# CABLE MANAGEMENT CASE STUDIES AND INSTALLATIONS

UK OWNED UK MANUFACTURER







# CABLE MANAGEMENT SPECIALISTS

Marshall-Tufflex is the UK's leading manufacturer and supplier of cable management solutions for commercial, industrial, healthcare, education and domestic markets.

The brand is synonymous with providing high quality, innovative solutions and our products have been installed to many prestigious projects and buildings.

We have a comprehensive range of trunking solutions to suit all types of cable management applications and are committed to pioneering new and effective solutions that look good and aid speed and simplicity of installation.

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We work hard to ensure our products meet the highest standards and are totally committed to the environment and maximising our usage of recycled plastic within our manufacturing process.

Our PVC-U products are manufactured from an average of 80% recycled plastic, with some extruded products produced from 100% recycled material.



#### Site visits

For large or complex projects, our team can attend site or work with contractors and specifiers to recommend cable management solutions that could ultimately reduce installation time. We can also arrange deliveries direct to site (carriage charges apply).

#### First class customer service

Our Area Sales Managers, National Contract and Sustainability Managers and technical specialists work closely with consultants, contractors and clients in order to provide the best possible technical and sales support.

Our Customer Service Team are on hand to advise on stock availability, lead times, delivery schedules and order fulfilment.

Our office opening hours are 8am to 5pm Monday to Friday.



# **TECHNICAL SUPPORT**

Our Technical Team consists of qualified Electricians, Electrical and Mechanical Engineers with many years experience of cable management installations including an understanding of the regulations and compliancy to standards in both domestic and commercial sectors.

The team can advise on a wide range of solutions and technical issues, product standards, data cabling control and Part M compliancy.

We pride ourselves on providing and supplying our customers with specialist solutions to suit a variety of needs. We aim to complete all standard quotes within one working day, although more complex quotations such as 'take offs' can take longer.



#### Standards

#### **BSI Standards**

Marshall-Tufflex is committed to excellence and is recognised by the BSI as a firm of Assessed Capability for Quality Management Systems to BS EN ISO 9001:2015, Environmental Management Systems to BS EN ISO 14001:2015, Occupational Health and Safety Systems to BS OHSAS 18001:2007 and Energy Management Systems to BS EN ISO 50001:2011.



#### **RoHS, REACH and WEEE**

Marshall-Tufflex is committed to compliance with the RoHS, REACH and WEEE European Union Directives.

#### **Specialised solutions**

With cable management installations becoming increasingly wide ranging, our specialised solutions service helps to find the perfect answer to a specific problem that a client is facing.

Our In-house Design Team continually push the boundaries of product design and work with architects, designers and contractors to create pre-fabricated solutions for their projects, designed to save time on site.

#### **BIM (Building Information Modelling)**



BIM (Building Information Modelling) brings together all of the digital information for every component of a building in one place allowing anyone to access that data. BIM data can be used and shared to illustrate the entire building life-cycle, from feasibility, design, during construction and throughout its working life.

3D Autodesk Revit models are now available to download for Marshall-Tufflex products, with the necessary technical product data for them to be easily specified and integrated into a construction project.

Visit www.marshall-tufflex.com/bim or bimstore.co.uk

#### STERLING DATA SOLUTION FOR SWANSEA FC MEDIA CENTRE

A vast amount of data cabling is required to keep Swansea City Football Club's media centre running smoothly and Sterling Curve and Sterling XL in PVC-U have provided the perfect cable management solutions.







#### STERLING CURVE AND STERLING XL

The club's media centre is regularly used by news and media agencies, such as Sky Sports, for outside broadcasts, interviews and press conferences. The large amount of cabling required to service the centre is now managed via trunking fitted across four media rooms, which form part of the club's new Fairwood training base. The state-of-the-art facility was built in collaboration with Swansea University at a cost of £10.5million.

Sterling Curve is a sleek, three compartment, data compliant trunking with one or two curved data compartments. It has been specially designed to stop clutter, prevent dust traps and be easily cleaned. It is also easy and cost effective to install and incorporates a 25mm bend radius.

Accompanying this, Sterling XL trunking was chosen for its large capacity provided by deep, four-part compartments that can be segregated and added too. The system can be fed from larger trunking systems for increased cable distribution.

The installation was carried out by EmC Services electrical contractors based in Carmarthen, Wales.

