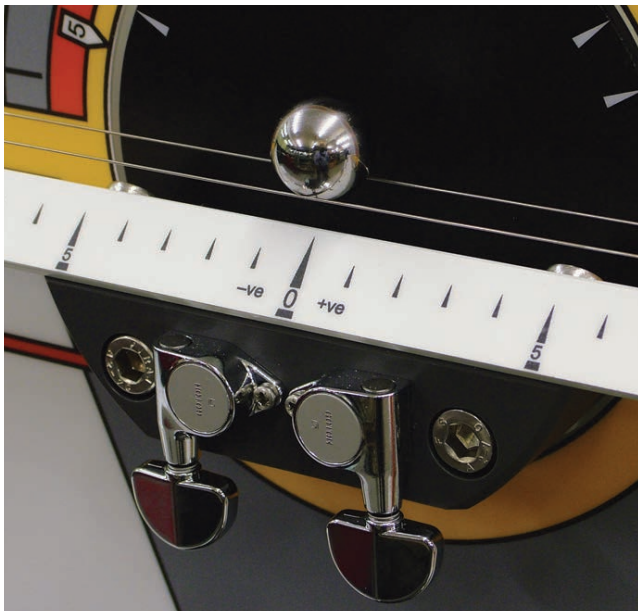


CONTROL ENGINEERING

The Control Engineering range focuses on the teaching of specific control principles relating to static and dynamic systems, as well as naturally unstable, non-linear, multi-variable and oscillatory systems.

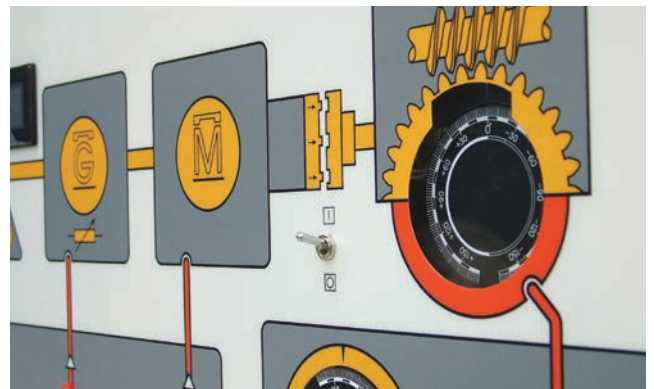
The majority of the range can be connected to TecQuipment's dedicated controllers with easy-to-use control software. The simple, low-voltage connections allow safe and quick experiment set up.

 **YouTube** CONTROL ENGINEERING PLAY LIST



FEATURES AND BENEFITS:

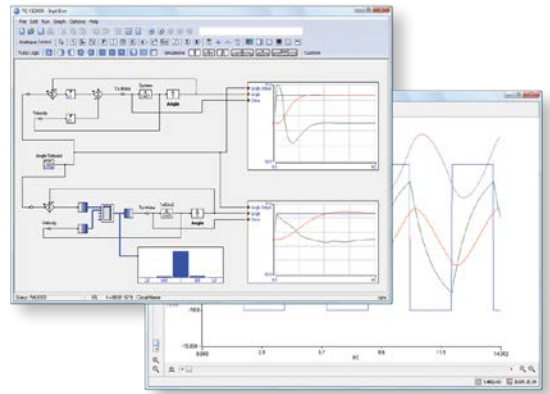
- **ACADEMIC AND INDUSTRIAL:** Benchtop products for academic teaching and industrial products for vocational training.
- **CHOICE:** Start with a single control scenario and build up, or choose a more complete product to suit the budget and needs.
- **SAFE AND EASY SET-UP:** Simple, low-voltage connections allow safe and quick experiment set up.
- **HANDS ON:** Both the academic and industrial products allow easy connection and adjustments, for a more practical understanding.



CONTROL SOFTWARE

GE2000

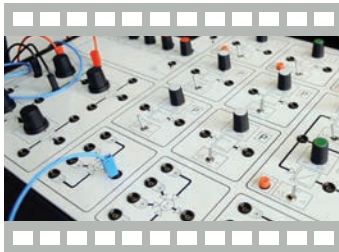
Software that simulates control systems and works with TecEquipment's controller (CE120) or digital interface (CE122) to control and acquire data from TecEquipment's Control Engineering range.



CONTROLLER

CE120

A self-contained analogue and computer-based controller designed to support practical investigations into the basic and advanced principles of control engineering at all academic levels.

