



MARSHALL TUFFLEX

CABLE MANAGEMENT CATALOGUE



**DELIVERING
INNOVATION
FOR 75 YEARS**

www.marshall-tufflex.com

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New products and introduction

Find out about our new products that have been developed in response to customer feedback and market demand. An introduction to Marshall-Tufflex, our customer service promise and the benefits of working with us.

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Colours and finishes

Marshall-Tufflex offer a range of colours and finishes that can provide protection as well as enhancing and personalising the installation to the customer's requirements.

Page 15

Products by application

Marshall-Tufflex cable management solutions are suitable for many different environments including: educational, office, transport and industry, data and IT and laboratory and healthcare.

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Specialised solutions

Marshall-Tufflex design and manufacturing facility for the production of bespoke, fabricated, pre-wired and pre-assembled products to meet the needs of installation and building variations.

Page 47

GRP ladder and tray

Light weight and easy to install alternatives to steel ladder, tray, duct and basket.

Range includes: GRP Ladder; GRP Tray; GRP Troughing ; Ground Ducts.

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Wire Basket

A comprehensive range of wire basket solutions for the simple routing of power and data cables.

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Underfloor to desk solutions

A range of products that provide complete power and data solutions from under the floor up to the desk.

Range includes: Powertrack; Raised floor boxes and grommets; In-screed systems; MT32 pre-wired underfloor distribution; Desk surface modules; Power and data modules.

Page 93

PowerPoles and PowerPosts

Elegant solutions for managing services to island work stations.

Range includes: Series 1 single and double-sided PowerPoles and PowerPosts and Series 2 single and double-sided PowerPoles and PowerPosts with hinged covers.

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PVC-U perimeter trunking systems

Multi-compartment dado and skirting trunking.

Range includes: Odyssey; Mono; Compact; Sterling Profile; Sterling Curve; XL Trunking; Twin165 trunking; Twin Plus; Series R; MT32 modular wiring for trunking.

PVC-U trunking

A range of general trunking options for a variety of installations.

Range includes: Mini trunking; Maxi trunking; Sceptre trunking; Cornice trunking; Sovereign Plus trunking; Bench trunking.

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Aluminium trunking systems

Multi-compartment dado, skirting and bench trunking.

Range includes: Elegance; Sterling Profile; XL Trunking; Twin Plus; Bench Trunking; MT32 modular wiring for trunking.

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Steel trunking systems

Multi-compartment dado and skirting systems. Friction-fit, screwless design.

Range includes: Series130 and 170.

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Conduit systems

A full range of PVC-U conduit and fittings. EMC and LSOH options.

Range includes: PVC-U round and oval conduit and fittings; Corrugated conduit; MT Supertube.

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Accessory boxes and enclosures

A full range of boxes and enclosures manufactured in high impact PVC-U.

Range includes: Surface boxes; Dry Lining boxes; Circular dry lining boxes; Moulded enclosures; Acoustic hoods.

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Power, voice and data accessories

13Amp wiring accessories and data outlet boxes for trunking systems.

Range includes: Sockets; Switches; Flush and surface options; UK and international boxes; MT32 Pre-wired and modular accessories for trunking.

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Fire and security systems

Products designed specifically to meet fire and security wiring regulations.

Range includes: Callmaster (red trunking and boxes); Fire barrier pads; Clear cable trunking and Firefly fire clips.

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Technical information

Product technical information, dimensions, capacities and installation information.

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Product index and general information

Index by product name, Index by size, Index by part number
Health and safety at work; Low voltage directive;
Product colour; Unexposed parts; Conditions of sale.

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DELIVERING INNOVATION

The Marshall-Tufflex brand is synonymous with providing quality, and innovative engineered solutions. We have the most comprehensive range of trunking solutions to suit all types of cable management applications and we are committed to pioneering new and effective solutions that look good and aid speed and simplicity of installation. Importantly, we also ensure our products comply to current legislation and regulations.

Within this catalogue you will find some new products and changes to existing ranges that have been made in response to feedback from you, our customers.

NEW

New ideas and product innovation

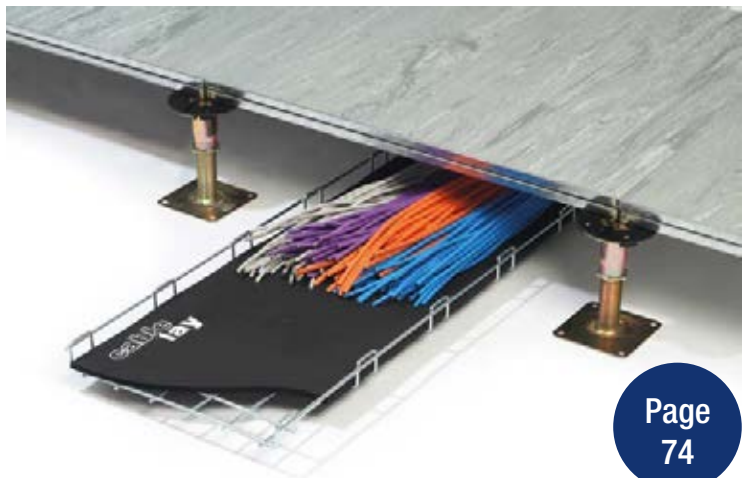
Do you have a product idea that could be developed into a useful or time saving solution to benefit electrical contractors, designers and specifiers? If so, we'd love to hear from you.

Contact our Innovation and New Product Development department at innovation@marshall-tufflex.com

Wire Basket Cablelay

To complement our range of Fast-Coupling Wire Basket we now offer two types of fire resistant matting; Cablelay Matting and Cablelay Rigid. Wire Basket Cablelay is positioned within wire basket and tray to protect cables from protrusions, sharp edges, rough and uneven surfaces, pressure points or kinking ridges and to protect the integrity of the data cables.

cable
From
Marshall
Tufflex
lay™



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Punched Mini Trunking



MMT2 and MMT4 from our mini trunking range are now offered in three variations; standard, self-fix and a new punched version. Punched mini trunking is designed for increased speed and ease of installation with secondary holes located at the top of the trunking which is perfect for mounting Firefly safety clips.

Firefly clips ensure full compliance with the latest fire regulations BS5839-1 for our popular sizes of mini, maxi and conduit products.

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Aluminium Power Modules

New to our Underfloor to Desk range this range of Aluminium Power Modules can be connected directly* to underfloor powertrack via a tap-off. Available in 3.15 or 5 Amp; Standard or Clean Earth versions with 3 or 5 metre tap-offs.

* Means of circuit protection must meet the requirements of BS 7671.



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Pre-Wired Floor Boxes



Labour costs are often the most expensive part of a project so with that in mind our new pre-wired three or four compartment raised floor boxes save time on site as they are supplied wired up and ready for installation.

Standard or Clean Earth versions are available complete with 3 metre tap-offs.

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Retro-Fit Part M Spacer

These new spacers can be added to existing installations where our ETL1WH main compartment cover is installed, to enable compliance with the Disability Discrimination Act (DDA) and Part M of The Building Regulations. The spacers are available in blue and charcoal as standard.



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6 | Recent innovations

Following the introduction of several new products over the last two years we are pleased to report that these products are now in full use within the electrical industry.

Fast Coupling Wire Basket

Our Wire Basket range is now regularly specified thanks to the impressive installation time savings available. The system was installed within a Kent School recently and saved the contractors significant time on-site.

Fast-Coupling Wire Basket is quick and easy to assemble, with no tools required thanks to an integral push-fit coupler which connects the basket lengths together and gives the system excellent strength and rigidity.

“It was amazing how quickly it fitted together”

Colin Gunn, Contracts Manager for M&S Electrical (UK) Limited

Read the case study on Page 73

Sterling Curve

“Sterling Curve perfectly fitted the nature of the installation, offering good capacity coupled with a curved profile which prevents the trunking being used as storage”

Phil Ringwood,
Contractor of Wisbech Electrical

Sterling Curve was a new addition to the popular and proven Sterling range in 2016 and is a sleek three compartment trunking featuring one or two curved data compartments to stop clutter, avoid dust traps and to make cleaning easy.

Suitable for dado and skirting application the range includes single piece moulded fittings and flat tees/angles with integral bend radius control.

Sterling Curve is already proving popular with specifiers and contractors. One of the larger projects is for MM Flowers in Cambridgeshire, where the cable management solution is being installed in new production and office facilities to deliver power and data via more than 400 data points.

Desk Modules

Designed to meet the needs of the modern workplace, this new range of pre-wired and pre-tested power and data modules is ideal for under desk mounting and was developed with flexibility and speed of installation in mind. The desk modules can be used individually or can be linked to serve multiple workstations using the latest Wieland GST18/3 connectors.

With additional circuit protection via a selection of RCBO modules there is the ability to connect direct from powertrack up to single or multiple configurations of under desk modules. The range also now includes the latest 5A USB modules for faster charging times.



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Moulded Single Piece Fittings for Sterling Profile 1 and 2

Single piece moulded couplers, end caps and internal/external bends for Profile 1 and 2 that are easier to install and give a neater finish.



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Bend Radius Control for Sterling Profile 1 and Sterling Curve

Moulded fittings with built-in bend radius control guides providing full radius control around bends for Cat 6 and above data cabling.



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Mounting Frame for Odyssey



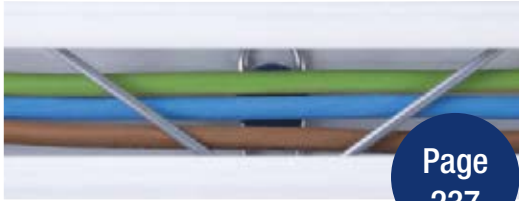
Mounting frames for Odyssey trunking providing easy access for Cat 6 and Cat 7 cables to the socket outlet point.



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Firefly Fire Clips

Firefly fire clips to prevent cables from falling in the event of a fire, helping to keep escape routes accessible. For use with mini, maxi and conduit.



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3D Printer Technology



We use the latest 3D printing technology to develop innovative product ideas, by taking product from design to market as quickly and cost-effectively as possible. 3D printing enables us to continually improve our service levels, whether that be responding to customer feedback or developing new product ideas. It has proven revolutionary and is now an integral part of our product development. We can take a product idea, design it in-house with our CAD engineers and produce a 3D prototype, enabling us to quickly evaluate the design and ensuring we invest in the very best cable management concepts and solutions.

New ideas and product innovation

Do you have a product idea that could be developed into a useful or time saving solution to benefit electrical contractors, designers and specifiers? If so, we'd love to hear from you.

Contact our Innovation and New Product Development department at innovation@marshall-tufflex.com

CABLE MANAGEMENT SPECIALISTS



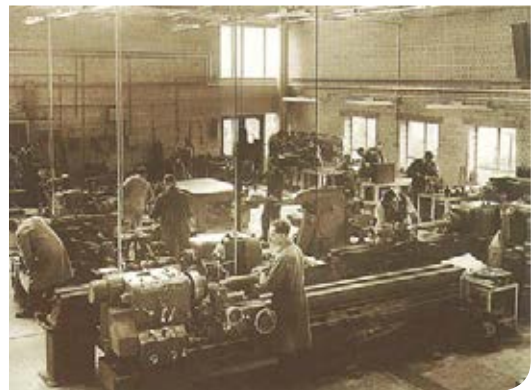
Marshall-Tufflex is the UK's leading manufacturer and supplier of cable management solutions for commercial, industrial, healthcare, education and domestic markets.

Based in Hastings, East Sussex the company was established in 1942 and is recognised throughout the industry for quality, consistency, reliability, value for money and innovation.

When you buy a Marshall-Tufflex product there are high expectations and we don't take this lightly. We work hard to ensure our products meet the highest standards and we are totally committed to customer satisfaction.

75th Anniversary

2017 is a milestone year for Marshall-Tufflex as we celebrate 75 years of manufacturing and supplying award-winning products to the UK and worldwide markets. We are extremely proud of our heritage as a family owned company and our priority for the future is to re-invest and continue producing new and effective solutions for the building industry.



Award winning customer service

Our Area Sales Managers, Project Managers and Technical specialists work closely with Electrical 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 and delivery schedules.

In 2017 Marshall-Tufflex were proud to be shortlisted in four categories at the prestigious Electrical Wholesaler Awards including Best Customer Service, Best Overall Supplier and Best Sales Representative.



Where to buy Marshall-Tufflex products

Marshall-Tufflex products are available throughout the UK via a large network of national and independent electrical wholesalers.

Marshall-Tufflex products are available internationally in over 40 different countries via our 85 international distributors, who also maintain a range of products for their customers locally. See the inside back cover of this catalogue for details of our international distributors.

Please contact our Customer Service Team on +44 (0)1424 856600 for details of your local stockist.

See the inside back cover of this catalogue for details of our International distributors.

Same day collection*



Our popular same day collection service gives our customers an unrivalled two-hour turnaround on product orders, allowing them to collect from our dedicated collection points in Manchester and London. Orders can also be collected next day from our Hastings depot.

Manchester

Europa Trading Estate,
Stoneclough Road,
Radcliffe,
Manchester
M26 1GG

London

101c Blackhorse Lane
London
E17 6DJ

Hastings

55-65 Castleham Road
St Leonards-on-Sea
TN38 9NU



- Orders can be collected two hours after order placement from Manchester and London.
- Orders placed by 3.30pm will be available for collection until 5.30pm.
- Orders received by 5pm will be ready for collection from 7am the following day.
- Orders placed by 12.30pm can be collected from 10am the next day from our Hastings depot.

* Subject to stock availability

Distributor orders

Orders can be placed directly with our Customer Services Team.

The daily cut-off time for orders to be placed is 12.30pm. Orders will be delivered on your next scheduled delivery day, providing your order is received before this time.

Need your order delivered to site? Speak to a member of our Customer Services Team.

Send your order to us at:

sales@marshall-tufflex.com
f: +44 (0)1424 856611



marshall-tufflex.com

marshall-tufflex.com is an essential resource for the cable management industry and features comprehensive technical information, BIM resources, product and installation to assist with choosing the perfect trunking system for your project.

10 | 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 and the team's expertise enables us to provide quotations for specialist solutions. We aim to complete all standard quotes within 1 working day, although more complex quotations such as 'take offs' can take longer.



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 our website www.marshall-tufflex.com or www.bimstore.co.uk



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.



Q05393 EMS 539243 OHS 622466 ENMS 602935

BEAMA

BEAMA is the independent expert knowledge base and forum for the electrotechnical industry for the UK and across Europe. Representing over 300 manufacturing companies in the electrotechnical sector, the organisation has significant influence over UK and international political, standardisation and commercial policy. We are very proud to **be an active member of BEAMA and work closely with them.**



RoHS, REACH and WEEE

Marshall-Tufflex is committed to compliance with the RoHS, REACH and WEEE European Union Directives. For further details, please visit www.marshall-tufflex.com

Our Technical Team can be contacted on +44 (0)1424 856688.

Charitable donations

Marshall-Tufflex is an established supporter of charity, donating almost half a million pounds over the last five years alone.

Our philanthropic spirit is part of our heritage and ingrained into the culture and we are very proud to support local and national charities through regular staff fundraising efforts and company donations.

In 1962 our Company founder Harold Cirket, established a charitable Trust, the Charlotte Marshall Charitable Trust, which the company stills supports today through a mix of dividend payments and donations.



Marshall-Tufflex and the community



Marshall-Tufflex is committed to community engagement; we believe that it is our corporate responsibility to be socially aware and to give back to the local area.

MT in the Community is a programme to drive and encourage engagement across a range of community activities. As part of the programme we encourage our staff to volunteer and engage with activities that aid local development and growth within our community and the wider environment we all inhabit.

We are continually building relationships with local educational establishments, from schools to universities. Marshall-Tufflex also supports an active Apprenticeship Programme, allowing people to grow and develop with the business and deliver the skills needed for tomorrow.

Sustainability and Standards

Environmental

Marshall-Tufflex actively pursues a comprehensive programme to develop formulations based on environmentally acceptable materials, whilst still maintaining and, where possible, improving on long-term performance properties.

Recycling

Marshall-Tufflex source and include high quality recycled PVC-U within a number of its product ranges. We are active in and financially support various industry bodies in driving the industry in the use and control of PVC-U based materials, with the aim of increasing awareness and use of recycled material. We also recycle paper, cardboard, polythene, wood, metal, print cartridges and aluminium cans.

Vinyl Plus

The company is dedicated and actively contributing to meeting the requirements of Vinyl Plus and its ongoing programme of Voluntary Commitment to the European Commission.



Standard colour

The standard colour for each Marshall-Tufflex range is shown within each relevant product information section, although solid white RAL 9003 is our most popular colour option.

The below table identifies the relevant RAL colour reference for all our standard colour options, dependent on product range. However we would be happy to quote for any other colour requirements, please see the Special colours and finishes section on page 13.

Standard Colours	
WH	BK
WH: White BK: Black	



Material	Standard colour	Colour code suffix	RAL
PVC-U	Solid White	WH	9003
	Black	BK	9005
	Charcoal	CH	7021
	Red	RD	3020
	Brown	BN	8017
Aluminium	Silver Grey	SG	9006
	White	WH	9016
Steel	White	WH	9010
GRP	Light Grey	N/A	7032

Please note: due to different processes and materials utilised, it may not always be possible to obtain an exact colour match between the extruded and moulded product.



Special colours and finishes



To help enhance the style of an installation, different variations of solid colour are sometimes required.

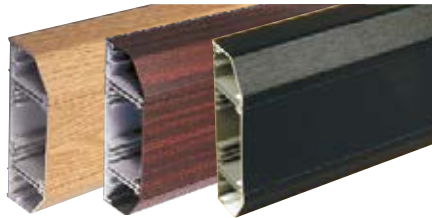
We can provide special colours in either a solid PVC-U solution or a painted solution dependent on your client's preference. All special colour requirements will need to be specified as a RAL colour.

Please note: due to different processes and materials utilised, it may not always be possible to obtain an exact colour match between the extruded and moulded product.

Woodgrain finishes

For a truly authentic look, we are able to supply a quotation for a range of woodgrain finishes for trunking and fittings in Light Oak, Mahogany and Ebony that provide interior designers with the scope to offer a more traditional feel. Colours can be indicated by replacing the WH colour code with the specific woodgrain code required.

Woodgrain finish		
LO	MY	EY
LO: Light oak MY: Mahogany EY: Ebony		



Please note: these colours and finishes are made to order and therefore are subject to set up charges, minimum order quantities and a longer lead time. For more information and a quotation contact our Technical Team on +44 (0)1424 856688.

Copper Screening

A special conductive spray coating is applied to the relevant section of the trunking or fittings to screen data cables against EMI interference with no reduction in cable capacity.

Marshall-Tufflex offers a standard range of copper screened products within selected PVC-U perimeter trunking systems which are shown within this catalogue and are held in stock.

If you have a requirement for products to be copper screened that are not part of our standard range, please contact our Technical Team on +44 (0)1424 856688. Please note that non standard products are made to order and therefore are subject to set up charges and a longer lead time.



Bio antimicrobial trunking



Where hygiene is a priority, Marshall-Tufflex has a solution with integral antimicrobial properties that can be incorporated within the PVC-U perimeter trunking and deliver ongoing antimicrobial protection that prevents 99.9% of harmful bacteria.



Because the Marshall-Tufflex Bio trunking solution is integral to the PVC-U material, there is no reduction in effectiveness of the trunking throughout its life – even if it is scratched or damaged.

We hold stock of key Odyssey and Sterling Curve Profile 1 trunking components with Bio antimicrobial protection due to its popularity. The following trunking systems are also available in Bio but not available as standard:

- Bench trunking
- Compact trunking
- Mono Plus 20 trunking
- Sterling Profile
- Twin Plus trunking
- XL trunking

Please note: non standard products are made to order and therefore are subject to set up charges and a longer lead time. For more information and a quotation contact our Technical Team on +44 (0)1424 856688.

Look for these quick reference symbols within the catalogue



Indicates that a product can be used in conjunction with MT32 Prefabricated Wiring.



Indicates that a product is compliant up to a specific cable category.



Indicates that a system can be manufactured with antimicrobial properties.



Indicates that a system can have a conductive spray coating to protect against EMI interference.

PRODUCTS BY APPLICATION

Marshall-Tufflex cable management solutions are suitable to many different environments including: education, office, transport, industry, data, laboratory and healthcare.



CABLE MANAGEMENT FOR EDUCATIONAL ENVIRONMENTS

Marshall-Tufflex has been supplying trunking systems to the UK's educational facilities for over thirty years. We are dedicated to ensuring that our comprehensive range of products meets the needs of clients, designers and contractors working in the education sector.

We understand that there is increasing demand for cable management products that enable the distribution of power and high speed data services. As the largest UK manufacturer of cable management products, we apply our vast experience and technical knowledge to not only meet these requirements but to provide future proof cable management solutions.



What we offer

- Cable management products that are already proven and have been selected for use in the classrooms, workshops and offices in the education sector.
- A comprehensive range of trunking systems available in PVC-U, aluminium and steel, combining the latest technology in plug & play power connection to reduce installation time on site.
- Designs, dimensions and cable capacities to meet the latest standards and to accommodate building designs and construction parameters.
- Products to comply with Part M of the UK Building Regulations (Disability Discrimination Act for Visual Impairment).
- Antimicrobial trunking systems with an integral formulation preventing 99.9% of harmful bacterial growth.
- Stylish and practical trunking systems that complement modern classroom environments.
- Ever growing range of Level 2 BIM models and data.

PVC-U trunking

Compact 1 and 2

130 x 50mm

A compact two compartment dado and skirting system suited to fit within areas that have trunking height restrictions, for example to negotiate radiators or window sills.



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Mono Plus 20 and 30

140 x 50mm / 155 x 55mm

An economical and stylish three compartment dado trunking for use where space is limited. Mono Plus has one piece fittings with a single lid for improved security.



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Sterling Profile 1, 2 and 3

167 x 50mm

A popular stylish medium sized trunking system for dado and skirting application with three segregated compartments. Sterling Profile 1 has been tried and tested within the educational environment over many years.



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Sterling Curve

167 x 50mm

Sterling Curve is a stylish medium sized trunking system for dado and skirting application with three segregated compartments.

Sterling Curve Profile 1 has curved outer compartments designed to stop clutter, avoid dust traps and make cleaning easy.



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Odyssey

180 x 57mm

Curved profile dado trunking with one main compartment and two smaller compartments designed specifically for heavy traffic areas such as classrooms. Odyssey's curved profile is designed to prohibit clutter, avoid dust traps and makes cleaning easy. Compartments can be subdivided and screened if required.



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Twin Plus

210 x 57mm

An attractive high capacity segregated two compartment containment system which is ideal for schools colleges and universities requiring large quantities of Cat 7 data cabling throughout classrooms and computer suites.



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Twin165

160 x 65mm

A mid-size, two-compartment system, Twin165 offers high capacity for Cat 6, Cat 6a and Cat 7 data cabling for specification in educational environments.



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Bench trunking

105 x 105mm

An easy to install robust, angled trunking that can be mounted directly on workbenches or angled under shelving. Compartment can be subdivided and screened if required.



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Aluminium trunking systems

Elegance 110

110 x 55mm

An impact resistant compact rectangular dado trunking system with a single lid cover. Elegance 110 is an excellent choice for educational areas requiring a stylish yet robust trunking system, particularly effective where a high quality of screening performance and security is required.



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Elegance 170

170 x 55mm

An attractive, light to handle, rectangular dado trunking system with a single lid cover. Elegance 170 is particularly suited to workshop or laboratory installations where extra mechanical strength is necessary. Can be single, twin or three compartment with easy to fit dividing fillets with pre-punched knockouts.



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Twin Plus

210 x 57mm

A strong and attractive high capacity segregated two compartment containment system. Ideal for schools, colleges and universities requiring large quantities of Cat 7 data cabling throughout classrooms and computer suites.

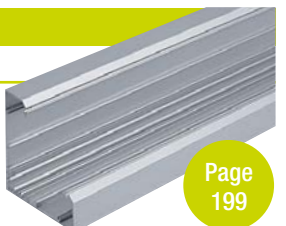


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Bench trunking

105 x 105mm

An easy to install, robust, angled trunking that can be mounted directly on laboratory and medical workbenches or angled under shelving. Compartment can be subdivided if required.



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Case Study 1

Elegance 170 goes to the top of the class



Elegance 170 aluminium profile has scored top marks after proving perfect for a brand new school in Belfast.

Elegance 170 Aluminium (170x55mm) is hard-wearing, good-looking and lightweight, making it perfect for educational and office projects where a robust yet stylish cable management solution with extra mechanical strength and a higher cable capacity is required.

The profile ticked all the boxes for the new Bunscoil Bheann Mhadagain School in Belfast. Supplied by Core Electrical (NI), working with consultants JCP Consulting and electrical contractors Norlect Engineering, the Elegance 170 system was also praised for being Cat 7 and Part M compliant.

“The contractor and consultant needed a system that could be installed quickly while still delivering the highest standards of quality. The Elegance 170 range was perfect,” said Gerry McKeith, Core Electrical (NI). “We believe this is the first school project in Northern Ireland to use Elegance 170 but it certainly won’t be the last. Since supplying Marshall-Tufflex for Bunscoil Bheann Mhadagain we have been successful in obtaining orders and supplying Elegance 110 and 170 to a number of schools and we’re quoting for more schools and commercial projects.”

Case Study 2

‘Twin’ trunking duo resolves size issue at Sunderland College



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.

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 was 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 was 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.

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.

CABLE MANAGEMENT FOR OFFICE ENVIRONMENTS

Marshall-Tufflex has a wide range of cable management products in a variety of materials which are designed to transport power and data throughout office environments. We are dedicated to ensuring that our comprehensive range of products meets the needs of clients, designers and contractors working in the commercial sector.



What we offer

- A comprehensive range of underfloor to desk cable management and prefabricated wiring systems developed for fast, easy and adaptable installation.
- MT32 prefabricated technology that provides seamless connection all the way from the incoming feed to the desktop.
- PowerPoles and PowerPosts are a practical, elegant and efficient solution for the management of power, data and communication services to island work stations.
- Practical trunking solutions in PVC-U, steel and aluminium including features such as Part M compliance, copper screening and data control bends.

Underfloor to desk solutions

Powertrack

Powertrack is a comprehensive range of underfloor 63Amp powertrack that comes complete with pre-assembled coupler, end cap and floor mounting brackets.



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Raised floor boxes

A high quality range of raised floor boxes to provide power and data to desks within the modern office environment. Available as standard or heavy duty versions. Pre-wired versions are available for speed and ease of installation.



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In-screed flooring systems

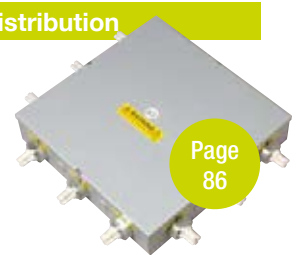
A range of floor outlet boxes, fittings and plates in galvanised steel, with choice of PVC-U or steel ducting.



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MT32 Pre-wired underfloor distribution

A prefabricated wiring system that incorporates 32Amp plug and play connector technology. The system provides a range of pre-wired, pre-tested products which can be used alone or in conjunction with powertrack, desk modules and other pre-wired systems to accommodate various underfloor layout options.



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Desk surface units

A range of surface mounted power and data modules for use with office furniture. See page 78 for a typical office installation using our underfloor to desk solutions.



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PowerPoles and PowerPosts

PowerPoles are a practical and elegant solution for the management of power, data and communication services to island work stations. PowerPoles are suitable for suspended and solid ceiling applications whilst PowerPosts are suitable for all floor applications. Single and double sided options are available.



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PVC-U trunking

Sterling Profile 1, 2 and 3

167 x 50mm

A popular stylish medium sized trunking system for dado and skirting application with three segregated compartments. Sterling Profile 1 has been tried and tested within the office environment over many years. Outer compartments can be subdivided and screened if required.



Page 122

Twin Plus

210 x 57mm

An attractive high capacity segregated two compartment containment system which is ideal for carrying power and data services. Compartments can be subdivided and screened if required.



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Sterling Curve

167 x 50mm

Sterling Curve is a stylish medium sized trunking system for dado and skirting application with three segregated compartments. Sterling Curve Profile 1 has curved outer compartments designed to stop clutter, avoid dust traps and make cleaning easy. Compartments can be subdivided and screened if required.

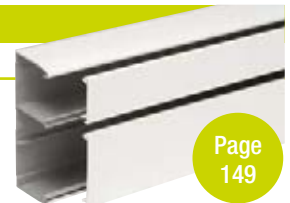


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Twin165

160 x 65mm

A mid-size, two-compartment system, Twin165 offers high capacity for Cat 6, Cat 6a and Cat 7 data cabling for specification in office environments.



Page 149

Odyssey

180 x 57mm

Curved profile dado trunking with one main compartment and two smaller compartments designed specifically for heavy traffic areas. Odyssey's completely curved profile is designed to prohibit clutter, avoid dust traps and makes cleaning easy. Compartments can be subdivided and screened if required.



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Aluminium trunking systems

Sterling Profile 3001 - 3003

167 x 50mm

A popular and stylish trunking system that offers a variety of trunking profiles with three separate compartments and individual covers for each compartment for ease of access.



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184

Twin Plus

210 x 57mm

A strong and attractive high capacity segregated two compartment containment system which is ideal for offices requiring large quantities of Cat 7 data cabling.



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Elegance 170

170 x 55mm

An attractive, light to handle, rectangular dado trunking system with a single lid cover. Elegance 170 has mechanical strength and impact-resistance that is superior to steel. Can be single, twin or three compartment with easy to fit dividing fillets with pre-punched knockouts.



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Steel trunking systems

System 130

130 x 63mm

Steel System 130 is a stylish compact pre-galvanised trunking system with extra depth and a resilient white powder-coat finish that helps to prevent smearing and marking.



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System 170

170 x 63mm

Steel System 170 is a mid-sized pre-galvanised trunking system with extra depth and a resilient white powder-coat finish that helps to prevent smearing and marking.



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Case Study 1

Nice and easy with Twin165 Trunking



Twin165 data compliant trunking system had no trouble impressing both Ormiston Victory Academy and the Dodd Group's project team of its specification merits for the academy's purpose-built building in Norwich.

"It ticked all the boxes and that of our client," said Alan Hensby of Dodd Group Eastern, electrical and mechanical contractor for the project. "As a trust, Ormiston Victory Academy took an active role in selecting products for the new school building, which included looking at samples."

"Marshall-Tufflex came out best when we looked at different cable management options & it provided value for money compared with the competition," added Mr Hensby. "We particularly liked the simplicity of its design and ease of installation when up against time. Some systems we considered were fragmented and not tamper-proof. Being a tamper-proof, all-in-one unit with double compartments, Twin165 gave us the depth of capacity we required without being over-bearing in width, easily fitting spaces around windows & radiators. It also gave us flexibility for future-proofing without disturbing the fabric of the building. We like nice and easy trunking!"

Some 284 lengths of Twin165 in white with grey lids to meet DDA requirements were installed within the new academy building by Electrical Engineering Services, King's Lynn.

Case Study 2

Marshall-Tufflex trunking keeps Pace with prestigious project



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.

The second key requirement of the project was an underfloor power delivery solution suited to the open plan environment of the building. For this Marshall-Tufflex's in-screed floor distribution system was specified.

CABLE MANAGEMENT FOR TRANSPORT AND INDUSTRIAL ENVIRONMENTS

Marshall-Tufflex has a wide range of cable management products in a variety of materials which are designed to suit specific on site or installation needs, where particular hazards or harsh environments require a specialised solution. We are dedicated to ensuring that our comprehensive range of products meets the needs of clients, designers and contractors working in the transport and industrial sector.



**Marshall-Tufflex is registered with the RISQS
Railway Industry Supplier Qualification scheme.**

What is RISQS?

RISQS, formerly known as Achilles Link-up, has been developed to provide a service for the qualification of suppliers for all products and services that are procured by the industry. RISQS supports Network Rail, LUL/Transport for London, train operators and other rail products and services providers in the management of supply chain risk. RISQS is an independent, third party qualification assessment of a supplier's capability to supply products and services.

GRP cable management systems

Glass Reinforced Polyester (GRP) cable management systems are well suited to aggressive environments, such as extreme weather or high temperatures.

The systems are extremely robust, considerably lighter than traditional metal systems, and have excellent resistance against fire and corrosion resulting in a very long life span. GRP systems have a large cable capacity, and offer fast and flexible installation solutions, with the ability of on-site assembly and configuration. Marshall-Tufflex can offer a wide range of GRP systems including trays, ladders, ground ducts, troughing, accessories and fittings, fixings and supports.

- Large cable capacity
- No need for painting means low maintenance costs
- Self extinguishing, without toxic fumes
- Zero Halogen
- Resistant to temperatures from -80° to +130°
- Excellent cable protection



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GRP vs. Steel

GRP is 40% lighter

Completely corrosion resistant. No rusting even when in contact with salt spray, H25, acid built up from exhaust gases, or brake dust along roads and railways

Fast installation with fewer fasteners

Easy to cut and drill

Slow rate of heat transfer

Earthing not required

Antimagnetic and therefore resistant to electromagnetic pulses

Lower life cycle cost

MT Supertube LSOH Conduit: A time saving alternative to steel conduit



MT Supertube is a three-layer, heavy gauge, impact-resistant conduit giving excellent EMI properties. Available with steel or polycarbonate fittings, MT Supertube is manufactured to comply with BS EN 50086.

- LSOH Polyethylene-coated aluminium
- Can be formed by hand and no bending spring is required
- No special tools necessary
- MT Supertube FR Plus version is fire tested in accordance with, and meets criteria for, Category 'EQ/I' of the London Underground Limited Engineering Standard 2-01001-002: Issue A1:December 2003

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Contractor cost and labour saving example (based on contractor purchase price)

Costs calculated on using 100m of 20mm conduit with 8 off 90° bends and estimated manpower costs of £30 per hour.

Galvanised steel conduit		MT Supertube coiled conduit	
Material Cost	£2.20 per metre + fittings = £230	Material Cost	£2.62 per metre + fittings = £288.71
Labour @ 30 mins / metre	2 metres / hour	Labour @ 10 mins / metre	6 metres / hour
50 hours @ £30	£1,500	16.67 hours @ £30	£500
Galvanised steel overall costs	£1,730	MT Supertube overall costs	£788.71

The savings on this job amounts to £941.29 – 54% cheaper than galvanised steel.

These figures are based on Marshall-Tufflex trade list price 1st February 2017 (for MT Supertube) and quoted wholesaler prices (for galvanised steel conduit).

Steel trunking systems

Steel has a mechanical strength that makes it a robust and durable option for public areas where there is a high footfall. Our steel trunking provides specifiers, contractors and end-users with reliable, practical systems with hard-wearing, clean lines and all the advantages of inherent LSOH and screening properties.

The extra depth provided by Marshall-Tufflex steel perimeter trunking systems offer increased capacity for power and data services. All earth bondings are 'friction fit' to eliminate the need for unsightly screw fixings.

- Easy to install steel trunking system
- Well known, proven and stylish design
- Increased space internally
- Lighter weight to make installation easier
- Simpler to cut

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Aluminium trunking systems

Aluminium perimeter trunking systems provide the specifier, contractor and end-user with elegant, stream-lined containment that offers the practical advantages of inherent LSOH and screening properties making it ideal for industrial environments.

Aluminium is light to handle with a mechanical strength and impact-resistance that is superior to steel. Extruded sections provide attractive profiles and products are finished with a high quality, powder-coat that provides a blemish-resistant surface.

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Case Study 1

Marshall-Tufflex keeps London Underground in the picture



Marshall-Tufflex's MT Supertube FR, formulated for applications where fire safety regulations are at their most stringent, was a key component in the upgrade of London Underground's Victoria Line OPO CCTV camera system, with more than five miles (8,100m) of the high-performance conduit installed.

Manufactured from a special three-layer LSOH conduit, MT Supertube FR delivered a superior design solution to protect cables that transmit images of the platforms to the train driver. MT Supertube FR is an alternative to steel trunking, offering much faster fit times. It is supplied in coils of up to 100m and therefore produces little wastage from cut lengths.

For the London Underground project MT Supertube FR's EMC shielding capabilities were of paramount importance, as the specifying contractor explained: "We chose MT Supertube for its ability to provide EMC shielding. It has proved a better way to segregate cables, which is greatly beneficial in London Underground applications where there are a lot of unknown cables to contend with."

MT Supertube FR meets London Underground's fire and materials specification, having undergone a series of tests conducted against the rigorous requirements set out by London Underground Ltd.

A Marshall-Tufflex spokesman said: "Having product specified for use in the London Underground system is of immense importance to us and a big rubber stamp for MT Supertube FR. The Underground is a demanding environment that calls for products of the highest calibre and performance."

Case Study 2

GRP cable management proves perfect solution for Jersey's historic rail tunnels



High humidity levels and potential fire risks posed a cable management specification challenge during work at Jersey's famous St Aubin's war-time tunnels.

Corroded casing needed replacing within the tunnels because it was considered a fire risk and required frequent repair due to high humidity levels. GRP cable management proved the perfect solution thanks to its corrosion resistance and excellent fire safety credentials.