#### CUTTING EDGE CITY COLLEGE STAYS AHEAD OF THE CURVE WITH PVC-U TRUNKING

Sterling Curve has been fitted throughout a new £13 million building at City College, Plymouth in Devon. Sterling Curve Profile 1 has been used as a dado trunking system to supply data to all teaching areas in this state-of-the-art facility and contributes to the high spec finish.

> REASSURINGLY RECYCLED OUR WHITE STERLING CURVE PROFILE 1 IS MANUFACTURED USING 66% RECYCLED MATERIAL





"I WOULD USE THIS SYSTEM AGAIN BASED ON THE FACT THAT IT IS GOOD QUALITY AND EASY TO INSTALL WHEN COMPARED TO ITS PEERS. IN TERMS OF VALUE IT ALSO STOOD UP ON PRICE." Dan Rendell, Totus Engineering

The Cat 7a compliant trunking is part of the popular and proven Sterling range. It is easy and cost effective to install and incorporates a 25mm bend radius that allows it to easily tackle corners.

"We used around 800m of white Sterling Curve in the build and it is a great product. I would use this system again based on the fact that it is good



quality and easy to install when compared to its peers. In terms of value it also stood up on price." Dan Rendell, Totus Engineering.

"We have previously used Marshall-Tufflex products and found them to be of excellent quality. The STEM Centre is a wonderful building and we are really pleased with the finish." Martin Sings, City College Plymouth.

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## WIRE BASKET AND FLOOR BOXES INSTALLED AT PRESTIGIOUS LONDON OFFICE REFURBISHMENT

Marshall-Tufflex's Fast-Coupling Wire Basket ensured a quick installation at a prestigious South London office redevelopment.

The multi-million pound Edinburgh House Project, has seen the complete refurbishment of a 1960's office block into contemporary workspace complete with a south-facing central atrium, café, seating areas and conference suite.

Thousands of metres of 65mm Fast-Coupling Wire Basket have been installed along with 700 bespoke floor boxes and accessories. All wire basket and floor boxes are exposed so needed to match the look of the high specification interior.





#### WIRE BASKET AND SPECIAL FLOOR BOXES

Electrical contractor Andrew Aird of Sapphire Mechanical & Electrical Services, said: "Our specification was for a good value product from a market-leading manufacturer. Marshall-Tufflex's products fitted the bill. In particular the floor boxes were unique as we used a grey powder coated steel option that fitted the bespoke look on this project. Fitting went very smoothly. I was also really pleased with the Wire Basket's connection system, which made it quick and easy to install."

Made from steel, with an electro-zinc finish, the basket system is strong but lightweight with a unique rippled design to enhance strength. It offers easy threading of cables and increased load capacity with resistance to flexing.

Most importantly the baskets assemble easily using integral couplers that are pre-fabricated so there is no need to screw and bolt lengths together. This super-fast installation reduces labour intensity, which was of huge value to the electrical contractors working on the re-fit. The high-quality Marshall-Tufflex floor boxes, providing power and data to desk areas, have 3mm thick standard support plates that tolerate high traffic levels, while the sub-frame does not restrict wiring space and allows for fine adjustments to be made to accommodate uneven flooring. This meant that the products could be cleverly adapted to address any challenges.

Mr Aird added: "In a couple of areas we had a challenge with minimal floor void space, but we were able to use the angled plates and shallower underfloor boxes to overcome this, which was really helpful. We would definitely use these products again."







#### **GRP TRUNKING SOLUTION FOR ICONIC BRIGHTON HOTEL**

An aggressive coastal location coupled with conservation regulations were key challenges for contractors tasked with installing a new air conditioning system at Brighton's historic Grand hotel. Marshall-Tufflex's Glass Reinforced Polyester (GRP) cable management system fitted the bill perfectly thanks to its corrosion-resistance, long-lasting durability and a heritage sensitive sand colour that perfectly complemented the building's Victorian facade.

"THE SANDY COLOUR OF THE PRODUCT ALSO FITTED PERFECTLY WITH THE BACK OF THE BUILDING AND WAS RECOMMENDED BY PLANNERS. THE SYSTEM IS OF A VERY GOOD QUALITY AND HIGHLY ROBUST." Paul Smith. Airtemp





More than 320m of perforated GRP tray with standard covers was installed on the rear of the seafront hotel to hold air conditioning pipes and cables.

