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Laboratory Trunking CL3+

THE QUEEN'S AWARDS
FOR ENTERPRISE:
INNOVATION
2005

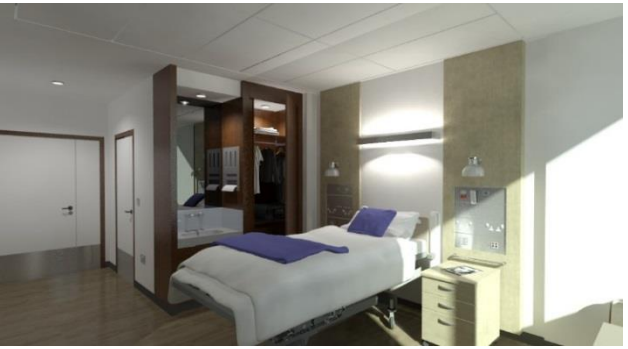
CABLEFLOW™
HEALTHCARE

applications

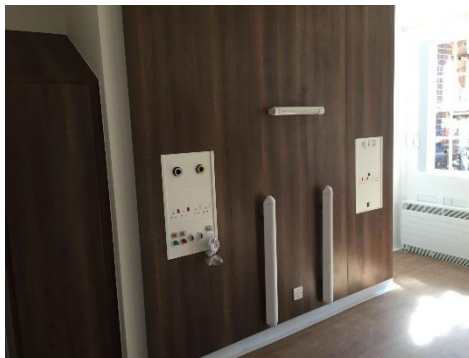












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THE QUEEN'S AWARDS FOR ENTERPRISE: INNOVATION 2005

Innovation is at the heart of an evolutionary healthcare infrastructure. Challenging boundaries whilst being respectful of clinical skills are two valued philosophies which ensure knowledge led developments in bedroom architecture.

At CABLEFLOW we recognise the need to be different, to ensure product development offers practical and sustainable progression whilst always ensuring full compliance with Patient Safety Standards and improving the clinical environment.

We are proud of our British healthcare heritage which offers universal application around the world. Having been conferred a prestigious Queens Award for Innovation our client's take confidence in that unique recognition as a market leader.

As Britain's leading medical supply unit manufacturer our range of solutions meet a vast array of design concepts throughout all clinical environments whether primary or tertiary care areas, and every speciality in-between.

In 2005 our **integra** product range became the first and only bedhead trunking system to achieve Royal recognition with the conferment of a **Queens Award for Enterprise: Innovation** from Her Majesty Queen Elizabeth II.

Improving the clinical architecture, the patient experience and ensuring flexibility and adaptation in later use are hallmarks of our innovative integrated lighting solutions. At home in an acute hospital setting or more domestic environments such as Hospice's and the like our systems can be tailored to your requirements.

The use of dado trunking systems in laboratory environments is not a fundamentally new concept but is an area where great care should be taken in selecting the appropriate materials.

A frequently recurring problem in CL3+ labs is the installation of electrical sockets and services outlets generally, especially where penetrating the wall fabric impacts upon the sealed integrity of the room. Installation of standard back boxes into cavity walls will result in substantial effort being expended to seal these when it comes to validation, with limited success. The provision of sockets and other services outlets on a surface-mounted dado avoids most of these problems whilst offering flexibility to the overall installation and ease of maintenance.

RESILIENCE IN USE

The type of pathogens and biological agents within these environments is ever-changing, whilst the progress and advancement of science dictates that ever more harmful and destructive pathogens must be faced. The levels of containment usually required for working with such agents are determined by their categorisation *(e.g: Containment Level [CL] 3 is required for Hazard Group 3 pathogens)* and these reflect the increasing levels of health risk to those involved.

Bio-decontamination is key to ensuring that these laboratory environments remain safe, clean and reliably functional.

BIO-DECONTAMINATION

Severe fumigation and cleaning agitants such as viricides, bactericides or the like, including Vapourised Hydrogen Peroxide (VHP) or formalin (Formaldehyde) gassing amongst others, present product selection challenges. Formaldehyde is a very hazardous substance and used in concentrations way above the accepted safe levels.

As pathogens increase in complexity and resistance harsher bio-decontamination requirements will often prevail and product selection is critical.

Given the harshness of these 'kill' agents, selecting an appropriate building services containment system which is resilient over time and can withstand exposure to these chemical cleansing processes remains paramount.

It is proven that selecting the right materials for the containment will be key to the longevity of the installation design.

EXTRUDED ALUMINIUM

Cableflow's relentless quest for design perfection, where innovation and technology combine, ensures we create the most revolutionary products for the most abstract and demanding environments, such as CL3+ labs.

