CASE STUDY

National Centre of Excellence for the Food Engineering Industry

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Flexicon provides conduit solutions for the National Centre of Excellence for Food Engineering (NCEFE)

Flexible conduit manufacturer, Flexicon has worked with electrical contractors, Yorkshire Plumbing and Heating Services (YPHS) to deliver the cable protection system for the state-of-the art National Centre of Excellence for Food Engineering (NCEFE).

Operated by Sheffield Hallam University, the brand-new facility has just opened and will focus on tackling food industry challenges such as productivity, health, minimising waste and reducing energy use. It will also support the food and drink industry by developing new and enhanced facilities, processes and equipment, and creating a skilled, knowledgeable workforce.

Led by main contractors, BAM Services Engineering, food grade LTP-FG flexible conduit has been installed to protect cabling and electrical services for final termination.

Key Features	Key Benefits
LTP-FG is Liquid Tight with IP ratings of IP66, 67, 68 & 69	Can withstand rigours of frequent wash down routines, where connections will be subject to extended wet and/or damp conditions
FG fittings are maufactured to BS EN 1672-2 and EN ISO 14159 using Stainless Steel grade 316	Black - Low Fire Hazard Nylon 25mm - IP66 Hygienically designed to prevent build up of micro-organisms and bacteria and offers excellent corrosion resistance
LTP-FG flexible conduit is manufactured from FDA approved materials	Offers inherent flexibility making it easy to use while the smooth outer coating provides high level of hygiene and safety

The LTP-FG, liquid-tight, flexible conduit system is manufactured using approved food grade materials, featuring a galvanised steel core with a smooth coating, which provided the high levels of hygiene, safety and ingress protection required. John Goodyear, Electrical Manager from YPHS explains further:

"It was critical that the cable protection system specified not only met the appropriate food industry hygiene standards but could also withstand the rigours of frequent wash down routines, where connections will be subject to extended wet and/or damp conditions.

"The LTP-FG flexible conduit system has proved ideal for the installation. The helically wound design is easy to use and offers inherent flexibility, while the smooth outer coating reduces the build-up of bacteria and micro-organisms. Manufactured using FDA-approved materials, it provides peace of mind that our electrical installation will be protected fully for many years to come."

BS EN ISO9001 2015 EN 61373 Cat2 EN ISO 14159
BS EN IEC 61386 EU Regulation 10/2011 EN 1672-2

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Fast and simple installation

Speed and cost of installation was a key consideration, with the NCEFE looking to partner with a supplier that could overcome any restrictions in terms of cable routing and termination.

Conventional rigid conduit systems are suited to long, straight runs of cable. However, when routing around corners or in different directions they typically require additional fixed bends or elbows in order to route cabling securely, which can be both time-consuming and costly to install.

The Flexicon system specified provides an easy interface with sections of rigid conduit throughout the installation, thus simplifying the final termination. Hygienically designed and manufactured using stainless steel, the flexible conduit fittings help to ensure a safe and durable installation. John Goodyear continues:

"The Flexicon conduit system provides far greater flexibility for our engineers during installation. Unlike rigid stainless-steel systems, it is quick and easy to cut to length, resulting in a neat and secure solution. Last minute design changes and mistakes can be expensive to accommodate or rectify with a rigid system. The flexible conduit system, however, makes it much simpler to achieve a secure termination first time and facilitate changes throughout the life of the installation.

"In addition, it will be much easier to re-configure sections of the cable installation over time as the facility expands and adapts to meet new customer requirements or changing equipment and technologies."

The flexible conduit fittings have been hygienically designed to prevent the build-up of micro-organisms and bacteria using the principles of BS EN 1672-2 and EN ISO 14159. Manufactured from stainless steel grade 316, they offer excellent corrosion resistance.

Suitable for repeat contact with all food types, at full temperature, and offering excellent resistance to oils and greases, the flexible conduit system has IP ratings of IP66, IP67, IP68 and IP69 and can perform in temperatures ranging from -20°C to +105°C. Colin Legg, Marketing Manager from Flexicon added:

"Flexicon is at the forefront of material technologies and industrial design to deliver solutions that protect safety and performance-critical cabling.

"In particular, we believe that cleaning time should be swift and effective, without compromising product safety and quality. We therefore offer a wide variety of solutions to facilitate this, to ensure critical power and data cabling in hygienic environments are not compromised."

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