Paul Smith, of air conditioning contractor Airtemp, based in St Leonards-on-Sea, explained why GRP cable containment was the ideal solution: "We could not use metal due to the hotel's position on the seafront, so the GRP provided a robust and saline-resistant solution. The sandy colour of the product also fitted perfectly with the back of the building and was recommended by planners. The system is of a very good quality and highly robust." GRP, particularly in locations exposed to extreme weather conditions and high salinity, is the perfect alternative to steel cable management. It is a corrosion-resistant, robust product specifically designed for challenging environments. It is also 40% lighter than steel, making it easier to move around site and fix, another plus point for this project given that The Grand wanted to minimise the impact of renovations on guests so ease of installation was crucial.

A spokesman for The Grand Brighton said: "We selected Marshall-Tufflex based on its top quality products and its established reputation. We are delighted with the results so far and the company went above and beyond to deliver the highest standard of customer service."

#### A STERLING JOB FOR UK'S LARGEST PRIMARY SCHOOL

Sterling Profile 1 dado system has been used extensively in the expansion of Gascoigne Primary School, Barking, Essex, the largest primary school in the UK.

The most recent development of the school is an £11m project providing a new three-storey facility to accommodate 1,500 pupils. To power this large and complex building, considerable electrical wiring was required. Sterling Profile 1 system in white was used with a charcoal main compartment cover, a versatile, cost-effective, and high-quality trunking that has a proven track-record of meeting the demands of school environments.

The contractor said: "One of the key factors in our decision was Sterling's versatility – it can be used at a 90° bend, allowing installers to easily fit it in the new school without too much doctoring. Supply chain was also very important – we used hundreds of metres at Gascoigne, with the three compartment trunking in every single room apart from the kitchen and main hall. Being the largest school in the UK this is a significant project and Sterling has more than stood up to the challenge. We have tried competitor products in the past but Marshall-Tufflex can't be beaten on quality or price."

**OUR WHITE STERLING** 

IS MANUFACTURED USING

**62% RECYCLED MATERIAL** 

PROFILE 1

**STERLING PROFILE 1** 

"ONE OF THE KEY FACTORS IN OUR DECISION WAS STERLING'S VERSATILITY - IT CAN BE USED AT A 90° BEND, ALLOWING INSTALLERS TO EASILY FIT IT IN THE NEW SCHOOL WITHOUT TOO MUCH DOCTORING." The Contractor

#### MT SUPERTUBE IN GROUND-BREAKING APPLICATION AT TATE MODERN EXTENSION

Tate Modern's new extension, the  $\pounds 260m$  Switch House, required a highly creative approach to the installation of electrical services in a concrete core that rises through the centre of the 10-storey building.





"ONLY A FLEXIBLE SOLUTION LIKE MT SUPERTUBE COULD HAVE BEEN USED TO DELIVER THIS INSTALLATION AS IT ALLOWED THE TEAM TO BEND LENGTHS OF CONDUIT TO FIT INTO POSITION AROUND THE STEELWORK AND MAXIMISED THE LENGTHS WE COULD USE WITHOUT A TERMINATION." Steve Jamieson, REL Technical Manager

# Contractors REL Building Services ruled out the use of traditional galvanised conduit as too costly and unworkable, opting instead for MT Supertube and in doing so breaking new ground in the application of the product. The cable management - carrying power, lighting, data, fire alarms, security, access control and CCTV services - was encased within the building's concrete core and delivered the architectural vision for flush-mounted electrical accessories without the use of voids for cable concealment in floors, walls or ceilings.

Steve Jamieson, REL Technical Manager, said: "Only a flexible solution like MT Supertube could have been used to deliver this installation as it allowed the team to bend lengths of conduit to fit into position around the steelwork and maximised the lengths we could use without a termination.

"MT Supertube's smooth inner surface also allows cables to be inserted using a traditional draw wire, enabling cable pulls of up to 50m in length through a tube with no fittings. This minimises the risk of cables snagging during the build or any future electrical refurbishment, which would not have been possible using a traditional galvanised conduit and fittings arrangement."

Steve Jamieson, REL Technical Manager

#### DOUBLE SOLUTION FOR PLYMOUTH UNIVERSITY RE-FIT

Marshall-Tufflex's white PVC-U Bench Trunking and Sterling Profile 1 fitted the bill perfectly when contractors refurbishing a university required a quality cable management system on a tight timescale.