Carefully designed extruded aluminium trunking systems with hinged lids for ease of maintenance access and a resilience tested polyester powder coat finish, ensures a product capable to withstand the test of time, all supported by a 25 year Manufacturers Guarantee.

Extruded aluminium offers a longer life and appearance over any other material and is best suited to the harsh biomedical environments encountered in laboratory locations.

Our systems have been **independently tested** for resilience to the harsh environments of CL3+ laboratories making it the product of choice for many specifiers and end users.

Multi-compartmentation using earthed aluminium dividers ensures the segregation and screening of cabled services whilst cast aluminium corners allows for any building shape to be accommodated ensuring a robust and durable end product.

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Knowing that the agent used won't cause a failure of the trunking system or its components is important to the overall functionality of the area.

Alongside performance is appearance, safe in the knowledge that discolouration and durability of the finished system is not adversely affected during use and regular de-fumigation activities.

Resilience to bio-decontamination chemicals and the ease of de-fumigation are key hallmarks of Cableflow systems.

BUILDING SERVICES INTEGRATION

An accepted principle of CL3+ Laboratory design is that over complicated M&E installations should be avoided and designs which duly consider the maintenance capability of the client adopted.

Specifically designed internal component assemblies of stainless steel facilitate maintenance and aid resilience in the bio-decontamination process.

OFF-SITE MANUFACTURING

Making use of our Off-Site Manufacturing (OSM) capability, bespoke modules can be pre-assembled and cabled using composite cabling solutions. The integrity of the installation is maintained and ensures projects can be completed on-time and on-budget. Interfacing with sealed cable entry points to the CL3+ area ensures the complete installation design has end-to-end functionality.

IP RATED OUTLETS

Given the harshness of laboratory environments and specifically where water jets may be used or testing cages using automated water feeders, IP 66 rated socket outlets and ancillary services can be mounted with ease,

Whilst the trunking enclosure cannot attain to IP 66 by its very nature of design those services contained and terminated therein are within enclosed IP66 sub-assemblies.

SWITCH & SOCKET DROPS

Ad-hoc switch drops, door entry mechanism contacts, $C0_2$ shut off buttons and the like are an essential security barrier in all CL3+ laboratories and annex rooms.

In many cases these will simply require a single drop or multiple drops at a single location and our mini-trunking option has been designed specifically to compliment the range, offering a total containment solution for all laboratory areas and associated spaces.

Again manufactured from extruded aluminium with specially treated steel boxes, BS4662 fixings or bespoke as required, these components offer equal resilience to the rigours of CL3+ cleaning and environment usage.

Supplied in a range of finishes with aesthetic appeal, ease of installation and maintenance are primary design features.

Where underbench outlets are required this tertiary distribution trunking allows the simple interface with the dado system to ensure a composite and complete solution to cable management services.

INCOMING SERVICES INTERFACE

Purpose made riser sections allow the interface with cabling from external cableways via bio resistant compression glands which maintain the integrity of the CL3+ pressure seal.

Ensuring a knowledge based design interface is key to our product offering.

LEGENDS AND LABELLING

The specific nature of individual accessory lids in hospital applications, requires that legends and usage instructions are clearly evident to the user. We adopt a policy of indelibly marking all text and legends on our systems thus ensuring a greater life expectancy for the component and making it easy for the user to identify the relevant service.

CORNERS AND END CAPS

All of our trunking configurations have purpose made metal end caps, powder coated to complement the system whilst ensuring that the overall aesthetics of the product are maintained.

By incorporating metal end caps, EMC compliance is maintained. which cannot be achieved where plastic or polymer end caps are used.

Should corner sections be required on any specific contract please contact our sales office for further information.

OFF SITE PRE-FABRICATION

While our CL3+ dado systems can be supplied in kit form for site assembly, the efficiencies of factory assembled pre-wired, pre-piped modules, with all outlets pre-configured, aids the simplicity of the product. Prefabricated modules can be fitted as a second or third fix item and later in the conventional construction programme.

EMC CERTIFICATION AND COMPLIANCE

Protecting electronic components in the patent environment from Electro-Magnetic Interference (EMI) and Radio Frequency Interference (RFI) is of paramount importance. Our CL3+ dado systems have been designed specifically to ensure that each chamber, and in turn each individual compartment, controls both the emission and reception of any such Interference.

By specifying **Cableflow** you can be satisfied that the EMC elements of BS EN 50085-1 have been complied with. All of our system solutions have been independently tested by BSI with all of the commercially available nurse call system in operation.