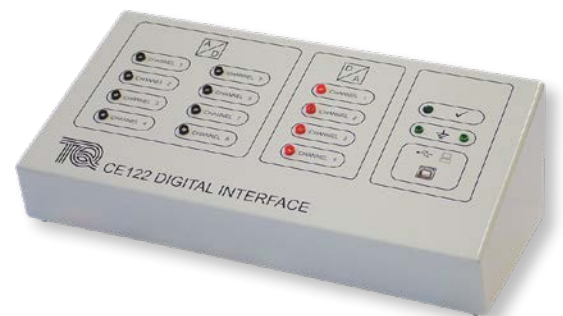


EXPERIMENT MODULES POSTER

DIGITAL INTERFACE

CE122

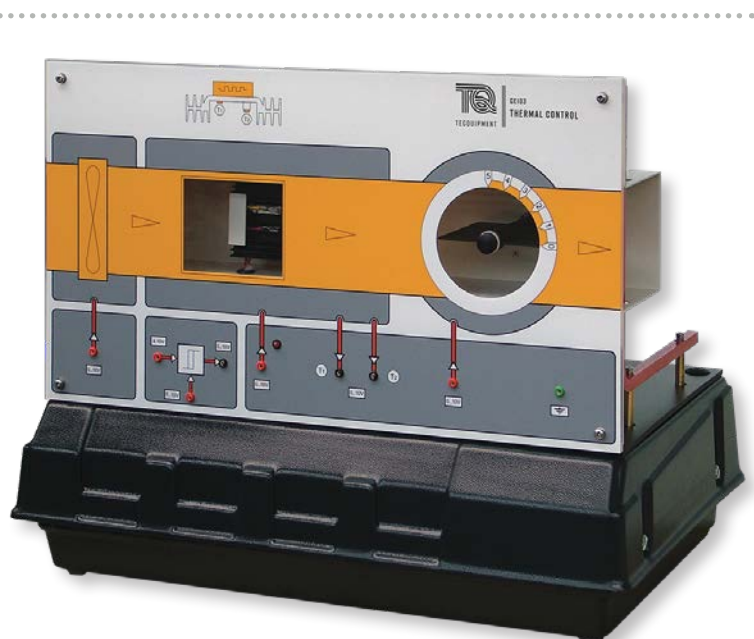
A self-contained computer-based controller designed to support practical investigations, covering the basic and advanced principles of control engineering at all academic levels.



THERMAL CONTROL PROCESS APPARATUS

CE103

A self-contained, benchtop temperature control apparatus that mimics common industrial processes, designed to allow students at all academic levels to investigate the basic and advanced principles of control.



COUPLED TANKS / MULTI-VARIABLE COUPLED TANKS APPARATUS

GE105/GE105MV

A self-contained, benchtop apparatus to demonstrate basic and advanced principles of control of single and coupled tanks, including the study of static and dynamic systems.



GE105



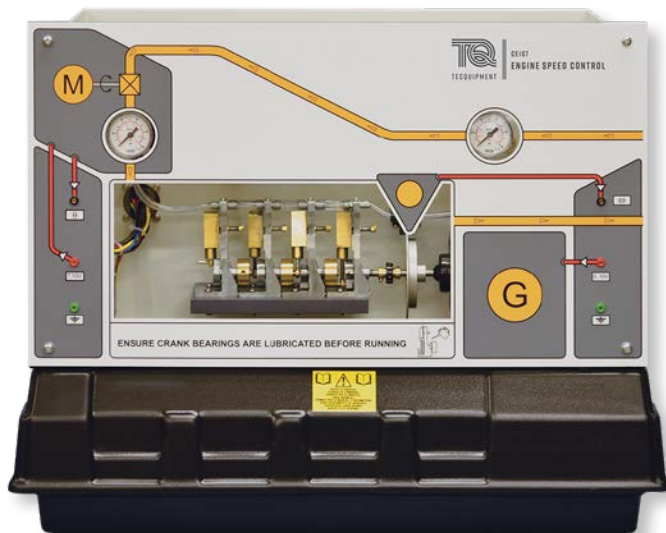
GE105MV



BALL AND BEAM APPARATUS

GE106

A self-contained, benchtop apparatus to demonstrate basic and advanced principles of control in naturally unstable systems.



