

## FRAUNHOFER INSTITUTE FOR MANUFACTURING ENGINEERING AND AUTOMATION IPA



## INNOVATIVE SENSOR SYSTEM FOR AN INTELLIGENT LEG POSITIONER

ned for the minimally invasive implantation of artificial hip joints with the direct anterior approach as well as for joint-preserving treatments of hip disorders using open and arthroscopic techniques. For the first time, the surgeon can adjust all essential leg positions himself during a routine hip implantation, while also receiving feedback on tissue tension. This unique feature makes the Rotex Table a new class of surgical positioning aids.

The Rotex Table is the only ergonomic posi-

tioning aid in the world specifically desig-

Condor Medical and the Fraunhofer Institute for Manufacturing Engineering and Automation IPA are now collaborating in a project designed to expand the Rotex Table by a sensor unit. The recorded sensor data are evaluated on a PC so that the processed data and the evolution of the data over time can be displayed on the monitor. For the first time, the collection of sensor data in a study makes it possible to determine the optimum values for positioning, torque and tensile force during surgery.

The use of different sensor principles provides the surgeon with feedback during the operation. Thus, the surgeon can check for the best possible position and make adjustments to suit the situation. The sensor data are stored to document the course of the surgical procedure. This approach will improve the quality of surgery, making it an understandable and transparent process.

Dr. med. Andreas Ottersbach, Head of the Orthopaedic Department of the Valais Hospital (GNW) in Brig/Switzerland, played a decisive role in the development of the Rotex Table.

Fraunhofer Institute for Manufacturing Engineering and Automation IPA

Nobelstrasse 12 70569 Stuttgart

Contact Dipl.-Ing. Christof Giers Phone +49 711 970-3635 christof.giers@ipa.fraunhofer.de

www.ipa.fraunhofer.de