INSTALLATION

The system can be installed by any competent tradesman. However, are able to offer total supply and installation package from a specialist manufacturer.

Our experienced Contracts Department specialises in the installation of our trunking systems, and all **Cableflow** installation technicians are trained to the highest standards, and equipped with the most up to date machinery to achieve the best possible result when our products and their skills are combined.

Further information about this service can be obtained by contacting our Sales Team who will be pleased to provide you with a costing on your specific application.

Product ref:

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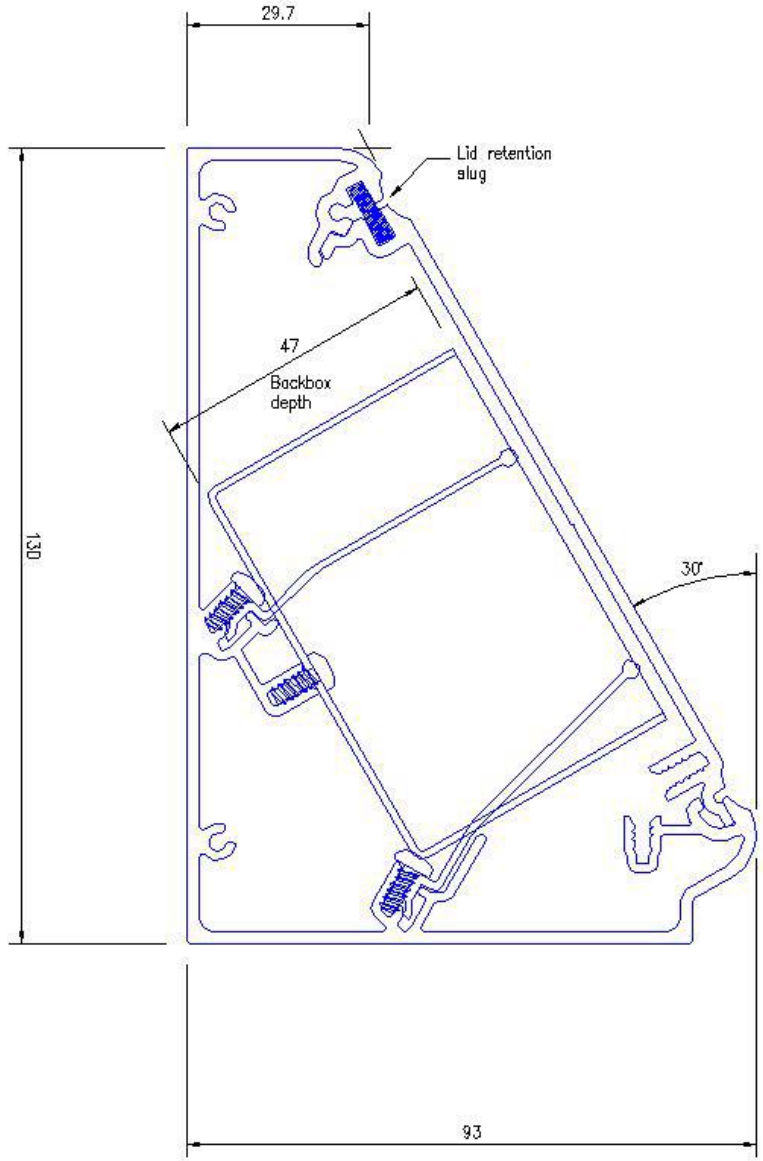