ENGINE SPEED CONTROL APPARATUS

GE107

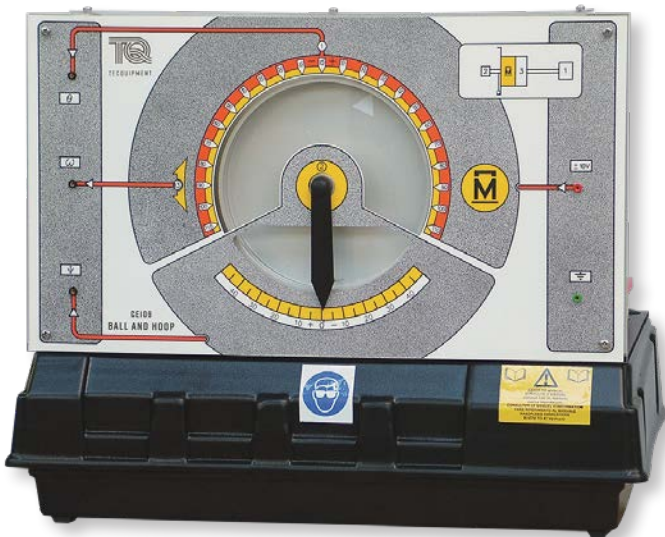
A self-contained, benchtop apparatus to demonstrate basic and advanced principles of engine speed control, including non-linear systems and inner loop feedback techniques.



COUPLED DRIVES APPARATUS

CE108

Compact, benchtop apparatus designed to allow students at all academic levels to investigate basic and advanced principles of control, including control of multi-variable systems.



BALL AND HOOP APPARATUS

CE109

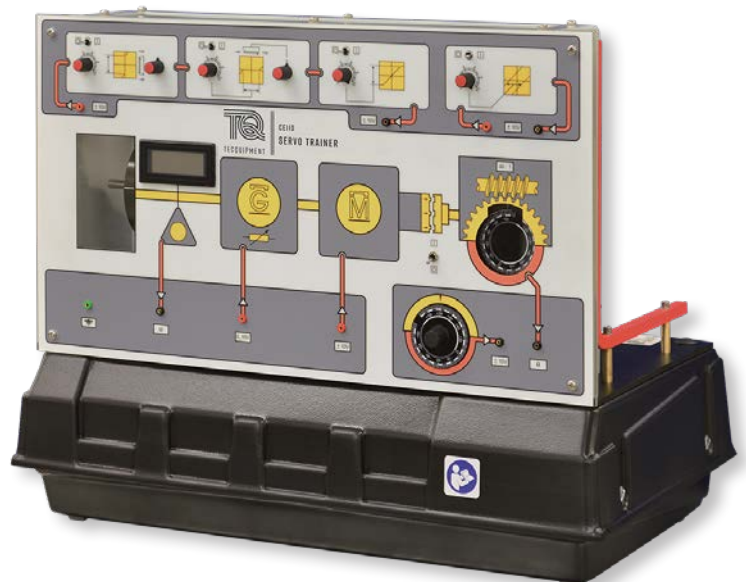
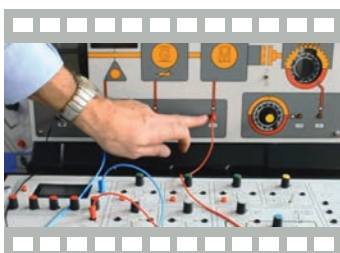
A self-contained, benchtop apparatus to demonstrate basic control of position or speed of a ball in a hoop, and more advanced studies of liquid slop.