For this project GRP tray was suspended from ceilings to carry a wide range of cables, including PVC/SWA sub main, lighting SY sub-circuit, fire alarm and low voltage signal cables. Light fittings have also been fixed to the trunking's underside.

Specifier, Dave Atkinson from States of Jersey, explained why GRP was ideal for this challenging environment: "The humidity level in the tunnels at certain times of the year is very high due to water permeating through the hillside and concrete structure. Because of this moisture, the existing electrical installation had corroded.

"We chose GRP tray for the upgrade as it's resistant to humidity and fire. Apart from putting an end to the corrosion issues, St Aubin's needed a solution that would improve safety for tunnel users while also allowing maintenance teams to reduce testing regimes – something that was taking up a lot of time. Thanks its fire resistant credentials, the use of GRP has meant that periodic testing is now sufficient, in-line with BS 5839," concluded Mr Atkinson.

Case Study 3

Marshall-Tufflex systems ensure no delays at Dublin Airport passenger terminal



Behind the scenes at Terminal 2, the flagship project of the redevelopment of Dublin Airport, are thousands of metres of Marshall-Tufflex trunking products, selected for their ease and speed of installation, good looks and short lead times.

Substantial amounts of three-layer LSOH MT Supertube conduit are installed at high level and within ceilings in the main Terminal building, satisfying the project consultant's requirement for mechanical protection/segregation and a good architectural aesthetic.

Client Dublin Airport Authority had originally specified steel conduit but the project's engineering contractor, Mercury Engineering, gained agreement for a specification change to MT Supertube. A spokesman said: "It was a really tight construction programme which I knew would benefit from the time-saving features of certain Marshall-Tufflex products. MT Supertube offered two specific advantages over steel conduit. Not only is it much quicker to install, delivering significant labour saving benefits, it is also much lighter. This meant that when installed at height it was a one man, rather than a two man, lift."

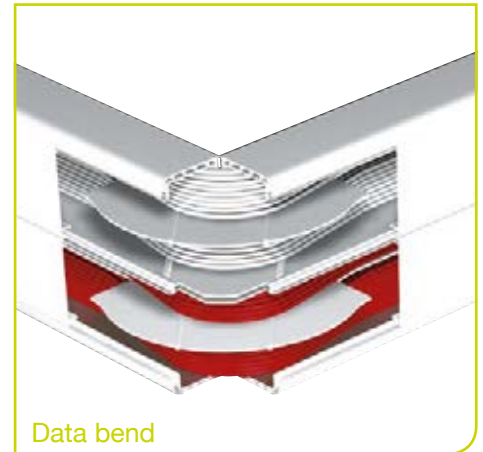
Thousands of metres of Marshall-Tufflex's unique, all-curved profile trunking Odyssey were also installed in some 150 offices within Terminal 2. The good-looking Cat 6 compliant profile was also installed in passenger booking kiosks, immigration booths, car rental offices and other front-of-house desk areas.

All Marshall-Tufflex products were supplied by its sole Irish distributor, Core Electrical Ltd.

CABLE MANAGEMENT FOR DATA INSTALLATIONS

Marshall-Tufflex cable management solutions are designed to accommodate the increasing performance levels of current and future data networks. It is important that cable containment systems measure up to the demand and offer the flexibility for reconfiguration whilst having a large data capacity to allow for future data requirements.

Decisions on the right system for any application are based on many factors. Marshall-Tufflex has a wide selection of data compliant perimeter trunking systems, so whatever your application, we are confident we have a solution for you.


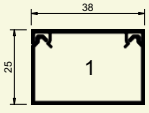

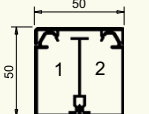

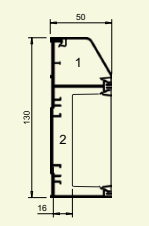

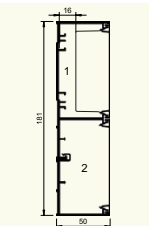
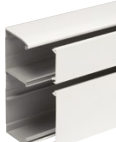
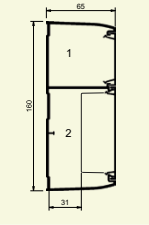

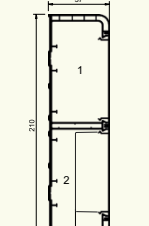


What we offer

- Bend radius controls.
- Steel screening divider to BS EN 50174-2: 2009+A2:2014.
- 50mm power/data separation to BS EN 50174-2: 2009+A2:2014.
- Full compartment copper spray screening (to assist in meeting EMC Directive) with NO reduction of compartment capacity.
- Adjustable depth data boxes and frames.
- Accessories to accommodate LJ6 (6C) and Euromod data modules.
- Trunking systems (Sterling and Sterling XL) that can be extended to accommodate any number of data cables.

1 compartment trunking

2 compartment trunking


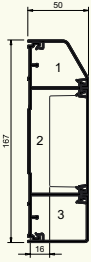

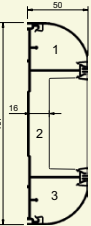
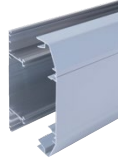
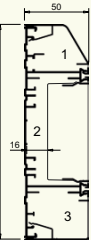
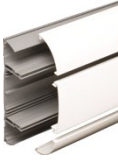
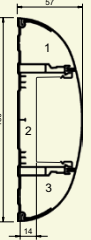
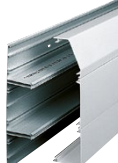
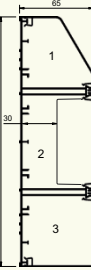
System		Dimensions		Cable Capacity based on typical values for Ø6.5mm, Ø7.0mm and Ø8.4mm data cables*					
MINI PVC-U			MMT4: 38 x 25mm	Comp 1					
				MMT4	Ø6.5mm Ø7.0mm Ø8.4mm	10 8 6			
MAXI PVC-U			MTRS50: 50 x 50mm	Total (No dividers)					
			MTRS75: 75 x 75mm	With dividers					
				COMP 1	COMP 2	COMP 3			
MTRS50	Ø6.5mm Ø7.0mm Ø8.4mm	28 23 16	13 11 7	13 11 7	- - -				
MTRS75	Ø6.5mm Ø7.0mm Ø8.4mm	66 55 38	31 26 18	31 26 18	- - -				
MTRS100: 100 x 100mm	Ø6.5mm Ø7.0mm Ø8.4mm	122 102 71	33 28 19	20 17 12	57 48 33				
COMPACT 1 & 2 PVC-U			Compact 1: 130 x 50mm	Comp 1		Comp 2			
			Compact 2: 130 x 50mm (Compact 1)			NO BOX	WITH BOX		
Compact 1	Ø6.5mm Ø7.0mm Ø8.4mm	18 15 10	53 44 31	21 17 12					
Compact 2	Ø6.5mm Ø7.0mm Ø8.4mm	21 18 12	53 44 31	21 17 12					
COMPACT 3 PVC-U			Compact 3: 181 x 50mm	Comp 1		Comp 2			
						NO BOX	WITH BOX	NO BOX	WITH BOX
Compact 3	Ø6.5mm Ø7.0mm Ø8.4mm	53 44 31	21 18 12	52 43 30	20 17 12				
TWIN165 PVC-U			160x65mm	Comp 1		Comp 2			
						NO BOX	WITH BOX	NO BOX	WITH BOX
Twin165	Ø6.5mm Ø7.0mm Ø8.4mm	46 38 27	76 63 44	43 36 25					
TWIN PLUS PVC-U & ALUMINIUM			210 x 57mm	Comp 1		Comp 2			
						NO BOX	WITH BOX	NO BOX	WITH BOX
Twin Plus	Ø6.5mm Ø7.0mm Ø8.4mm	66 56 39	34 28 20	66 56 39	34 28 20				

*All calculations allow for a 45% space factor

	Bend radius control	Internal Bend	External Bend	Flat Tee	Flat Angle	Slow Bend	For PVC-U ranges only	
							Steel insert	Copper spray
	50mm COMPLIANT UP TO CAT 7A						X	X
		Moulded	Moulded	Moulded	Moulded	Special#		
	25mm & 50mm COMPLIANT UP TO CAT 7A						X	X (Dividing fillet can be copper sprayed)
		Moulded	Moulded	Fabricated	Moulded	Special#		
		Fabricated	Fabricated	Fabricated	Moulded	Special#		
	50mm COMPLIANT UP TO CAT 7A						✓	Please contact the Technical Team on +44 (0)1424 856688 for options regarding special screening requirements
		Moulded	Moulded	Fabricated	Fabricated	Special#		
		Moulded	Moulded	Fabricated	Fabricated	Special#		
	50mm COMPLIANT UP TO CAT 7A						✓	✓
		Moulded	Moulded	Fabricated	Fabricated	Special#		
	25mm & 50mm COMPLIANT UP TO CAT 7A						✓	✓
		Moulded	Moulded	Fabricated	Fabricated	Special#		
	25mm & 50mm COMPLIANT UP TO CAT 7A						✓	✓
		Moulded	Moulded	Fabricated	Moulded	Special#		

These products are made to special order and may be subject to minimum order quantities and longer lead times.

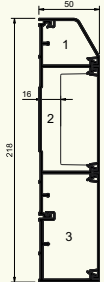
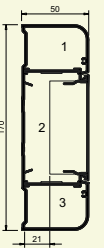
* For made to order fittings to meet Cat 7a requirements please contact our Technical Team on +44 (0)1424 856688

System		Dimensions	Cable Capacity based on typical values for Ø6.5mm, Ø7.0mm and Ø8.4mm data cables*					
STERLING PROFILE 1, 2 & 3 PVC-U 	 (Sterling Profile 2)	167 x 50mm		Comp 1	Comp 2		Comp 3	
					NO BOX	WITH BOX		
			Profile 1	Ø6.5mm Ø7.0mm Ø8.4mm	18 15 10	54 45 31	19 16 11	18 15 10
			Profile 2	Ø6.5mm Ø7.0mm Ø8.4mm	18 15 10	54 45 31	19 16 11	22 18 13
			Profile 3	Ø6.5mm Ø7.0mm Ø8.4mm	22 18 13	54 45 31	19 16 11	22 18 13
STERLING CURVE PROFILE 1 & 2 PVC-U 	 (Sterling Curve Profile 1)	167 x 50mm		Comp 1	Comp 2		Comp 3	
					NO BOX	WITH BOX		
			Profile 1	Ø6.5mm Ø7.0mm Ø8.4mm	16 14 10	54 45 31	19 16 11	16 14 10
			Profile 2	Ø6.5mm Ø7.0mm Ø8.4mm	16 14 10	54 45 31	19 16 11	22 18 13
STERLING PROFILE 3001, 3002 & 3003 ALUMINIUM 	 (Sterling Profile 3002)	167 x 50mm		Comp 1	Comp 2		Comp 3	
					NO BOX	WITH BOX		
			3001	Ø6.5mm Ø7.0mm Ø8.4mm	15 12 9	53 44 31	21 18 12	16 14 9
			3002	Ø6.5mm Ø7.0mm Ø8.4mm	15 12 9	53 44 31	21 18 12	20 16 11
			3003	Ø6.5mm Ø7.0mm Ø8.4mm	18 15 11	53 44 31	21 18 12	20 16 11
ODYSSEY PVC-U 		190 x 57mm		Comp 1	Comp 2		Comp 3	
					NO BOX	WITH BOX		
			Odyssey	Ø6.5mm Ø7.0mm Ø8.4mm	18 15 10	56 47 33	17 14 10	18 15 10
XL PVC-U & ALUMINIUM 	 (XL202)	220x65mm		Comp 1	Comp 2		Comp 3	
					NO BOX	WITH BOX		
			XL201	Ø6.5mm Ø7.0mm Ø8.4mm	39 33 23	67 56 39	35 29 20	39 33 23
			XL202	Ø6.5mm Ø7.0mm Ø8.4mm	39 33 23	67 56 39	35 29 20	49 41 29
			XL203	Ø6.5mm Ø7.0mm Ø8.4mm	49 41 29	67 56 39	35 29 20	49 41 29

*All calculations allow for a 45% space factor

	Bend radius control	Internal Bend	External Bend	Flat Tee	Flat Angle	Slow Bend	For PVC-U ranges only	
							Steel insert	Copper spray
	25mm & 50mm <small>COMPLIANT UP TO</small> CAT 7A							
		Moulded	Moulded	Moulded	Moulded	Special#	✓	✓
		Moulded	Moulded	Fabricated	Fabricated	Special#		
	Moulded	Moulded	Fabricated	Fabricated	Special#			
	25mm & 50mm <small>COMPLIANT UP TO</small> CAT 7A							
		Moulded	Moulded	Moulded	Moulded	N/A†	✓	✓
	Moulded	Moulded	Moulded	Moulded	N/A†			
	25mm & 50mm <small>COMPLIANT UP TO</small> CAT 7A						N/A	N/A
		Moulded	Moulded	Fabricated	Fabricated	Special#		
		Moulded	Moulded	Fabricated	Fabricated	Special#		
	25mm, 50mm & 65mm <small>COMPLIANT UP TO</small> CAT 7A						✓	✓
		Moulded	Moulded	Moulded	Moulded	N/A†		
	25mm & 50mm <small>COMPLIANT UP TO</small> CAT 7A						✓	Please contact the Technical Team on +44 (0)1424 856688 for options regarding special screening requirements
		Moulded	Moulded	Fabricated	Fabricated	Special#		
		Moulded	Moulded	Fabricated	Fabricated	Special#		
		Moulded	Moulded	Fabricated	Fabricated	Special#		

These products are made to special order and may be subject to minimum order quantities and longer lead times.
 † Slow bends are not required as built-in cable guides within fittings are standard.
 * For made to order fittings to meet Cat 7a requirements please contact our Technical Team on +44 (0)1424 856688

System	Dimensions	Cable Capacity								
		based on typical values for Ø6.5mm, Ø7.0mm and Ø8.4mm data cables*								
STERLING PROFILE 4-13 PVC-U	 Profile 4 & 5: 218 x 50mm Profile 6: 269 x 50mm Profile 11, 12 & 13: 255 x 50mm (Sterling Profile 4)	Profile 4 Ø6.5mm Ø7.0mm Ø8.4mm	Comp 1		Comp 2		Comp 3		Comp 4	
			NO BOX	WITH BOX	NO BOX	WITH BOX	NO BOX	WITH BOX		
			18	–	54	19	52	17		
		Profile 5 Ø6.5mm Ø7.0mm Ø8.4mm	22	–	54	19	52	17	–	–
			18	–	45	16	43	14	–	–
			13	–	31	11	30	10	–	–
		Profile 6 Ø6.5mm Ø7.0mm Ø8.4mm	52	17	54	19	52	17	–	–
			43	14	45	16	43	14	–	–
			30	10	31	11	30	10	–	–
		Profile 11 Ø6.5mm Ø7.0mm Ø8.4mm	18	–	54	19	50	15	18	–
15	–		45	16	42	13	15	–		
10	–		31	11	29	9	10	–		
Profile 12 Ø6.5mm Ø7.0mm Ø8.4mm	18	–	54	19	50	15	20	–		
	15	–	45	16	42	13	17	–		
	10	–	31	11	29	9	12	–		
Profile 13 Ø6.5mm Ø7.0mm Ø8.4mm	20	–	54	19	50	15	20	–		
	17	–	45	16	42	13	17	–		
	12	–	31	11	29	9	12	–		
ELEGANCE 170 ALUMINIUM	 170 x 55mm	Elegance 170 Ø6.5mm Ø7.0mm Ø8.4mm	Comp 1		Comp 2		Comp 3			
			NO BOX	WITH BOX	NO BOX	WITH BOX	NO BOX	WITH BOX		
			25	–	63	–	24	–	25	
			21	–	53	–	20	–	21	
14	–	37	–	14	–	14				

*All calculations allow for a 45% space factor

	Bend radius control	Internal Bend	External Bend	Flat Tee	Flat Angle	Slow Bend	For PVC-U ranges only	
							Steel insert	Copper spray
	25mm & 50mm <small>COMPLIANT UP TO</small> CAT 7A						✓	Please contact the Technical Team on +44 (0)1424 856688 for options regarding special screening requirements
		Moulded	Moulded	Fabricated	Moulded	Special#		
		Moulded	Moulded	Fabricated	Fabricated	Special#		
		Moulded	Moulded	Fabricated	Fabricated	Special#		
		Moulded	Moulded	Fabricated	Fabricated	Special#		
		Moulded	Moulded	Fabricated	Fabricated	Special#		
		Moulded	Moulded	Fabricated	Fabricated	Special#		
	25mm & 50mm <small>COMPLIANT UP TO</small> CAT 7A						N/A	N/A
		Fabricated	Fabricated	Fabricated	Fabricated	Fabricated		

These products are made to special order and may be subject to minimum order quantities and longer lead times.

† Slow bends are not required as built-in cable guides within fittings are standard.

* For made to order fittings to meet Cat 7a requirements please contact our Technical Team on +44 (0)1424 856688

For Technical Information about usage of data trunking, please see page 246.

TRUNKING FOR LABORATORY AND HEALTHCARE ENVIRONMENTS

Marshall-Tufflex has many years of experience in providing cable management solutions for medical and healthcare environments.

Trunking systems for this specialised type of application are available in both aluminium and PVC-U, to carry gas, power, data, telecoms and nurse call, providing first class screening performance and optional antimicrobial protection.

PRODUCTS BY APPLICATION



What we offer

- PVC trunking that is easy to install and clean.
- Aluminium systems with multiple compartments providing LSOH containment for wiring, gas and air services.
- BIO trunking solutions to prevent the spread of infections and disease in environments such as hospitals, care homes, surgeries and health centres.

Built-in protection

Where hygiene is a priority, we offer cable management systems with integral antimicrobial properties. By incorporating silver ions within the PVC-U based material the perimeter trunking will deliver ongoing antimicrobial protection that prevents 99.9% of harmful bacteria.

Because the Marshall-Tufflex Bio trunking solution is integral to the PVC-U material, there is no reduction in effectiveness of the trunking throughout its life – even if it is scratched or damaged.

Bio trunking uses a silver ion solution throughout the product, ensuring that 99.9% of harmful bacteria – like MRSA – will not survive on the surface.



PVC-U trunking

Compact

130 x 50mm to 181 x 50mm

A range of small and medium sized, two compartment, dado and skirting systems with varying compartment sizes suited to fit within areas that have trunking height restrictions, for example to negotiate radiators or window sills.

Outer compartments can be subdivided and screened if required.



Page 115

Odyssey

180 x 57mm

Curved profile dado trunking with one main compartment and two smaller compartments designed specifically for heavy traffic areas such as hospitals. Odyssey's completely curved profile is designed to prohibit clutter, avoid dust traps and makes cleaning easy. Compartments can be subdivided and screened if required.

Odyssey is available as standard with Bio antimicrobial protection within the PVC-U material. See page 36.



Page 106

Mono Plus 20

140 x 50mm

An economical and stylish 3 compartment dado trunking for use where space is limited. Mono Plus has one piece fittings with a single lid for improved security.



Page 111

Twin Plus

210 x 57mm

An attractive high capacity segregated two compartment containment system which is ideal for carrying power and data services. Compartments can be subdivided and screened if required.



Page 151

Sterling Profile 1

167 x 50mm

A popular stylish medium sized trunking system for dado application with three segregated compartments. Sterling Profile 1 has been tried and tested within the laboratory and healthcare environment over many years. Compartments can be subdivided and screened if required.



Page 122

Bench trunking

105 x 105mm

An easy to install robust, angled trunking that can be mounted directly on laboratory and medical workbenches or angled under shelving. Compartment can be subdivided and screened if required.



Page 171

Sterling Curve

167 x 50mm

Sterling Curve is a stylish medium sized trunking system for dado and skirting application with three segregated compartments.

Sterling Curve Profile 1 has curved outer compartments designed to stop clutter, avoid dust traps and make cleaning easy.

Sterling Curve Profile 1 is available as standard with Bio antimicrobial protection within the PVC-U material. See page 36.



Page 128

Aluminium trunking systems

Bench trunking

105 x 105mm

A robust, angled trunking that can be subdivided and is suitable for laboratory and medical workbenches or angled under shelving. A PVC-U dividing fillet is available with screening if required.



Page 199

XL trunking

220 x 65mm to 308 x 65mm

A range of large three and four compartment dado and skirting trunking systems with separate compartments and individual covers. XL Trunking can accept gas and air outlets and can be extended to provide additional compartments. A PVC-U dividing fillet is available with screening if required.

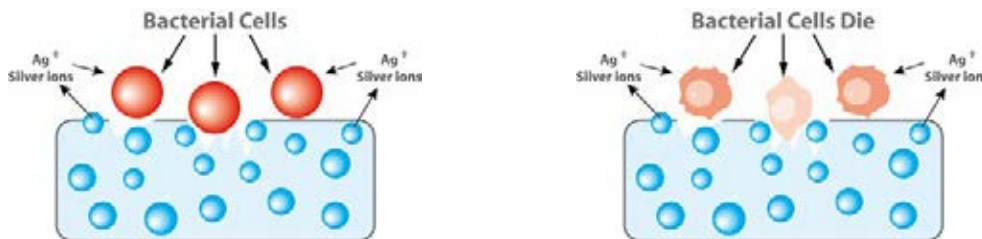


Page 188

Bio trunking solutions offer:

- Prevention of harmful bacteria growth (for more details see test results on page 313)
- Antimicrobial properties inherently formulated within the PVC-U and ABS compounds
- A durable, non-leaching antimicrobial treatment
- Testing to ISO 22196:2011
- Proven silver ion-based technology to neutralise any bacteria with which it comes into contact
- Registration with the Environmental Protection Agency (EPA).
- Compliance with the European Biocidal Products Directive (BPD).
- Proven reductions in bacterial viable count by more than 99.9%.
- Antimicrobial treatments provide an extra level of protection when combined with normal cleaning procedures.

Bio trunking can be identified by using a UV light on the external surface of the trunking. The Bio system will reflect blue under UV light rather than violet.



Bio trunking from Marshall-Tufflex

Odyssey and Sterling Curve Profile 1 trunking are available as standard with Bio antimicrobial protection within the PVC-U material. The following trunking ranges are available in Bio but are made to order and therefore will incur set up charges and an extended lead time.

Bench trunking • Compact • Mono Plus 20 • Sterling Profile • Twin Plus • XL

Odyssey Bio trunking component chart



Odyssey
180 x 57mm

Trunking assembly	End cap (1 piece)	Coupler (1 piece)	Internal bend (1 piece)	Internal adjustable bend	External bend (1 piece)	External adjustable bend	Flat angles (up or down)*	Flat tees (up or down)*	Accessory Box 1 gang Bio	Accessory Box 2 gang Bio	1 gang Bio mounting frame	2 gang Bio mounting frame
DD1B Pack 1 x 3m	DD1233WH Pack 2	DD1213WH Pack 1	DD1313WH Pack 1	DD1333WH Pack 1	DD1353WH Pack 1	DD1373WH Pack 1	DD1413WH Pack 1	DD1433WH Pack 1	DD1513WH Pack 20	DD1523WH Pack 10	DD1561WH Pack 20	DD1571WH Pack 10

Sterling Curve Bio trunking component chart



Sterling Curve Profile 1
167 x 50mm

Main compartment cover	Curve cover	Coupler	End cap	Internal bend	External bend	Flat angle complete*	Flat tee complete*	Accessory Box 1 gang Bio	Accessory Box 2 gang Bio
ETL1BIOWH Pack 8 x 3m	CETC1BIOWH Pack 8 x 3m	CECP1MBIOWH Pack 5	CEEC1P1MBIOWH Pack 5	CEIBP1MBIOWH Pack 5	CEXBP1MBIOWH Pack 5	CEFA1MBBIOWH Pack 1	CEFT1MBBIOWH Pack 1	ESSB1BIOWH Pack 20	ESSB2BIOWH Pack 10

* Manufactured from ABS

PVC Material Test Results

LABORATORY Anti-Microbial Test Division, Kyoto Biseibutsu Kenkyusyo, Yamashina-ku, Kyoto 607-8482, Japan
TEST ORGANISM MRSA (Methicillin Resistant Staphylococcus aureus) Escherichia coli
STANDARD ISO 22196 / JIS Z 2801:2000

Quantitative Assessment of Activity - MRSA (Methicillin Resistant Staphylococcus aureus)				
	Number of live organisms (Colony Forming Units)		% reduction of Colony Forming Units, expressed as comparison with control	
	0 hours	24 Hours		
Control - Untreated polyethylene film	110,000	96,000	-	-
PVC	110,000	<10	>99.98% Reduction	VERY GOOD

Quantitative Assessment of Activity - Escherichia coli				
	Number of live organisms (Colony Forming Units)		% reduction of Colony Forming Units, expressed as comparison with control	
	0 hours	24 Hours		
Control - Untreated polyethylene film	110,000	14,000,000	-	-
PVC	110,000	<10	>99.99992% Reduction	EXCELLENT

ABS Material Test Results

LABORATORY Thomson Research Associates Inc., Ontario, Canada
TEST ORGANISM Klebsiella pneumonia, Staphylococcus aureus
STANDARD ISO 22196:2011

Quantitative Assessment of Activity - K. pneumoniae				
Concentration of starting inoculum		1.92 x 10 ⁵		
Sample Description	No. Bacteria Recovered	Log Value	R=[log(B/C)]	% Reduction
Inoculum Control	8.39 x 10 ⁶	6.9	-	-
ABS	<2.00 x 10 ¹	<1.3	>5.6	>99.9%

Quantitative Assessment of Activity - S. aureus				
Concentration of starting inoculum		2.96 x 10 ⁵		
Sample Description	No. Bacteria Recovered	Log Value	R=[log(B/C)]	% Reduction
Inoculum Control	1.00 x 10 ⁶	6.0	-	-
ABS	1.04 x 10 ²	2.0	4.0	>99.9%



Bio trunking has demonstrated effectiveness against:

- Methicillin resistant Staphylococcus aureus (MRSA): an antibiotic resistant, opportunist pathogen that can survive on surfaces within the hospital environment.
- Klebsiella pneumoniae: an opportunist pathogen affecting people with a weakened immune system.
- Escherichia coli: All of us are colonised by E.coli in our gut but this bacterium can cause infections if it is transferred to a wound or a different part of the body causing severe food-associated illness.

Case Study 1

Selby project showcases benefits of Twin Plus trunking



Bio antimicrobial Twin Plus trunking proved the perfect choice for the £22 million Selby Community Project, a collaboration between the NHS and local authority to locate a community hospital, health clinic and council offices into a shared new build in the North Yorkshire town.

Large capacity Twin Plus is available in standard and antimicrobial versions, allowing consulting engineers DSSR to specify antimicrobial Bio Twin Plus for the hospital and standard Twin Plus for the council offices, creating a continuous aesthetic throughout the building. The hospital has 24 GP-led beds, a minor injuries unit, diagnostic facilities and minor surgery suite. It achieved a rating of 'excellent' against BREAAAM, the international environment assessment tool.

DSSR said: Bio Twin Plus offers the really valuable properties of an antimicrobial trunking system where it matters most, in the healthcare environment. Infection control is a huge issue and Bio Twin Plus supports cleaning regimes by working 24/7 in the fight against harmful bacteria."

Silver-ion protection is added to Bio's PVC-U formulation during manufacture, meaning that the bug-busting solution is incorporated within the Twin Plus. As a result it works 24 hours a day for the life of the trunking to kill bacteria such as MRSA, E-Coli and Salmonella, even if the trunking is scratched or knocked.

Bio Twin Plus has been tested to the quantitative standard ISO 22196:2007. Results show the survival rate of tested bacteria to be less than 0.1%. Marshall-Tufflex's Bio formulation is registered with the Environmental Protection Agency (EPA) and compliant with the European Biocidal Products Directive (BPD).

Case Study 2

White aluminium trunking does Sterling job for hospital



Specifiers working on ward upgrades at a leading South-West hospital required a cable management solution that met the cleanliness and durability requirements of the ward environment coupled with the capacity and flexibility to deliver bed-head services.

Facilities managers at Barnstaple's North Devon District Hospital, a high performing hospital, had also requested that the trunking system installed was metal, further narrowing specification choices. Sterling Aluminium 3002 in white delivered the ideal solution.

Andy Scourfield, of specifiers M&E Masters, Barnstaple, said: "We had to choose a trunking solution suitable for the medical environment. In other wards at the hospital PVC trunking has been used but for the most recent upgrades the hospital stipulated metal for its enhanced hygienic properties. The other big plus point of Sterling was price; it presented the most economically viable solution compared with other products of its type.

"We're big supporters of Marshall-Tufflex at M&E Masters. It's the first time we've used Sterling Aluminium 3002 but for the right application, it's definitely something we'd use again," added Mr Scourfield.

Sterling Trunking 3002 comprises three separate compartments, each with its own cover making it ideal for the multiple services on a hospital bed head such as lighting, communication and patient monitoring equipment.

SPECIALISED SOLUTIONS

Marshall-Tufflex's Specialised Solutions team was set up with the specific aim of working with clients to find a way around their installation challenges. This dedicated team addresses some of the difficult cable management problems encountered by designers, consulting engineers and contractors and, with the help of the in-house Design Office, fabricates versatile design solutions that combine functionality, style and safety.

HEATHROW AIRPORT TERMINAL 5

Product: Stainless steel floor boxes

The Heathrow Airport T5 project required bespoke stainless steel floor boxes delivering access to data and power supply systems vital for the safe and effective running of the airport and visually compatible with the floor finishes of the terminal building.

Several hundred of these access units were built to sit flush with the floor and designed to comply with Health and Safety legislation for pedestrian traffic.



Working closely with SPIE Matthew Hall and BAA, Marshall-Tufflex collaborated to produce rectangular, round and square floor boxes in various sizes. Many of the boxes have lockable lids and all are fabricated in heavy duty stainless steel to take higher point load than standard floor boxes, enabling them to cope with wheeled traffic and protect the cables within. The boxes accommodate Cat 6 cabling with provision for Cat 7 and Cat 7a systems.

BBC BROADCASTING HOUSE

Product: Power distribution units

The BBC's massive project of redevelopment to Broadcasting House in central London houses 5,000 people, delivering news nationally and globally as well as national radio and music services, creating one of the largest live newsrooms in the world and using the latest broadcast technology.

The project utilises Marshall-Tufflex's MT32 prefabricated wiring system, eliminating hard-wiring on site and permitting much faster installation times. It is delivered to site in cable management 'bays' complete with pre-wired cable sets marked with circuitry and ready to feed into distribution boards.

The system is installed into the initial fit-out of the Central Apparatus Area and Local Apparatus Rooms throughout the new 12-storey building, including three basement levels.



The 'bays' are installed above ceiling height and constructed from a combination of Marshall-Tufflex's PVC-U Maxi Trunking and Mono 10 with specialised Cee-Norm sockets. The complexity of the vast amounts of circuitry has necessitated the building of extra large containment units with the necessary headroom – some as much as 18 metres long with a 150mm x 150mm high containment capacity. A large number of sockets and cables in relatively short spaces have also been addressed by this cable management solution.

“We met what was a complex and very quick programme on time. The standard of Marshall-Tufflex's pre-manufactured units was good and helped us to reach timescales when under pressure.”

Phoenix Electrical Co Ltd

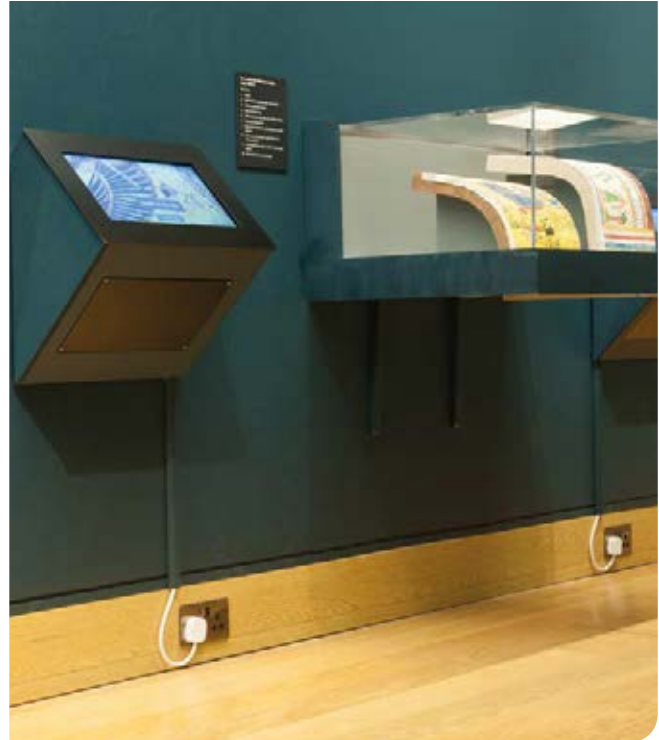
CAMBRIDGE UNIVERSITY

Product: Light Oak trunking to meet Historic England approval

Cambridge University's historic Fitzwilliam Museum required a skirting trunking system that would be a good match to the light oak floor. The building and its galleries are Grade 1 listed so the specification also had to meet with Historic England's approval.

"Marshall-Tufflex's Sterling Profile 3 in Light Oak was the closest match," said Darren Potter, Chief Technician of Facilities at the Fitzwilliam Museum. "We chose Sterling Profile 3 as it had square edges rather than bevelled ones, making it easier for us to fit the trunking flush into the skirting void behind the wall," said Darren.

The museum also used the MT32 prefabricated modular wiring system as they regularly need to change temporary exhibitions each requiring a different display layout with corresponding power supplies. MT32 now allows them to quickly reconfigure the power supplies and removes the need for trailing extension leads.



NEWQUAY SCHOOL

Product: Curved trunking



Architectural practice, The Bazeley Partnership, designed a new IT department within the sixth form of Tretharras School in Newquay for Cornwall County Council.

The architects' design included curved cable containment wrapped around a central workstation as the focal point of the room.

CCC's senior electrical engineer, David Shuff, turned to Marshall-Tufflex for a solution that could cope with the curved external and internal bends, all at dado level.

Marshall-Tufflex recommended its multi-compartment PVC-U perimeter cable management system, Sterling Profile 1, of which 40 metres was pre-curved to order.

"With the nature of this circular design, the trunking was a key element. Only Sterling could give us scope to achieve the architect's vision, and the end result has met everyone's expectations."

Cornwall County Council

WOODWATER HOUSE

Product: Horizontal PowerPoles

Marshall-Tufflex provided a spectacular solution for Michelmores Solicitors' striking glass building in Exeter.

Series 2 PowerPoles in aluminium were specified to blend in with existing steel columns, manufactured with special bends and suspended horizontally around the building to carry power and low voltage lighting in a way that sympathised perfectly with the existing steel work.

TES Projects Ltd, contractors for the installation commented: "The system suits the purpose really well, it carries segregated fire alarm and door entry cabling and it all looks really good."



UNIVERSITY OF WARWICK

Product: Special paint finish for aluminium trunking



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 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 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, Senior Electrical Technician at the School of Engineering

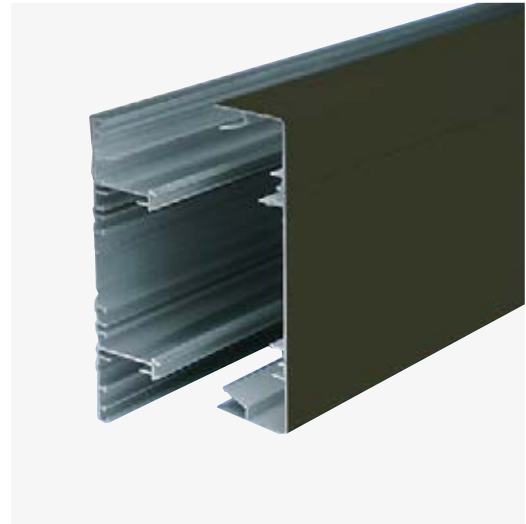
BIRMINGHAM UNIVERSITY

Product: Sterling Profile 3003 aluminium – matt black

Marshall-Tufflex has supplied Birmingham University's School of Physics and Astronomy with an unusual trunking for the laboratories housing a study into the behaviour of cold atoms.

To aid the study into quantum phenomena by exploiting cold atom gases as a unique window into the quantum world, the laboratory is fitted out with matt black trunking. This acts as a safety measure because the work utilises high powered lasers. Should a laser beam escape, a matt black trunking will absorb the light.

The aluminium Sterling Profile 3003 feeds power and data at dado height around the laboratories and has also been installed on overhead canopies sited above work benches.



ST ALOYSIUS COLLEGE, HIGHGATE

Product: MT32 and specially curved Odyssey trunking

Marshall-Tufflex provided an MT32 prefabricated modular perimeter wiring system and Cat 6 compliant Odyssey trunking in specially curved lengths to allow for fixing to the corresponding architecturally curved walls of the library building.

MT32 and Odyssey trunking provided economic and fast-fit installations at St Aloysius College, Highgate, one of eight secondary schools to undergo complete rebuilding or substantial refurbishment within Islington's Building Schools for the Future (BSF) initiative.