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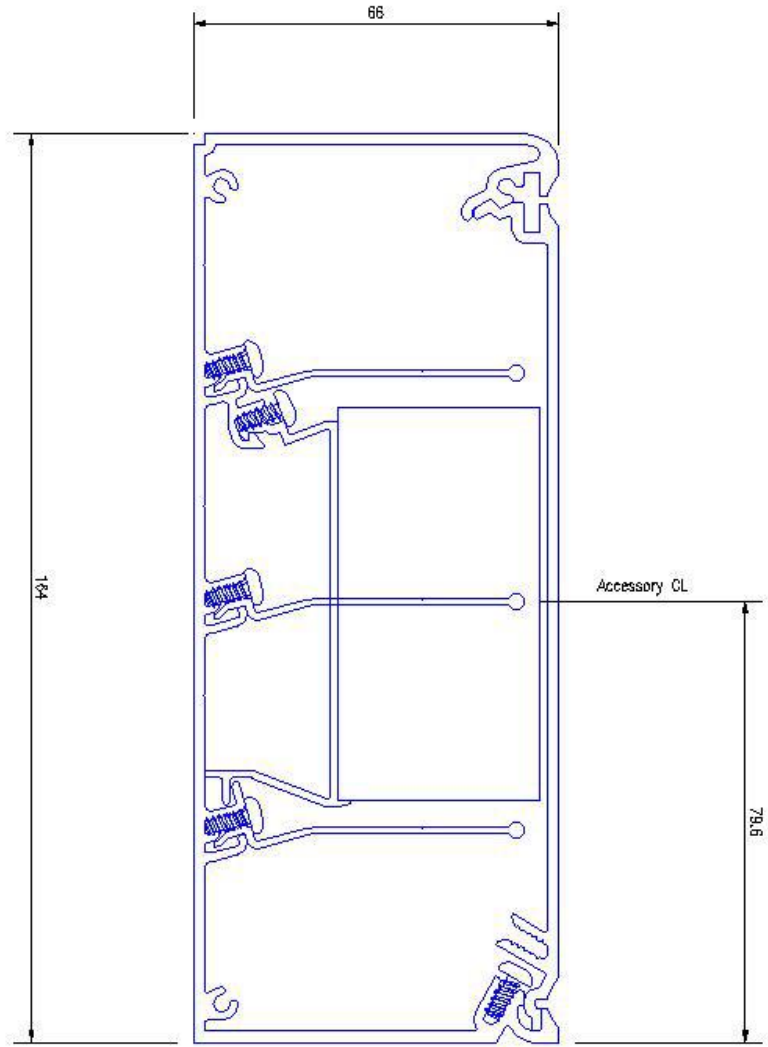

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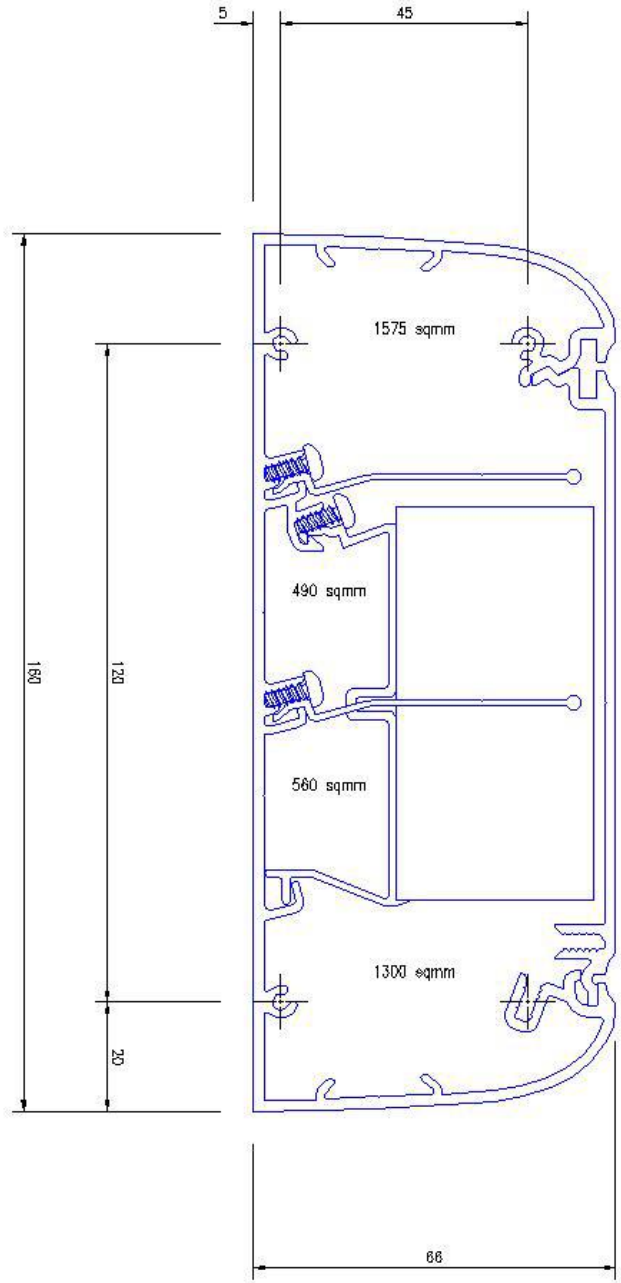