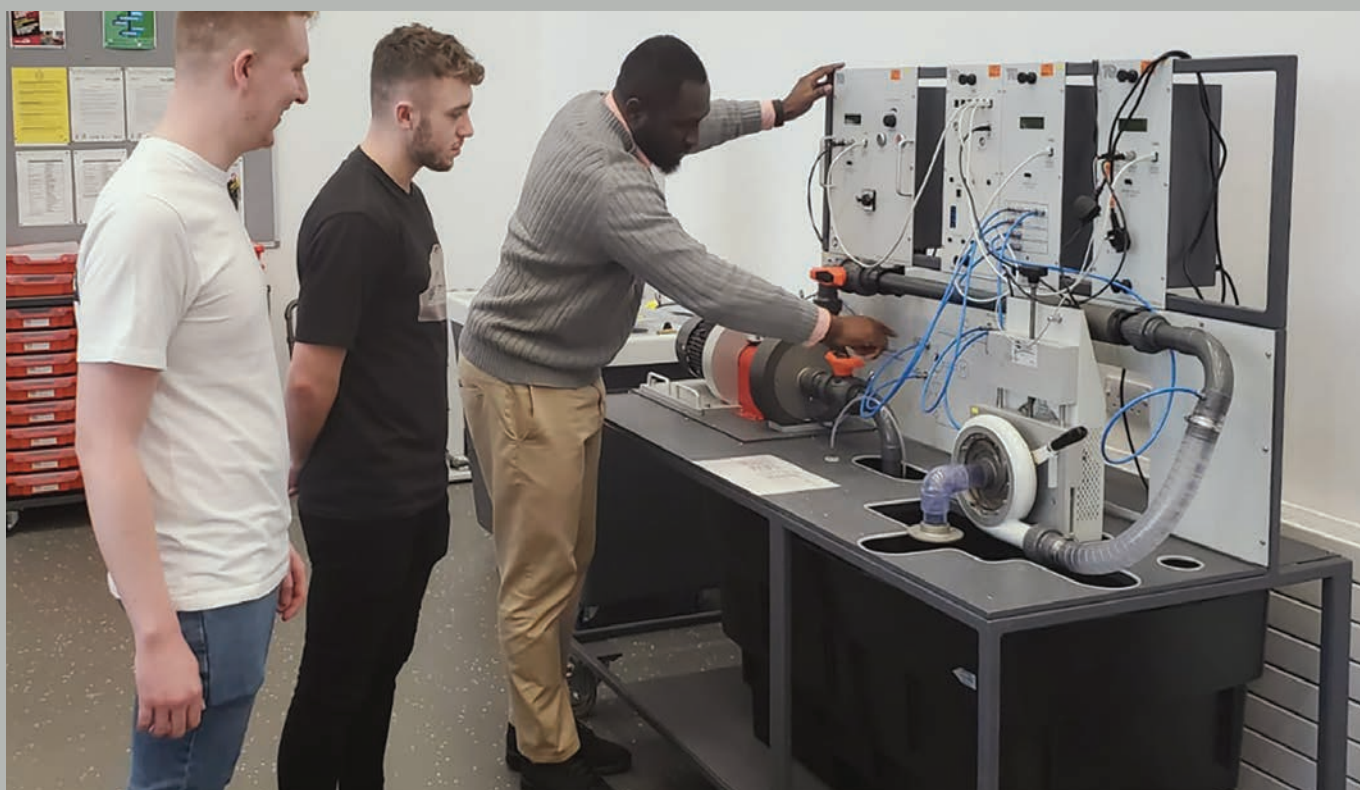
SERVO TRAINER

CE110

A self-contained, benchtop DC servo apparatus to study basic control of speed of a servomotor, through to more advanced studies of non-linear effects of hysteresis, deadzone and saturation.



FILLING THE NUCLEAR SKILLS GAP WITH EQUIPMENT FOR THE UK



In 2018 the National College of Nuclear North Hub (based at Lakes College West Cumbria) was opened to address the aging workforce of the UK nuclear industry, where the average age for a technical role was 55.

Specifically, the focus was on building technical skills, with courses that would take students straight into work within the nuclear industry. Developing students with these capabilities requires teaching equipment that balances the need for students to find experiments easy to use, while replicating applications in industry.

MATCHING TEACHING REQUIREMENTS

Paul Fairclough, Director of Higher Engineering, Science and Nuclear, explained that they have developed a teaching model called the Experiential Learning Model. This is designed to support people getting into industry, specifically for work readiness. Practical teaching in all of their degrees is an important element, giving the students the skill sets they need for employability. This was a main consideration when selecting TecEquipment over others in the engineering education equipment marketplace.

As well as TecEquipment's teaching products, the purpose-built facility also features simulated radioactive fields and virtual-reality systems that mean they can simulate the internal elements of a nuclear facility.

QUALITY

Paul Fairclough has used TecEquipment teaching equipment since 1989. In this period he has worked for a range of universities and colleges, choosing TecEquipment repeatedly. The number one reason for this is quality.

TecEquipment designs and manufactures products in the company's headquarters based in the Midlands region of the UK. The ability to control the whole process means that high quality standards can be maintained.

The benefit of using TecEquipment teaching products goes far beyond the apparatus itself. The lifelong customer care and supporting documentation makes a big difference.

Fairclough added: "The key thing is the learning materials that come with the products, including the exercises."

Each product comes with a manual, that includes set up instructions, maintenance guidelines, step-by-step guides on how to carry out experiments and, in many cases, supporting theory. The purpose is to make practical teaching as straightforward as possible.

Their model of practical teaching has been recognised by other national colleges as good practice and is being used as an example of excellence to replicate.

