

## Mechanical Engineering at Addenbrookes

Providing a comprehensive range of scientific and technical services to support clinicians of all disciplines

Based at Addenbrooke's Hospital, the Clinical Engineering team are a unique resource in the east of England. Very few other Trusts across the UK support clinical engineering on such a scale.

The Clinical Engineering team, all highly skilled technologists, provide essential Trust-wide support for patient-related equipment. There are four specialist sections: Medical Electronics, Anaesthetic & Clinical Engineering, Mechanical Engineering and Renal Technical Services.



*Computer controlled milling in the Mechanical Workshop*

All work conforms to the Medical Device Directive and the Department is working to achieve ISO 9001:2000 quality standards in 2009

## Recent Projects

**Variable abduction hip brace:** designed to restore pelvic stability, improve sitting balance and gait in children with cerebral palsy. This highly successful orthosis is now available commercially and distributed worldwide.

**Spinal / Oxford Frame Support:** to provide firm support to patients undergoing long back operations without causing sores. X-rays can also be taken at various stages during the operation without moving the patient from the frame.



**Adjustable focus spectacles (above):** developed to give people with Presbyopia clear focus over the entire field of view at any plane. The optical system consists of two lens pairs, separation is selected by a minute rack and pinion.

Contact the Department of Medical Physics and Clinical Engineering to get help with your new idea today!



**Facial retractor (above):** developed for use in main theatre during facial reanimation surgery. The Facial retractor holds up a skin flap during nerve rejoining surgery, a procedure undertaken to restore movement to faces that have been paralysed as a result of damage to the facial nerve and muscles.

**ArthroDEX Set (below):** manufactured for taking bone samples in main theatre. This set is constructed from a wide range of alloys.



**Specialist mechanical engineering resources on your doorstep to support the delivery of innovative patient care**

The Mechanical Engineering Department provides a comprehensive, quality mechanical engineering resource for all health professionals in the east of England.

Their workshops contain a wide range of high quality engineering equipment, including computer controlled machines, welding and test equipment.

**Services provided:**

- **Design** - computer aided design can show clinicians how their ideas can be translated into finished devices
- **Development and manufacture** - new devices can be manufactured in the fully equipped workshops
- **Rapid prototyping** - access to rapid prototyping facilities enables the creation of fully working prototypes for testing
- **Testing & commissioning** of new devices
- **Repairs** - planned preventative maintenance, repairs to all types of medical equipment and surgical instruments, marking and engraving instruments

The Department also helps with pre-purchase advice and evaluations of equipment, acceptance testing, maintenance of the clinical equipment asset register, incident evaluation and monitoring of hazard and safety alerts.

Further information available via the Cambridge University Hospitals NHS Trust website.



*The fully equipped Mechanical Engineering Workshop*

If you have an idea that may benefit the patients in your discipline and you wish to take advantage of our skills and services, please contact:

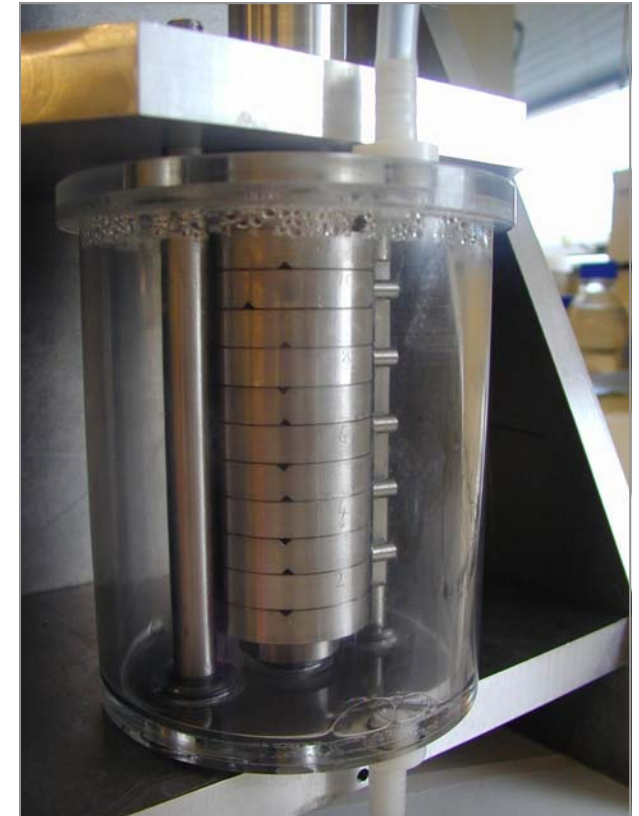
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**MECHANICAL ENGINEERING SERVICES FOR THE EAST OF ENGLAND**



Department of Medical Physics  
& Clinical Engineering

Addenbrooke's Hospital