Balfour Beatty Engineering Services selected Marshall-Tufflex's MT32 contained within Odyssey's contemporary curved dado trunking system and Tom Counihan, electrical engineer for BBES, explained why:



“We compared plug and play systems but liked the fact that MT32 is extremely neat and provides significant installation time reductions. Odyssey appealed because it is CAT 6 compliant, easy to install and because it is the most aesthetically pleasing of the containment systems we have looked at – and we have looked at quite a few! The client is happy with it and we are happy with it. As a result of the effectiveness of both systems, we are taking them through other schools within the BSF initiative.”

Balfour Beatty Engineering Services

Pre-formed trunking



PVC-U trunking systems can be pre-curved to order for installation on curved walls and curved furniture.

Please contact the Technical Team on +44 (0)1424 856688 for a bespoke quotation.

Please note minimum bend radius is required

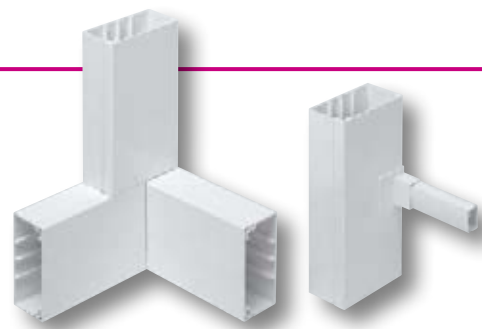
Series 2 PowerPost suspended



Ceiling-mounted units supplying various services are available as fixed items.

Combination bend

A combination internal bend to flat angle and adaptor to mini trunking. These can be made to order for most PVC-U trunking.



135°/45° bends

135°/45° bends in a variety of profiles can be fabricated to order. Other angles can also be produced upon request.

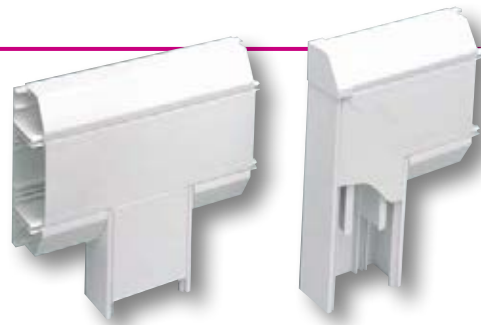
PVC trunking reducer

A section of trunking which has been reduced in depth so that it can pass behind radiators or pipes.



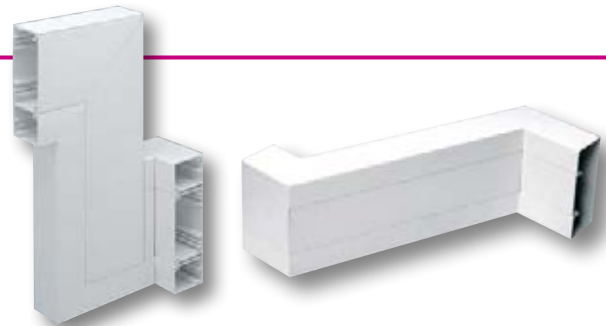
Fabricated connections

Fabricated units for joining or interconnecting two different sizes or models of PVC-U trunking.



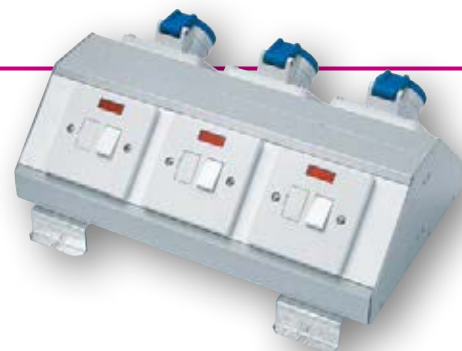
Profile sets

Pre-fabricated sets for negotiating columns, window bays and non-standard corners.



Multi-service pods

IEC 60309 industrial sockets on back to back aluminium bench trunking with 25mm raised brackets to raise units above any floor level water collection.



Pre-wired units

Pre-wired modules with standard UK accessories can be built to order and are supplied fully assembled and tested in-house.



GRP LADDER AND TRAY SYSTEMS

GRP ladder and tray support systems provide robust yet lightweight cable management for industrial and commercial applications.

GRP LADDER AND TRAY SYSTEMS

GLASS REINFORCED POLYESTER (GRP)

Glass reinforced polyester (GRP) cable management systems are vitally important for use in the transport, petrochemical and construction industries where it is used to provide lightweight yet mechanically strong materials which replace heavier, more energy consuming materials such as aluminium, steel and concrete. It is a highly competent engineering material, capable of being specified for a large number of construction applications.

GRP cable management systems are well suited to aggressive environments where there might be extreme weather or high temperatures. They are extremely robust, considerably lighter than aluminium or steel, and have excellent resistance against fire and corrosion resulting in a very long life span. GRP systems have a large cable capacity, and offer fast and flexible installation solutions, with the ability of on-site assembly and configuration.

Marshall-Tufflex can offer a wide range of GRP systems including trays, ladders, ground ducts, troughing, accessories and fittings, fixings and supports.

What is RISQS?

RISQS, formerly known as Achilles Link-up, has been developed to provide a service for the qualification of suppliers for all products and services that are procured by the industry. RISQS supports Network Rail, LUL/Transport for London, train operators and other rail products and services providers in the management of supply chain risk. RISQS is an independent, third party qualification assessment of a supplier's capability to supply products and services.



Marshall-Tufflex is registered with the RISQS Railway Industry Supplier Qualification scheme

Approvals

Mechanical Behaviour

- Breaking point to NEMA FG1
- Tensile strength at break point to ISO 527-5
- Modulus of elasticity to ISO 527-5
- Accelerated aging to ISO 4892-2 & ISO 9227
- IEC 61537

Electrical behaviour

- Surface resistivity to IEC 6079-0
- Breakage voltage to IEC 60243-1
- Comparative tracking index IEC 60112
- IEC 60093

Fire resistance to DIN 4102 part 12

Linear Thermal Expansion to DIN 53752

Water Absorption to ISO 62



Environmental

- Analysis shows GRP to have one of the best environmental impact profiles of any strong building material.
- Use of acetone has been eliminated.
- Light weight and easy handling can result in considerable fuel savings.
- Reduction in the need for motorised cranes and platform lift vehicles.
- Buildings using GRP within their infrastructure are lighter and require less energy to heat.



Recycling and sustainability

- GRP is easily dismantled and cut up to use in road metalling.
- Recycling trials for composite parts are progressing satisfactorily in several European programmes, using GRP as a source of heat energy and the resultant residue as raw material in cement manufacture.
- GRP can be re-used in other buildings.
- Building performance life of 40 to 50 years.



EMI protection

- Not applicable for this material.



Fire performance

- Excellent fire performance, GRP is a self-extinguishing composition, halogen-free and with low smoke and fume properties.

Fire Behaviour

- Inflammability to IEC 60695-2-12/ UL94
- Spread of flame to BS 476 part 7 class 2 / ASTM E84 (Up to Class 1 on request)
- Fire propagation to BS 476 Part 6
- Smoke emissions to BS 6853App B53
- Fire standard to DIN 4102 part 12
- UL 723

GRP ladder and tray systems

Marshall-Tufflex LSOH GRP systems are very robust and particularly suitable for interior and exterior areas where resistance to corrosion is a requirement. They are considerably lighter than aluminium or steel and have excellent fire performance.

Pressed tray**50 x 50mm to 400 x 80mm**

A complete range of pressed GRP trays for extended support span up to 3metres.



Page 51

Pultruded ladder**200 x 53mm to 900 x 150mm**

A pultruded ladder system for installation into tunnels, bridges, railways, underground, offshore and marine environments.



Page 57

GRP industrial support systems**for supporting large power cables**

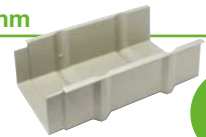
Brackets, bolts and rails for use with other GRP systems.



Page 61

Ground ducts**250 x 140mm to 450 x 176mm**

Self-supporting systems ideal for railway applications.



Page 62

Cable troughing**150 to 250 x 150mm**

Suited to railway applications where cable ducts cannot be buried.



Page 63

Note: you may use the rule on the left of this page to check profile sizes.

GRP cable management systems incorporate non-conductive and self-extinguishing properties, as well as stability, wherever they are subjected to high levels of UV and extreme temperatures. GRP systems are ideal solutions for installation in tunnels, bridges, railways, underground, offshore and marine environments.

Rail:

Optimum safety:

- Self-extinguishing UL94 - V0
- In the event of fire, no halogen toxic fumes (fire classification: M1, i0, F0; ASTM E84, Class 2 or Class 1; BS 476 Part 7, Class 2 or 1)
- No sharp edges or burrs, from cutting or drilling

Flexibility and easy mounting:

- Reduces installation costs with unique self coupling mechanism
- No earthing required
- Very strong mechanical resistance, even with high temperature variation
- 10 times lighter than concrete
- Excellent vibration resistance



Sea:

Resists corrosion: atmospheric, UV, saline

Save installation time and costs:

- Reduces use of bolts with clip-on splice plates and fixings
- No expensive protection accessories or coatings necessary
- No sharp edges or burrs, from cutting or drilling
- Ensures strong mechanical resistance with a lighter weight than metal
- Excellent vibration resistance



Road:

Resists corrosion: combustion gas, salt

Optimum safety:

- Self-extinguishing UL94 - V0
- Does not emit halogen or smoke (fire classification: M1, i0, F0; ASTM E84, Class 2 or Class 1; BS 476 Part 7, Class 2 or 1)
- No sharp edges or burrs, from cutting or drilling

Flexibility and easy mounting:

- Reduces installation costs with unique self coupling mechanism
- Save time and money as no earthing is required
- Ensures strong mechanical resistance with a lighter weight than metal
- No expensive protection accessories or coatings necessary
- Excellent vibration resistance



Petrochemical and Process Plant Industries:

Cut down corrosion and maintenance costs

Reduce installation costs

- No earthing required
- No expensive protection accessories or coating
- No sharp edges or burrs, from cutting or drilling

Ensures strong mechanical resistance and a lighter weight

Reduces weight of structure

- Saves 40% against stainless steel
- Saves 15% against aluminium



Energy Distribution:

Very strong mechanical resistance, even with high temperature variation

No expensive protection accessories or coating necessary

Optimum safety:

- Self-extinguishing UL94 - V0
- No toxic fumes or halogen in case of fire (fire classification: M1, i0, F0; ASTM E84, Class 2 or Class 1; BS 476 Part 7, Class 2 or 1)
- No sharp edges or burrs, from cutting or drilling



GRP standard span cable tray and fittings are pressed from glass reinforced polyester resin, using hot moulding technology and facilitating the manufacture of smooth intricate shapes. The system is ideal for installation into tunnels, bridges, railways, underground, offshore and marine environments.

Product information

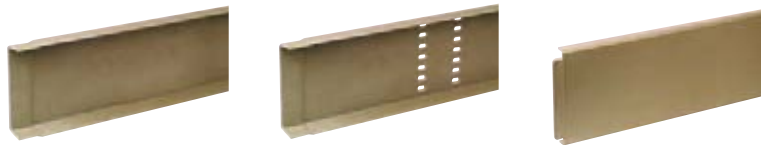
- A variety of sizes from 50 x 50mm to 400 x 80mm
- 2.5 times lighter than steel
- Completely corrosion resistant against salt spray, H25, acid build up from exhaust gases and brake dust along roads and railways
- No need for painting or protective coating
- Classified LSOH material
- Self-extinguishing
- Low conductivity
- Earthing not required
- Antimagnetic and resistant to electromagnetic pulses
- Effective at temperatures between -80°C to +130°C
- Lower life cycle cost
- Fast installation with fewer fasteners
- Easy to cut and drill
- Load characteristics in accordance with IEC 61537 (for load or other calculations and values, please refer to the technical section)



Reduced use of bolts

GRP is a non-conductive material with excellent fire performance and high corrosion resistance

Basic components



Non-perforated pressed tray – 3 metres

code	size	pack
KK5050	50 x 50mm	1 x 3m
KK10050	100 x 50mm	1 x 3m
KK15050	150 x 50mm	1 x 3m
KK20050	200 x 50mm	1 x 3m
KK30050	300 x 50mm	1 x 3m
KK10080	100 x 80mm	1 x 3m
KK15080	150 x 80mm	1 x 3m
KK20080	200 x 80mm	1 x 3m
KK30080	300 x 80mm	1 x 3m
KK40080	400 x 80mm	1 x 3m

Perforated pressed tray – 3 metres

code	size	pack
KKL5050	50 x 50mm	1 x 3m
KKL10050	100 x 50mm	1 x 3m
KKL15050	150 x 50mm	1 x 3m
KKL20050	200 x 50mm	1 x 3m
KKL30050	300 x 50mm	1 x 3m
KKL10080	100 x 80mm	1 x 3m
KKL15080	150 x 80mm	1 x 3m
KKL20080	200 x 80mm	1 x 3m
KKL30080	300 x 80mm	1 x 3m
KKL40080	400 x 80mm	1 x 3m

Tray cover – 3 metres

code	to fit	pack
KKD50	50 x 50mm	1 x 3m
KKD100	100 x 50/80mm	1 x 3m
KKD150	150 x 50/80mm	1 x 3m
KKD200	200 x 50/80mm	1 x 3m
KKD300	300 x 50/80mm	1 x 3m
KKD400	400 x 80mm	1 x 3m

See page 54 for quick reference chart

Fittings



Tray cover clip

code	size	pack
DF50	50mm	1
DF80	80mm	1

Tray end cap

code	to fit	pack
KKKE5050	50 x 50mm	1
KKKE10050	100 x 50mm	1
KKKE15050	150 x 50mm	1
KKKE20050	200 x 50mm	1
KKKE30050	300 x 50mm	1
KKKE10080	100 x 80mm	1
KKKE15080	150 x 80mm	1
KKKE20080	200 x 80mm	1
KKKE30080	300 x 80mm	1
KKKE40080	400 x 80mm	1

Tray internal bend base

code	to fit	pack
KKBI5050	50 x 50mm	1
KKBI10050	100 x 50mm	1
KKBI15050	150 x 50mm	1
KKBI20050	200 x 50mm	1
KKBI30050	300 x 50mm	1
KKBI10080	100 x 80mm	1
KKBI15080	150 x 80mm	1
KKBI20080	200 x 80mm	1
KKBI30080	300 x 80mm	1
KKBI40080	400 x 80mm	1

Tray internal bend cover

code	to fit	pack
KKBID5050	50 x 50mm	1
KKBID10050	100 x 50mm	1
KKBID15050	150 x 50mm	1
KKBID20050	200 x 50mm	1
KKBID30050	300 x 50mm	1
KKBID10080	100 x 80mm	1
KKBID15080	150 x 80mm	1
KKBID20080	200 x 80mm	1
KKBID30080	300 x 80mm	1
KKBID40080	400 x 80mm	1



Tray external bend base

code	to fit	pack
KKBA5050	50 x 50mm	1
KKBA10050	100 x 50mm	1
KKBA15050	150 x 50mm	1
KKBA20050	200 x 50mm	1
KKBA30050	300 x 50mm	1
KKBA10080	100 x 80mm	1
KKBA15080	150 x 80mm	1
KKBA20080	200 x 80mm	1
KKBA30080	300 x 80mm	1
KKBA40080	400 x 80mm	1



Tray external bend cover

code	to fit	pack
KKBAD5050	50 x 50mm	1
KKBAD10050	100 x 50mm	1
KKBAD15050	150 x 50mm	1
KKBAD20050	200 x 50mm	1
KKBAD30050	300 x 50mm	1
KKBAD10080	100 x 80mm	1
KKBAD15080	150 x 80mm	1
KKBAD20080	200 x 80mm	1
KKBAD30080	300 x 80mm	1
KKBAD40080	400 x 80mm	1



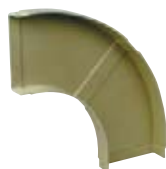
Tray flat angle base (small radius)

code	to fit	pack
KKW5050	50 x 50mm	1
KKW10050	100 x 50mm	1
KKW15050	150 x 50mm	1
KKW20050	200 x 50mm	1
KKW30050	300 x 50mm	1
KKW10080	100 x 80mm	1
KKW15080	150 x 80mm	1
KKW20080	200 x 80mm	1
KKW30080	300 x 80mm	1
KKW40080	400 x 80mm	1



Tray flat angle cover (small radius)

code	to fit	pack
KKWD50	50 x 50mm	1
KKWD100	100 x 50/80mm	1
KKWD150	150 x 50/80mm	1
KKWD200	200 x 50/80mm	1
KKWD300	300 x 50/80mm	1
KKWD400	400 x 80mm	1



Tray flat angle base (large radius)

code	to fit	pack
KKBD15050	150 x 50mm	1
KKBD20050	200 x 50mm	1
KKBD30050	300 x 50mm	1
KKBD10080	100 x 80mm	1
KKBD15080	150 x 80mm	1
KKBD20080	200 x 80mm	1
KKBD30080	300 x 80mm	1
KKBD40080	400 x 80mm	1



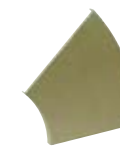
Tray flat angle cover (large radius)

code	to fit	pack
KKBD150	150 x 50/80mm	1
KKBD200	200 x 50/80mm	1
KKBD300	300 x 50/80mm	1
KKBD100	100 x 80mm	1
KKBD400	400 x 80mm	1



Tray flat angle 135° base (large radius)

code	to fit	pack
KKC10080	100 x 80mm	1
KKC15080	150 x 80mm	1
KKC20080	200 x 80mm	1
KKC30080	300 x 80mm	1
KKC40080	400 x 80mm	1



Tray flat angle 135° cover (large radius)

code	to fit	pack
KKCD100	100 x 80mm	1
KKCD150	150 x 80mm	1
KKCD200	200 x 80mm	1
KKCD300	300 x 80mm	1
KKCD400	400 x 80mm	1



Tray flat tee base (small radius)

code	to fit	pack
KKSS5050	50 x 50mm	1
KKSS10050	100 x 50mm	1
KKSS15050	150 x 50mm	1
KKSS20050	200 x 50mm	1
KKSS30050	300 x 50mm	1
KKSS10080	100 x 80mm	1
KKSS15080	150 x 80mm	1
KKSS20080	200 x 80mm	1
KKSS30080	300 x 80mm	1



Tray flat tee cover (small radius)

code	to fit	pack
KKSSD50	50 x 50mm	1
KKSSD100	100 x 50mm	1
KKSSD150	150 x 50mm	1
KKSSD200	200 x 50mm	1
KKSSD300	300 x 50mm	1
KKSSD100	100 x 80mm	1
KKSSD150	150 x 80mm	1
KKSSD200	200 x 80mm	1
KKSSD300	300 x 80mm	1



Tray flat tee base (large radius)

code	to fit	pack
KKST10050	100 x 50mm	1
KKST15050	150 x 50mm	1
KKST20050	200 x 50mm	1
KKST30050	300 x 50mm	1
KKST10080	100 x 80mm	1
KKST15080	150 x 80mm	1
KKST20080	200 x 80mm	1
KKST30080	300 x 80mm	1
KKST40080	400 x 80mm	1



Tray flat tee cover (large radius)

code	to fit	pack
KKSTD100	100 x 50/80mm	1
KKSTD150	150 x 50/80mm	1
KKSTD200	200 x 50/80mm	1
KKSTD300	300 x 50/80mm	1
KKSTD400	400 x 80mm	1

Fittings



Tray offset base set

code	to fit	pack
KKET10080	100 x 80mm	1
KKET15080	150 x 80mm	1
KKET20080	200 x 80mm	1
KKET30080	300 x 80mm	1
KKET40080	400 x 80mm	1



Tray offset cover set

code	to fit	pack
KKETD10080	100 x 80mm	1
KKETD15080	150 x 80mm	1
KKETD20080	200 x 80mm	1
KKETD30080	300 x 80mm	1
KKETD40080	400 x 80mm	1



Tray reducer LH base

code	reduction	pack
KKRL20080	200 to 100	1
KKRL30080	300 to 200	1
KKRL40080	400 to 300	1



Tray reducer LH cover

code	reduction	pack
KKRLD200	200 to 100	1
KKRLD300	300 to 200	1
KKRLD400	400 to 300	1



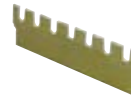
Tray reducer RH base

code	reduction	pack
KKRR20080	200 to 100	1
KKRR30080	300 to 200	1
KKRR40080	400 to 300	1



Tray reducer RH cover

code	reduction	pack
KKRRD200	200 to 100	1
KKRRD300	300 to 200	1
KKRRD400	400 to 300	1



Tray pin rack

code	to fit	pack
KR100	100 x 50/80mm	1
KR150	150 x 50/80mm	1
KR200	200 x 50/80mm	1
KR300	300 x 50/80mm	1
KR400	400 x 80mm	1

Components



Tray divider – 3 metres

code	to fit	pack
KKT50	100 x 50mm	1
KKT80	100 x 80mm	1

Cover clips

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Because GRP expands in heat these unique clips have been developed to ensure the lid remains firmly in place, even when subjected to extreme heat expansion. The clips are for use with the GRP tray and ladder systems and will prevent the lid from being displaced.



GRP cover clips

code	pack
DF50	1
DF80	1

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Technical Information

Quick reference chart

Standard span pressed tray

Tray/trunking component chart



Length: 3 metres

Pack 1

50 x 50mm tray

Non-perforated pressed GRP Tray	Perforated pressed GRP tray	Cover	Cover clip	Divider	End cap	Internal bend	
						Base	Cover
KK5050	KKL5050	KKD50	DF50	KKT50	KKKE5050	KKBI5050	KKBID5050

100 x 50mm tray

KK10050	KKL10050	KKD100	DF50	KKT50	KKKE10050	KKBI10050	KKBID10050
---------	----------	--------	------	-------	-----------	-----------	------------

150 x 50mm tray

KK15050	KKL15050	KKD150	DF50	KKT50	KKKE15050	KKBI15050	KKBID15050
---------	----------	--------	------	-------	-----------	-----------	------------

200 x 50mm tray

KK20050	KKL20050	KKD200	DF50	KKT50	KKKE20050	KKBI20050	KKBID20050
---------	----------	--------	------	-------	-----------	-----------	------------

300 x 50mm tray

KK30050	KKL30050	KKD300	DF50	KKT50	KKKE30050	KKBI30050	KKBID30050
---------	----------	--------	------	-------	-----------	-----------	------------

100 x 80mm tray

KK10080	KKL10080	KKD100	DF80	KKT80	KKKE10080	KKBI10080	KKBID10080
---------	----------	--------	------	-------	-----------	-----------	------------

150 x 80mm tray

KK15080	KKL15080	KKD150	DF80	KKT80	KKKE15080	KKBI15080	KKBID15080
---------	----------	--------	------	-------	-----------	-----------	------------

200 x 80mm tray

KK20080	KKL20080	KKD200	DF80	KKT80	KKKE20080	KKBI20080	KKBID20080
---------	----------	--------	------	-------	-----------	-----------	------------

300 x 80mm tray

KK30080	KKL30080	KKD300	DF80	KKT80	KKKE30080	KKBI30080	KKBID30080
---------	----------	--------	------	-------	-----------	-----------	------------

400 x 80mm tray

KK40080	KKL40080	KKD400	DF80	KKT80	KKKE40080	KKBI40080	KKBID40080
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Product Information

All products are supplied in pack quantities of one.

A range of Pressed GRP Trays with 110mm wall height is also available on request.

Complete range of Pultruded Trays for extended support span up to 3 metres in 50mm and 80mm wall heights are also available on request.

Please contact us on +44 (0)1424 856600 for a lead time.

Tray/trunking component chart



External bend		Flat angle (small radius)		Flat angle (large radius)		Flat angle 135° (large radius)		Offset	
Base	Cover	Base	Cover	Base	Cover	Base	Cover	Base set	Cover set
KKBA5050	KKBAD5050	KKW5050	KKWD50	-	-	-	-	-	-
KKBA10050	KKBAD10050	KKW10050	KKWD100	-	-	-	-	-	-
KKBA15050	KKBAD15050	KKW15050	KKWD150	KKB15050	KKBD150	-	-	-	-
KKBA20050	KKBAD20050	KKW20050	KKWD200	KKB20050	KKBD200	-	-	-	-
KKBA30050	KKBAD30050	KKW30050	KKWD300	KKB30050	KKBD300	-	-	-	-
KKBA10080	KKBAD10080	KKW10080	KKWD100	KKB10080	KKBD100	KKC10080	KKCD100	KKET10080	KKETD10080
KKBA15080	KKBAD15080	KKW15080	KKWD150	KKB15080	KKBD150	KKC15080	KKCD150	KKET15080	KKETD15080
KKBA20080	KKBAD20080	KKW20080	KKWD200	KKB20080	KKBD200	KKC20080	KKCD200	KKET20080	KKETD20080
KKBA30080	KKBAD30080	KKW30080	KKWD300	KKB30080	KKBD300	KKC30080	KKCD300	KKET30080	KKETD30080
KKBA40080	KKBAD40080	KKW40080	KKWD400	KKB40080	KKBD400	KKC40080	KKCD400	KKET40080	KKETD40080



Quick reference chart

Standard span pressed tray

Tray/trunking component chart



Length: 3 metres

Pack 1

50 x 50mm tray

Flat tee (small radius)		Flat tee (large radius)		Reducer left hand		Reducer right hand		Pin rack
Base	Cover	Base	Cover	Base	Cover	Base	Cover	

KKSS5050	KKSSD50	-	-	-	-	-	-	-
----------	---------	---	---	---	---	---	---	---

100 x 50mm tray

KKSS10050	KKSSD100	KKST10050	KKSTD100	-	-	-	-	KR100
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150 x 50mm tray

KKSS15050	KKSSD150	KKST15050	KKSTD150	-	-	-	-	KR150
-----------	----------	-----------	----------	---	---	---	---	-------

200 x 50mm tray

KKSS20050	KKSSD200	KKST20050	KKSTD200	-	-	-	-	KR200
-----------	----------	-----------	----------	---	---	---	---	-------

300 x 50mm tray

KKSS30050	KKSSD300	KKST30050	KKSTD300	-	-	-	-	KR300
-----------	----------	-----------	----------	---	---	---	---	-------

100 x 80mm tray

KKSS10080	KKSSD100	KKST10080	KKSTD100	-	-	-	-	KR100
-----------	----------	-----------	----------	---	---	---	---	-------

150 x 80mm tray

KKSS15080	KKSSD150	KKST15080	KKSTD150	-	-	-	-	KR150
-----------	----------	-----------	----------	---	---	---	---	-------

200 x 80mm tray

KKSS20080	KKSSD200	KKST20080	KKSTD200	KKRL20080 200 to 100mm	KKRLD200	KKRR20080 200 to 100mm	KKRRD200	KR200
-----------	----------	-----------	----------	---------------------------	----------	---------------------------	----------	-------

300 x 80mm tray

KKSS30080	KKSSD300	KKST30080	KKSTD300	KKRL30080 300 to 200mm	KKRLD300	KKRR30080 300 to 200mm	KKRRD300	KR300
-----------	----------	-----------	----------	---------------------------	----------	---------------------------	----------	-------

400 x 80mm tray

-	-	KKST40080	KKSTD400	KKRL40080 400 to 300mm	KKRLD400	KKRR40080 400 to 300mm	KKRRD400	KR400
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Product Information

All products are supplied in pack quantities of one.
A range of Pressed GRP Trays with 110mm wall height is also available on request.
Complete range of Pultruded Trays for extended support span up to 3 metres in 50mm and 80mm wall heights are also available on request.
Please contact us on +44 (0)1424 856600 for a lead time.

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Technical Information

GRP pultruded ladders are manufactured by pultrusion, a process using layers of mats and rovings injected with resin and pulled through a die in a continuous operation. The system is ideal for installation into tunnels, bridges, railways, underground, offshore and marine environments.

Product information

- A variety of sizes from 200 x 53mm to 900 x 150mm
- 2.5 times lighter than steel
- Completely corrosion resistant against salt spray, H2S, acid build up from exhaust gases and brake dust along roads and railways
- No need for painting or protective coating
- Classified LSOH material
- Self-extinguishing
- Low conductivity
- Earthing not required
- Antimagnetic and resistant to electromagnetic pulses
- Effective at temperatures between -80°C to +130°C
- Lower life cycle cost
- Fast installation with fewer fasteners
- Easy to cut and drill
- Load characteristics in accordance with IEC 61537
(for load or other calculations and values, please refer to the technical section)



Basic components



Ladder

code	size	pack
UL20053	200 x 53mm	1x3m
UL20080	200 x 80mm	1x3m
UL150100	150 x 100mm	1x3m
UL300100	300 x 100mm	1x3m
UL400100	400 x 100mm	1x3m
UL600100	600 x 100mm	1x3m
UL900100	900 x 100mm	1x3m
UL150150	150 x 150mm	1x3m
UL300150	300 x 150mm	1x3m
UL400150	400 x 150mm	1x3m
UL600150	600 x 150mm	1x3m
UL900150	900 x 150mm	1x3m

Ladder cover

code	to fit	pack
KKD200	200 x 53mm	1x3m
KKD200	200 x 80mm	1x3m
KKD150	150 x 100mm	1x3m
KKD300	300 x 100mm	1x3m
KKD400	400 x 100mm	1x3m
KKD600	600 x 100mm	1x3m
KKD900	900 x 100mm	1x3m
KKD150	150 x 150mm	1x3m
KKD300	300 x 150mm	1x3m
KKD400	400 x 150mm	1x3m
KKD600	600 x 150mm	1x3m
KKD900	900 x 150mm	1x3m

See page 59 for quick reference chart

Fittings



Ladder cover clip

code	pack
DF50	1
DF80	1
DF100	1
DF150	1

Ladder horizontal coupler* (Set of 2 pieces)

code	pack
ULIH53	1
ULIH80	1
ULIH100	1
ULIH150	1

* Foldable splice plate requires 4 x M616V4ADOM

Ladder int/ext angle base

code	to fit	pack
ULBA20053	200 x 53mm	1
ULBA20080	200 x 80mm	1
ULBA150100	150 x 100mm	1
ULBA300100	300 x 100mm	1
ULBA400100	400 x 100mm	1
ULBA600100	600 x 100mm	1
ULBA900100	900 x 100mm	1
ULBA150150	150 x 150mm	1
ULBA300150	300 x 150mm	1
ULBA400150	400 x 150mm	1
ULBA600150	600 x 150mm	1
ULBA900150	900 x 150mm	1

Ladder int/ext angle cover

code	to fit	pack
ULBAD20053	200 x 53mm	1
ULBAD20080	200 x 80mm	1
ULBAD150100	150 x 100mm	1
ULBAD300100	300 x 100mm	1
ULBAD400100	400 x 100mm	1
ULBAD600100	600 x 100mm	1
ULBAD900100	900 x 100mm	1
ULBAD150150	150 x 150mm	1
ULBAD300150	300 x 150mm	1
ULBAD400150	400 x 150mm	1
ULBAD600150	600 x 150mm	1
ULBAD900150	900 x 150mm	1

Fittings

**Ladder flat angle 90° base**

code	to fit	pack
ULB20053	200 x 53mm	1
ULB20080	200 x 80mm	1
ULB150100	150 x 100mm	1
ULB300100	300 x 100mm	1
ULB400100	400 x 100mm	1
ULB600100	600 x 100mm	1
ULB900100	900 x 100mm	1
ULB150150	150 x 150mm	1
ULB300150	300 x 150mm	1
ULB400150	400 x 150mm	1
ULB600150	600 x 150mm	1
ULB900150	900 x 150mm	1

**Ladder flat angle 90° cover**

code	to fit	pack
ULBD200	200 x 53/80mm	1
ULBD150	150 x 100/150mm	1
ULBD300	300 x 100/150mm	1
ULBD400	400 x 100/150mm	1
ULBD600	600 x 100/150mm	1
ULBD900	900 x 100/150mm	1

**Ladder flat tee base**

code	to fit	pack
ULTE20053	200 x 53mm	1
ULTE20080	200 x 80mm	1
ULTE150100	150 x 100mm	1
ULTE300100	300 x 100mm	1
ULTE400100	400 x 100mm	1
ULTE600100	600 x 100mm	1
ULTE900100	900 x 100mm	1
ULTE150150	150 x 150mm	1
ULTE300150	300 x 150mm	1
ULTE400150	400 x 150mm	1
ULTE600150	600 x 150mm	1
ULTE900150	900 x 150mm	1

**Ladder flat tee cover**

code	to fit	pack
ULTED200	200 x 53/80mm	1
ULTED150	150 x 100/150mm	1
ULTED300	300 x 100/150mm	1
ULTED400	400 x 100/150mm	1
ULTED600	600 x 100/150mm	1
ULTED900	900 x 100/150mm	1

**Ladder flat crossover base**

code	to fit	pack
ULX20053	200 x 53mm	1
ULX20080	200 x 80mm	1
ULX150100	150 x 100mm	1
ULX300100	300 x 100mm	1
ULX400100	400 x 100mm	1
ULX600100	600 x 100mm	1
ULX900100	900 x 100mm	1
ULX150150	150 x 150mm	1
ULX300150	300 x 150mm	1
ULX400150	400 x 150mm	1
ULX600150	600 x 150mm	1
ULX900150	900 x 150mm	1

**Ladder flat crossover cover**

code	to fit	pack
ULXD200	200 x 53/80mm	1
ULXD150	150 x 100/150mm	1
ULXD300	300 x 100/150mm	1
ULXD400	400 x 100/150mm	1
ULXD600	600 x 100/150mm	1
ULXD900	900 x 100/150mm	1

**Ladder reducer**

code	to fit	Reduction achieved	pack
ULR15053	200 x 53mm	150mm	1
ULR15080	200 x 80mm	150mm	1
ULR100100	150 x 100mm	100mm	1
ULR200100	300 x 100mm	200mm	1
ULR300100	400 x 100mm	300mm	1
ULR300100	600 x 100mm	500mm	1
ULR200150	150 x 150mm	100mm	1
ULR200150	300 x 150mm	200mm	1
ULR300150	400 x 150mm	300mm	1
ULR500150	600 x 150mm	500mm	1

**Vertical variable angle plate (Set of 2 pieces)**

code	size	pack
ULIV53	53mm	1
ULIV80	80mm	1
ULIV100	100mm	1
ULIV150	150mm	1

**Ladder Clamp To Support***

code	pack
ULKG	1

* ULKG requires 1 x M1040V4AHEX

Components

Quick reference chart
Pultruded ladder

Ladder component chart



Length: 3 metres
Pack 1

(width x height)

200 x 53mm

200 x 80mm

150 x 100mm

300 x 100mm

400 x 100mm

600 x 100mm

900 x 100mm

150 x 150mm

300 x 150mm

400 x 150mm

600 x 150mm

900 x 150mm

	Ladder	Cover	Cover clip	Flat 90° angle		Int/Ext angle Base	Int/Ext 90° angle Cover
				Base	Cover		
200 x 53mm	UL20053	KKD200	DF50	ULB20053	ULBD200	ULBA20053	ULBAD20053
200 x 80mm	UL20080	KKD200	DF80	ULB20080	ULBD200	ULBA20080	ULBAD20080
150 x 100mm	UL150100	KKD150	DF100	ULB150100	ULBD150	ULBA150100	ULBAD150100
300 x 100mm	UL300100	KKD300	DF100	ULB300100	ULBD300	ULBA300100	ULBAD300100
400 x 100mm	UL400100	KKD400	DF100	ULB400100	ULBD400	ULBA400100	ULBAD400100
600 x 100mm	UL600100	KKD600	DF100	ULB600100	ULBD600	ULBA600100	ULBAD600100
900 x 100mm	UL900100	KKD900	DF100	ULB900100	ULBD900	ULBA900100	ULBAD900100
150 x 150mm	UL150150	KKD150	DF150	ULB150150	ULBD150	ULBA150150	ULBAD150150
300 x 150mm	UL300150	KKD300	DF150	ULB300150	ULBD300	ULBA300150	ULBAD300150
400 x 150mm	UL400150	KKD400	DF150	ULB400150	ULBD400	ULBA400150	ULBAD400150
600 x 150mm	UL600150	KKD600	DF150	ULB600150	ULBD600	ULBA600150	ULBAD600150
900 x 150mm	UL900150	KKD900	DF150	ULB900150	ULBD900	ULBA900150	ULBAD900150

Product Information

All products are supplied in pack quantities of one.
Additional ladder widths in wall heights 53mm, 80mm, 100mm and 150mm are available on request.
6 metre lengths are available on request.
Please contact us on +44 (0)1424 856600 for a lead time.



