hand is illuminated from below and a camera records the light transmitted through the patient's hand in a series of grey scale images. The images are translated into special measurement values. By measuring two wavelengths, red and infra-red, subtle differences in blood flow in the joints can be accurately determined.



Advanced Endoscopy

DEMCON strongly believes in partnerships. Large R&D projects are run with researchers from academia, partner companies, and medical professionals. In 2008 a joint-research project was initiated with the aim of developing a 'surgical telemanipulation system'. DEMCON was the coordinator of the project consortium and, in addition to project management, was responsible for the technical realization.

Researchers from the University of Twente (UT) provided scientific output and involved surgeons provided good support in defining the clinical vision and determining the market potential.

Minimal Invasive Surgery and endoluminal procedures are less demanding on patients, leading to faster recovery, reduced risk of infection and less, or even no, scarring. This is possible with modern flexible endoscopes equipped with optics, for internal examination of the patient, and working channels through which instruments, such as forceps, can be introduced at the operating site to perform operations. The synchronized control of all required motions is very challenging for clinicians. With the developed telemanipulation system the complexity of controlling those motions is significantly reduced.





DEMCON was founded in 1993 and is a high-tech company with more than 200 employees at three locations. We develop medical systems for a very broad spectrum of applications in the medical instrumentation market. DEMCON is certified to ISO 9001 and ISO 13485.

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