#### **STERLING PROFILE 1 AND BENCH TRUNKING**



Installed by Dodd Group South in Exeter the project also required around 30m of Sterling Profile 1 perimeter trunking. This versatile solution comprises three separate compartments, ideal for delivering multiple services to the laboratory's workbenches.

Adrian Rowntree, Electrical Contracts Manager at Dodd Group South said: "The refurbishment had to be completed on a tight turnaround. We picked Marshall-Tufflex products because the finish offered is of a high standard and the products and accessories are readily available. The Bench Trunking was a special order. However, Marshall-Tufflex had stock and supplied it in a quick and timely manner.

"We found the Sterling Profile 1 Trunking easy to install which ultimately saved us time, and the construction of the products is of a high quality with a great finish. We are a regular installer and would recommend these products on any of our future projects."



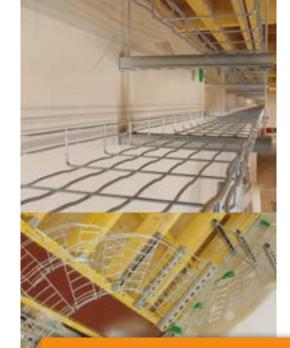
"THE REFURBISHMENT HAD TO BE COMPLETED ON A TIGHT TURNAROUND. WE PICKED MARSHALL-TUFFLEX PRODUCTS BECAUSE THE FINISH OFFERED IS OF A HIGH STANDARD AND THE PRODUCTS AND ACCESSORIES ARE READILY AVAILABLE. THE BENCH TRUNKING WAS A SPECIAL ORDER. HOWEVER, MARSHALL-TUFFLEX HAD STOCK AND SUPPLIED IT IN A QUICK AND TIMELY MANNER. " Adrian Rowntree, Dodd Group South

**62% RECYCLED MATERIAL** 

#### WIRE BASKET 'FLIES IN' AT NEW-BUILD KENT SCHOOL

School projects are under pressure to finish on time and in budget – two major factors that can be aided by Fast-Coupling Wire Basket, an extremely quick installation solution for cable management.

Installed by M&S Electrical at the new St George's C of E Primary School in Thanet, Kent, the Fast-Coupling Wire Basket System boasts a connection time of just four seconds. "I can vouch for the Fast-Coupling Wire Basket System's installation speeds," said Colin Gunn, Contracts Manager for M&S Electrical (UK) Limited. "It was amazing how quickly it fitted together."





## <sup>8</sup> WIRE BASKET

"Our crew had never used it before but got the hang of it straight away – the stuff flew in! The system was perfect for this job – the time on-site it saved was significant. Where I can, I will always use it in the future, other solutions on the market just don't compare," concluded Mr Gunn.

With no tools required and featuring an integral push-fit coupling, install times are further cut thanks to the ease with which complicated changes in direction can be overcome simply by manipulating the wire basket during fitting.

Approximately 300 lengths of Fast-Coupling Wire Basket system have been installed at St George's to transport power cables along hall ways and to classrooms.

#### **PERFECT SOLUTION ENGINEERED FOR** UNIVERSITY

Elegance 110 and Bench trunking both in aluminium were supplied with custom paint finishes in RAL 7035 Light Grey and RAL 7016 Anthracite Grey to match new benches at the University of Warwick's





" WE ALSO REQUIRED A QUICK TURNAROUND AND MARSHALL-TUFFLEX WAS ABLE TO SUPPLY THE TRUNKING WITHIN A VERY TIGHT TIMESCALE - A MAJOR FACTOR IN ENABLING US TO COMPLETE THE PROJECT ON TIME." Jonathan Meadows, University of Warwick's School of Engineering.

# ELEGANCE 110 AND BENCH TRUNKING

School of Engineering. The colour matching greatly enhanced the overall appearance of the project of two refurbished teaching laboratories, where power and data connections to laboratory workbenches were situated for computers and test equipment.