GRP LADDER AND TRAY SYSTEMS

Quick reference chart

Pultruded ladder

Ladder component chart



Length: 3 metres

Pack 1

200 x 53mm

	Flat tee		Flat crossover		Reducer	Horizontal coupler (Set of 2 pieces)	Vertical variable angle plate (Set of 2 pieces)	Ladder clamp to support
	Base	Cover	Base	Cover				

ULTE20053	ULTED200	ULX20053	ULXD200	ULR15053 § 150mm	*ULIH53	ULIV53	+ULKG
-----------	----------	----------	---------	---------------------	---------	--------	-------

200 x 80mm

ULTE20080	ULTED200	ULX20080	ULXD200	ULR15080 § 150mm	*ULIH80	ULIV80	+ULKG
-----------	----------	----------	---------	---------------------	---------	--------	-------

150 x 100mm

ULTE150100	ULTED150	ULX150100	ULXD150	ULR100100 § 100mm	*ULIH100	ULIV100	+ULKG
------------	----------	-----------	---------	----------------------	----------	---------	-------

300 x 100mm

ULTE300100	ULTED300	ULX300100	ULXD300	ULR200100 § 200mm	*ULIH100	ULIV100	+ULKG
------------	----------	-----------	---------	----------------------	----------	---------	-------

400 x 100mm

ULTE400100	ULTED400	ULX400100	ULXD400	ULR300100 § 300mm	*ULIH100	ULIV100	+ULKG
------------	----------	-----------	---------	----------------------	----------	---------	-------

600 x 100mm

ULTE600100	ULTED600	ULX600100	ULXD600	ULR300100 § 500mm	*ULIH100	ULIV100	+ULKG
------------	----------	-----------	---------	----------------------	----------	---------	-------

900 x 100mm

ULTE900100	ULTED900	ULX900100	ULXD900	-	*ULIH100	ULIV100	+ULKG
------------	----------	-----------	---------	---	----------	---------	-------

150 x 150mm

ULTE150150	ULTED150	ULX150150	ULXD150	ULR100150 § 100mm	*ULIH150	ULIV150	+ULKG
------------	----------	-----------	---------	----------------------	----------	---------	-------

300 x 150mm

ULTE300150	ULTED300	ULX300150	ULXD300	ULR200150 § 200mm	*ULIH150	ULIV150	+ULKG
------------	----------	-----------	---------	----------------------	----------	---------	-------

400 x 150mm

ULTE400150	ULTED400	ULX400150	ULXD400	ULR300150 § 300mm	*ULIH150	ULIV150	+ULKG
------------	----------	-----------	---------	----------------------	----------	---------	-------

600 x 150mm

ULTE600150	ULTED600	ULX600150	ULXD600	ULR500150 § 500mm	*ULIH150	ULIV150	+ULKG
------------	----------	-----------	---------	----------------------	----------	---------	-------

900 x 150mm

ULTE900150	ULTED900	ULX900150	ULXD900	-	*ULIH150	ULIV150	+ULKG
------------	----------	-----------	---------	---	----------	---------	-------

Product Information

§ Reduction achieved

* Foldable splice plate requires 4 x M616V4ADOM

+ ULKG requires 1 x M1040V4AHEX

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Technical Information

Quick reference chart
Support systems

		Support system component chart						
		GRP Systems				Stainless steel 316		
								
		FPAM Bracket	Bracket Type 'A' + 'B'	Adj. rail (GRP) 45 x 45 x 2000mm	Clamp bolt assembly S/S M10 x 30mm	H/D Bracket Type 'A' S/S	Adj. rail (S/S) 40 x 40 x 2000mm	Clamp bolt assembly S/S M10 x 30mm
Pack	1							
100mm		FPAM100	FPAP100AC	FPAR2000AC	FPBGV10/V4A	–	ASSV2000	BGSV
150mm		–	FPAP150AC	FPAR2000AC	FPBGV10/V4A	–	ASSV2000	BGSV
200mm		FPAM200	FPAP200AC	FPAR2000AC	FPBGV10/V4A	AV200S	ASSV2000	BGSV
250mm		FPAM250	FPAP250AC	FPAR2000AC	FPBGV10/V4A	AV250S	ASSV2000	BGSV
300mm		FPAM300	FPAP300AC	FPAR2000AC	FPBGV10/V4A	AV300S	ASSV2000	BGSV
400mm		–	FPAP400AC	FPAR2000AC	FPBGV10/V4A	AV400S	ASSV2000	BGSV
500mm		–	FPAP500AC	FPAR2000AC	FPBGV10/V4A	AV500S	ASSV2000	BGSV
600mm		–	FPAP600AC	FPAR2000AC	FPBGV10/V4A	AV600S	ASSV2000	BGSV

Product Information

All products are supplied in pack quantities of one.
Other brackets and supports available on request.
Please contact us on +44 (0)1424 856600 for a lead time.



GRP ground ducts and profiles are ideal for railway applications wherever below ground installations are required.

Product information

Ducts

- 250 x 140mm to 450 x 176mm
- Rigid and self-supporting
- 3 times lighter than GRC (Glass fibre Reinforced Concrete)
- 10 times lighter than concrete
- 2.5 times lighter than steel
- Impact and frost resistant
- Easy to handle and load

Profile

- 36 x 35mm to 143 x 53mm
- Avoids ballast falling into ducts
- Ensures perfect positioning of ground duct covers
- Increases capacity of existing concrete ground ducts
- High mechanical and corrosion performance

For information on other available dimensions, please call our Technical Team on +44 (0)1424 856688



GRP is a non-conductive material with excellent fire performance and high corrosion resistance.

Ground ducts and profiles



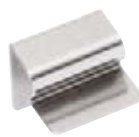
Duct base 2500mm

code	size	pack
BK200140	250 x 140mm	1
BK300176	350 x 176mm	1
BK400176	450 x 176mm	1



Cover 1250mm

code	to fit	pack
BKDR200	250 x 140mm	1
BKDR300	350 x 176mm	1
BKDR400	450 x 176mm	1



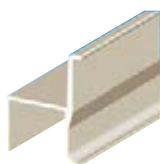
Clip for cover mounting

code	to fit	pack
DF94/4	250 x 140mm	1
DF94/4	350 x 176mm	1
DF94/4	450 x 176mm	1



Set of clips and hinge for articulate cover mounting

code	to fit	pack
DF94/C	250 x 140mm	1
DF94/C	350 x 176mm	1
DF94/C	450 x 176mm	1



Ground duct profile

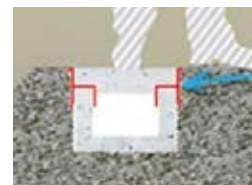
code	to fit	pack
PR3635	36 x 35mm	1
PR5045	50 x 45mm	1
PR5555	55 x 55mm	1



Ground duct A profile

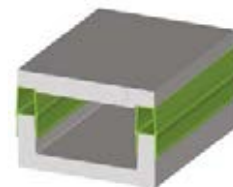
code	to fit	pack
PR5080	143 x 53mm	1

Ground duct profile



Ground duct A profile

- Increases cable capacity of existing concrete ground ducts
- High mechanical and corrosion performance
- Highly effective at minimum cost



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Technical Information

GRP cable troughing is ideally suited to railway applications where cable ducts cannot be buried.

Product information

- 150 and 250 x 150mm
- Self-supporting base
- High mechanical loading capacity
- One post every 6m
- Lightweight product
- Only one person required for installation

For further information please call our Technical Team on +44 (0)1424 856688



GRP is a non-conductive material with excellent fire performance and high corrosion resistance

Basic components



Base and pre-mounted connector 6M

code	size	pack
SP150150	150 x 150mm	1
SP250150	250 x 150mm	1



U-Shaped connector

code	to fit	pack
SPIH150150	150 x 150mm	1
SPIH250150	250 x 150mm	1



Splice plate

code	to fit	pack
KKIH50	150 x 150mm	1



Cable trough covers

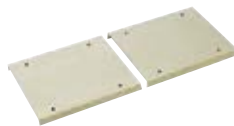
code	to fit	pack
KKDL150	150 x 150mm	1
KKDL250	250 x 150mm	1

Fittings



Internal vertical elbow 15°

code	size	pack
SPBI150	150 x 150mm	1
SPBI250	250 x 150mm	1



Cover for internal vertical elbow 15°

code	to fit	pack
SPBID150	150 x 150mm	1
SPBID250	250 x 150mm	1



External vertical elbow 15°

code	size	pack
SPBA150	150 x 150mm	1
SPBA250	250 x 150mm	1



Cover for external vertical elbow 15°

code	to fit	pack
SPBAD150	250 x 150mm	1
SPBAD250	250 x 150mm	1



Horizontal elbow 15°

code	size	pack
SPB150	150 x 150mm	1
SPB250	250 x 150mm	1



Cover for horizontal elbow 15°

code	to fit	pack
SPBD150	150 x 150mm	1
SPBD250	250 x 150mm	1

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Technical Information

GRP LADDER AND TRAY SYSTEMS

Fittings

**Steel post 1500mm**

code	to fit	pack
SPP100150	150/250 x 150mm	1

**Steel post 2000mm**

code	to fit	pack
SPP100200	150/250 x 150mm	1

**Steel post 2500mm**

code	to fit	pack
SPP100250	150/250 x 150mm	1

**Steel mounting plate**

code	to fit	pack
SPC100150	150 x 150mm	1
SPC100250	250 x 150mm	1

**HDG steel cable out fitting with bolts**

code	to fit	pack
SPKA	150/250 x 150mm	1

**316 SS bolts and nuts for SPIH/KKIH**

code	to fit	pack
SPM1025	for 150/250 x 150mm	1

**HDG steel bolts, nuts and U-shaped washers**

code	to fit	pack
SPM1025/HDG	150/250 x 150mm	1

Case Study

GRP cable management proves perfect solution for Jersey's historic rail tunnels

High humidity levels and potential fire risks posed a cable management specification challenge during work at Jersey's famous St Aubin's war-time tunnels.

Corroded casing needed replacing within the tunnels because it was considered a fire risk and required frequent repair due to high humidity levels. GRP cable management proved the perfect solution thanks to its corrosion resistance and excellent fire safety credentials.

For this project GRP tray was suspended from ceilings to carry a wide range of cables, including PVC/SWA sub main, lighting SY sub-circuit, fire alarm and low voltage signal cables. Light fittings have also been fixed to the trunking's underside.

Specifier, Dave Atkinson from States of Jersey, explained why GRP was ideal for this challenging environment: "The humidity level in the tunnels at certain times of the year is very high due to water permeating through the hillside and concrete structure. Because of this moisture, the existing electrical installation had corroded.

"We chose GRP tray for the upgrade as it's resistant to humidity and fire. Apart from putting an end to the corrosion issues, St Aubin's needed a solution that would improve safety for tunnel users while also allowing maintenance teams to reduce testing regimes – something that was taking up a lot of time. Thanks its fire resistant credentials, the use of GRP has meant that periodic testing is now sufficient, in-line with BS 5839," concluded Mr Atkinson.



WIRE BASKET SYSTEMS

A comprehensive range of wire basket solutions for the simple routing of power and data cables.



WIRE BASKET SYSTEMS

WIRE BASKET SYSTEMS

A range of Fast Coupling Wire Basket for the simple routing of power and data cables. Strong and simple to install, Wire Basket offers maximum cable ventilation and a high level of resistance to cable movement.

Connection between sections of wire basket is quick and easy thanks to the integral couplers which results in reduced installation times and labour savings.

A unique rippled wire design enhances the product strength and resists flexing.

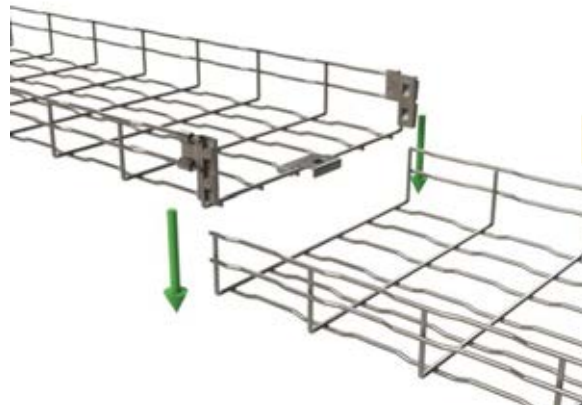


WIRE BASKET SYSTEMS

Fast-Coupling

Fast-Coupling Wire Basket is quick and simple to install:

- Two step mounting: fitting and pressure.
- The couplers at the end of the tray are used as guide in the assembly process.
- Once the couplers are connected the system offers excellent earth continuity across the joints.



4
SECONDS



Visit www.marshall-tufflex.com to view our video about Wire Basket installation

Applications

Wire basket can be used in a wide range of environments which require the transport of cables.

- Industrial installations
- Commercial installations
- Solar installations
- Wind farms
- Railways



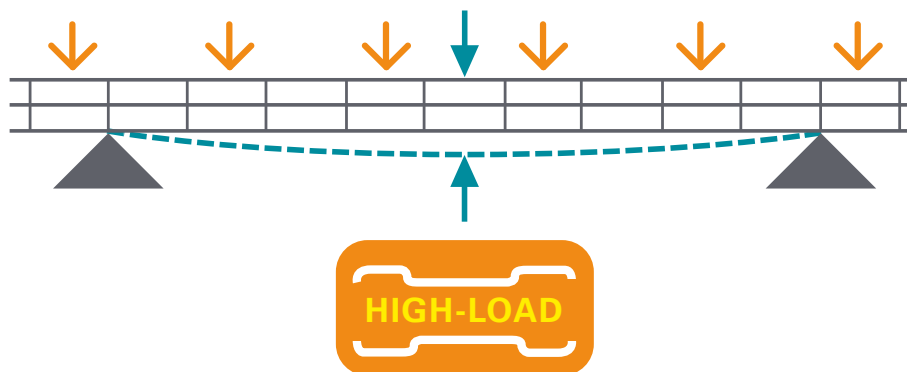
Approvals

- UL Certification E358301 EN61537 - Cable Management
- IEC 61537:2006 Cable management - Cable tray systems and cable ladder systems.



Rippled design

The unique rippled design of the base of the basket allows for the easy threading of cable ties and increased load capacity with greater resistance to flexing.



Innovative patented design which offers:

- Greater resistance to flexing
- Greater safe working load
- Excellent aesthetic finish



Useful area

Base width	Standard Basket 35mm Height*		Fast Coupling 65mm Height		Fast Coupling 105mm Height	
	in ²	cm ²	in ²	cm ²	in ²	cm ²
60	-	-	3.57	23	-	-
100	4.18	27	7.29	47	-	-
150	6.51	42	11.63	75	-	-
200	8.99	58	15.81	102	28.83	186
300	13.80	89	24.34	157	45.11	291
400	-	-	32.86	212	61.38	396
500	-	-	41.39	267	77.66	501
600	-	-	49.91	322	93.93	606

*Please note our 35mm wire basket does not have integral couplers

A fast-coupling system allowing sections of wire basket to be simply joined together for super-fast installation using the integral couplers.

- Two heights available; 65mm and 105mm
- Integral couplers for quick and easy connection in just two steps
- The position of the couplers create a guide making a fast and easy assembly process
- No tools required
- Reduced installation time, saving labour costs
- Strong and lightweight
- Unique rippled wire design to enhance product strength and resist flexing
- Maximum cable ventilation and a high level of resistance to cable movement
- Safety edges to prevent cable damage and personal injury
- Optimal solution for installations that do not require big loads
- Simple manipulations to the wire basket can overcome complicated changes in direction
- Electro-Zinc finish
- Corrosion resistance, can be used in harsh environments
- Fire resistant to E90 DIN 4101 section 12



Standard finish
EZ
EZ: Electro-Zinc

Wire Basket is available in Electro-Zinc as standard.

Finish options: HDG and SST are available but these are subject to minimum quantity orders and longer lead times.

65mm Height

Fast-Coupling Wire Basket 65mm Height

code	description	dimensions (mm)			pack	
		width	height	length		
MT2/7389	60 x 65mm	60	65	3000	2 x 3m	
MT2/7248	100 x 65mm	100	65	3000	2 x 3m	
MT2/7249	150 x 65mm	150	65	3000	2 x 3m	
MT2/7250	200 x 65mm	200	65	3000	2 x 3m	
MT2/7251	300 x 65mm	300	65	3000	2 x 3m	
MT2/7394	400 x 65mm	400	65	3000	2 x 3m	
MT2/7395	500 x 65mm	500	65	3000	2 x 3m	
MT2/7396	600 x 65mm	600	65	3000	2 x 3m	

105mm Height



Fast-Coupling Wire Basket 105mm Height

code	description	dimensions (mm)			pack	
		width	height	length		
MT2/7397	200 x 105mm	200	105	3000	2 x 3m	
MT2/7398	300 x 105mm	300	105	3000	2 x 3m	
MT2/7399	400 x 105mm	400	105	3000	2 x 3m	
MT2/7400	500 x 105mm	500	105	3000	2 x 3m	
MT2/7401	600 x 105mm	600	105	3000	2 x 3m	

Covers



- Cover eliminates dirt and dust build-up on cable
- Provides physical protection for cables
- Galvanised Steel finish
- To mount the cover no accessories are needed - fixed by pressure

Wire Basket Cover

code	description	dimensions (mm)		weight (kg)	pack
		width	length		
MT2/1312	Cover 100mm	102	3000	0.55	2 x 3m
MT2/1313	Cover 150mm	152	3000	0.76	2 x 3m
MT2/1314	Cover 200mm	202	3000	0.98	2 x 3m
MT2/1316	Cover 300mm	302	3000	1.55	2 x 3m
MT2/1317	Cover 400mm	402	2000	2.19	2 x 2m
MT2/1318	Cover 500mm	502	2000	3.11	2 x 2m
MT2/1319	Cover 600mm	602	2000	3.95	2 x 2m

An innovative wire basket solution to accommodate high cable loads.

- High cable capacity
- Maximum cable ventilation and a high level of resistance to cable movement
- Ripple design offers greater resistance to flexing
- Greater safe working load
- Excellent aesthetic finish
- Assemble using our range of Fast Fix Clip on couplers – no bolts required
- 35mm height
- Compatible with the full range of accessories



Standard finish
EZ
EZ: Electro-Zinc

Wire Basket in available in Electro-Zinc as standard.

Finish options: HDG and SST are available but these are subject to minimum quantity orders and longer lead times.

35mm Height



Standard Wire Basket 35mm Height

code	description	dimensions (mm)			pack	
		width	height	length		
MT2/3616	100 x 35mm	100	35	3000	2 x 3m	
MT2/3617	150 x 35mm	150	35	3000	2 x 3m	
MT2/3618	200 x 35mm	200	35	3000	2 x 3m	
MT2/3619	300 x 35mm	300	35	3000	2 x 3m	

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Technical Information



Fast fix clip on coupler - 35mm

code	pack
MT2/7271	50



Basket connector bolt

code	pack
MT2/4364	10



Basket connector bracket

code	pack
MT2/4919	10



Nut and bolt

code	pack
MT2/4362	10



Ceiling support plate

code	pack
MT2/2064	10

Please note these are sold in singles; two are needed for fittings as per the image. Nut and bolt are not supplied.



Wall bracket support plate

code	pack
MT2/0355	10



Conduit feed plate

code	pack
MT2/0356	8

Aperture: 1 x 21mm, 1 x 25.5mm, 1 x 32.5mm



Universal box plate

code	description	pack
MT2/0358	Large universal box plate	4
MT2/0359	Small universal box plate	8



Side support clip 65mm

code	pack
MT2/0360	10



Cable drop out plate

code	pack
MT2/6451	1



Bend connector bolt
code _____ pack
MT2/5059 _____ 1



Side support clip
code _____ pack
MT2/5724 _____ 1

Accepts 10mm mounting stud



Floor bracket
code _____ pack
MT2/5590 _____ 1



Lighting attachment plate
code _____ pack
MT2/5906 _____ 1



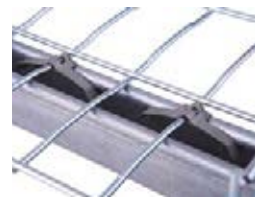
Multi-union joint
code _____ pack
MT2/0357 _____ 1



Cutting tool
code _____ pack
MT2/5066 _____ 1



Spray paint 98% zinc
code _____ pack
MT2/7224 _____ 1



Clip to secure basket to strut
code _____ pack
MT2/10284 _____ 10



Variable support bracket
code _____ pack
MT2/6477 _____ 10



M8 threaded rod
code _____ pack
MT2/3397 _____ 10 x 1m

Fixing accessories



M8 nut		
code		pack
MT2/0338		10



Earth bonding connector		
code		pack
MT2/6797		10



Self fixing dividing fillet		
code	description	pack
MT2/3476	35mm	10 x 3m
MT2/2066	60mm	10 x 3m
MT2/3478	100mm	10 x 3m

Attaches to wire basket using self fixing clip



Bracket for 60x65 wire basket		
code		pack
MT2/7304		1

Wall brackets



Fast fix wall bracket		
code	description	pack
MT2/7230	Fast fix wall bracket 100mm	1
MT2/7231	Fast fix wall bracket 150mm	1
MT2/7232	Fast fix wall bracket 200mm	1
MT2/7233	Fast fix wall bracket 300mm	1
MT2/7234	Fast fix wall bracket 400mm	1



Wall bracket supporting piece		
code		pack
MT2/6240		1

Ceiling brackets



Fast fix ceiling bracket		
code	description	pack
MT2/7235	Fast fix ceiling bracket 100mm	1
MT2/7236	Fast fix ceiling bracket 150mm	1
MT2/7237	Fast fix ceiling bracket 200mm	1
MT2/7238	Fast fix ceiling bracket 300mm	1

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Technical Information



Fast fix suspension frame

code	description	pack
MT2/3630	Fast fix suspension frame 100mm	1
MT2/1073	Fast fix suspension frame 150mm	1
MT2/1074	Fast fix suspension frame 200mm	1
MT2/1076	Fast fix suspension frame 300mm	1
MT2/3629	Fast fix suspension frame 400mm	1
MT2/1077	Fast fix suspension frame 500mm	1
MT2/5941	Fast fix suspension frame 600mm	1

Support strut leg

code	leg height	pack
MT2/5602	142mm	1

Case Study

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.

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.



“The system was perfect for this job – the time on-site it saved was significant.”

Colin Gunn, M&S Electrical (UK) Limited



Wire Basket Cablelay is laid within lengths of wire basket or tray to protect cables from protrusions, sharp edges, rough surfaces and kinking ridges thus maintaining the integrity of the data cables which lay on top.



Damaged cabling considerably slows down system performance, causes loss of data and costs hours of additional work time. Our Cablelay products are designed to minimise the risk of damage often caused during installation and protects the cabling for the lifetime of the system.

Cablelay Matting

- A lightweight and flexible 6mm thick mat supplied on rolls for quick and easy installation.
- Class 0 fire standard to meet Building Regulations for England and Wales
- Rolls are joined using Cablelay tape which maintains the Fire Standard and prevents joint movement

Cablelay Rigid

- A 3mm thick compressed foam sheet that is lightweight, strong and flexible and available in a variety of widths to suit your wire basket installation.
- LSOH (low smoke and halogen free)
- Cablelay Rigid conforms to Class 1 (British Standards test 476 part 7)
- Available in a wide range of widths (60mm to 600mm)

Cablelay Matting Meets Building Regulations

Quality assurance and health and safety issues are becoming increasingly more important, Class 0 Cablelay has an excellent fire safety performance complying with Building Regulations by passing both BS476 parts 6 and 7 for fire propagation and surface spread of flames.

WIRE BASKET SYSTEMS

Cablelay Matting



Cablelay Matting Class 0

code	width	pack
WBM0660	60mm	1 x 30m
WBM06100	100mm	1 x 30m
WBM06150	150mm	1 x 30m
WBM06200	200mm	1 x 30m
WBM06300	300mm	1 x 30m
WBM06400	400mm	1 x 30m
WBM06500	500mm	1 x 30m

Cablelay Rigid



Cablelay Rigid (LSOH)

code	width	pack
WBMR360	60mm	10 x 1.2m
WBMR3100	100mm	10 x 1.2m
WBMR3150	150mm	10 x 1.2m
WBMR3200	200mm	10 x 1.2m
WBMR3300	300mm	10 x 1.2m
WBMR3400	400mm	10 x 1.2m
WBMR3500	500mm	10 x 1.2m
WBMR3600	600mm	10 x 1.2m

Accessories



Cablelay Tape

code	description	pack
WBMOT	Class 0	1 x 15m roll
WBMLT	LSOH	1 x 15m roll



Cutting Tool

code	pack
WBMCT	1

UNDERFLOOR TO DESK SOLUTIONS

A comprehensive product range of flexible floor to desk cable management and prefabricated wiring systems developed to provide installations that are fast, easy and adaptable for contractor and client.

UNDERFLOOR TO DESK SOLUTIONS

Marshall-Tufflex's underfloor to desk solutions incorporate a range of products for the distribution of power and data services from beneath raised floors and in-screed systems to desks.

A variety of wiring options are available, including the MT32 prefabricated technology that provides seamless connection all the way from the incoming feed to the desktop.

Underfloor to desk solutions provide a sustainable wiring option, offering zero waste systems which can be re-used and re-configured.

Powertrack

Standard and CE (Clean Earth) 63Amp powertrack.



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80

Raised floor boxes and grommets

3 and 4 compartment unwired and pre-wired boxes and grommets.



Page
82

In-screed system

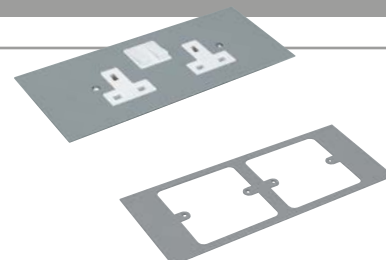
PVC-U or steel ducting with 3 and 4 compartment outlet boxes.



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Faceplates and accessories

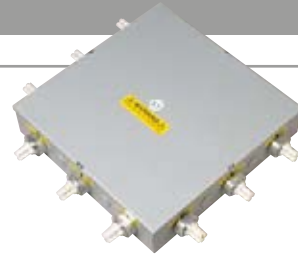
Accessories and accessory mounting plates for raised floor and in-screed floor outlet boxes.



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88

MT32 pre-wired underfloor power distribution

A 32Amp, interconnecting, fast-fit and flexible, pre-wired and tested underfloor to floor outlet box power distribution system.



Page 86

Power and data modules

A range of moulded pre-wired and assembled power units that can be used singly or linked by plug and play cable connectors.



Page 89

PowerPosts

An efficient way of managing services at island locations.



Page 96

Other pre-wired units

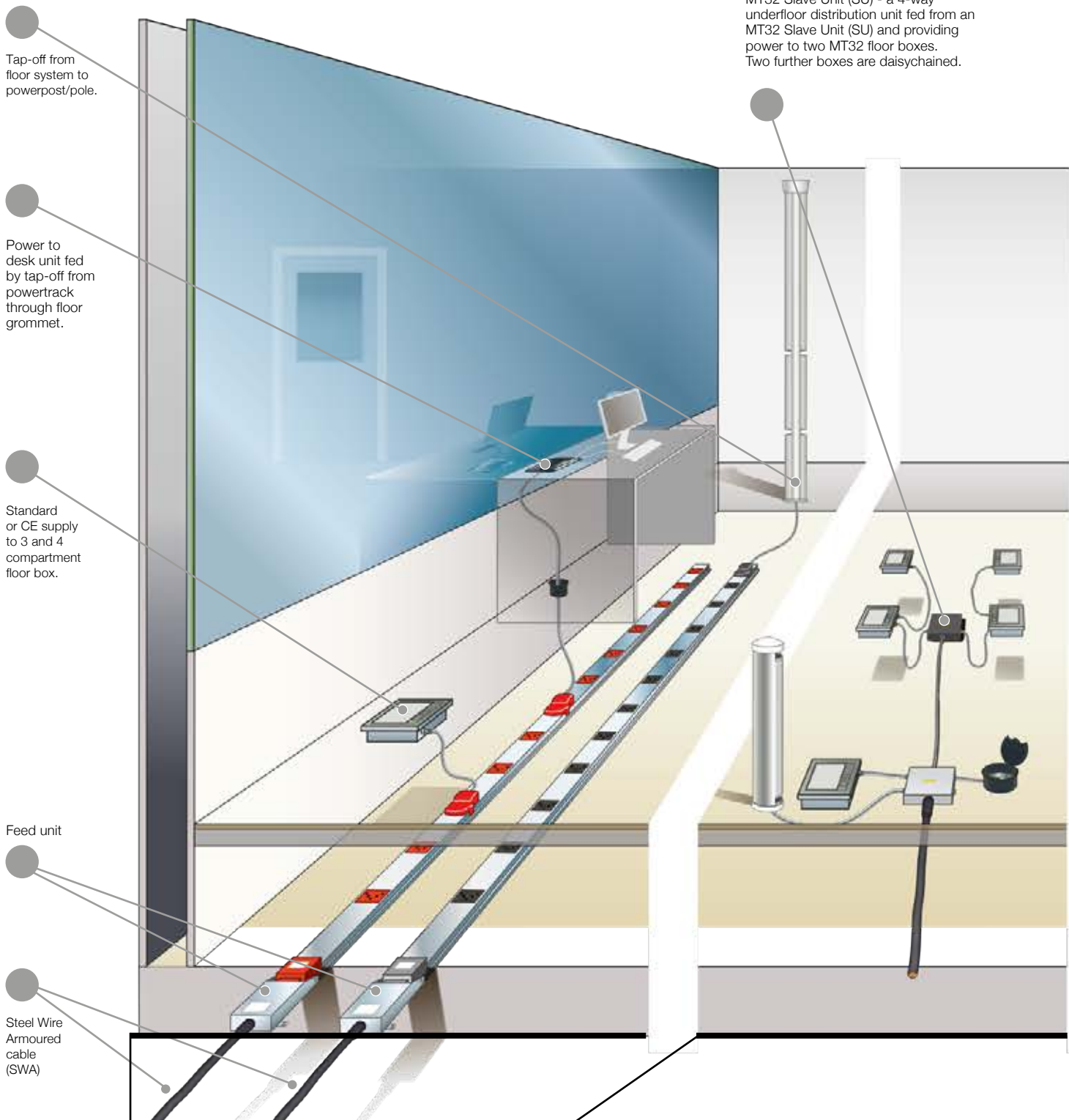
For other pre-wired units made to order to suit your specifications, please contact the Technical Team on +44 (0)1424 856688.



A selection of design layouts incorporating MT32 pre-wired technology and powertrack.

Please note: All products should be installed as per the manufacturer's installation instructions and as per current Wiring Regulations

UNDERFLOOR TO DESK SOLUTIONS



MT32 Slave Unit (SU) - a 4-way underfloor distribution unit fed from an MT32 Slave Unit (SU) and providing power to two MT32 floor boxes. Two further boxes are daisy-chained.

AREA 1

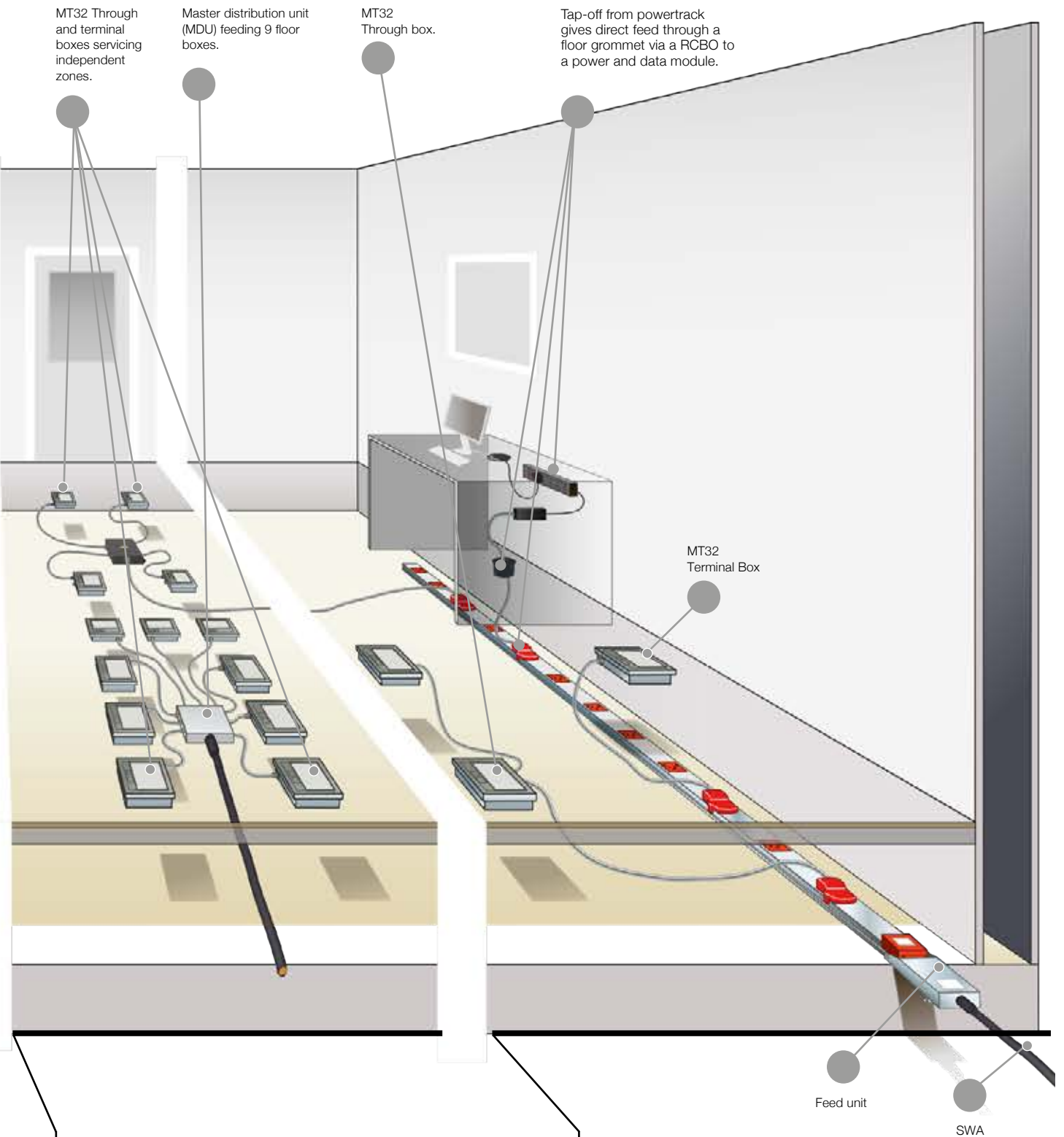
Using traditional powertrack and hard-wired floor boxes

- Standard and Clean Earth (CE) Powertrack
- 63Amp rating

AREA 2 – MT32 PRE-WIRED AND RECONFIGURABLE INTERCONNECTING SYSTEMS

Using MT32 Slave Unit (SU)

- Radial or daisy chain options for Standard and CE Systems
- 32Amp rating



AREA 3 – MT32 PRE-WIRED AND RECONFIGURABLE INTERCONNECTING SYSTEMS

Using MT32 Slave Unit (SU)

- Radial or daisy chain options for Standard and CE Systems 32Amp rating

AREA 4 – A COMBINATION OF powertrack AND MT32

Using 63Amp Standard or CE Powertrack with the MT32 32Amp Underfloor Distribution system.

- A combination that permits greater floor coverage 32Amp rating

A range of 63Amp powertrack complete with integral mounting brackets and pre-assembled end caps and couplers for ease of installation.



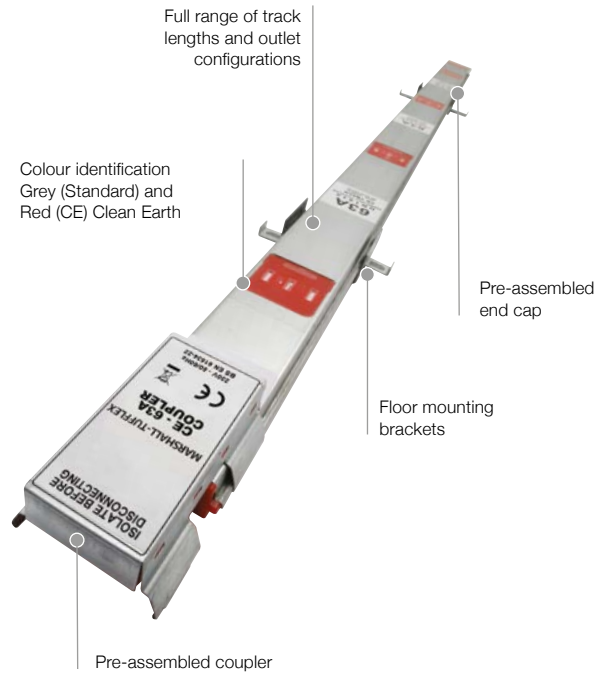
Product information

- Each length of track comes complete with pre-assembled coupler, end cap and floor mounting brackets.
- Maximum 63Amp rating
- Tap-offs are key and colour coded for Standard and CE (Clean Earth)
- Tap-offs are 32Amp rated or fused at 13Amp
- Adhesive dust covers protect outlets
- Compatible with MT32 pre-wired floor boxes



Powertrack and fittings are independently tested by Intertek

Identification	
Standard	CE
Standard: Grey CE (Clean Earth): Red	



To calculate powertrack lengths required for different floor layouts refer to table on opposite page.