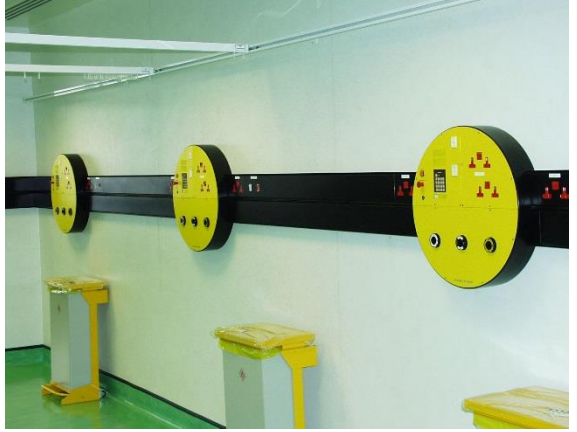
Standards compliance

Document Reference	Document Description
BS 476-10: 2009	Fire tests on building materials and structures. Guide to the principles, selection, role and application of fire testing and their outputs
BS 1363-1: 1995	13 A plugs, socket-outlets, adaptors and connection units. Specification for rewirable and non-rewirable 13 A fused plugs
BS 1363-2: 1995	13 A plugs, socket-outlets, adaptors and connection units. Specification for 13 A switched and unswitched socket-outlets
BS 1363- 4: 1995	13 A plugs, socket-outlets, adaptors and connection units. Specification for 13 A fused connection units switched and unswitched
BS EN 60669-1:1999+A2:2008	Switches for household and similar fixed-electrical installations. General requirements
BS 5733:2010+A1:2014	General requirements for electrical accessories. Specification
BS EN 12206-1:2004	Paints and varnishes. Coating of aluminium and aluminium alloys for architectural purposes. Coatings prepared from coating powder
BS 6701: 2010	Telecommunications equipment and telecommunications cabling. Specification for installation, operation and maintenance
BS 7671:2008+A3:2015	Requirements for Electrical Installations. IET Wiring Regulations
BS 8300:2009+A1:2010	Design of buildings and their approaches to meet the needs of disabled people. Code of practice
BS EN ISO 7599:2010	Anodizing of aluminium and its alloys. General specifications for anodic oxidation coatings on aluminium (formally BS EN 12373:2001)
BS EN 61000-6-3:2007+A1:2011	Electromagnetic compatibility (EMC). Generic standards. Emission standard for residential, commercial and light-industrial environments (formally BS EN 50081-1)
BS EN 61000-6-4:2007 +A1:2011	Electromagnetic compatibility (EMC). Generic standards. Emission standard for industrial environments (formally BS EN 50081-2)

Document Reference	Document Description
BS EN 61000-6-1:2007	Electromagnetic compatibility (EMC). Generic standards. Immunity for residential, commercial and light-industrial environments (formally BS EN 50082-1)
BS EN 50083-2:2012	Cable networks for television signals, sound signals and interactive services. Electromagnetic compatibility for equipment
BS EN 50085-1:2005+A1:2013	Cable trunking systems and cable ducting systems for electrical installations. General requirements
BS EN 50085-2: 2006	Cable trunking systems and cable ducting systems for electrical installations. Cable trunking systems and cable ducting systems intended for mounting on walls and ceilings
BS EN 60439-5: 2006	Low-voltage switchgear and controlgear assemblies. Particular requirements for assemblies for power distribution in public networks
BS EN 60529:1992+A2:2013	Degrees of protection provided by enclosures (IP code)
BS EN 60601-1-6:2010+A1:2015	Medical electrical equipment. General requirements for basic safety and essential performance. Collateral standard. Usability
BS EN 60601-1-2: 2007	Medical electrical equipment. General requirements for basic safety and essential performance. Collateral standard. Electromagnetic compatibility. Requirements and tests
HTM 06-01	Electrical services: supply and distribution
HTM 06-02	Electrical safety guidance for low voltage systems
HTM 08-03	Management of bedhead services in the health sector
HTM 17	Health Building Engineering Installations
HTM 2014	Abatement of electrical interference
HTM 2020	Electrical safety code for low voltage systems
IEC 60364-7-710: 2002	Electrical installations of buildings. Requirements for special installations or medical locations (UK BS7671 Section 7-710)
NHS SPEC C49: 1997	Nurse Call Systems. Revision 3


OPH/ENT









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CABLEFLOW™

Cableflow International Limited

For full product data sheets go to our website or contact us directly

www.cableflow.com

Cableflow International Limited
Windsor House | Abbey Barn Road
High Wycombe | Buckinghamshire
HP11 1NN | United Kingdom

(tel) 00 44 (0) 1494 52 88 11
(fax) 00 44 (0) 1494 52 11 88
(email) sales@cableflow.com

Registered in England 2356618

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