

## Spelsberg helps TecQuipment to deliver engineering excellence in STEM education

**TecQuipment, leading provider of high quality educational equipment for engineering disciplines across the world, is using customised enclosures from Spelsberg UK in its latest sediment transport channel flume for teaching engineering students about fluid mechanics. To deliver suitable enclosures quickly, the products were produced via Spelsberg's in-house CNC machining service.**

Many engineering departments incorporate an element of practical teaching into their syllabus, which over the years has defined a global market of engineering education equipment providers.

It's a competitive market place, with TecQuipment positioning itself as a leader in its sector by delivering high quality products with a 5-year warranty. The company, based in the Midlands, has been established for 60 years and exports to over 100 countries with more than 1500 customers.

One of TecQuipment's core competencies is the development and manufacture of laboratory apparatus for teaching fluid mechanics. In particular, one of the most interesting products developed recently focuses on open flow channels. Peter Skinner, Principal Mechanical Engineer at TecQuipment, explained: "*These are used to simulate rivers and canals as well as various features found that may affect flow and current: such as weirs and sluice gates.*"

TecQuipment's FC300 range of Open Channel Flumes were built to provide students and academics with the opportunity for advanced research and student study on a wide range of fluid flow topics. The large open channels that range from 5 to 15 metres long, can simulate different naturally occurring and man-made conditions with some of these requiring the functionality to incline to various gradients. This calls for an 'inclination box' that measures the tilt of the flume. This contains a printed circuit board (PCB) inclinometer, displaying the angle of the flume.

The PCB is highly accurate and has a resolution of 0.05 degrees. However, the device is also extremely delicate, and any water splashes or spills can heavily damage it, compromising the entire equipment. In addition, as TecQuipment products are distributed worldwide, any protections for the PCB needs to meet international standards, including European, U.S. and Canadian regulations.

In need of a high-quality solution to protect the PCB installed on the FC300 range, TecEquipment chose Spelsberg UK as its enclosure supplier having previously specified its enclosures for the company's very popular Digital Hydraulic Bench. Spelsberg is one of the world's leading manufacturers of electrical equipment enclosures and distribution boards and, like TecEquipment, has a long tradition of technical innovation and quality products.

Dionne Knowles, Marketing Manager at TecEquipment, commented: *"With our reputation for quality, we ensure every component used is super-efficient and reliable, like those provided by Spelsberg UK. Spelsberg also provides solid customer service, with teams that work closely with our engineers to test and install the right product with the quality that we demand for our equipment."*

Thanks to in-house certified testing facilities located at its German headquarters, Spelsberg products can be used with confidence in TecEquipment's overseas markets. In fact, Spelsberg can independently conduct analyses and certifications according to Underwriters Laboratories (UL), for the U.S. and Canada, and VDE and DIN EN, for Europe.

The enclosures chosen by TecEquipment and Spelsberg UK to house the sensitive PCBs belong to the TK range of enclosures. These are industrial enclosures designed to suit a wide range of applications, i.e. they are available in different sizes and materials.

More precisely, based on the specific FC300 Open Channel Flume design requirements, the TK enclosures selected are made of high-strength polycarbonate and feature IP68 rating against dust and water ingress, IK07 protection against external mechanical stresses, and a transparent lid to read the PCB display.

In addition, while the TK series are available in a range of standard formats, Spelsberg worked with TecEquipment to design and supply a customised solution to deliver improved performance. The customisation service was carried out in-house at Spelsberg UK's headquarters in Telford. With four CNC machines and an assembly production line, Spelsberg is able to produce bespoke turnkey solutions. As a result, the enclosures models with the optimal design were provided to TecEquipment within two weeks.

Dionne Knowles and Peter Skinner agreed that the collaboration with Spelsberg UK was extremely fruitful and contributed to the creation of high-quality teaching equipment. Dionne added: *"The product is selling well around the world, from Derby, UK, through to Columbia and Peru. With such a wide customer base it's so important to be working with supply partners we trust."*

Clare McCusker, Area Sales Manager for Spelsberg UK, concluded: *"We have been working with TecEquipment on a number of projects, supplying customised high-quality enclosures. The company is well known worldwide for its state-of-the-art products and services and we are happy to play a part in the continued success of their business as well as their mission to maintain a no.1 position in their market."*

## **Photograph Captions**

### **Photograph 1 :**

In need of a high-quality solution to protect the PCB installed on the FC300 range, TecQuipment chose Spelsberg UK as its enclosure supplier having previously specified its enclosures for the company's very popular Digital Hydraulic Bench.

### **Photograph 2 :**

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## **About Spelsberg**

Spelsberg is one of the largest manufacturers of electrical enclosures in the world. With over 4,000 enclosures available as standard and further customisation possible, it offers solutions for almost any application.

With the largest supply of non-metallic enclosures, ex-stock in the UK, its products are often available for delivery within 24 hours; customisation is possible on any product, including bespoke entries, engraved corporate logos or fitted terminals, within 48 hours. Products can be ordered direct from Spelsberg or from most leading supply specialists including RS, Rapid, Farnell and CPC.

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## Editor Contact

DMA Europa Ltd. : David Bedford

Tel: +44 (0)1562 751436

Fax: +44 (0)1562 748315

Web: [www.dmaeuropa.com](http://www.dmaeuropa.com)

Email: [david@dmaeuropa.com](mailto:david@dmaeuropa.com)

## Company Contact

Spelsberg els UK Ltd. : Chris Lloyd

Tel: +44 (0)1952 605849

Fax: +44 (0)1952 670814

Web: [www.spelsberg.co.uk](http://www.spelsberg.co.uk)

Email: [cll@spelsberg.co.uk](mailto:cll@spelsberg.co.uk)