UNDERFLOOR TO DESK SOLUTIONS

Powertrack
Standard



code	length	Number of outlets	pitch (mm)	pack
UN1112	1.2m	4	300	2
UN1118	1.8m	6	300	2
UN1114	2.4m	8	300	2
UN1116	3.6m	12	300	2

Powertrack
CE (Clean Earth)



code	length	Number of outlets	pitch (mm)	pack
UN1212	1.2m	4	300	2
UN1218	1.8m	6	300	2
UN1214	2.4m	8	300	2
UN1216	3.6m	12	300	2



Standard
Rated current 63Amp



Low Noise (CE)
Rated current 63Amp



Feed unit	Interlink		Interlink		Tap-off units		Tap-off units		Tap-off units		Tap-off units	
Female	Length	1.2m	Length	2.4m	Unfused 32Amp	Fused 13Amp	Unfused 32Amp	Fused 13Amp	Unfused 32Amp	Fused 13Amp	Unfused 32Amp	Fused 13Amp
Pack 1	Pack 1		Pack 1		Length 3m	Length 3m	Length 5m	Length 5m	Length 5m	Length 5m	Length 5m	Length 5m
					Pack 1	Pack 1	Pack 1	Pack 1	Pack 1	Pack 1	Pack 1	Pack 1
UN3100	UN5102		UN5104		UN7113	UN7123	UN7115		UN7125			
UN3200	UN5202		UN5204		UN7213	UN7223	UN7215		UN7225			

Other configurations of tap-off units including fuse options and conduit lengths up to 10m are available on request.

All tap-off units comply with 17th Edition Wiring Regulations Section 543 (High Integrity Earthing).

Powertrack – run length component chart

To determine the number and size of track required for a given area, select your total run length (in metres) from the left hand column, then find the correct track combinations along that row.

Total run in metres	Track lengths required			
3.6	3.6			
4.2	1.8	2.4		
4.8	2.4	2.4		
5.4	3.6	1.8		
6.0	3.6	2.4		
6.6	2.4	2.4	1.8	
7.2	3.6	3.6		
7.8	3.6	2.4	1.8	
8.4	3.6	3.6	1.2	
9.0	3.6	3.6	1.8	
9.6	3.6	3.6	2.4	
10.2	3.6	3.6	1.8	1.2
10.8	3.6	3.6	3.6	
11.4	3.6	3.6	2.4	1.8
12.0	3.6	3.6	3.6	1.2

Total run in metres	Track lengths required					
12.6	3.6	3.6	3.6	1.8		
13.2	3.6	3.6	3.6	2.4		
13.8	3.6	3.6	3.6	1.8	1.2	
14.4	3.6	3.6	3.6	3.6		
15.0	3.6	3.6	3.6	2.4	1.8	
15.6	3.6	3.6	3.6	3.6	1.2	
16.2	3.6	3.6	3.6	3.6	1.8	
16.8	3.6	3.6	3.6	3.6	2.4	
17.4	3.6	3.6	3.6	3.6	1.8	1.2
18.0	3.6	3.6	3.6	3.6	3.6	
18.6	3.6	3.6	3.6	3.6	2.4	1.8
19.2	3.6	3.6	3.6	3.6	3.6	1.2
19.8	3.6	3.6	3.6	3.6	3.6	1.8

We recommend that no single run of Powertrack exceeds 20 metres.

UNDERFLOOR TO DESK SOLUTIONS

A high quality range of raised floor boxes to provide power and data to desks within the modern office environment. Available as standard or heavy duty versions, boxes are supplied with dividers for quick and easy configuration as either a 3 or 4 compartment box.

Designed with quality in mind, the standard support plate is 3mm thick and allows for high traffic levels. In the case of very heavy traffic a robust steel sub-frame can be used to support the lid. The sub-frame doesn't restrict space for wiring and accessories and also allows for fine adjustments to be made to accommodate uneven flooring.



Designed and manufactured to

- BS EN 61534-22:2009
- BS EN 60670-1:2005
- BS EN 60670-23:2008
- BS EN 50085-1:2005
- BS EN 50085-2-2:2008

Standard finish
GY
GY: Grey RAL7011 (floor box trim)



Barrel lock option for extra security



Optional steel sub-frame



Snap-in retainer guides

UNDERFLOOR TO DESK SOLUTIONS



Reversible & self closing lid

Dividers to create 3 or 4 compartment options

Matching galvanised steel accessory plates

MT32 pre-wired option



Product information

- Standard depth 83mm
- Supplied with dividers to create 3 or 4 compartment box
- Two earth fixing points for flexible positioning of sockets
- 3mm thick medium load plate
- Steel sub-frame option for heavy traffic and fine adjustment to allow for uneven flooring
- Supplied with two snap-in cable retainers/guides
- Grey trim as standard
- Cut-out within lid for carpet or carpet tiles up to 6mm
- Reversible lid

- Supplied with metal screws to fix attach trim to box for a secure fix
- Fixings are pre-punched for quick and easy installation
- Barrel lock option available for extra security
- RCD option
- Self closing lid for extra safety and security
- Pre-wired option available with MT32 Connectors
- Pre-wired boxes with tap-off
- Heavy duty steel galvanized conduit (BS EN 61386-23:2004+A11:2010)



Raised Floor Boxes

Other options

- Steel lid & trim option (UMLD3) for even greater strength and durability
- Lid (UMLD1) available separately
- Replacement cable flap (UMCB1) available separately
- Replacement screw pack (UMSC1) available separately



3 compartment standard floor box (terminal)
357 x 257 x 83mm

code	description	pack
UM1010	1 x 2 gang Std	1
UM1020	2 x 2 gang Std	1
UM1030	3 x 2 gang Std	1
UM1110	1 x 2 gang CE	1
UM1120	2 x 2 gang CE	1
UM1130	3 x 2 gang CE	1



3 Compartment standard floor box (through)
357 x 257 x 83mm

code	description	pack
UM5210	1 x 2 gang Std	1
UM5220	2 x 2 gang Std	1
UM5230	3 x 2 gang Std	1
UM5211	1 x 2 gang CE	1
UM5221	2 x 2 gang CE	1
UM5231	3 x 2 gang CE	1



4 compartment standard floor box (terminal)
357 x 257 x 83mm

code	description	pack
UM5010	1 x 2 gang Std	1
UM5020	2 x 2 gang Std	1
UM5030	3 x 2 gang Std	1
UM5110	1 x 2 gang CE	1
UM5120	2 x 2 gang CE	1
UM5130	3 x 2 gang CE	1



4 Compartment standard floor box (through)
357 x 257 x 83mm

code	description	pack
UM5610	1 x 2 gang Std	1
UM5620	2 x 2 gang Std	1
UM5630	3 x 2 gang Std	1
UM5611	1 x 2 gang CE	1
UM5621	2 x 2 gang CE	1
UM5631	3 x 2 gang CE	1



3 compartment standard pre-wired box with 3m tap-off
357 x 257 x 83mm

code	description	pack
UPW400	1 x 2 gang Std	1



3 compartment CE pre-wired box with 3m tap-off
357 x 257 x 83mm

code	description	pack
UPW405	1 x 2 gang CE	1



4 compartment standard pre-wired box with 3m tap-off
357 x 257 x 83mm

code	description	pack
UPW410	1 x 2 gang Std	1



4 compartment CE pre-wired box with 3m tap-off
357 x 257 x 83mm

code	description	pack
UPW415	1 x 2 gang CE	1



Tap-off (Standard) to MT32 connector

code	length	rating	pack
UN8113	3m	32Amp unfused	1
UN8115	5m	32Amp unfused	1
UN8123	3m	13Amp fused	1
UN8125	5m	13Amp fused	1



Tap-off (Clean Earth) to MT32 connector

code	length	rating	pack
UN8213	3m	32Amp unfused	1
UN8215	5m	32Amp unfused	1
UN8223	3m	13Amp fused	1
UN8225	5m	13Amp fused	1

MT32 Connectors

The description 'male' (white) and 'female' (black) does not refer to the connector pins but describes and identifies the moulded connector housings. For further information please contact our Technical Team on +44 (0)1424 856688.

UNDERFLOOR TO DESK SOLUTIONS



Empty floor box

code	description	pack
UM1000	Plastic lid & trim	1
UM1500	Steel lid & trim	1



Contractor floor box

code	description	pack
UM1430	Plastic lid/trim with plate to accept 1 x 2 gang accessory	1



Sub-frame assembly

code	pack
UMSF1	1



Lock kit

code	pack
UMLK1	1



Raised floor lid assembly

code	description	pack
UMLD1	Plastic	1
UMLD3	Steel	1



Replacement screw pack

code	pack
UMSC1	1



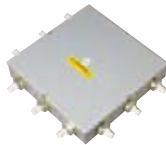
Replacement cable flaps pack

code	pack
UMCB1	1



Slave unit (SU) 32Amp rating 100x100x55mm

code	description	pack
UM6100	4 way Std	1
UM6101	4 way CE	1



Master distribution unit (MDU) 32Amp rating 260 x 260 x 55mm

code	description	pack
UM6200	9 way Std	1
UM6201	9 way CE	1



Floor grommet

code	description	pack
UTG1BK	without foam insert	1
UTG1GY	without foam insert	1



Floor grommet

code	description	pack
UTG2BK	with foam insert	1
UTG2GY	with foam insert	1



Floor power grommet

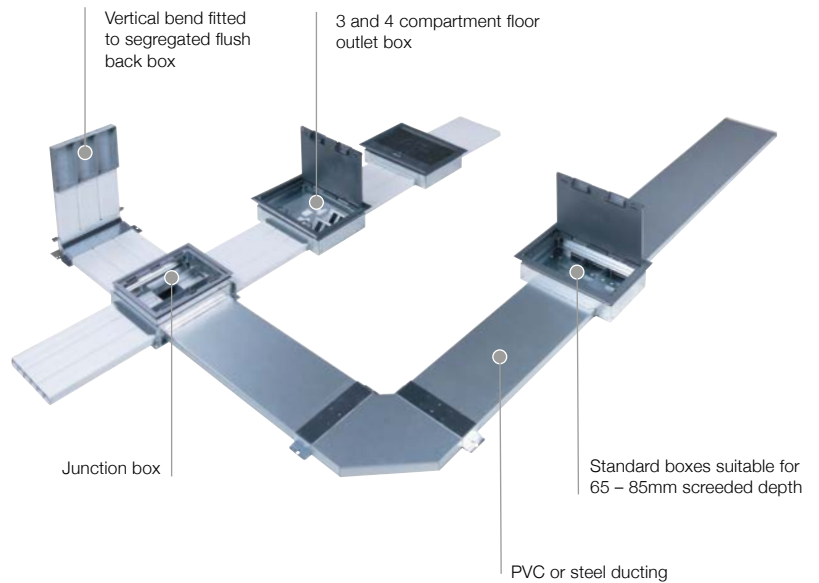
code	description	pack
UPG1BK	with foam insert	1
UPG1GY	with foam insert	1

Please note the floor box grommets are available in black BK (RAL9004) and grey GY (RAL7037).

A range of floor outlet boxes, fittings and plates in galvanised steel, with choice of PVC-U or steel ducting designed to be positioned within screed flooring.

Product information

- 3 and 4 compartments (boxes come with extra divider to make 4 compartments)
- Suitable for 65-85mm screed depth
Boxes for deeper floor screed available on request
- Box tray lid suitable for standard 6mm floor finishes
- For advice on box tray lids for non-standard floor finishes please contact our Technical Team
- Adjustable for box trim height
- Grey moulded carpet trim for floor outlet boxes
- Steel trims with various finishes available
- Universal junction box with integral, fully-reversible cable segregation



Standard floor box trim
GY
GY: Grey RAL7011 (floor box trim)

Other trim finishes: Floor boxes can be provided with a variety of trim finishes such as brass, stainless steel and painted colours. For further information please contact the Technical Team on +44 (0)1424 856688.

Basic components



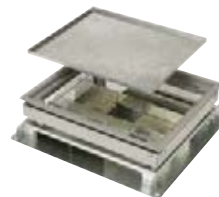
**Floor outlet box
3 and 4 compartment**

code	size	pack
USF32	357 x 257mm	1



Floor box lid assembly

code	description	pack
UMLD1	Plastic	1
UMLD3	Steel	1



**Universal junction box
(excluding adaptors)**

code	size	pack
USJ3	269 x 234mm	1



**Twin section PVC-U duct
(three ducts required per run)**

code	size	pack
MTU125	75 x 25mm	8 x 3m

Please see page 88 for the full range of accessory plates



3 Compartment steel duct

code	description	pack
USFT25	225 x 25mm	1 x 2.5m



Blank end

code	description	pack
USFB1	3 x 20mm KO	1
USFB25	6 x 25mm KO	1



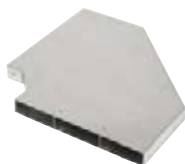
Adaptor

code	pack
USFA1	1



Connector

code	pack
USFC1	1



**Flat bend
(excluding connector)**

code	description	pack
USFF1	steel	1
HFP125BK	PVC-U	1



**Vertical bend
(excluding connector)**

code	description	pack
USFV1	steel	1
HVP125	PVC-U	1



Steel screeding plate

code	pack
USFSP1	1

Note: Used in place of box lid when screeding

Floor materials

Marshall-Tufflex can supply floor outlet boxes and junction boxes that are suitable for different floor materials, such as marble, stone or wood, or where a higher IP rating is required. For more information on these, please contact our Technical Team on +44 (0)1424 856688.



UNDERFLOOR TO DESK SOLUTIONS

MT32 pre-wired underfloor distribution is a prefabricated wiring system that incorporates 32Amp plug and play connector technology. The system provides a range of pre-wired, pre-tested products which can be used alone or in conjunction with powertrack, desk modules and other pre-wired systems to accommodate various underfloor layout options.



Product information

- Distribution from powertrack supply
- 32Amp power distribution
- Standard and CE systems
- Greater scope in layout design
- Wider range of floor distribution
- Economical and practical for large or high density floor areas
- Designs, dimensions and cable capacities to meet the latest BS EN ISO standards and accommodate all building designs and construction parameters
- Accessory plates manufactured from galvanised steel to match floor boxes

Plate dimensions

- 3 compartment 185 x 95mm
- 4 compartment 185 x 71mm



Standard finish
GY
GY: Grey RAL7011 (floor box trim)

MT32 Connectors

The description 'male' (white) and 'female' (black) does not refer to the connector pins but describes and identifies the moulded connector housing. For further information please contact our Technical Team on +44 (0)1424 856688.

UNDERFLOOR TO DESK SOLUTIONS

Components



Slave unit (SU)
32Amp rating
100 x 100 x 55mm

code	description	pack
UM6100	4 way Std	1
UM6101	4 way CE	1

MT32 Four compartment floor boxes

Terminal: Refer to page 83



Floor box – through 3 compartment
357 x 257 x 83mm

code	description	pack
UM5210	1 x 2 gang Std	1
UM5220	2 x 2 gang Std	1
UM5230	3 x 2 gang Std	1
UM5211	1 x 2 gang CE	1
UM5221	2 x 2 gang CE	1
UM5231	3 x 2 gang CE	1



Floor box – terminal 3 compartment
357 x 257 x 83mm

code	description	pack
UM1010	1 x 2 gang Std	1
UM1020	2 x 2 gang Std	1
UM1030	3 x 2 gang Std	1
UM1110	1 x 2 gang CE	1
UM1120	2 x 2 gang CE	1
UM1130	3 x 2 gang CE	1



Interconnecting conduit assembly To MDU, SU, FBDU and floor boxes

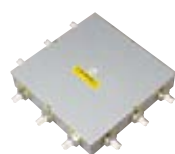
code	length	description	pack
UC3353	3m	Std	1
UC3355	5m	Std	1
UC4453	3m	CE	1
UC4455	5m	CE	1



***Male & female adaptors 220mm tail - fits 20mm knockout**

code	description	pack
UA7234	3 pole (male) white	1
UA7244	4 pole (male) white	1
UA7134	3 pole (female) black 1	1
UA7144	4 pole (female) black 1	1

*For adapting additional equipment and floor boxes to modular system.



Master distribution unit (MDU) 32Amp rating
260 x 260 x 55mm

code	description	pack
UM6200	9 way Std	1
UM6201	9 way CE	1



Tap-off (Standard) to MT32 connector

code	length	rating	pack
UN8113	3m	32Amp unfused	1
UN8115	5m	32Amp unfused	1
UN8123	3m	13Amp fused	1
UN8125	5m	13Amp fused	1

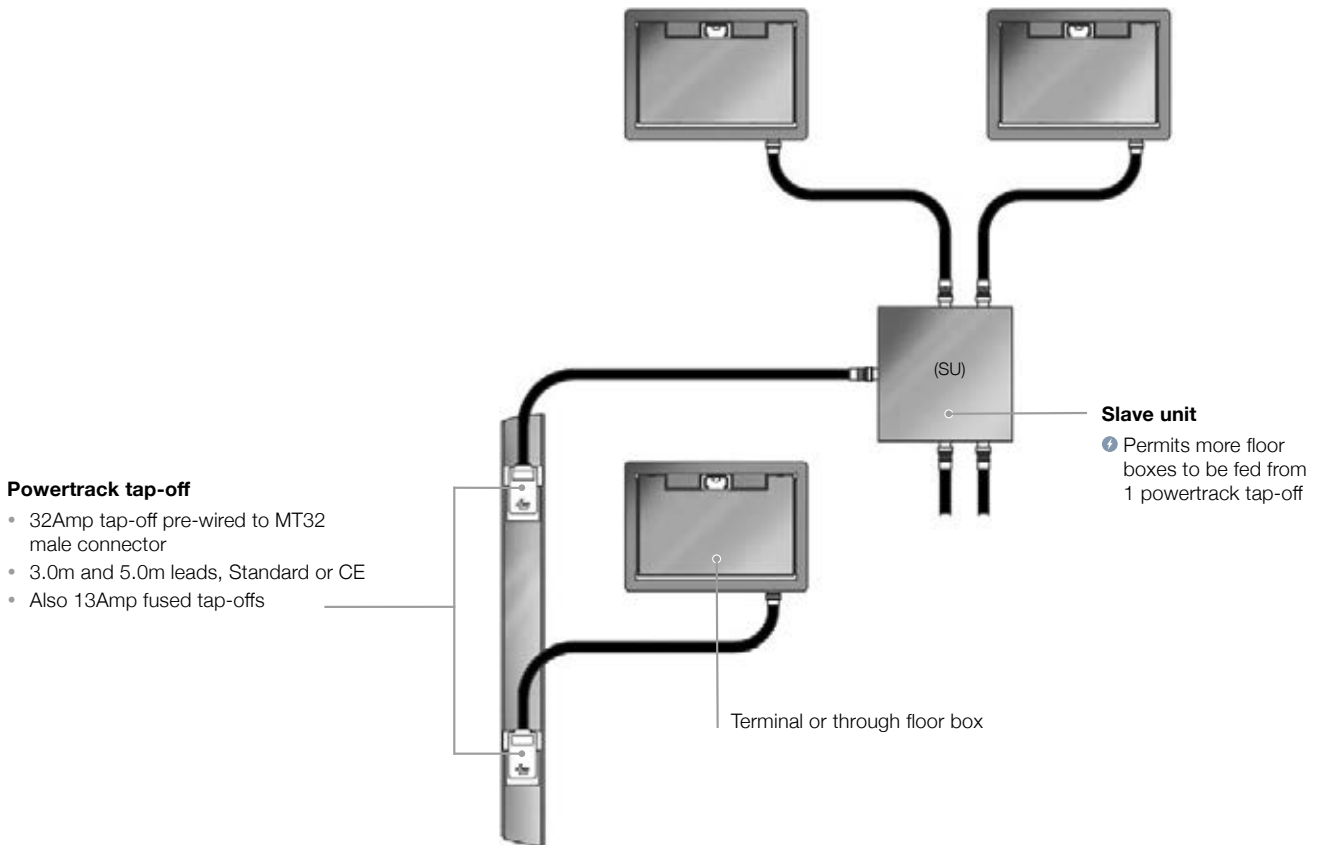


Tap-off (Clean Earth) to MT32 connector

code	length	rating	pack
UN8213	3m	32Amp unfused	1
UN8215	5m	32Amp unfused	1
UN8223	3m	13Amp fused	1
UN8225	5m	13Amp fused	1

Suggested layout

Should powertrack be the preferred method of underfloor power supply, then combining powertrack with MT32's interlinked through floor boxes and/or slave units will provide a far greater reach of floor area than can be achieved using powertrack alone.





13Amp 2 gang DP/TE switched socket

code	description	pack
UP651	3 comp	1
UP751	4 comp	1



13Amp 2 gang DP/TE switched socket clean earth

code	description	pack
UP653	3 comp	1
UP753	4 comp	1



Double plate with 2 x 13Amp 2 gang switched socket

code	description	pack
UP751D	4 comp	1
UP753D	4 comp CE	1

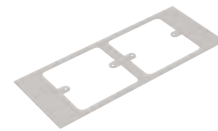


Plate to accept 2 x 1 gang accessory (M3.5 x 60.3mm)

code	description	pack
UP633	3 comp	1

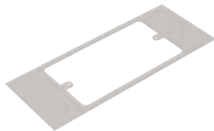


Plate to accept 1 x 2 gang accessory (M3.5 x 120.3mm)

code	description	pack
UP632	3 comp	1



Plate to accept 1 x 1 gang accessory

code	description	pack
UP631	4 comp	1



Plate to accept 1 x 1 gang accessory

code	description	pack
UP731	4 comp	1

Plate dimensions

3 compartment = 185 x 95mm
4 compartment = 185 x 71mm

Plate material

Plates are manufactured from plain galvanised steel to match floor boxes.



Plate to accept 2 x 1 gang accessory (M3.5 x 60.3mm)

code	description	pack
UP733	4 comp	1

Accessory overlaps adjacent plates

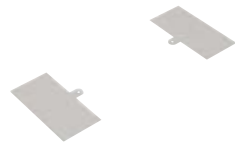


Plate to accept 1 x 2 gang accessory (M3.5 x 120.3mm)

code	description	pack
UP732	4 comp	1

Accessory overlaps adjacent plates



13Amp 2 gang RCD unswitched socket

code	description	pack
UP660	3 comp Std	1
UP663	3 comp CE	1



Blank plate

code	description	pack
UP621	3 comp	1
UP721	4 comp	1



Euro plate 2 gang

code	description	pack
UP615	3 comp	1
UP715	4 comp	1

Adaptor plate required 2 x 50mm x 50mm cut outs
Note: Adaptor plates are not supplied by Marshall-Tufflex

International accessory plates

It is advisable to use MTOP plates for conversion to a range of continental sockets. Please refer to page 232 for more information.



Data/voice plate 6 x RJ45

code	description	pack
UP612	3 comp	1
UP712	4 comp	1

6 x 37mm x 22mm cut outs



Data/voice plate 4 x RJ45

code	description	pack
UP610	3 comp	1
UP710	4 comp	1

4 x 37mm x 22mm cut outs



Data wave plate 4 x RJ45

code	description	pack
UP617	3 comp	1

4 x 37mm x 22mm cut outs



Data wave plate 2 x RJ45

code	description	pack
UP717	4 comp	1

2 x 37mm x 22mm cut outs

A range of surface mounted power and data modules for use with office furniture.



Product information

- Flip up units - flush finish when in use
- Surface units - desk mounted
- Desk grommets
- Fed from wall trunking or floor boxes
- Various switching and fusing options available
- Individually fused
- Master switch option
- RCD and MCB protection available



Various configurations of power and data outlets

Aluminium body

Surface units



Flip-up unit with master switch and individually fused sockets

code	description	pack
FDMF002BK	2 gang	1
FDMF007BK	4 gang	1
FDMF008BK	5 gang	1

Flip-up unit with master switch, data outlets and individually fused sockets

code	description	pack
FDMF013BK	2 gang + 1 Cat 5e	1
FDMF014BK	3 gang + 2 Cat 5e	1
FDMF015BK	4 gang + 2 Cat 5e	1



Curved surface unit with master switch and individually fused sockets

code	description	pack
FDMC003BK	2 gang	1
FDMC005BK	3 gang	1
FDMC009BK	4 gang	1
FDMC011BK	6 gang	1



Curved surface unit with master switch, data outlets and individually fused sockets

code	description	pack
FDMC012BK	2 gang + 1 Cat 5e	1
FDMC013BK	3 gang + 2 Cat 5e	1
FDMC014BK	4 gang + 3 Cat 5e	1
FDMC015BK	4 gang + 4 Cat 5e	1
FDMC016BK	6 gang + 4 Cat 5e	1



13Amp in-feed power cable Wieland connector

code	length	pack
DM8301	1m	1
DM8302	2m	1
DM8303	3m	1

Please note that these products come with 2 x adjustable desk clamps (to suit between 13 - 40mm)



Desk grommet

code	diameter	pack
DG1BK	92mm	1

UNDERFLOOR TO DESK SOLUTIONS



A range of power and data modules ideal for under desk mounting.

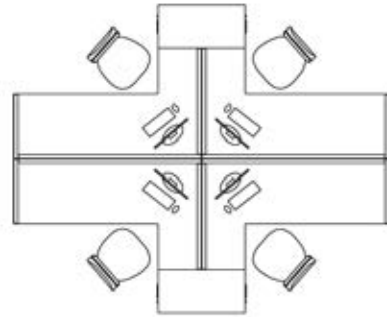
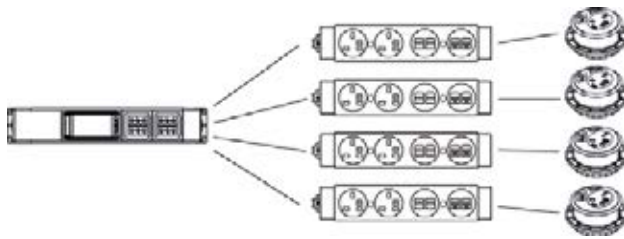


Product information

- High strength, flame retardant polycarbonate moulded modules
- Aluminium RCBO units
- Aluminium power modules
- Can be fed from wall trunking, floor boxes, grommets or powerpoles
- For single use or modules can be interlinked
- In-feed supply either by Wieland GST 18/3 connection or plug socket
- Unswitched individually fused 3.15Amp or 5Amp sockets
- 2 and 4 gang options plus the ability to link modules
- Polycarbonate power modules with twin USB points that charge up to 5 x faster than your standard PC USB port
- Desk units comply with BS 6396 for Electrical Systems in Office Furniture when powered from a plug socket outlet and with BS 7671 when powered from a power distribution network.
- RJ45 data sockets in Cat 5e, Cat 6 or blank configuration options



Our range of power modules and RCBOs can be integrated to deliver a complete system from underfloor to desk.



UNDERFLOOR TO DESK SOLUTIONS

Polycarbonate power modules



Power module 2G indiv fused

code	description	pack
DM5001	3.15Amp	1
DM5003	5Amp	1

Power module 4G indiv fused

code	description	pack
DM5002	3.15Amp	1
DM5004	5Amp	1

Aluminium power modules



Power module 4G STD (Terminal)
For use with up to 13Amp supply

code	description	pack
DM6003	3.15Amp	1
DM6005	5Amp	1

Power module 4G CE (Terminal)
For use with up to 13Amp supply

code	description	pack
DM6009	3.15Amp	1
DM6010	5Amp	1

Power module 4G STD (Terminal)
For use with up to 32Amp supply

code	description	pack
DM6002	3.15Amp	1
DM6004	5Amp	1

Power module 4G CE (Terminal)
For use with up to 32Amp supply

code	description	pack
DM6007	3.15Amp	1
DM6008	5Amp	1

All modules are supplied with 20mm knockout for power input

Aluminium power modules



NEW

**Power module 4G
STD & 13Amp tap-off**

code	description	pack
DM6013	3.15Amp 3m tap-off	1
DM6019	3.15Amp 5m tap-off	1
DM6015	5Amp 3m tap-off	1
DM6020	5Amp 5m tap-off	1



NEW

**Power module 4G
CE & 13Amp tap-off**

code	description	pack
DM6023	3.15Amp 3m tap-off	1
DM6029	3.15Amp 5m tap-off	1
DM6025	5Amp 3m tap-off	1
DM6030	5Amp 5m tap-off	1



NEW

**Power module 4G
STD & 32Amp tap-off**

code	description	pack
DM6012	3.15Amp 3m tap-off	1
DM6022	3.15Amp 5m tap-off	1
DM6014	5Amp 3m tap-off	1
DM6024	5Amp 5m tap-off	1



NEW

**Power module 4G
CE & 32Amp tap-off**

code	description	pack
DM6017	3.15Amp 3m tap-off	1
DM6027	3.15Amp 5m tap-off	1
DM6018	5Amp 3m tap-off	1
DM6028	5Amp 5m tap-off	1

Polycarbonate power & data modules



**Module 2xpower 2xUSB
2xCat 5e**

code	description	pack
DM5030	3.15Amp	1
DM5033	5Amp	1



**Module 2xpower 2xUSB
2xCat 6**

code	description	pack
DM5031	3.15Amp	1
DM5034	5Amp	1



**Module 2xpower 2xUSB
2xblank**

code	description	pack
DM5032	3.15Amp	1
DM5035	5Amp	1

UNDERFLOOR TO DESK SOLUTIONS

Desk Module USB

Power and Data Modules with Twin USB Fast Charger

With 5Amp output across two USB ports, our Power and Data Modules can simultaneously charge two devices at speeds comparable to, or faster than, the devices' own chargers.

- Fast charge 2 devices
- 5 Amps combined maximum output
- Up to 91% efficiency
- 5000+ USB insertion connections

The USB ports are designed to withstand the elements of a commercial environment with connectors built to withstanding over 5000 insertions.

This feature allows you to charge your devices faster, with far less power wastage through heat generation, and comply with the latest international standards on the efficiency of power supplies.



Aluminium RCBO16A/30mA units



RCBO 1xGST18 Female & tap-off STD

code	length	pack
DM5050	3m	1
DM5051	5m	1



RCBO 1xGST18 Female & tap-off CE

code	length	pack
DM5052	3m	1
DM5053	5m	1



RCBO 4xGST18 Female & tap-off STD

code	length	pack
DM5054	3m	1
DM5055	5m	1



RCBO 4xGST18 Female & tap-off CE

code	length	pack
DM5056	3m	1
DM5057	5m	1



RCBO 1xGST18 Female

code	pack
DM5058	1



RCBO 4xGST18 Female

code	pack
DM5059	1

Both modules supplied with 20mm knockout for power input

Wieland power cables



GST18/3 F & 13A plug

code	length	pack
DM8301	1m	1
DM8302	2m	1
DM8303	3m	1



GST18/3 M/F lead

code	length	pack
DM8502	1m	1
DM8503	1.5m	1
DM8504	3m	1



POWERPOLES AND POWERPOSTS

PowerPoles and PowerPosts are a practical and elegant solution for the management of power, data and communication services to island workstations.



PowerPoles are a practical and elegant solution for the management of power, data and communication services to island work stations.

Product information

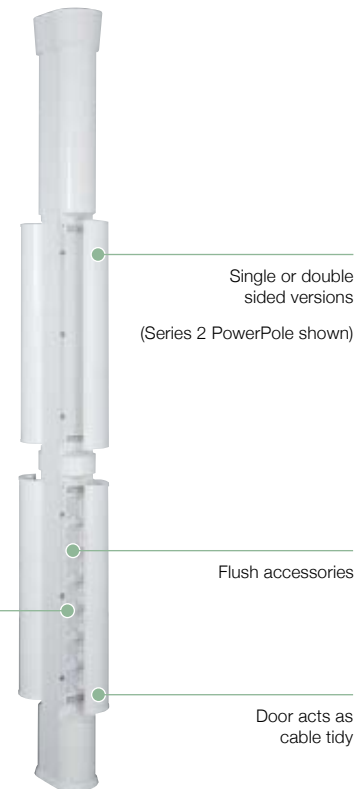
- Aluminium body for strength and rigidity
- PowerPoles are suitable for suspended and solid ceiling applications
- Cabling to PowerPoles can be fed from the ceiling, from the floor or both
- Single and double sided options
- Doors available with Series 2
- Series 2 PowerPoles provide option of key operated locks fitted to hinged covers
- Standard 3.6m pole includes ceiling fixing bracket
- 1m fixing bracket available for installations above 3.6m
- Pole extension kit available to extend up to 5m
- Can be subdivided and screened between services
- Flush accessories
- Can be supplied pre-wired

Standard finish Series 1	
ANWH	WHWH
ANWH • Anodised body • White fittings	WHWH • White body • White fittings

Standard finish Series 2	
ANWH	WHWH
ANWH • Anodised body • Anodised doors • White fittings	WHWH • White body • White doors • White fittings

Single-sided Series 2 PowerPoles are supplied with 7 accessory boxes and pre-installed dividing fillets

Double-sided Series 2 PowerPoles are supplied with 14 accessory boxes and pre-installed dividing fillets



PowerPoles Series 1



PowerPole – Series 1 square single-sided

code	pack
PPS36001ANWH	1
with 250mm adjustable slide	
PPS36002ANWH	1
with 1150mm adjustable slide	
PPS36001WHWH	1
with 250mm adjustable slide	
PPS36002WHWH	1
with 1150mm adjustable slide	

Note: Series 1 single-sided PowerPoles come complete with 6 accessory boxes

Material: Aluminium body with PVC-U covers

Finish: White powder coat or natural anodised finish



Dividing fillet single sided

code	pack
ELDF200	8 x 3m

For Series 1 single sided pole



PowerPole – Series 1 square double-sided

code	pack
PP36001ANWH	1
with 250mm adjustable slide	
PP36002ANWH	1
with 1150mm adjustable slide	
PP36001WHWH	1
with 250mm adjustable slide	
PP36002WHWH	1
with 1150mm adjustable slide	

Note: Series 1 double-sided PowerPoles come complete with 6 accessory boxes

Material: Aluminium body with PVC-U covers

Finish: White powder coat or natural anodised finish



Dividing fillet double sided

code	pack
EDF1	8 x 3m

For Series 1 double sided pole

Fixing system

An adjustable slide fixing system to the ceiling is included with the PowerPole. Please order 250mm or 1150mm as required (see left).



Extension kit double-sided (1400mm) for Series 1 PowerPoles

code	pack
PP1400EAN	anodised 1
PP1400EWH	white 1

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Technical Information

PowerPoles Series 2



PowerPole – Series 2 circular single-sided

code	pack
NPPC3600721ANWH	1
NPPC3600721WHWH	1

Height: Maximum height of Series 2 PowerPoles is 3686mm. For additional heights within ceiling voids, a 1m adjusting slide is available (PHAS2)

Note: Series 2 single-sided PowerPoles come complete with 7 accessory boxes and a further 7 boxes can be accommodated

Material: Aluminium body and doors

Finish: White powder coat or natural anodised finish

Dividing fillets: dividing fillets are pre-installed in Series 2 PowerPoles



PowerPole – Series 2 elliptical double-sided

code	pack
NPPE36001441ANWH	1
NPPE36001441WHWH	1

Height: Maximum height of Series 2 PowerPoles is 3686mm. For additional heights within ceiling voids, a 1m adjusting slide is available (PHAS2)

Note: Series 2 double-sided PowerPoles come complete with 14 accessory boxes and a further 14 boxes can be accommodated

Material: Aluminium body and doors

Finish: White powder coat or natural anodised finish

Dividing fillets: dividing fillets are pre-installed in Series 2 PowerPoles

***Single-sided extension kit for Series 2 circular PowerPoles**

code	pack
NPPC1400EAN	1

*Extends pole to 5m

***Double-sided extension kit for Series 2 elliptical PowerPoles**

code	pack
NPPE1400EAN	1

*Extends pole to 5m

Components



Door locking assembly Series 2

code	pack
NPPLA1ANWH	1
NPPLA1WHWH	1

Note: please contact Technical Team for details



Cover Series 1 and 2

code	PowerPole	pack
PL1WH	1 x 3.6m	1



Accessory box spacer Series 1 and 2

code	pack
ES1WH	4

For use between accessory boxes

Boxes (Series 1 and 2)



***RCD/MCB housing Series 2**

code	pack
EAHC1MWH	1

*Up to 4 modules can be housed.

Note: RCD not supplied by Marshall-Tufflex



1 gang accessory box

code	depth	pack
ESSB1WH	30mm	20



1 gang adjustable box

code	depth	pack
EAB1WH	32 – 40mm	10

EAB1 is fully adjustable to 47mm. Please see page 311 for more details.



Wired 13Amp 1 gang vertical mount switched socket

code	depth	pack
ESS11WH	30mm	1



Vertical mounted flush data module 2 x RJ45

code	size	pack
EM526WH	37 x 22mm	1

Screened boxes

Screening

Conductive spray (CS) is unique to Marshall-Tufflex and is applied in the factory to assist with screening from electromagnetic interference to data and communications cabling within trunking systems. The coating is applied to a range of data boxes, covers, clip-on components and fabricated fittings.

WARNING: A CS coating is not suitable for low voltage circuits. BS7671:2008. For data/voice use only.