"Apart from the look and functionality, we also required a guick turnaround, and Marshall-Tufflex was able to supply the trunking within a very tight timescale - a major factor in enabling us to complete the project on time." Jonathan Meadows, Senior Electrical Technician at the School of Engineering

#### **'TWIN' TRUNKING DUO RESOLVES SIZE ISSUE AT SUNDERLAND COLLEGE**



OUR WHITE TWIN PLUS TRUNKING IS MANUFACTURED USING 69% RECYCLED MATERIAL

REASSURINGLY OUR WHITE TWIN165 RECYCLED TRUNKING IS MANUFACTURED USING 78% RECYCLED MATERIAL Twin165 trunking has come up trumps for yet another major educational new-build project, offering generous compartment sizes in a trunking profile able to accommodate height restrictions around window sills.

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TWIN PLUS AND TWIN165

Specifiers working on the new £22 million Arts and Sports Academies at Sunderland College's Bede Campus required an integrated cable management solution for both buildings.

The college had previously used Twin Plus trunking and were happy with its performance and generous, two full-sized compartment cabling capacity. But when specifying trunking to carry power and data supplies throughout the new buildings, mechanical and electrical services consultant Desco were limited by height restrictions around window sills. Twin165 solved the dilemma, offering an alternative solution for these tricky areas with a flexible, medium-sized, cable containment solution that met the specification and required cable capacity perfectly.

Tel +44 (0)1424 856600

Both Twin Plus and Twin165 were specified for the new buildings. Karen Wade, director of facilities at Sunderland College, said: "We have used Marshall-Tufflex trunking not only in the new Sports and Arts Academies' projects, but also in other smaller refurbishment projects across the estate. We find Marshall-Tufflex trunking both flexible and durable which makes it suitable for use in a busy college environment."

The products were installed by Castle Building Services, which carried out the mechanical and electrical engineering services. Although familiar with installing Marshall-Tufflex products, Castle Building Services had not worked with Twin165 before but reported that it had been very straightforward to install.

"WE FIND MARSHALL-TUFFLEX TRUNKING BOTH FLEXIBLE AND DURABLE WHICH MAKES IT SUITABLE FOR USE IN A BUSY COLLEGE ENVIRONMENT." Karen Wade, Sunderland College. I MANAGER

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#### MARSHALL-TUFFLEX TRUNKING IN DOUBLE ACT FOR EALING SCHOOLS

When specifying for two London Borough of Ealing schools, Balfour Beatty Engineering Services (BBES) required good-looking DDA compliant trunking systems with the capacity for large amounts of data and the flexibility for re-configuration. It therefore opted for Marshall-Tufflex cable management systems designed to meet the needs of growing educational establishments with large and complicated power and data supply requirements.



"MARSHALL-TUFFLEX'S TRUNKING SYSTEM HAS GONE INTO APPROXIMATELY 300 CLASSROOMS WITHIN THE SCHOOL WHERE IT SUPPLIES ALL OF THE DATA AND SOME POWER AND LIGHTING. IT LOOKS THE PART.<sup>33</sup>

Kevin O'Toole, BBES project manager.

#### TWIN 165 AND STERLING PROFILE 1 TRUNKING

Tel +44 (0)1424 856600



As a result some 9,000 linear metres of two of Twin165 and Sterling Profile 1 have been used throughout the re-building of Dormers Wells High School, Southall, and the remodelling of Cardinal Wiseman School, Greenford.

The £30m re-building of Dormers Wells High School has provided an enlarged secondary including a new ICT suite. It is here that Marshall-Tufflex's double compartment Twin165 PVC-U perimeter trunking in white has been installed with lids and DDA compliant accessory boxes in charcoal to cater for special needs students. Twin165 is a medium-sized trunking with split compartments for power and data supplies. It has far greater capacity than traditional similar-sized trunking systems plus its bend radius of 50mm, with adjustable internal and external bends for improved flexibility, enables the delivery of larger amounts of, and more complex, power and data services.



Twin165 was installed 'double-banked' to provide the three-compartmental system that was required. As the internal arrangement of the new Dormers Wells building evolved during construction, its flexibility enabled engineers to think on their feet. Twin165 has gone in to all areas, including where it is simply a futureproofed containment system ready for power and data supplies should the current layout be altered or new classrooms created.

Kevin O'Toole, BBES project manager, said: "Marshall-Tufflex's trunking system has gone into approximately 300 classrooms within the school where it supplies all of the data and some power and lighting. It looks the part."