1 gang screened accessory box

code	depth	pack
ESSB1SWH*	30mm	20

1 gang screened adjustable box

code	depth	pack
EAB1SWH*	32 – 40mm	1

*Supplied complete with earth terminal

EAB1S is fully adjustable to 47mm. Please see page 311 for more details.

PowerPosts are a practical and elegant solution for the management of power, data and communication services to island work stations.

Product information

- PowerPosts are suitable for all floor applications
- Single and double sided options
- Doors available with Series 2
- Series 2 provides option of key operated locks fitted to hinged covers
- Series 1 Designed to fit below standard desk height
- Flush accessories
- Can be supplied pre-wired

Standard finish Series 1	
ANWH	WHWH
ANWH • Anodised body • White fittings	WHWH • White body • White fittings

Standard finish Series 2	
ANWH	WHWH
ANWH • Anodised body • Anodised doors • White fittings	WHWH • White body • White doors • White fittings

Single-sided Series 2 PowerPosts are supplied with 7 accessory boxes and a pre-installed dividing fillet

Double-sided Series 2 PowerPosts are supplied with 14 accessory boxes and a pre-installed dividing fillet



POWERPOLES AND POWERPOSTS

PowerPosts Series 1



PowerPost – Series 1 square double-sided

code	pack
PP685ANWH	1
PP685WHWH	1

Height: Overall height of Series 1 PowerPoles including cap and foot is 692mm

Note: Series 1 double-sided PowerPoles come complete with 6 accessory boxes

Material: Aluminium body with PVC-U covers

Finish: White powder coat or natural anodised finish

Components



Dividing fillet double sided

code	pack
EDF1	8 x 3m

Specialised PowerPost Solutions

Our Technical Team will work with architects, design teams and contractors to create pre-fabricated solutions designed to save time on site.

PowerPosts can be adapted to be ceiling-mounted or horizontally mounted. See pages 43 and 45 for further details or contact our Technical Team on +44 (0)1424 856688 to discuss your project or request a quotation.



PowerPosts Series 2



PowerPost – Series 2 circular single-sided

code	pack
NPPC80671ANWH	1
NPPC80671WHWH	1

Height: Overall height of Series 2 PowerPosts including cap and foot is 838mm

Note: Series 2 single-sided PowerPosts come complete with 7 accessory boxes

Material: Aluminium body and doors

Finish: White powder coat or natural anodised finish

Dividing fillets: dividing fillets are pre-installed in Series 2 PowerPosts



PowerPost – Series 2 elliptical double-sided

code	pack
NPPE811142ANWH	1
NPPE811142WHWH	1

Height: Overall height of Series 2 PowerPosts including cap and foot is 838mm

Note: Series 2 double-sided PowerPosts come complete with 14 accessory boxes

Material: Aluminium body and doors

Finish: White powder coat or natural anodised finish

Dividing fillets: dividing fillets are pre-installed in Series 2 PowerPosts

Components



Door locking assembly Series 2

code	pack
NPPLA1ANWH	1
NPPLA1WHWH	1

Note: please contact Technical Team for details



Cover Series 1 and 2

code	pack
PL2WH PowerPost 1 x 685mm	



Accessory box spacer Series 1 and 2

code	pack
ES1WH	4

For use between accessory boxes

Boxes (Series 1 and 2)



***RCD/MCB housing**

code	depth	pack
EAHC1MWH	30mm	1

*Up to 4 modules can be housed

Note: RCD not supplied by Marshall-Tufflex



1 gang accessory box

code	depth	pack
ESSB1WH	30mm	20



1 gang adjustable box

code	depth	pack
EAB1WH	32 – 40mm	10

EAB1 is fully adjustable to 47mm. Please see page 311 for more information.



Wired 13Amp 1 gang vertical mount switched socket

code	depth	pack
ESS11WH	30mm	1



Vertical mounted flush data module 2 x RJ45

code	size	pack
EM526WH	37 x 22mm	1

Screened boxes

Screening

Conductive spray (CS) is unique to Marshall-Tufflex and is applied in the factory to assist with screening from electromagnetic interference to data and communications cabling within trunking systems. The coating is applied to a range of data boxes, covers, clip-on components and fabricated fittings.

WARNING: A CS coating is not suitable for low voltage circuits. BS7671:2008. For data/voice use only.



1 gang screened accessory box

code	depth	pack
ESSB1SWH*	30mm	20

1 gang screened adjustable box

code	depth	pack
EAB1SWH*	32 – 40mm	1

*Supplied complete with earth terminal

EAB1S is fully adjustable to 47mm. Please see page 311 for more information.

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Technical Information

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 and the team's expertise enables us to provide quotations for specialist solutions. We aim to complete all standard quotes within 1 working day, although more complex quotations such as 'take offs' can take longer.



Contact our Technical Services team on +44 (0)1424 856688 or email technical@marshall-tufflex.com

Award winning customer service

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

In 2017 Marshall-Tufflex were proud to be shortlisted in four categories at the prestigious Electrical Wholesaler Awards including Best Customer Service, Best Overall Supplier and Best Sales Representative.

Contact our Customer Services team on +44 (0)1424 856600 or email sales@marshall-tufflex.com



BIM (Building Information Modelling)

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 or www.bimstore.co.uk



Same day collection*



Our popular same day collection service gives our customers an unrivalled two-hour turnaround on product orders, allowing them to collect from our dedicated collection points in Manchester and London. Orders can also be collected next day from our Hastings depot.

Manchester

Europa Trading Estate, Stoneclough Road, Radcliffe, Manchester M26 1GG

London

101c Blackhorse Lane, London E17 6DJ

- Orders can be collected two hours after order placement from Manchester and London.
- Orders placed by 3.30pm will be available for collection until 5.30pm.
- Orders received by 5pm will be ready for collection from 10am the following day.

Hastings

55-65 Castleham Road, St Leonards-on-Sea TN38 9NU

- Orders placed by 12.30pm can be collected from 10am the next day from our Hastings depot.

* Subject to stock availability

For details regarding collections, please contact our Customer Services team on +44 (0)1424 856600 or email sales@marshall-tufflex.com



Follow us on Twitter @MTufflex

PVC-U PERIMETER TRUNKING SYSTEMS

PVC-U perimeter trunking is an ideal solution for the transportation of data, communication and power cabling.

PVC-U PERIMETER TRUNKING SYSTEMS

PVC-U PERIMETER TRUNKING SYSTEMS

Polyvinyl chloride unplasticised (PVC-U) is one of the most successful modern synthetic materials. It makes excellent use of scarce resources, is long-lasting and safe in production, use and is widely recycled.

PVC-U cable containment is easy to install, light to handle and very cost-effective. It is an excellent choice of material for the majority of commercial, education and healthcare environments and has been more thoroughly researched than almost any other synthetic material.

With the widest range of any supplier, there will always be a perfect solution with Marshall-Tufflex.

We have PVC-U multi-compartment perimeter trunking in different heights, designs, cable capacities and numbers of compartments to suit all installation requirements.

Choose the UK's number one in cable management.

Standard colour

The standard colour for each Marshall-Tufflex perimeter trunking range is shown within each relevant product information section, although solid white RAL 9003 is our most popular colour option.

The below table identifies the relevant RAL colour reference for all our standard colour options, dependent on product range. However we would be happy to quote for any other colour requirements, please see the Special Colours section.

Standard Colours	
WH	CH
WH: White CH: Charcoal	

Material	Standard colour	Colour code suffix	RAL
PVC-U	Solid White Charcoal	WH CH	9003 7021



Please note: it is dependent on the product range as to which colour is available as standard.

Special colours and finishes



To help enhance the style of an installation, different variations of solid colour are sometimes required.

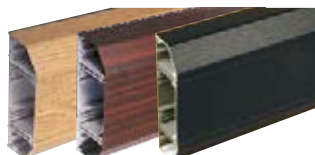
We can provide special colours in either a solid PVC-U solution or a painted solution dependent on your client's preference. All special colours requirements will need to be specified as a RAL colour.

Please note: due to different processes and materials utilised, it may not always be possible to obtain an exact colour match between the extruded and moulded product.

Woodgrain finishes

For a truly authentic look, we offer a range of woodgrain finishes for trunking and fittings in Light Oak, Mahogany and Ebony that provide interior designers with the scope to offer a more traditional feel. Colours can be indicated by replacing the WH colour code with the specific woodgrain code required.

Woodgrain finish		
LO	MY	EY
LO: Light oak MY: Mahogany EY: Ebony		



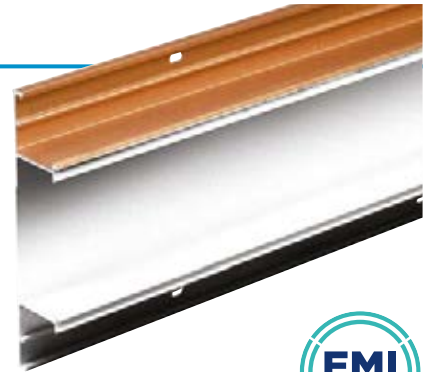
Please note: these colours and finishes are made to order and therefore are subject to set up charges, minimum order quantities and a longer lead time. For more information and a quotation contact our Technical Team on +44 (0)1424 856688.

Copper screening

A special conductive spray coating is applied to the relevant section of the trunking or fittings to assist in screening data cables against EMI interference with no reduction in cable capacity.

Marshall-Tufflex offer a standard range of copper screened products within selected PVC-U perimeter trunking systems which are shown within this catalogue and are held in stock.

If you have a requirement for products to be copper screened that are not part of our standard range, please contact our Technical Team on +44 (0)1424 856688. Please note that non standard products are made to order and therefore are subject to set up charges and a longer lead time.



Bio antimicrobial trunking



Where hygiene is a priority, Marshall-Tufflex has a solution with integral antimicrobial properties that can be incorporated within the PVC-U perimeter trunking and deliver ongoing antimicrobial protection that prevents 99.9% of harmful bacteria.

Because the Marshall-Tufflex Bio trunking solution is integral to the PVC-U material, there is no reduction in effectiveness of the trunking throughout its life – even if it is scratched or damaged.

We hold stock of key Odyssey and Sterling Curve trunking components with Bio antimicrobial protection due to its popularity.

The following trunking systems; Compact trunking, Mono Plus 20 trunking, Sterling Profile, Twin Plus trunking and XL trunking are also available in Bio but not available as standard.



Please note: non standard products are made to order and therefore are subject to set up charges and a longer lead time. For more information and a quotation contact our Technical Team on +44 (0)1424 856688.

 <h3>Environmental</h3>	 <h3>Recycling and sustainability</h3>	 <h3>EMI protection</h3>	 <h3>Fire performance</h3>
<ul style="list-style-type: none"> • No increase in dioxin emission from Municipal Waste Incineration. • No phthalates used in manufacture of PVC-U or FR-ABS. • Lead-free formulations are used for mouldings and extrusions. • No use of cadmium-based stabilisers or pigments. • Lowest oil content of a commodity plastic. 	<ul style="list-style-type: none"> • PVC-U is a cost-effective, sustainable choice and comparable with other materials such as steel, aluminium, copper and wood. • 100% recyclable material. • Long life cycle. • Excellent weather resistance. • No painting or powder coating required. 	<ul style="list-style-type: none"> • Some PVC-U systems are available with a coating that provides effective screening against electromagnetic interference with no reduction in cable capacity. • Steel screening insert option. • Aluminium screening insert option. 	<ul style="list-style-type: none"> • The fire rating for PVC-U is excellent* and PVC-U has all the characteristics required for Fire Escape Time. • Highly resistant to ignition. • Does little to contribute to the spread of fire and is classified to Building Regs: Class 0. • Has a low rate of smoke production during the early stages of a fire. • Acts as an effective barrier to flame spread from malfunctioning electrical components within systems. • Chars and is self-extinguishing. • Does not produce flaming droplets or burning debris. • ABS fittings fire rated to UL94V0. <p>*see the independent report at www.beama.org.uk</p>

PVC-U multi-compartment perimeter trunking is available in different heights, designs, cable capacities and numbers of compartments to suit all installation requirements. Standard PVC-U products are supplied as white. For further information on colour and finish options please refer to page 100 or call our Technical Team on +44 (0)1424 856688.

Note: you may use the rule on the left of this page to check profile sizes.

Mono 10

100 x 50mm

Small trunking with a single cover suitable for dado application and as a feeder trunking.



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Sterling Profile 1

167 x 50mm

Dado trunking with three separate compartments and individual covers for each compartment.

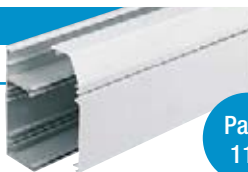


Page 122

Compact 1

130 x 50mm

Dado and skirting trunking with one full and one half size compartment.

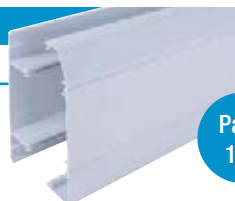


Page 115

Sterling Profile 2

167 x 50mm

Skirting trunking with three separate compartments and individual covers for each compartment.

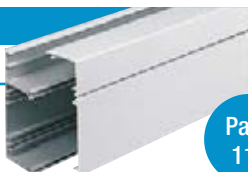


Page 122

Compact 2

130 x 50mm

Dado and skirting trunking with one full and one half size compartment.

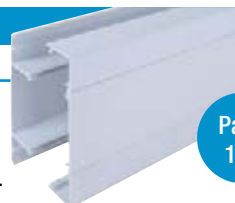


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Sterling Profile 3

167 x 50mm

Dado and skirting trunking with three separate compartments and individual covers for each compartment.

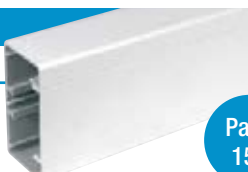


Page 122

Series R 130

130 x 65mm

Extra deep compact trunking suitable for dado application and as a feeder trunking.



Page 154

Sterling Curve Profile 1

167 x 50mm

A curved dado trunking with three segregated compartments that can be subdivided and screened if required.



Page 128

Mono Plus 20

140 x 50mm

Dado trunking with three compartments and a single cover.



Page 111

Sterling Curve Profile 2

167 x 50mm

A curved skirting trunking with three segregated compartments that can be subdivided and screened if required.

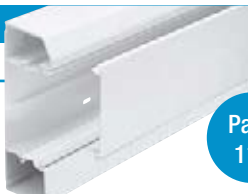


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Mono Plus 30

155 x 55mm

Dado trunking with one main compartment and two smaller outer compartments suitable for skirting or worktop application.



Page 113

Odyssey

180 x 57mm

Curved profile dado trunking with one main compartment and two smaller outer compartments.

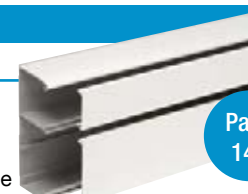


Page 106

Twin165

160 x 65mm

A mid-size dado trunking with one full size compartment and one two-thirds size compartment to accommodate Cat 6 and Cat 6a data cabling.



Page 149

Compact 3

181 x 50mm

Dado and skirting trunking with two full size compartments.

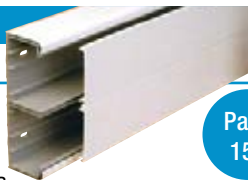


Page 119

Twin Plus

210 x 57mm

Large dado and skirting trunking with two deep compartments incorporating segregation of power and data.



Page 151

Sterling Profile 11

255 x 50mm

Dado trunking with two full size compartments and two half size compartments with the option of extending the height.



Page 134

Sterling Profile 4

218 x 50mm

Large dado and skirting trunking with one half size and two full compartments with the option of extending the height.



Page 134

Sterling Profile 12

255 x 50mm

Skirting trunking with two full size compartments and two half size compartments with the option of extending the height.

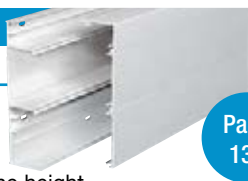


Page 134

Sterling Profile 5

218 x 50mm

Large dado and skirting trunking with one half size and two full compartments with the option of extending the height.



Page 134

Sterling Profile 13

255 x 50mm

Dado and skirting trunking with two full size compartments and two half size compartments with the option of extending the height.

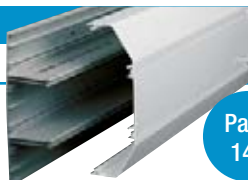


Page 134

XL 201

220 x 65mm

Extra large dado trunking with three deep compartments.

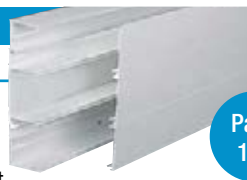


Page 141

Sterling Profile 6

269 x 50mm

Dado and skirting trunking with three full size compartments and the option of extending the height.

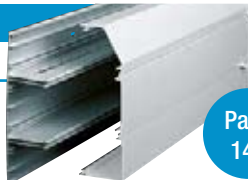


Page 134

XL 202

220 x 65mm

Skirting trunking with three deep compartments.



Page 141

XL 211

308 x 65mm

Dado trunking with four deep compartments.



Page 145

XL 203

220 x 65mm

Dado and skirting trunking with three deep compartments.

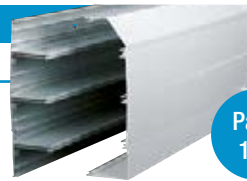


Page 141

XL 212

308 x 65mm

Skirting trunking with four deep compartments.



Page 145

XL 213

308 x 65mm

Dado and skirting trunking with four deep compartments.



Page 145

Sterling Profile and XL Trunking

These trunking ranges can be extended easily by using additional compartments. For more information, contact the Technical Team on +44 (0)1424 856688.

Note: you may use the rule on the left of this page to check profile sizes.



Part M

DDA COMPLIANT BOXES FOR VISUAL IMPAIRMENT

Part M of the UK Building Regulations for Visual Impairment requires that face plates differ in colour from their background. Coloured accessory boxes provide a different colour frame to contrast against standard white accessories and are offered as part of our standard product range in blue (RAL5002) and charcoal (RAL7021). Two ranges are available, one compatible with Odyssey and one compatible with other PVC-U and Aluminium trunking systems.



Odyssey trunking with Part M boxes installed at Old Swinford Hospital School, Stourbridge.



Sterling Profile 1 with charcoal Part M flush plate.

Plates are available in other colours subject to set up charges, minimum order quantities and longer lead times.

1 and 2 gang accessory boxes for Odyssey trunking

code	description	pack
DD1510BU	1 gang – blue	20
DD1510CH	1 gang – charcoal	20
DD1520BU	2 gang – blue	10
DD1520CH	2 gang – charcoal	10



1 and 2 gang power and data mounting frame for Odyssey trunking

code	description	pack
DD1560BU	1 gang – blue plate	2
DD1560CH	1 gang – charcoal plate	2
DD1570BU	2 gang – blue plate	2
DD1570CH	2 gang – charcoal	2



1 and 2 gang accessory boxes with coloured flush plate for PVC-U and Aluminium trunking systems

code	description	pack
ESPM1BU	1 gang – blue plate	1
ESPM1CH	1 gang – charcoal plate	1
ESPM2BU	2 gang – blue plate	1
ESPM2CH	2 gang – charcoal plate	1



Retrofit spacer for 1 and 2 gang accessory boxes for PVC-U and Aluminium trunking systems

code	description	pack
ES3BU	Part M spacer – blue	4
ES3CH	Part M spacer – charcoal	4



For more information and a quotation contact our Technical Team on +44 (0)1424 856688

MT32 PREFABRICATED AND MODULAR WIRING SYSTEMS



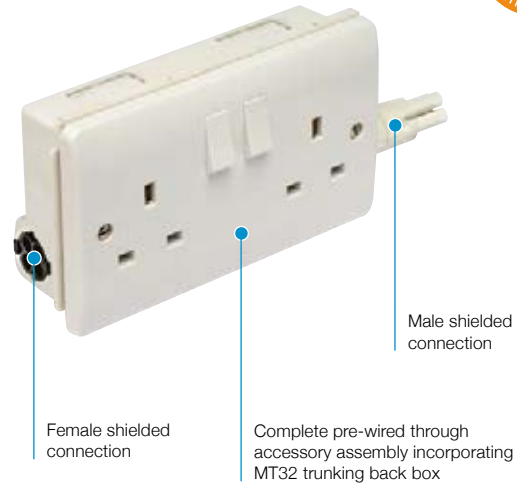
MT32 prefabricated and modular wiring systems are designed to take all the hard work out of electrical installations by providing the complete pre-wired, pre-tested, plug and play electrical wiring system.

The system provides fast, safe, labour and cost saving installations that comply with BS 8488:2009+A1:2010 for prefabricated wiring systems intended for permanent connection in fixed installation.

The range of pre-wired, pre-tested and assembled interconnecting leads and accessory modules incorporate the Marshall-Tufflex compact 32Amp connector.

Product information

- 32Amp rated system
- Available as LSOH 3 core 2.5mm² flex system specification that meets the requirement for high integrity earthing
- Suitable for ring and radial circuits
- Circuit testing only required on completion of final layout
- Reduced installation time – no cutting required on site
- Reduced health & safety risk



Pre-wired accessories



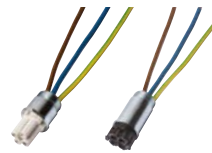
Extension cable 2.5mm²

code	length	pack
AA3330	0.5m	1
AA3332	1.5m	1
AA3333	3.0m	1
AA3335	5.0m	1



Connection cable free end 2.5mm²

code	length	pack
AA3732 (male)	1.5m	1
AA3532 (female)	1.5m	1



Male and female adaptors 2.5mm²

code	length	pack
AA7211 (male)	220mm	1
AA7212 (female)	220mm	1

For adapting distribution board to modular system
Note: to fit 20mm knockout



Adaptor cables 2.5mm²

code	length	pack
AA8901 (male/male)	0.5m	1
AA8902 (female/female)	0.5m	1

Required for ring circuit



Terminal block 2.5mm²

code	size	pack
AA6510 (female/male)	2.5mm ²	1



Pre-wired accessory 2.5mm²

code	size	pack
AA6221	2 gang	1

MT32 prefabricated modular wiring system installed at Fitzwilliam Museum. See page 127 to read the case study.



MT32 Connectors

The description 'male' (white) and 'female' (black) does not refer to the connector pins but describes and identifies the moulded connector housings.

For further information please contact our Technical Team on +44 (0)1424 856688.

Odyssey is a three-compartment trunking system with a completely curved front profile designed with tamper-resistant covers and fittings and flush accessories to enhance the finished appearance. Odyssey's curved profile is easy to clean and prohibits surface clutter.

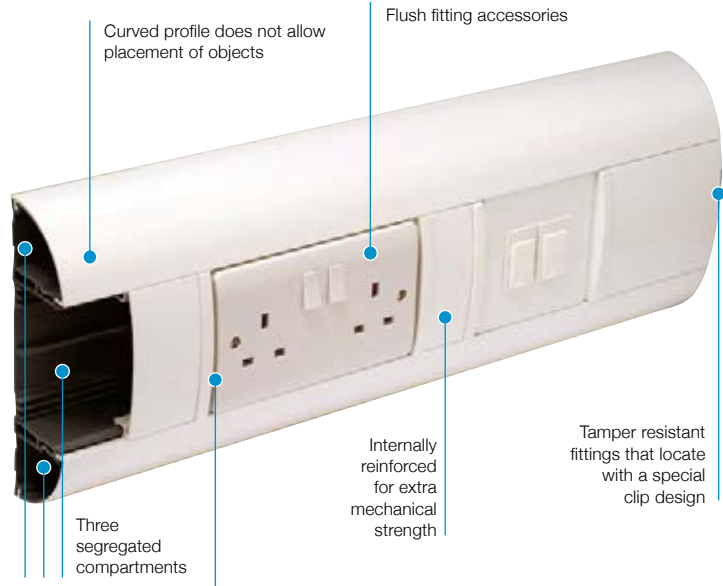


Product information

- 180 x 57mm
- 1 main compartment and 2 smaller outer compartments
- Can be subdivided
- Suitable for dado application
- Available in antimicrobial Bio option (see page 107)
- Flush fitting accessories
- Tamper resistant covers and fittings

Data information


- Compliant up to Cat 7a
- Standard bend radius 25mm
- Data fittings available for bend radius up to 65mm
- Steel divider available to BS EN 50174-2
- Can be screened against EMI with no reduction in cable capacity
- Adjustable data box 32-40mm
- Screened divider and data boxes



Standard Colour
WH
WH: White

Part M

The Odyssey trunking range includes unique coloured accessory boxes that meet the requirements of Part M (DDA) please refer to page 104.




Trunking assembly (base and 3 covers)

code	size	pack
DD1WH	180 x 57mm	1 x 3m

Trunking profile

Fittings



Coupler

code	pack
DD1210WH	1



End cap

code	pack
DD1230WH	2



Internal bend

code	pack
DD1310WH	1



Internal bend adjustable

code	adjustable	pack
DD1330WH	85-95°	1



External bend

code	pack
DD1350WH	1



External bend adjustable

code	adjustable	pack
DD1370WH	85 - 95°	1



Flat angle up/down

code	pack
DD1410WH	1



Flat tee 3 part assembly - up/down

code	pack
DD1430WH	1

Flat tee cover

An option is available to order a flat tee cover only (DD1440WH). Please call the Technical Team on +44 (0)1424 856688.

PVC-U PERIMETER TRUNKING SYSTEMS

Fittings



MMT2 adaptor

code	size	pack
DD1740WH	MMT2	1

Round conduit adaptor

code	size	pack
DD1720WH	20mm	1
DD1725WH	25mm	1

***Box adaptors**

When installing adjustable boxes DD1540 and DD1550, a DD1590 adaptor should be used at either end of the box.

Where two or more adjustable boxes are being used in line, the spacer included is for use between boxes and a DD1590 adaptor is used at either end.

Boxes



***RCD housing**

code	pack
DD1580MWH	1

Up to 4 modules can be accommodated

Note: RCDs are not supplied by Marshall-Tufflex



1 gang accessory box

code	depth	pack
DD1510WH	30mm	20



2 gang accessory box

code	depth	pack
DD1520WH	30mm	10



***1 gang adjustable depth box**

code	depth	pack
*DD1540WH	32 – 39mm	10



***2 gang adjustable depth box**

code	depth	pack
*DD1550WH	32 – 39mm	10



***Accessory box adaptor**

code	pack
DD1590WH	1 pair

Each pack contains 2 adaptors



1 gang power and data mounting frame

code	pack
DD1560WH	2



2 gang power and data mounting frame

code	pack
DD1570WH	2

Part M

For boxes that meet the requirements of Part M (DDA) please refer to page 104.

PVC-U PERIMETER TRUNKING SYSTEMS

Odyssey Bio



Odyssey is available as part of our standard range with Bio antimicrobial protection within the PVC-U material.

Odyssey Bio trunking component chart



Odyssey trunking
180 x 57mm

Trunking assembly	End cap (1 piece)	Coupler (1 piece)	Internal bend (1 piece)	Internal adjustable bend	External bend (1 piece)	External adjustable bend	Flat angle (up or down)	Flat tee (up or down)	1 gang accessory box	2 gang accessory box	1 gang Bio power and data mounting frame	2 gang Bio power and data mounting frame
DD1B Pack 1 x 3m	DD1233WH Pack 2	DD1213WH Pack 1	DD1313WH Pack 1	DD1333WH Pack 1	DD1353WH Pack 1	DD1373WH Pack 1	DD1413WH Pack 1	DD1433WH Pack 1	DD1513WH Pack 20	DD1523WH Pack 10	DD1561WH Pack 2	DD1571WH Pack 2

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Technical Information

Screening

Conductive spray (CS) is unique to Marshall-Tufflex and is applied in the factory to assist in screening from electromagnetic interference to data and communications cabling within trunking systems. The coating is applied to a range of data boxes, covers, clip-on components and fabricated fittings.



WARNING: A CS coating is not suitable for low voltage circuits. BS 7671:2008. For data/voice use only.

Steel screening divider

code pack
DD1730 1 x 1.5m

Note: optional steel screening divider to assist in compliance with BS EN 50174-2



Steel screening divider bonding clip

code pack
ESF3 5



Bonding strap

code pack
DD1711 5



Odyssey screened component chart

Odyssey trunking assembly screened – 1 compartment only
 Pack 1 x 3m

Odyssey trunking assembly screened – compartment 1 & 3
 Pack 1 x 3m

Flat angle (1 & 3)
 Pack 1

Flat tee (1 & 3)
 Pack 1
 For covers only, please contact the technical team

1 gang accessory box
 Pack 1

2 gang accessory box
 Pack 1



3 Compartment

Odyssey CS1

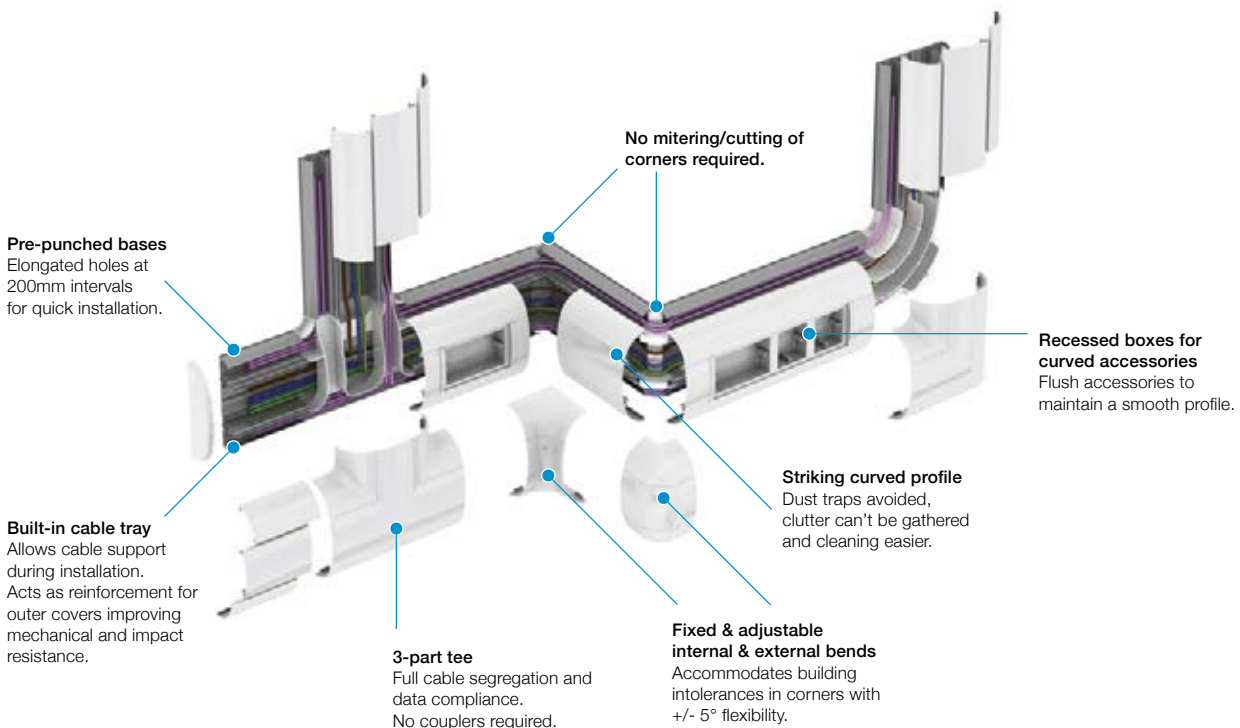


DD1001WH
DD1002WH
DD1412WH
DD1432WH
DD1511WH
DD1521WH

PVC-U PERIMETER TRUNKING SYSTEMS

Odyssey Trunking

Odyssey can enhance the look of a project as well as providing all of the practical features that ensure fast and easy installation.



Mono 10 is a compact trunking that is perfectly suited for the smaller office or workshop area.

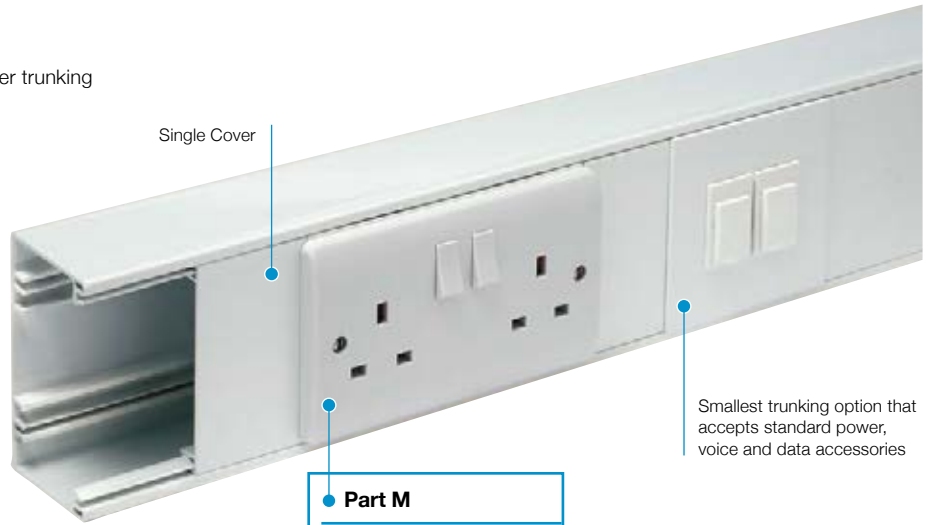


Product information

- 100 x 50mm
- 1 main compartment
- Can be subdivided
- Suitable for dado application and as a feeder trunking

Data information

- Compliant up to Cat 7a*
- Standard bend radius 25mm
- Adjustable data box 32-40mm



Standard Colour
WH
WH: White

Part M

For box assemblies and spacers that meet the requirements of Part M (DDA) please refer to page 104.

***Data fittings**

For made to order fittings to meet Cat 7a requirements please contact our Technical Team on +44 (0)1424 856688

Basic components



Trunking base (including 2 dividing fillets)

code	pack
ETB10WH	4 x 3m



Main compartment cover

code	pack
ETL1WH	8 x 3m

Fittings



Coupler

code	pack
EC10WH	5



End cap

code	pack
EEC10WH	5



Internal bend

code	pack
EIB10WH	5



External bend

code	pack
EXB10WH	5



Flat angle cover

code	pack
EFA10WH	1



Flat tee – up/down

code	pack
EFT10WH	1

Fabricated

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Technical Information

Components



Dividing tray

code	pack
EDF2	8 x 3m



Cable retainer

code	pack
EMCR1	10

Boxes and plates



***RCD/MCB Housing**

code	pack
EAHC1MWH	1

*Up to 4 modules can be accommodated
Note: RCDs are not supplied by Marshall-Tufflex



1 gang accessory box

code	depth	pack
ESSB1WH	30mm	20



2 gang accessory box

code	depth	pack
ESSB2WH	30mm	10



Accessory box spacer

code	size	pack
ES1WH	14mm	4

For use between accessory boxes



1 gang adjustable depth box

code	depth	pack
EAB1WH	32 – 40mm	10



2 gang adjustable depth box

code	depth	pack
EAB2WH	32 – 40mm	5



1 gang accessory plate

code	pack
ESSP1WH	2



2 gang accessory plate

code	pack
ESSP2WH	2

EAB1 and EAB2 are fully adjustable to 47mm. Please see page 311 for more information.

Part M

For boxes that meet the requirements of Part M (DDA) please refer to page 104 of this section.

Mono Plus 20 is an economical and stylish three-compartment trunking, compact in size and designed to fit within areas that may have trunking height restrictions.



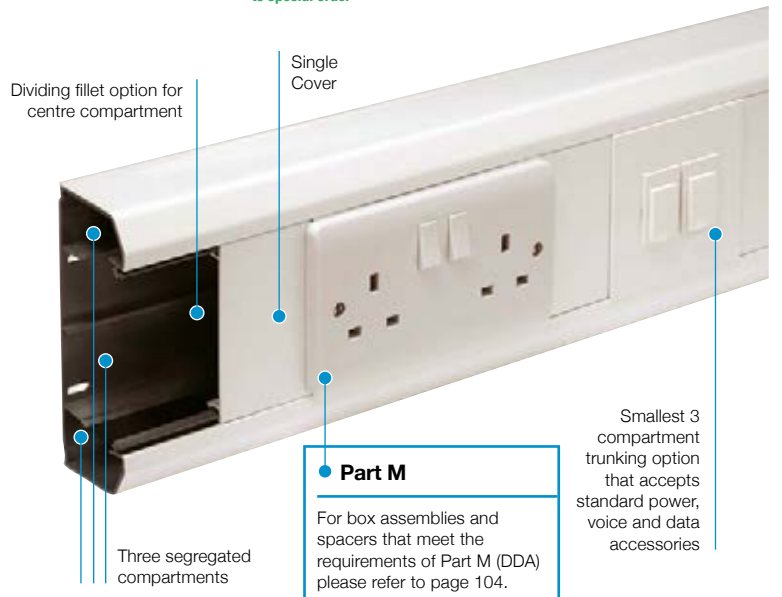
'Bio option' available to special order

Product information

- 140 x 50mm
- 1 main compartment and 2 smaller outer compartments
- Can be subdivided
- Suitable for dado application

Data information

- Compliant up to Cat 7a
- Standard bend radius 25mm
- Data fittings available for bend radius up to 50mm
- Adjustable data box 32-40mm



Smallest 3 compartment trunking option that accepts standard power, voice and data accessories

Standard Colour
WH
WH: White

Basic components



Trunking base (including 2 dividing fillets)

code	pack
EMT20WH	4 x 3m



Main compartment cover

code	pack
ETL1WH	8 x 3m

Fittings



Coupler

code	pack
EC20WH	5



End cap

code	pack
EEC20WH	5



Internal bend COMPLIANT UP TO CAT 7A

code	pack
EIB20WH	5



External bend COMPLIANT UP TO CAT 7A

code	pack
EXB20WH	5



Flat angle - up/down

code	pack
EFA20WH	1
Fabricated	



Slow bend COMPLIANT UP TO CAT 7A

code	pack
EFA20SBWH	1
Fabricated	

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PVC-U PERIMETER TRUNKING SYSTEMS

Fittings



Flat tee – up/down
 code pack
EFT20WH 1
 Fabricated



Flat tee Gusseted ...CAT 7A...
 code pack
EFT20GTWH 1
 Fabricated

Components



Dividing fillet
 code pack
EDF1 8 x 3m



Main crossover bridge
 code pack
EMCB1 5



Main cable retainer
 code pack
EMCR1 10

Boxes and plates



***RCD/MCB Housing**
 code pack
EAHC1MWH 1

*Up to 4 modules can be accommodated
Note: RCDs are not supplied by Marshall-Tufflex



1 gang accessory box
 code depth pack
ESSB1WH 30mm 20



2 gang accessory box
 code depth pack
ESSB2WH 30mm 10



Accessory box spacer
 code size pack
ES1WH 14mm 4
 For use between accessory boxes



1 gang adjustable depth box ...CAT 7A...
 code depth pack
EAB1WH 32 – 40mm 10



2 gang adjustable depth box ...CAT 7A...
 code depth pack
EAB2WH 32 – 40mm 5



1 gang accessory plate ...CAT 7A...
 code pack
ESSP1WH 2



2 gang accessory plate ...CAT 7A...
 code pack
ESSP2WH 2

EAB1 and EAB2 are fully adjustable to 47mm. Please see page 311 for more information.

Part M

For boxes that meet the requirements of Part M (DDA) please refer to page 104 of this section.



Mono Plus 30 is an economical and stylish three-compartment compact skirting system, particularly suitable for general office applications.

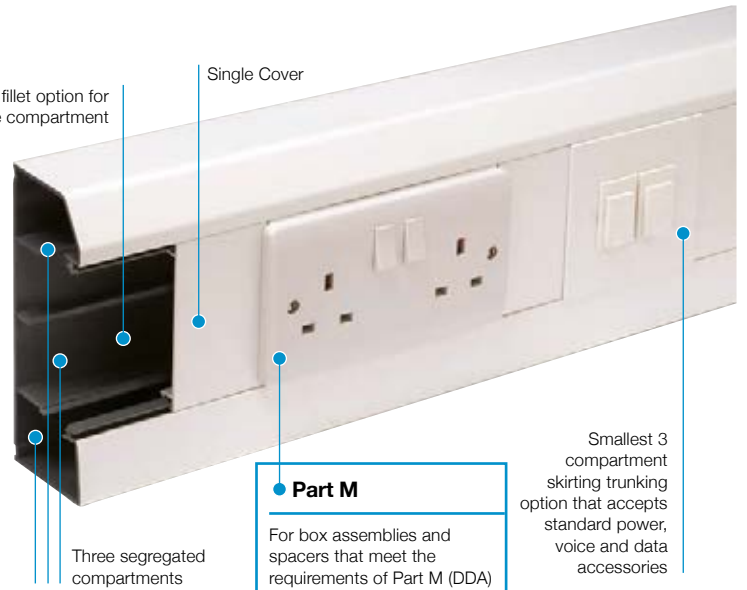


Product information

- 155 x 55mm
- 1 main compartment and 2 smaller outer compartments
- Can be subdivided
- Suitable for skirting or worktop application

Data information

- Compliant up to Cat 7a
- Standard bend radius 25mm
- Data fittings available for bend radius up to 50mm
- Adjustable data box 32-40mm



Standard Colour
WH
WH: White

Part M

For box assemblies and spacers that meet the requirements of Part M (DDA) please refer to page 104.

Basic components



Trunking (including 2 dividing fillets)

code	pack
EMT30WH	4 x 3m



Main compartment cover

code	pack
ETL1WH	8 x 3m

Fittings



Coupler

code	pack
EC30WH	5



End cap

code	pack
EEC30LHWH (left hand)	5
EEC30RHWH (right hand)	5



Internal bend COMPLIANT UP TO CAT 7A

code	pack
EIB30WH	5



External bend COMPLIANT UP TO CAT 7A

code	pack
EXB30WH	5



Flat angle - upward

code	pack
EFA30UWH	1
Fabricated	



Flat angle - downward

code	pack
EFA30DWH	1
Fabricated	

p272 **Technical Information**

PVC-U PERIMETER TRUNKING SYSTEMS

Fittings



Flat tee – upward

code	pack
EFT30ULWH	1

Fabricated

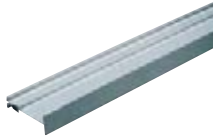


Flat tee – downward

code	pack
EFT30DLWH	1

Fabricated

Components



Dividing fillet

code	pack
EDF30	8 x 3m



Main crossover bridge

code	pack
EMCB1	5



Main cable retainer

code	pack
EMCR1	10

Boxes and plates



***RCD/MCB Housing**

code	pack
EAHC1MWH	1

*Up to 4 modules can be accommodated
Note: RCDs are not supplied by Marshall-Tufflex



1 gang accessory box

code	depth	pack
ESSB1WH	30mm	20



2 gang accessory box

code	depth	pack
ESSB2WH	30mm	10



Accessory box spacer

code	size	pack
ES1WH	14mm	4

For use between accessory boxes



1 gang adjustable depth box ...CAT 7A...

code	depth	pack
EAB1WH	32 – 40mm	10



2 gang adjustable depth box ...CAT 7A...

code	depth	pack
EAB2WH	32 – 40mm	5



1 gang accessory plate ...CAT 7A...

code	pack
ESSP1WH	2



2 gang accessory plate ...CAT 7A...

code	pack
ESSP2WH	2

EAB1 and EAB2 are fully adjustable to 47mm.
 Please see page 311 for more information.

Part M

For boxes that meet the requirements of Part M (DDA) please refer to page 104 of this section.



Compact 1 is a small, fully segregated two compartment trunking system with a chamfered top profile. This trunking is suited to fit within areas where physical outside dimensions are important, for example, to negotiate above or below radiators and window sills.

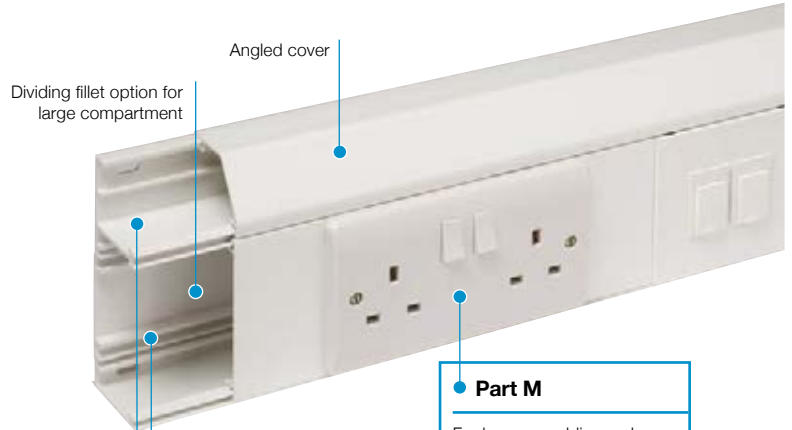


Product information

- 130 x 50mm
- 1 full and 1 half size compartment
- For dado installation
- Can be subdivided

Data information

- Compliant up to Cat 7a
- Standard bend radius 25mm
- Data fittings available for bend radius up to 50mm
- Compact 1 and 2 small compartment can be screened to assist against EMI with no reduction in cable capacity
- Adjustable data box 32-40mm
- Screened divider and data boxes
- Steel divider available



Part M
For box assemblies and spacers that meet the requirements of Part M (DDA) please refer to page 104.

Standard Colour
WH
WH: White

See page 121 for quick reference chart

Basic components



Base unit

code	pack
ETB2WH	4 x 3m



Main compartment cover

code	pack
ETL1WH	8 x 3m



Angled cover

code	pack
ETAC1WH	8 x 3m

Fittings



Compact 1 Couplers

code	description	pack
ECC1WH	2 piece	5
ECHC1WH	1 piece	5



Compact 1 End caps LH & RH

code	description	pack
EECC1LHWH	2 piece	5
EECC1RHWH	2 piece	5
EECHC1LHWH	1 piece	5
EECHC1RHWH	1 piece	5



Compact 1 Internal bend

code	description	pack
EIBC1WH	2 piece	5
EIBHC1WH	1 piece	5



Compact 1 Internal bend assembly

code	description	pack
ELIBCD1WH	assemblies	1
EIBCD1WH	covers only	1



Compact 1 External bend

code	description	pack
EXBC1WH	2 piece	5
EXBHC1WH	1 piece	5



Compact 1 External bend assembly

code	description	pack
ELOBCD1WH	assemblies	1



Compact 1 Flat angle upward

code	pack
EFAC1UWH	1



Compact 1 flat angle downward

code	pack
EFAC1DWH	1

Compact 1 flat tees

Compact 1 flat tees are handed to the left or to the right side. For the product you require, please order the following:

Left upward = EFTC1ULWH
 Left downward = EFTC1DLWH
 Right upward = EFTC1URWH
 Right downward = EFTC1DRWH

For further advice please call the Technical Team on +44 (0)1424 856688.

Fittings



Angled mini-trunking adapter

code	size	pack
EATA2WH	MMT2	5

Angled mini-trunking adapter

code	size	pack
EATA4WH	MMT4	5

Allows the transfer of cables from Compact 1 to Marshall-Tufflex Mini-Trunking

Components



Dividing fillet

code	pack
EDF1	8 x 3m



Steel screening divider

code	pack
ESF1	1 x 1.5m

Note: optional steel screening divider to assist in compliance with BS EN 50174-2



Steel screening divider bonding strap

code	pack
ESF2	5



Bonding strap

code	pack
ESBS1	5



Main crossover bridge

code	pack
EMCB1	5

Provides segregation of services crossing from one compartment to another



Angled cable retainer

code	pack
EACR1	10

Provides cable retention in the upper angled or square compartment.



Main cable retainer

code	pack
EMCR1	10

The recommended cable retainer for all compartments which use the ETL1WH lid.

Boxes and plates



*RCD/MCB housing

code	pack
EABC1MWH	1

*Up to 4 modules can be accommodated

Note: RCDs are not supplied by Marshall-Tufflex



1 gang accessory box

code	depth	pack
ESSB1WH	30mm	20



2 gang accessory box

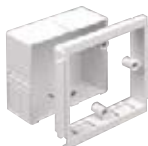
code	depth	pack
ESSB2WH	30mm	10



Accessory box spacer

code	size	pack
ES1WH	14mm	4

For use between accessory boxes



1 gang adjustable **CAT 7A+** depth box

code	depth	pack
EAB1WH	32 – 40mm	10

EAB1 is fully adjustable to 47mm. Please see page 311 for more information.



2 gang adjustable **CAT 7A+** depth box

code	size	pack
EAB2WH	32 – 40mm	5

EAB2 is fully adjustable to 47mm. Please see page 311 for more information.



1 gang accessory **CAT 7A+** plate

code	pack
ESSP1WH	2



2 gang accessory **CAT 7A+** plate

code	pack
ESSP2WH	2

Part M

For boxes that meet the requirements of Part M (DDA) please refer to page 104.

Compact 2 is a small, fully segregated two compartment trunking system with a square top profile. This trunking is suited to fit within areas where physical outside dimensions are important, for example, to negotiate above or below radiators and window sills.

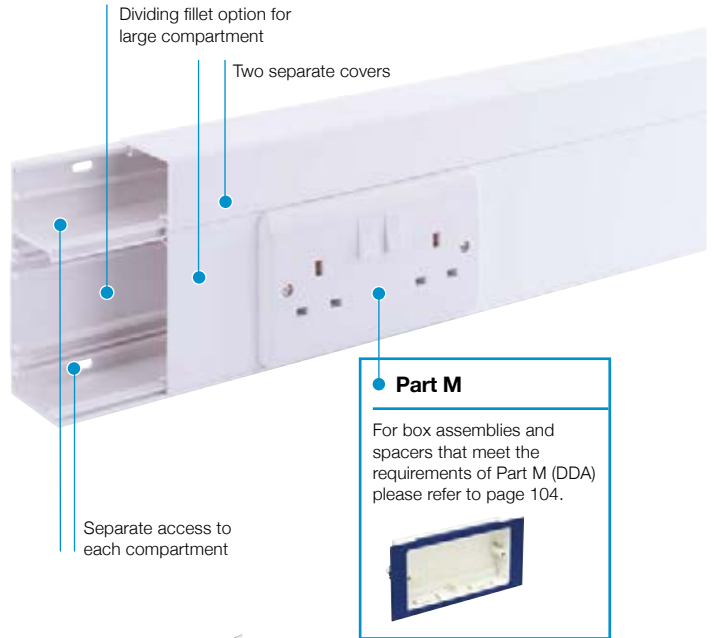


Product information

- 130 x 50mm
- One full size compartment and one half size
- For dado and skirting installation
- **Note:** where Compact 2 is fitted at skirting level, it is recommended that the larger compartment is installed uppermost.
- Can be subdivided

Data information

- Compliant up to Cat 7a
- Standard bend radius 25mm
- Data fittings available for bend radius up to 50mm
- Compact 1 and 2 small compartment can be screened to assist against EMI with no reduction in cable capacity
- Adjustable data box 32-40mm
- Screened divider and data boxes
- Steel divider available



Standard Colour
WH
WH: White

See page 121 for quick reference chart

Basic components



Base unit		Main compartment cover		Square cover	
code	pack	code	pack	code	pack
ETB2WH	4 x 3m	ETL1WH	8 x 3m	ETSC1WH	8 x 3m

Fittings



Compact 2 Couplers			Compact 2 End caps LH & RH			Compact 2 Internal bend			Compact 2 Internal bend assembly and cover only		
code	description	pack	code	description	pack	code	description	pack	code	description	pack
ECC2WH	2 piece	5	EECC2LHWH	2 piece	5	EIBC2WH	2 piece	5	ELIBCD2WH	assemblies	1
ECHC2WH	1 piece	5	EECC2RHWH	2 piece	5	EIBHC2WH	1 piece	5	EIBCD2WH	covers only	1
			EECHC2LHWH	1 piece	5						
			EECHC2RHWH	1 piece	5						



Compact 2 External bend			Compact 2 External bend assembly			Compact 2 Flat angle - upward			Compact 2 Flat angle - downward		
code	description	pack	code	description	pack	code	description	pack	code	description	pack
EXBC2WH	2 piece	5	ELOBCD2WH	assemblies	1	EFAC2UWH		1	EFAC2DWH		1
EXBHC2WH	1 piece	5									

Compact 2 flat tees

Compact 2 flat tees are handed to the left or to the right side. For the product you require, please order the following:

Left upward = EFTC2ULWH
 Left downward = EFTC2DLWH
 Right upward = EFTC2URWH
 Right downward = EFTC2DRWH

For further advice please call the Technical Team on +44 (0)1424 856688.

PVC-U PERIMETER TRUNKING SYSTEMS

Fittings



Square mini-trunking adapter

code	size	pack
ESTA2WH	MMT2	5



Square mini-trunking adapter

code	size	pack
ESTA4WH	MMT4	5

Allows the transfer of cables from Compact 2 to Marshall-Tufflex Mini-Trunking

Components



Dividing fillet

code	pack
EDF1	8 x 3m



Steel screening divider

code	pack
ESF1	1 x 1.5m

Note: optional steel screening divider to assist in compliance with BS EN 50174-2



Steel screening divider bonding strap

code	pack
ESF2	5



Bonding strap

code	pack
ESBS1	5



Main crossover bridge

code	pack
EMCB1	5

Provides segregation of services crossing from one compartment to another



Main cable retainer

code	pack
EMCR1	10

The recommended cable retainer for all compartments which use the ETL1WH lid

Boxes and plates



*RCD/MCB housing

code	pack
EABC1MWH	1

*Up to 4 modules can be accommodated

Note: RCDs are not supplied by Marshall-Tufflex



1 gang accessory box

code	depth	pack
ESSB1WH	30mm	20



2 gang accessory box

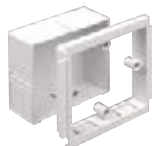
code	depth	pack
ESSB2WH	30mm	10



Accessory box spacer

code	size	pack
ES1WH	14mm	4

For use between accessory boxes



1 gang adjustable depth box

code	depth	pack
EAB1WH	32 – 40mm	10

EAB1 is fully adjustable to 47mm. Please see page 311 for more information.



2 gang adjustable depth box

code	size	pack
EAB2WH	32 – 40mm	5

EAB2 is fully adjustable to 47mm. Please see page 311 for more information.



1 gang accessory plate

code	pack
ESSP1WH	2



2 gang accessory plate

code	pack
ESSP2WH	2

Part M

For boxes that meet the requirements of Part M (DDA) please refer to page 104.

Compact 3 is a fully segregated trunking system with two main compartments suited for installations requiring larger cable capacity.



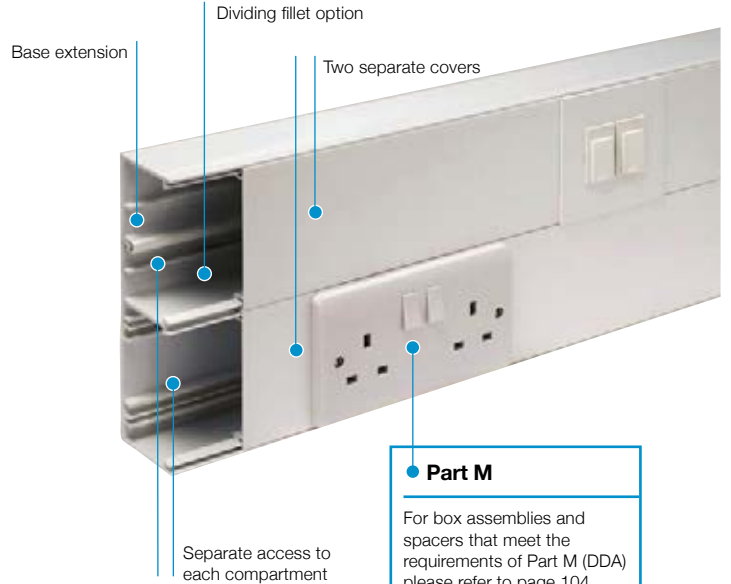
'Bio option' available to special order

Product information

- 181 x 50mm
- 2 full size compartments
- For dado and skirting installation
- Can be subdivided

Data information

- Compliant up to Cat 7a
- Standard bend radius 25mm
- Data fittings available for bend radius up to 50mm
- Adjustable data box 32-40mm
- Screened divider and data boxes
- Steel divider available



Part M

For box assemblies and spacers that meet the requirements of Part M (DDA) please refer to page 104.

Standard Colour
WH
WH: White

See page 121 for quick reference chart

Basic components



Base unit

code	pack
ETB2WH	4 x 3m

Main compartment cover

code	pack
ETL1WH	8 x 3m

Base extension

code	pack
EBE1WH	4 x 3m

Fittings



Compact 3 Coupler

code	description	pack
ECC3WH	2 piece	5
EHC3WH	1 piece	5

Compact 3 End caps LH & RH

code	description	pack
EECC3LHWH	2 piece	5
EECC3RHWH	2 piece	5
EEHC3LHWH	1 piece	5
EEHC3RHWH	1 piece	5

Compact 3 Internal bend

code	description	pack
EIBC3WH	2 piece	5
EIBHC3WH	1 piece	5

Compact 3 Internal bend assembly and cover only

code	description	pack
ELIBC3WH	assemblies	1
EIBC3WH	covers only	1

Compact 3 External bend

code	description	pack
EXBC3WH	2 piece	5
EXBHC3WH	1 piece	5

Compact 3 External bend assembly

code	description	pack
ELOB3WH	assemblies	1

Compact 3 Flat angle - up/down

code	pack
EFAC3WH	1

Compact 3 Flat tee - up/down

code	pack
EFTC3WH	1

PVC-U PERIMETER TRUNKING SYSTEMS

Components



Dividing fillet	
code	pack
EDF1	8 x 3m



Steel screening divider	
code	pack
ESF1	1 x 1.5m

Note: optional steel screening divider to assist in compliance with BS EN 50174-2



Steel screening divider bonding strap	
code	pack
ESF2	5



Bonding strap	
code	pack
ESBS1	5



Main crossover bridge	
code	pack
EMCB1	5

Provides segregation of services crossing from one compartment to another



Main cable retainer	
code	pack
EMCR1	10

The recommended cable retainer for all compartments which use the ETL1WH lid

Boxes and plates



*RCD/MCB Housing	
code	pack
EAHC1MWH	1

*Up to 4 modules can be accommodated
Note: RCDs are not supplied by Marshall-Tufflex



1 gang accessory box		
code	depth	pack
ESSB1WH	30mm	20




2 gang accessory box		
code	depth	pack
ESSB2WH	30mm	10




Accessory box spacer		
code	size	pack
ES1WH	14mm	4

For use between accessory boxes




1 gang adjustable  depth box		
code	depth	pack
EAB1WH	32 – 40mm	10




2 gang adjustable  depth box		
code	size	pack
EAB2WH	32 – 40mm	5



1 gang accessory  plate	
code	pack
ESSP1WH	2



2 gang accessory  plate	
code	pack
ESSP2WH	2

EAB1 and EAB2 are fully adjustable to 47mm. Please see page 311 for more information.

Part M

For boxes that meet the requirements of Part M (DDA) please refer to page 104.

Quick reference chart
Compact trunking

2 compartment

Compact 1 130 x 50mm	Compact 2 130 x 50mm	Compact 3 181 x 50mm
-------------------------	-------------------------	-------------------------



Base unit Pack 4 x 3m		ETB2WH	ETB2WH	ETB2WH
Base extension Pack 4 x 3m		-	-	EBE1WH
Main compartment cover Pack 8 x 3m		ETL1WH	ETL1WH	2 x ETL1WH
Angled cover Pack 8 x 3m		ETAC1WH	-	-
Square cover Pack 8 x 3m		-	ETSC1WH	-
Couplers Pack 5 1 or 2 piece fittings		ECC1WH or ECHC1WH	ECC2WH or ECHC2WH	ECC3WH or ECHC3WH
End caps Pack 5 1 or 2 piece fittings		EECC1LHWH EECC1RHWH or EECHC1LHWH EECHC1RHWH	EECC2LHWH EECC2RHWH or EECHC2LHWH EECHC2RHWH	EECC3LHWH EECC3RHWH or EECHC3LHWH EECHC3RHWH
Internal bends Pack 5 1 or 2 piece fittings		EIBC1WH or EIBHC1WH	EIBC2WH or EIBHC2WH	EIBC3WH or EIBHC3WH
Internal bend assembly Pack 1 		ELIBCD1WH	ELIBCD2WH	ELIBCD3WH
Internal bend – cover only Pack 1 		EIBCD1WH	EIBCD2WH	EIBCD3WH
External bends Pack 5 1 or 2 piece fittings		EXBC1WH or EXBHC1WH	EXBC2WH or EXBHC2WH	EXBC3WH or EXBHC3WH
External bend assembly Pack 1 		ELOBCD1WH	ELOBCD2WH	ELOBCD3WH
Flat angles – up or down Pack 1		EFAC1UWH EFAC1DWH	EFAC2UWH EFAC2DWH	EFAC3WH
Flat tees – up or down Pack 1 Left or right handed Upward or downward		EFTC1ULWH EFTC1URWH EFTC1DLWH EFTC1DRWH	EFTC2ULWH EFTC2URWH EFTC2DLWH EFTC2DRWH	EFTC3WH



Sterling Profile systems 1 to 3 are popular and stylish looking perimeter dado and skirting systems that are easy and cost effective to use. A firm favourite for many years due to its versatility, range of fittings and accessories and suitability for many different cable management installation needs.



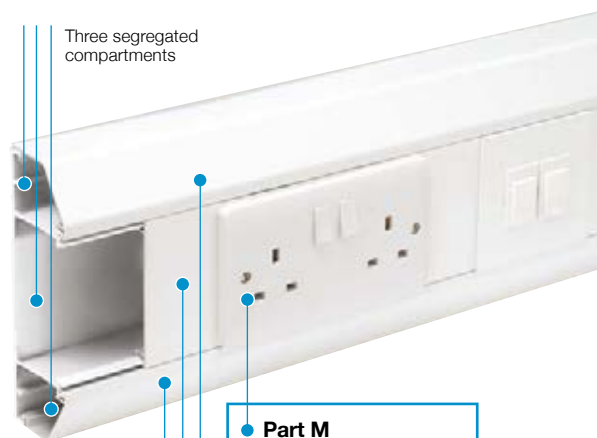
'Bio option' available to special order

Product information

- 167 x 50mm
- 3 segregated compartments
- Outer compartments can be subdivided
- Suitable for dado and skirting application
- Can be fed from larger trunking systems for increased cable distribution
- Boxes available to comply with Part M (DDA)
- Comprehensive range of flush power and data accessories
- Moulded fittings with Profile 1 and Profile 2

Data information

- Compliant up to Cat 7a
- Standard bend radius 25mm
- Data fittings available for bend radius up to 50mm
- Compartment can be screened to assist against EMI with no reduction (refer to p103) in cable capacity
- Adjustable data box 32-40mm
- Screened data boxes
- Steel screening divider available



Separate cover access to each compartment

Part M

For box assemblies and spacers that meet the requirements of Part M (DDA) please refer to page 104.



See page 126 for quick reference chart

Standard Colours

WH CH

WH: White CH: Charcoal

Colour options: Charcoal solid colour option is available as standard item for selected fittings. Please indicate when ordering by replacing the WH colour code suffix with CH for charcoal.

Trunking profiles



Sterling Profile 1 trunking assembly

code	size	pack
EP1MWH	167 x 50mm	1 x 3m



Sterling Profile 2 trunking assembly

code	size	pack
EP2MWH	167 x 50mm	1 x 3m



Sterling Profile 3 trunking assembly

code	size	pack
EP3MWH	167 x 50mm	1 x 3m

Basic components



Base unit

code	pack
ETB1M	4 x 3m



Main compartment cover

code	pack
ETL1WH	8 x 3m



Angled cover

code	pack
ETAC1WH	8 x 3m



Square cover

code	pack
ETSC1WH	8 x 3m

All above covers are also available from stock in charcoal.

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Technical Information

Profile 1 fittings



Profile 1 Coupler

code	description	pack
ECP1MWH	1 piece	2

Profile 1 couplers are also available from stock in charcoal.



Profile 1 End cap

code	description	pack
EECP1MWH	1 piece	2

Universal for both LH & RH
Profile 1 end caps are also available from stock in charcoal.



Profile 1 Internal bend

code	description	pack
EIBP1MWH	1 piece	2

Profile 1 internal bends are also available from stock in charcoal.



Profile 1 Internal bend cover CAT 7A

code	pack
EIBD1WH	1



Profile 1 Internal bend assembly CAT 7A

code	pack
ELIBD1WH	1

Profile 1 internal bends are also available from stock in charcoal.



Profile 1 External bend

code	description	pack
EXBP1MWH	1 piece	2

Profile 1 external bends are also available from stock in charcoal.



Profile 1 External bend assembly CAT 7A

code	pack
ELOBD1WH	1

Profile 1 external bends are also available from stock in charcoal.



Profile 1 Flat angle - up/down cover

code	pack
EFA1MWH	1

Profile 1 angle covers are also available from stock in charcoal.



Now with integral bend radius control

Profile 1 Flat angle - up/down complete CAT 7A

code	pack
EFA1MBWH	1

Profile 1 flat angles are also available from stock in charcoal.



Profile 1 Flat tee cover

code	pack
EFT1MWH	1

Profile 1 tee covers are also available from stock in charcoal.



Now with integral bend radius control

Profile 1 Flat tee complete CAT 7A

code	pack
EFT1MBWH	1

Profile 1 flat tees are also available from stock in charcoal.

Profile 2 fittings



Profile 2 Coupler

code	description	pack
ECP2MWH	1 piece	2



Profile 2 End cap

code	description	pack
EECP2MLHWH (left)	1 piece	2
EECP2MRHWH (right)	1 piece	2



Profile 2 Internal bend

code	description	pack
EIBP2MWH	1 piece	2



Profile 2 Internal bend cover CAT 7A

code	pack
EIBD2WH	1



Profile 2 Internal bend assembly CAT 7A

code	pack
ELIBD2WH	1

Profile 2 internal bends are also available from stock in charcoal.



Profile 2 External bend

code	description	pack
EXBP2MWH	1 piece	2

Profile 2 external bends are also available from stock in charcoal.



Profile 2 External bend assembly CAT 7A

code	pack
ELOBD2WH	1

Profile 2 external bends are also available from stock in charcoal.



Profile 2 Flat angle - upward

code	pack
EFA2UWH	1

Profile 2 angle covers are also available from stock in charcoal.

Profile 2 fittings



Sterling Profile 2 flat tees

Sterling Profile 2 flat tees use an angled cover for the upwards cover and tee. Downward tees use a square cover.

Profile 2 Flat angle – downward	
code	pack
EFA2DWH	1

Profile 3 fittings



Profile 3 Coupler		
code	description	pack
ECP3WH	3 piece	2
ECHP3WH	1 piece	2



Profile 3 End cap		
code	description	pack
EECP3WH	3 piece	2
EECHP3WH	1 piece	2

Universal for both LH & RH



Profile 3 Internal bend		
code	description	pack
EIBP3WH	3 piece	2
EIBHP3WH	1 piece	2



Profile 3 Internal bend cover <small>CAT 7A</small>	
code	pack
EIBD3WH	1



Profile 3 Internal bend assembly <small>CAT 7A</small>	
code	pack
ELIBD3WH	1



Profile 3 External bend		
code	description	pack
EXBP3WH	3 piece	2
EXBHP3WH	1 piece	2



Profile 3 External bend assembly <small>CAT 7A</small>	
code	pack
ELOBD3WH	1



Profile 3 Flat angle – up/down	
code	pack
EFA3WH	1



Profile 3 Flat tee	
code	pack
EFT3WH	1

Fittings



Angled mini trunking adaptor MMT2	
code	pack
EATA2WH	5



Angled mini trunking adaptor MMT4	
code	pack
EATA4WH	5



Square mini trunking adaptor MMT2	
code	pack
ESTA2WH	5



Square mini trunking adaptor MMT4	
code	pack
ESTA4WH	5

Components



Main crossover bridge

code	pack
EMCB1	5



Angled cable retainer

code	pack
EACR1	10

Boxes and plates



***RCD/MCB Housing**

code	pack
EAHC1MWH	1

*Up to 4 modules can be accommodated Note: RCDs are not supplied by Marshall-Tufflex



1 gang accessory box

code	depth	pack
ESSB1WH	30mm	20

ESSB1 and ESSB2 are also available from stock in charcoal.



2 gang accessory box

code	depth	pack
ESSB2WH	30mm	10



Accessory box spacer

code	size	pack
ES1WH	14mm	4

For use between accessory boxes



1 gang adjustable depth box CAT 7A+

code	depth	pack
EAB1WH	32 – 40mm	10



2 gang adjustable depth box CAT 7A+

code	size	pack
EAB2WH	32 – 40mm	5



1 gang accessory plate CAT 7A+

code	pack
ESSP1WH	2



2 gang accessory plate CAT 7A+

code	pack
ESSP2WH	2

EAB1 and EAB2 are fully adjustable to 47mm. Please see page 311 for more information.



Segregated flush back box 280 x 150mm Steel

code	depth	pack
ESFBB1	35mm	1

Part M

For boxes that meet the requirements of Part M (DDA) please refer to page 104 of this section.



Quick reference chart Sterling Profile 1, 2 and 3

3 compartment

Profile 1	Profile 2	Profile 3
167 x 50mm	167 x 50mm	167 x 50mm



		Profile 1	Profile 2	Profile 3
Base unit		ETB1M	ETB1M	ETB1M
Pack	4 x 3m			
Main compartment cover		ETL1WH	ETL1WH	ETL1WH
Pack	8 x 3m			
Angled cover		2 x ETAC1WH	ETAC1WH	-
Pack	8 x 3m			
Square cover		-	ETSC1WH	2 x ETSC1WH
Pack	8 x 3m			
Couplers		ECP1MWH	ECP2MWH	ECP3WH or ECHP3WH
Pack	2			
	3 piece or 1 piece			
End caps		EECP1MWH	EECP2MRHWH EECP2MLHWH	EECP3WH or EECHP3WH
Pack	2			
	Left or right handed			
	1 piece			
Internal bend		EIBP1WH or EIBP1MWH	EIBP2MWH	EIBP3WH or EIBHP3WH
Pack	2			
	3 piece or 1 piece			
Internal bend assemblies	CAT 7A	ELIBD1WH	ELIBD2WH	ELIBD3WH
Pack	1			
Internal bend covers only	CAT 7A	EIBD1WH	EIBD2WH	EIBD3WH
Pack	1			
External bends		EXBP1MWH	EXBP2MWH	EXBP3WH or EXBHP3WH
Pack	2			
	3 piece or 1 piece			
External bend assemblies	CAT 7A	ELOBD1WH	ELOBD2WH	ELOBD3WH
Pack	1			
Flat angles up or down		EFA1MWH or EFA1MBWH	EFA2UWH EFA2DWH	EFA3WH
Pack	1			
Flat tees up or down		EFT1MWH or EFT1MBWH	EFT2UWH †	EFT3WH
Pack	1			
Flat angles up or down	CAT 7A	-	EFA2USBWH EFA2DSBWH	-
Pack	1			
	Slow bend			

† Sterling Profile 2 flat tees

Sterling Profile 2 flat tees use an angled cover for the upwards cover and tee. Downward tees use a square cover.

Quick reference chart

Sterling Profile 1
screened

3 compartment

Profile 1 CS13
167 x 50mm



Base unit

Pack 1 x 3m



ETB1MCS13

Main compartment cover

Pack 8 x 3m
Unscreened



ETL1WH

Angled cover

Pack 1 x 3m



2 x ETAC1CSWH

Screening

Conductive spray (CS) is unique to Marshall-Tufflex and is applied in the factory to assist in screening from electromagnetic interference to data and communications cabling within trunking systems. The coating is applied to a range of data boxes, covers, clip-on components and fabricated fittings.



WARNING: A CS coating is not suitable for low voltage circuits. BS 7671:2008. For data/voice use only.

Screened compartments key to coding

CS13 = screening in compartments 1 and 3

1 gang screened accessory box

CAT 7A+

code	depth	pack
ESSB1SWH*	30mm	20

2 gang screened adjustable accessory box

CAT 7A+

code	depth	pack
ESSB2SWH*	30mm	10

*Supplied complete with earth terminal

Steel screening divider

code	pack
ESF1	1 x 1.5m

Note: optional steel screening divider to assist in compliance with BS EN 50174-2



Steel screening divider bonding strap

code	pack
ESF2	5



Bonding strap

code	pack
ESBS1	5



Case Study

Historic museum's exhibition challenge solved

When Cambridge University's historic Fitzwilliam Museum required a flexible power delivery system for its temporary exhibition galleries it turned to the MT32 prefabricated modular wiring system.

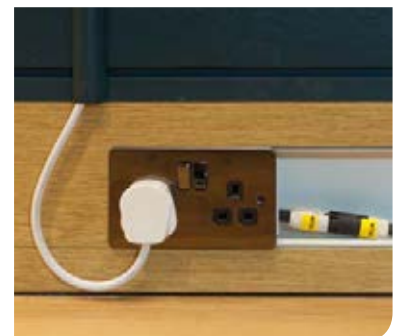
Previously the museum's in-house facilities team hard wired power cables to plug into floor sockets using extension leads, a costly and time-consuming process. Therefore the museum wanted a flexible power delivery system that also avoided trailing extension leads.

"We looked at a few different plug and play systems but none of them were flush enough to the wall for the display cabinets to be positioned," said Darren Potter, Chief Technician of Facilities at the Fitzwilliam Museum. "When it comes to refurbishing the galleries time is of the essence with no room for error as the opening of pre-publicised exhibitions cannot be postponed."

"We also wanted a simple system in order to adjust the lids to correspond with the plug-in-lengths with ease and in the longer term we hope to save money as well as time."

The museum also required trunking that would be a good match to the light oak floor (the trunking sits on the floor at skirting level within the gallery) and would meet Historic England approval as the building and its galleries are Grade 1 listed.

"We chose Sterling Profile 3 in Light Oak as it had square edges, making it easier for us to fit the trunking flush into the skirting void behind the wall," said Darren.