At Cardinal Wiseman Catholic School, the chosen Marshall-Tufflex containment system was three-compartment Sterling Profile 1 perimeter trunking in white. It too was supplied with DDA compliant accessories in charcoal.

As the first phase new build was to be followed by later refurbishments to the existing school, a compatible cable management system was required. "Our brief was a three-compartment PVC-U trunking in white to give us flexibility and to avoid any potential issues. We have used Marshall-Tufflex products before, they are good products," said Tom Counihan, BBES project manager. "We have had no issues and are happy with the finish. Sterling Profile 1 has gone in successfully in phase 1 where it has been used widely throughout classrooms, offices, kitchens and the dining hall, which includes teaching areas."

### TRUNKING KEEPS PACE WITH PRESTIGIOUS DURHAM UNIVERSITY PROJECT



#### STERLING PROFILE 1 IN CHARCOAL

The impressive refurbishment of the Pace Building within Durham University's Palace Green Library

demonstrates how well-specified cable management can enhance the final look of a project. The 1960s part-listed Pace Building unites wood, exposed steelwork, concrete and glass to provide users with a beautifully executed modern, hi-tech environment in which to do research and to study.





Each of the many desks within the library have power delivered by Marshall-Tufflex's charcoal-coloured Sterling Profile 1 dado trunking where a perimeter cable management solution was required.

Project mechanical and electrical building design consultant Desco, turned to Marshall-Tufflex to provide cable containment that combined looks and performance and was in-line with the architectural aesthetic of the building. Sterling Profile delivered the required style, colour and finish for the project together with functionality: as well as looking good the 167x50mm trunking has three segregated compartments that can be further subdivided as required, making it an attractive and flexible solution.

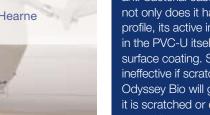
#### ODYSSEY BIO TRUNKING FOR HEAVITREE HOSPITAL, EXETER

Consultant engineers opted for Marshall-Tufflex's curved Odyssey Bio trunking in order to ensure three treatment rooms and a recovery ward within a unit at Heavitree Hospital were as hygienic as possible.

"Preventing the spread of infection is a major element of the work we do within healthcare buildings and we are increasingly looking for building products that can play a part," said Simon Cuthbert, of Terry Hearne & Partners, who designed the mechanical and electrical aspects of the project.

> " PREVENTING THE SPREAD OF INFECTION IS A MAJOR ELEMENT OF THE WORK WE DO WITHIN HEALTHCARE BUILDINGS AND WE ARE INCREASINGLY LOOKING FOR BUILDING PRODUCTS THAT CAN PLAY A PART." Simon Cuthbert, of Terry Hearne

& Partners.





#### ODYSSEY BIO TRUNKING

Silver-formulated, antimicrobial cable containment systems such as Odyssey Bio are playing an important role in fighting the spread of hospital-acquired infections with a proven method of neutralizing some of the most common and dangerous bacteria found in hospitals, care homes and other locations where infection control is an issue. Untreated trunking systems can harbour harmful bacteria and, if touched, be a source of cross-contamination.

Odyssey Bio is, however, different to other anti-bacterial cable containment systems: not only does it have a uniquely all-curved profile, its active ingredients are embodied in the PVC-U itself rather than applied as a surface coating. Surface coatings can become ineffective if scratched or damaged whilst Odyssey Bio will go on doing its job even if it is scratched or damaged. Odyssey's sleek curved lines not only look good but are also impossible to clutter, allowing the necessary regular cleansing operation to be easily maintained.

Standard Odyssey was used for the circuit, housing voice and data structured cabling in consulting rooms and associated administrative areas and antimicrobial Odyssey Bio was used in the treatment areas.

#### **Marshall-Tufflex Ltd**

Churchfields Industrial Estate Hastings East Sussex TN38 9PU United Kingdom T +44 (0)1424 856600
F +44 (0)1424 856611
E sales@marshall-tufflex.com
www.marshall-tufflex.com

**Technical Hotline:** +44 (0)1424 856688

#### Republic of Ireland & Northern Ireland distributor

Core Electrical Ltd 17b Goldenbridge Industrial Estate Tyrconnell Road, Inchicore Dublin 8

- T +353 (0)1453 7033
- **F** +353 (0)1453 8911

In pursuance of our policy of continued product improvement Marshall-Tufflex reserve the right to change the design or specification of its products without notification.





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