Sterling Curve Profile 1 and 2 are stylish curved perimeter dado and skirting systems that are easy and cost effective to use. Sterling Curve is a sleek data compliant medium sized trunking system with three segregated compartments. The adaptable system has 1 or 2 curved data compartments designed to stop clutter, avoid dust traps and to make cleaning easy.



Product information

- 167 x 50mm
- 3 segregated compartments
- Suitable for dado and skirting application
- Boxes available to comply with Part M (DDA)
- Comprehensive range of flush power and data accessories
- Single piece moulded fittings
- Flat Tees and Flat Angles have integral bend radius control
- Profile 1 is available in charcoal as standard

Data information

- Compliant up to Cat 7a
- Standard bend radius 25mm
- Data fittings available for bend radius up to 50mm
- Compartment can be screened to assist against EMI with no reduction in cable capacity (refer to p103)
- Adjustable data box 32-40mm
- Screened data boxes
- Steel screening divider available

See page 132 for quick reference chart



Part M

For box assemblies and spacers that meet the requirements of Part M (DDA) please refer to page 104.

Standard Colours	
WH	CH
WH: White CH: Charcoal	

Colour options: Charcoal solid colour option is available as standard item for selected Profile 1 fittings. Please indicate when ordering by replacing the WH colour code suffix with CH for charcoal.

PVC-U PERIMETER TRUNKING SYSTEMS

Trunking profiles



Curve Profile 1 trunking assembly

code	size	pack
CEP1MWH	167 x 50mm	1 x 3m



Curve Profile 2 trunking assembly

code	size	pack
CEP2MWH	167 x 50mm	1 x 3m

Basic components



Base unit

code	pack
ETB1M	4 x 3m



Main compartment cover

code	pack
ETL1WH	8 x 3m



Curve cover

code	pack
CETC1WH	8 x 3m



Square cover

code	pack
ETSC1WH	8 x 3m

All above covers also available in charcoal

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Curve Profile 1 fittings



**Curve Profile 1
Coupler**

code	pack
CECP1MWH	2

Profile 1 coupler is also available from stock in charcoal



**Curve Profile 1
End cap**

code	pack
CEEC1MWH	2

Profile 1 end cap is also available from stock in charcoal



**Curve Profile 1
Internal bend**

code	pack
CEIB1MWH	2

Profile 1 internal bend is also available from stock in charcoal



**Curve Profile 1
External bend**

code	pack
CEXP1MWH	2

Profile 1 external bend is also available from stock in charcoal



**Curve Profile 1
Flat angle cover**

code	pack
CEFA1MWH	1

Profile 1 flat angle cover is also available from stock in charcoal



**Curve Profile 1 CAT 7A
Flat angle complete**

code	pack
CEFA1MBWH	1

Profile 1 flat angle complete is also available from stock in charcoal



**Curve Profile 1
Flat tee cover**

code	pack
CEFT1MWH	1

**Curve Profile 1 CAT 7A
Flat tee complete**

code	pack
CEFT1MBWH	1

Profile 1 flat tee complete is also available from stock in charcoal

Curve Profile 2 fittings



**Curve Profile 2
Coupler**

code	pack
CECP2MWH	2



**Curve Profile 2
End cap**

code	pack
CEEC2MRHWH (right)	2
CEEC2MLHWH (left)	2



**Curve Profile 2
Internal bend**

code	pack
CEIB2MWH	2



**Curve Profile 2
External bend**

code	pack
CEXP2MWH	2



**Curve Profile 2
Flat angle up cover**

code	pack
CEFA2UMWH	1



**Curve Profile 2 CAT 7A
Flat angle up complete**

code	pack
CEFA2UMBWH	1



**Curve Profile 2
Flat tee cover**

code	pack
CEFT2MWH	1

**Curve Profile 2 CAT 7A
Flat tee complete**

code	pack
CEFT2MBWH	1

Components



Steel screening divider	
code	pack
ESF1	1 x 1.5m



Steel screening divider bonding strap	
code	pack
ESF2	5



Bonding strap	
code	pack
ESBS1	5



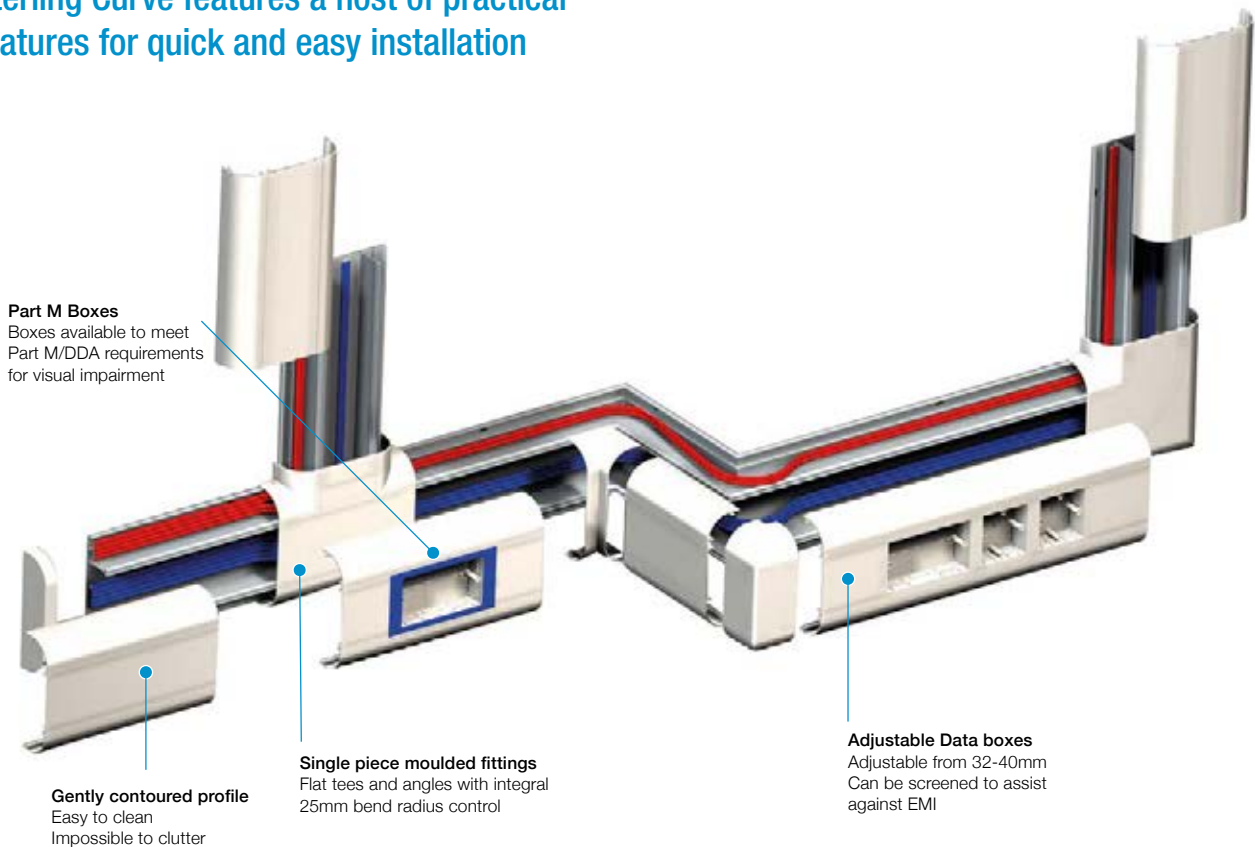
Main crossover bridge	
code	pack
EMCB1	5



Angled cable retainer	
code	pack
EACR1	10

Sterling Curve Trunking

Sterling Curve features a host of practical features for quick and easy installation



Part M Boxes
Boxes available to meet Part M/DDA requirements for visual impairment

Gently contoured profile
Easy to clean
Impossible to clutter

Single piece moulded fittings
Flat tees and angles with integral 25mm bend radius control

Adjustable Data boxes
Adjustable from 32-40mm
Can be screened to assist against EMI



***RCD/MCB Housing**

code	pack
EAHC1MWH	1

1 gang accessory box

code	depth	pack
ESSB1WH	30mm	20

2 gang accessory box

code	depth	pack
ESSB2WH	30mm	10

Accessory box spacer

code	size	pack
ES1WH	14mm	4

*Up to 4 modules can be accommodated
Note: RCDs are not supplied by Marshall-Tufflex

For use between accessory boxes



1 gang adjustable depth box CAT 7A

code	depth	pack
EAB1WH	32 – 40mm	10

2 gang adjustable depth box CAT 7A

code	size	pack
EAB2WH	32 – 40mm	5

1 gang accessory plate CAT 7A

code	pack
ESSP1WH	2

2 gang accessory plate CAT 7A

code	pack
ESSP2WH	2

EAB1 and EAB2 are fully adjustable to 47mm. Please see page 311 for more information.



Segregated flush back box 280 x 150mm Steel

code	depth	pack
ESFBB1	35mm	1

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Technical Information

Sterling Curve Bio



Sterling Curve Profile 1 trunking is available as standard with Bio antimicrobial protection within the PVC-U material.

Sterling Curve Bio trunking component chart

	Main compartment cover	Curve cover	Coupler	End cap	Internal bend	External bend	Flat angle complete <small>CAT 7A</small>
Sterling Curve Profile 1 167 x 50mm	ETL1BIOWH Pack 8 x 3m	CETC1BIOWH Pack 8 x 3m	CECP1MBIOWH Pack 2	CEEC1MBIOWH Pack 2	CEIBP1MBIOWH Pack 2	CEXP1MBIOWH Pack 2	CEFA1MBBIOWH Pack 1
	<small>CAT 7A</small> Flat tee complete	<small>CAT 7A</small> 1 gang accessory box	2 gang accessory box	1 gang accessory box blue	1 gang accessory box charcoal	2 gang accessory box blue	2 gang accessory box charcoal
	CEFT1MBBIOWH Pack 1	ESSB1BIOWH Pack 20	ESSB2BIOWH Pack 10	ESPM1BIOBU Pack 1	ESPM1BIOCH Pack 1	ESPM2BIOBU Pack 1	ESPM2BIOCH Pack 1



Quick reference chart Sterling Curve

3 compartment

Profile 1	Profile 2
167 x 50mm	167 x 50mm



		Profile 1	Profile 2
Base unit Pack 4 x 3m		ETB1M	ETB1M
Main compartment cover Pack 8 x 3m		ETL1WH	ETL1WH
Curve cover Pack 8 x 3m		2 xCETC1WH	CETC1WH
Square cover Pack 8 x 3m		-	ETSC1WH
Couplers Pack 5		CECP1MWH	CECP2MWH
End caps Pack 5		CEECP1MWH	CEECP2MRHWH CEECP2MLHWH
Internal bend Pack 5		CEIBP1MWH	CEIBP2MWH
External bends Pack 5		CEXBP1MWH	CEXBP2MWH
Flat angle cover Pack 1		CEFA1MWH	-
Flat angle complete Pack 1		CEFA1MBWH	-
Flat angle up cover Pack 1		-	CEFA2UMWH
Flat angle up complete Pack 1		-	CEFA2UMBWH
Flat tee cover Pack 1		CEFT1MWH	CEFT2MWH
Flat tee complete Pack 1		CEFT1MBWH	CEFT2MBWH

Sterling Curve screened component chart

3 compartment

Profile 1 CS13
167 x 50mm



Base unit screened
Pack 1 x 3m



ETB1MCS13

Main compartment cover
Pack
Unscreened 8 x 3m



ETL1WH

Curve cover screened
Pack 8 x 3m



CETC1CSMWH

Screening

Conductive spray (CS) is unique to Marshall-Tufflex and is applied in the factory to assist in screening from electromagnetic interference to data and communications cabling within trunking systems. The coating is applied to a range of data boxes, covers, clip-on components and fabricated fittings.



WARNING: A CS coating is not suitable for low voltage circuits. BS 7671:2008. For data/voice use only.

Screened compartments key to coding

CS13 = screening in compartments 1 and 3

1 gang screened accessory box ...CAT 7A...

code	depth	pack
ESSB1SWH*	30mm	20

2 gang screened adjustable accessory box ...CAT 7A...

code	depth	pack
ESSB2SWH*	30mm	10

*Supplied complete with earth terminal

Steel screening divider



code	pack
ESF1	1 x 1.5m

Note: optional steel screening divider to assist in compliance with BS EN 50174-2

Steel screening divider bonding strap



code	pack
ESF2	5

Bonding strap



code	pack
ESBS1	5

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Technical Information

Sterling Profile systems 4 to 13 are perimeter dado and skirting trunking systems that provide increased cable capacity with large multi compartments that can be subdivided to carry a greater range of services.

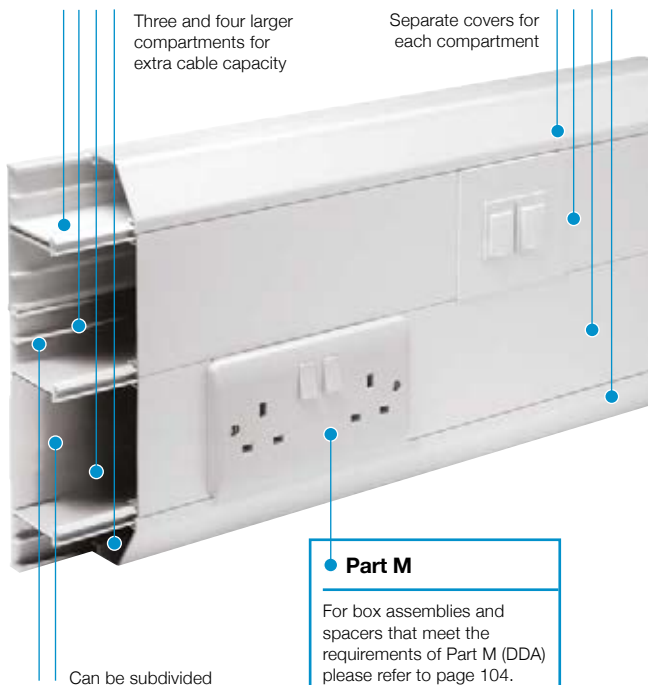


Product information

- Profile 4 and 5 = 218 x 50mm
- Profile 11, 12 and 13 = 255 x 50mm
- Profile 6 = 269 x 50mm
- 3 and 4 large, segregated compartments
- Can be subdivided
- Suitable for dado and skirting application
- Can be fed from larger trunking systems for increased cable distribution
- Boxes available to comply with Part M (DDA)
- Comprehensive range of flush power and data accessories
- Improved design to base unit to give greater cable capacity

Data information

- Compliant up to Cat 7a
- Standard bend radius 25mm
- Data fittings available for bend radius up to 50mm
- Adjustable data box 32-40mm
- Screened data boxes
- Steel screening divider available



Standard Colour
WH
WH: White

See page 140 for quick reference chart

Trunking profiles



Sterling Profile 4

size
218 x 50mm



Sterling Profile 5

size
218 x 50mm



Sterling Profile 6

size
269 x 50mm



Sterling Profile 11

size
255 x 50mm



Sterling Profile 12

size
255 x 50mm



Sterling Profile 13

size
255 x 50mm

Basic components



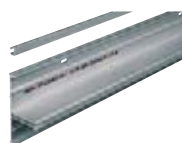
Base unit

code	pack
ETB1M	4 x 3m



Base extension

code	pack
EBE1WH	4 x 3m



Extendable base

code	pack
EEB1	4 x 3m

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Basic components



Main compartment cover	
code	pack
ETL1WH	8 x 3m



Angled cover	
code	pack
ETAC1WH	8 x 3m



Square cover	
code	pack
ETSC1WH	8 x 3m

Profile 4 fittings



Profile 4 Coupler	
code	pack
ECP4WH	5



Profile 4 End cap	
code	pack
EECP4LHWH	5
EECP4RHWH	5



Profile 4 Internal bend	
code	pack
EIBP4WH	5



Profile 4 Internal bend cover <small>CAT 7A</small>	
code	pack
EIBD4WH	1



Profile 4 Internal bend assemblies <small>CAT 7A</small>	
code	pack
ELIBD4WH	1



Profile 4 External bend	
code	pack
EXBP4WH	5



Profile 4 External bend assemblies <small>CAT 7A</small>	
code	pack
ELOBD4WH	1



Profile 4 Flat angle - up	
code	pack
EFA4UWH	1



Profile 4 Flat angle - down	
code	pack
EFA4DWH	1

Profile 5 fittings



Profile 5 Coupler	
code	pack
ECP5WH	5



Profile 5 End cap	
code	pack
EECP5LHWH	5
EECP5RHWH	5



Profile 5 Internal bend	
code	pack
EIBP5WH	5



Profile 5 Internal bend cover <small>CAT 7A</small>	
code	pack
EIBD5WH	1

Profile 5 fittings



Profile 5 CAT 7A
Internal bend assemblies
 code pack
 ELIBD5WH 1



Profile 5
External bend
 code pack
 EXBP5WH 5



Profile 5 CAT 7A
External bend assemblies
 code pack
 ELOBD5WH 1



Profile 5
Flat angle - up
 code pack
 EFA5UWH 1



Profile 5
Flat angle - down
 code pack
 EFA5DWH 1

Sterling Profiles 4, 5 and 12 flat tees

Flat tees for Sterling Profiles 4, 5 and 12 are not evenly handed and Marshall-Tufflex recommends that ordering of flat tees for these profiles is done with the advice of the Technical Team on +44 (0)1424 856688.



Profile 6
Coupler
 code pack
 ECP6WH 5



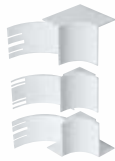
Profile 6
End cap
 code pack
 EECP6WH 5
 Universal for both LH & RH



Profile 6
Internal bend
 code pack
 EIBP6WH 5



Profile 6 CAT 7A
Internal bend cover
 code pack
 EIBD6WH 1



Profile 6 CAT 7A
Internal bend assemblies
 code pack
 ELIBD6WH 1



Profile 6
External bend
 code pack
 EXBP6WH 5



Profile 6 CAT 7A
External bend assemblies
 code pack
 ELOBD6WH 1



Profile 6
Flat angle - up/down
 code pack
 EFA6WH 1



Profile 6
Flat tee - up/down
 code pack
 EFT6WH 1



Profile 6 fittings

Profile 11 fittings



Profile 11 Coupler

code	pack
ECP11WH	5



Profile 11 End cap

code	pack
EECP11WH	5

Universal for both LH & RH



Profile 11 Internal bend

code	pack
EIBP11WH	5



Profile 11 Internal bend cover ...CAT 7A

code	pack
EIBD11WH	1



Profile 11 Internal bend assemblies ...CAT 7A

code	pack
ELIBD11WH	1



Profile 11 External bend

code	pack
EXBP11WH	5



Profile 11 External bend assemblies ...CAT 7A

code	pack
ELOBD11WH	1



Profile 11 Flat angle - up/down

code	pack
EFA11WH	1



Profile 11 Flat tee - up/down

code	pack
EFT11WH	1

Profile 12 fittings



Profile 12 Coupler

code	pack
ECP12WH	5



Profile 12 End cap

code	pack
EECP12LHWH	5
EECP12RHWH	5



Profile 12 Internal bend

code	pack
EIBP12WH	5



Profile 12 Internal bend cover ...CAT 7A

code	pack
EIBD12WH	1



Profile 12 Internal bend assemblies ...CAT 7A

code	pack
ELIBD12WH	1



Profile 12 External bend

code	pack
EXBP12WH	5



Profile 12 External bend assemblies ...CAT 7A

code	pack
ELOBD12WH	1

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Profile 12 fittings



**Profile 12
Flat angle – up**
code pack
EFA12UWH 1



**Profile 12
Flat angle – down**
code pack
EFA12DWH 1

Sterling Profiles 4, 5 and 12 flat tees

Flat tees for Sterling Profiles 4, 5 and 12 are not evenly handed and Marshall-Tufflex recommends that ordering of flat tees for these profiles is done with the advice of the Technical Team on +44 (0)1424 856688.

Profile 13 fittings



**Profile 13
Coupler**
code pack
ECP13WH 5



**Profile 13
End cap**
code pack
EECP13WH 5
Universal for both LH & RH



**Profile 13
Internal bend**
code pack
EIBP13WH 5



**Profile 13
Internal bend cover**
code pack
EIBD13WH 1



**Profile 13
Internal bend assemblies**
code pack
ELIBD13WH 1



**Profile 13
External bend**
code pack
EXBP13WH 5



**Profile 13
External bend assemblies**
code pack
ELIBD13WH 1



**Profile 13
Flat angle – up/down**
code pack
EFA13WH 1



**Profile 13
Flat tee – up/down**
code pack
EFT13WH 1

Fittings



**Angled mini trunking
adaptor MMT2**
code pack
EATA2WH 5



**Angled mini trunking
adaptor MMT4**
code pack
EATA4WH 5



**Square mini trunking
adaptor MMT2**
code pack
ESTA2WH 5



**Square mini trunking
adaptor MMT4**
code pack
ESTA4WH 5

Components



Dividing fillet		
code	pack	
EDF1	8 x 3m	



Dividing tray		
code	pack	
EDF2	8 x 3m	



Steel screening divider		
code	pack	
ESF1	1 x 1.5m	

Note: optional steel screening divider to assist in compliance with BS EN 50174-2



Steel screening divider bonding strap		
code	pack	
ESF2	5	



Bonding strap		
code	pack	
ESBS1	5	



Main crossover bridge		
code	pack	
EMCB1	5	



Angled cable retainer		
code	pack	
EACR1	10	



Main cable retainer		
code	pack	
EMCR1	10	

Boxes and plates



*RCD/MCB Housing		
code	pack	
EAHC1MWH	1	

*Up to 4 modules can be accommodated
 Note: RCDs are not supplied by Marshall-Tufflex



1 gang accessory box		
code	depth	pack
ESSB1WH	30mm	20



2 gang accessory box		
code	depth	pack
ESSB2WH	30mm	10

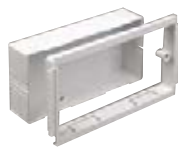


Accessory box spacer		
code	size	pack
ES1WH	14mm	4

For use between accessory boxes



1 gang adjustable depth box <small>CAT 7A+</small>		
code	depth	pack
EAB1WH	32 – 40mm	10



2 gang adjustable depth box <small>CAT 7A+</small>		
code	size	pack
EAB2WH	32 – 40mm	5



1 gang accessory plate <small>CAT 7A+</small>	
code	pack
ESSP1WH	2



2 gang accessory plate <small>CAT 7A+</small>	
code	pack
ESSP2WH	2

EAB1 and EAB2 are fully adjustable to 47mm. Please see page 311 for more information.



























































































Part M

For box assemblies and spacers that meet the requirements of Part M (DDA) please refer to page 104.



Quick reference chart

Sterling Profile 4 to 13

	3 compartment			4 compartment		
	Profile 4 218 x 50mm	Profile 5 218 x 50mm	Profile 6 269 x 50mm	Profile 11 255 x 50mm	Profile 12 255 x 50mm	Profile 13 255 x 50mm
Base unit Pack 4 x 3m						
	ETB1M	ETB1M	ETB1M	ETB1M	ETB1M	ETB1M
Base extension Pack 4 x 3m						
	EBE1WH	EBE1WH	2 x EBE1WH	-	-	-
Extendable base Pack 4 x 3m						
	-	-	-	EEB1	EEB1	EEB1
Main compartment cover Pack 8 x 3m						
	2 x ETL1WH	2 x ETL1WH	3 x ETL1WH	2 x ETL1WH	2 x ETL1WH	2 x ETL1WH
Angled cover Pack 8 x 3m						
	ETAC1WH	-	-	2 x ETAC1WH	ETAC1WH	-
Square cover Pack 8 x 3m						
	-	ETSC1WH	-	-	ETSC1WH	2 x ETSC1WH
Couplers Pack 5						
	ECP4WH	ECP5WH	ECP6WH	ECP11WH	ECP12WH	ECP13WH
End caps Pack 5 Left or right handed						
	EECP4LHWH EECP4RHWH	EECP5LHWH EECP5RHWH	EECP6WH	EECP11WH	EECP12LHWH or EECP12RHWH	EECP13WH
Internal bend Pack 5						
	EIBP4WH	EIBP5WH	EIBP6WH	EIBP11WH	EIBP12WH	EIBP13WH
Internal bend assemblies <small>...CAT 7A...</small> Pack 1						
	ELIBD4WH	ELIBD5WH	ELIBD6WH	ELIBD11WH	ELIBD12WH	ELIBD13WH
Internal bend covers only <small>...CAT 7A...</small> Pack 1						
	EIBD4WH	EIBD5WH	EIBD6WH	EIBD11WH	EIBD12WH	EIBD13WH
External bends Pack 5						
	EXBP4WH	EXBP5WH	EXBP6WH	EXBP11WH	EXBP12WH	EXBP13WH
External bend assemblies <small>...CAT 7A...</small> Pack 1						
	ELOBD4WH	ELOBD5WH	ELOBD6WH	ELOBD11WH	ELOBD12WH	ELOBD13WH
Flat angles up or down Pack 1						
	EFA4UWH EFA4DWH	EFA5UWH EFA5DWH	EFA6WH	EFA11WH	EFA12UWH EFA12DWH	EFA13WH
Flat tees up or down Pack 1						
	†	†	EFT6WH	EFT11WH	†	EFT13WH

† Flat tees

For more information on the specification and screening of these Flat Tees, we would advise you to contact our Technical Team on +44 (0)1424 856688.

XL Trunking sizes 201 to 203 comprise a range of deep, large capacity 3 compartment, segregated containment systems. These systems can accommodate integral lighting units.



'Bio option' available to special order

Product information

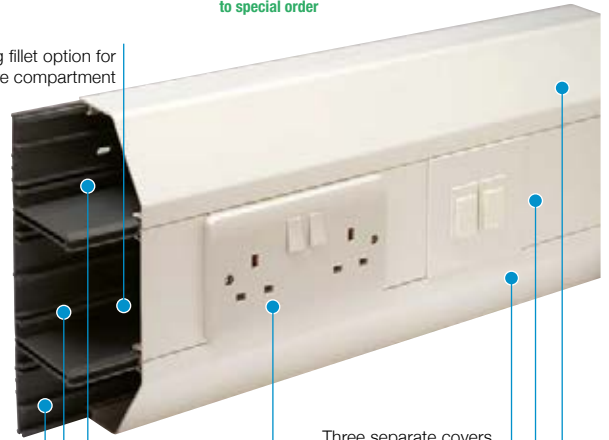
- 220 x 65mm
- 1 full and 2 half size compartments
- XL 201 for dado installation only
- 3 deep segregated compartments
- Can be subdivided
- Suitable for dado and skirting application
- Can be fed from larger trunking systems for increased cable distribution
- Boxes available to comply with Part M (DDA)
- Comprehensive range of flush power and data accessories

Data information

- Compliant up to Cat 7a*
- Adjustable data box 32-47mm
- Screened data boxes
- Steel screening divider available

See page 144 for quick reference chart

Dividing fillet option for centre compartment



Three separate covers

Standard Colour
WH
WH: White

Colour options: Optional colours and finishes are available but these may be subject to setup charges, minimum order quantity orders and longer lead times. For more information contact the Technical Team on +44 (0)1424 856688.

Three deep compartments for extra cable capacity

Part M

For box assemblies and spacers that meet the requirements of Part M (DDA) please refer to page 104.

***Data fittings**

For made to order fittings to meet Cat 7a requirements please contact our Technical Team on +44 (0)1424 856688

Trunking profiles



XL 201
size
220 x 65mm



XL 202
size
220 x 65mm



XL 203
size
220 x 65mm

Basic components



Base unit
code pack
ELTB200 4 x 3m



Main compartment cover
code pack
ETL1WH 8 x 3m



Angled cover
code pack
ELAC200WH 8 x 3m



Square cover
code pack
ELSC200WH 8 x 3m

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Technical Information

XL 201 fittings



XL 201 Coupler

code	pack
EC201WH	5



XL 201 End cap

code	pack
ECC201WH	5

Universal for both LH & RH



XL 201 Internal bend

code	pack
EIB201WH	5



XL 201 External bend

code	pack
EXB201WH	5



XL 201 Flat angle - up/down

code	pack
EFA201WH	1



XL 201 Flat tee - up/down

code	pack
EFT201WH	1

XL 202 fittings



XL 202 Coupler

code	pack
EC202WH	5



XL 202 End cap

code	pack
ECC202LHWH (Left hand)	5
ECC202RHWH (Right hand)	5



XL 202 Internal bend

code	pack
EIB202WH	5



XL 202 External bend

code	pack
EXB202WH	5



XL 202 Flat angle - upward

code	pack
EFA202UWH	1



XL 202 Flat angle - downward

code	pack
EFA202DWH	1

XL 203 fittings



XL 203 Coupler

code	pack
EC203WH	5



XL 203 End cap

code	pack
ECC203WH	5

Universal for both LH & RH



XL 203 Internal bend

code	pack
EIB203WH	5



XL 203 External bend

code	pack
EXB203WH	5

XL 203 fittings



**XL 203
Flat angle – up/down**

code	pack
EFA203WH	1



**XL 203
Flat tee – up/down**

code	pack
EFT203WH	1

Components



Dividing fillet

code	pack
ELDF200	8 x 3m



Steel screening divider

code	pack
ESF200	1 x 1.5m

Note: optional steel screening divider to assist in compliance with BS EN 50174-2



Steel screening divider bonding strap

code	pack
ESF2	5



Bonding strap

code	pack
ESBS1	5

Boxes and plates



***RCD/MCB Housing**

code	pack
EAHC1MWH	1

*Up to 4 modules can be accommodated
Note: RCDs are not supplied by Marshall-Tufflex



1 gang accessory box

code	depth	pack
ESSB1WH	30mm	20



2 gang accessory box

code	depth	pack
ESSB2WH	30mm	10



Accessory box spacer

code	size	pack
ES1WH	14mm	4

For use between accessory boxes



1 gang adjustable ^{CAT 7A+} depth box

code	depth	pack
EAB1WH	32 – 47mm	10



2 gang adjustable ^{CAT 7A+} depth box

code	size	pack
EAB2WH	32 – 47mm	5



1 gang accessory ^{CAT 7A+} plate

code	pack
ESSP1WH	2



2 gang accessory ^{CAT 7A+} plate

code	pack
ESSP2WH	2

EAB1 and EAB2 are fully adjustable to 47mm. Please see page 311 for more information.

Part M

For box assemblies and spacers that meet the requirements of Part M (DDA) please refer to page 104.

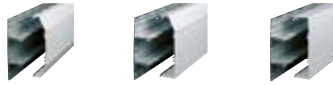


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Technical Information

Quick reference chart
XL Trunking 201 to 203

3 Compartment

XL 201 220 x 65mm	XL 202 220 x 65mm	XL 203 220 x 65mm
----------------------	----------------------	----------------------



		XL 201	XL 202	XL 203
Base unit Pack 4 x 3m		ELTB200	ELTB200	ELTB200
Main compartment cover Pack 8 x 3m		ETL1WH	ETL1WH	ETL1WH
Angled cover Pack 8 x 3m		2 x ELAC200WH	ELAC200WH	-
Square cover Pack 8 x 3m		-	ELSC200WH	2 x ELSC200WH
Couplers Pack 5		EC201WH	EC202WH	EC203WH
End caps Pack 5 left or right hand		EEC201WH	EEC202LHWH EEC202RHWH	EEC203WH
Internal bends Pack 5		EIB201WH	EIB202WH	EIB203WH
External bends Pack 5		EXB201WH	EXB202WH	EXB203WH
Flat angles Pack 1 upward or downward		EFA201WH	EFA202UWH EFA202DWH	EFA203WH
Flat tees Pack 1 † please refer to Flat Tee information		EFT201WH	†	EFT203WH

† XL 202 trunking flat tees

Where profiles have one angled cover and one square cover, as with XL 202, it is possible to create a tee by changing the top or bottom cover so that covers to match the profile of the trunking. For example:

- Upward tee – select XL 201 tee remove the angled bottom cover and replace with square cover.
- Downward tee – select XL 203 tee remove the square top cover and replace with angled cover.

XL Trunking sizes 211 to 213 comprises a range of deep, large capacity, 4-compartment, segregated containment systems with facilities for adding further full-size segregated compartments. This system can accommodate integral lighting units.



'Bio option' available to special order

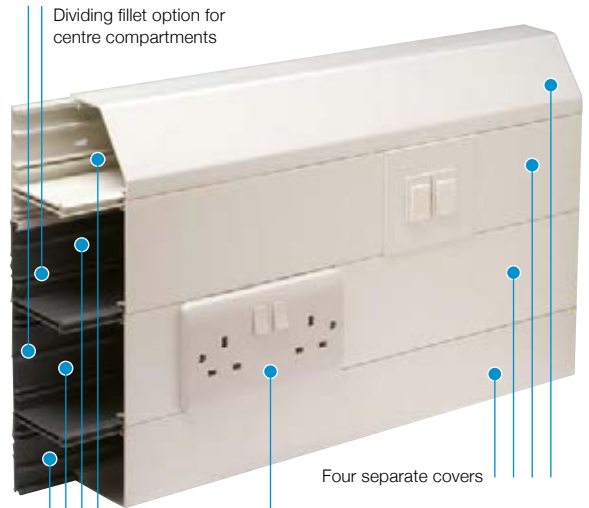
Product information

- 308 x 65mm
- 2 full and 2 half size compartments
- 4 deep segregated compartments
- Can be subdivided
- Suitable for dado and skirting application
- Can be fed from larger trunking systems for increased cable distribution
- Boxes available to comply with Part M (DDA)
- Comprehensive range of flush power and data accessories

Data information

- Compliant up to Cat 7a*
- Adjustable data box 32-47mm
- Screened data boxes
- Steel screening divider available

See page 148 for quick reference chart



Standard Colour
WH
WH: White

Part M

For box assemblies and spacers that meet the requirements of Part M (DDA) please refer to page 104.

***Data fittings**

For made to order fittings to meet Cat 7a requirements please contact our Technical Team on +44 (0)1424 856688

Trunking profiles



XL 211
size
308 x 65mm



XL 212
size
308 x 65mm



XL 213
size
308 x 65mm

Basic components



Base unit
code pack
ELTB200 4 x 3m



Extendable base
code pack
ELEB200 4 x 3m



Main compartment cover
code pack
ETL1WH 8 x 3m



Angled cover
code pack
ELAC200WH 8 x 3m



Square cover
code pack
ELSC200WH 8 x 3m

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Technical Information

XL 211 fittings



XL 211 Coupler
code _____ pack
EC211WH 5



XL 211 End cap
code _____ pack
EEC211WH 5
Universal for both LH & RH



XL 211 Internal bend
code _____ pack
EIB211WH 5



XL 211 External bend
code _____ pack
EXB211WH 5



XL 211 Flat angle – up/down
code _____ pack
EFA211WH 1



XL 211 Flat tee – up/down
code _____ pack
EFT211WH 1



XL 212 Coupler
code _____ pack
EC212WH 5



XL 212 End cap
code _____ pack
EEC212LHWH (Left hand) 5
EEC212RHWH (Right hand) 5



XL 212 Internal bend
code _____ pack
EIB212WH 5



XL 212 External bend
code _____ pack
EXB212WH 5



XL 212 Flat angle – upward
code _____ pack
EFA212UWH 1



XL 212 Flat angle – downward
code _____ pack
EFA212DWH 1

† XL 212 trunking flat tees

Where profiles have one angled cover and one square cover, as with XL 212, it is possible to create a tee by changing the top or bottom cover to match the profile of the trunking.

For example:

- Upward tee – select XL 211 tee remove the angled bottom cover and replace with square cover.
- Downward tee – select XL 213 tee remove the square top cover and replace with angled cover.

XL 213 fittings



XL 213 Coupler
code _____ pack
EC213WH 5



XL 213 End cap
code _____ pack
EEC213WH 5
Universal for both LH & RH



XL 213 Internal bend
code _____ pack
EIB213WH 5



XL 213 External bend
code _____ pack
EXB213WH 5

XL 213 fittings



**XL 213
Flat angle – up/down**

code	pack
EFA213WH	1



**XL 213
Flat tee – up/down**

code	pack
EFT213WH	1

Fittings



Dividing fillet

code	pack
ELDF200	8 x 3m



Steel screening divider

code	pack
ESF200	1 x 1.5m

Note: optional steel screening divider to assist in compliance with BS EN 50174-2



Steel screening divider bonding strap

code	pack
ESF2	5



Bonding strap

code	pack
ESBS1	5

Boxes and plates



***RCD/MCB Housing**

code	pack
EAHC1MWH	1

*Up to 4 modules can be accommodated
Note: RCDs are not supplied by Marshall-Tufflex



1 gang accessory box

code	depth	pack
ESSB1WH	30mm	20



2 gang accessory box

code	depth	pack
ESSB2WH	30mm	10



Accessory box spacer

code	size	pack
ES1WH	14mm	4

For use between accessory boxes



1 gang adjustable depth box ^{CAT 7A+}

code	depth	pack
EAB1WH	32 – 47mm	10



2 gang adjustable depth box ^{CAT 7A+}

code	depth	pack
EAB2WH	32 – 47mm	5



1 gang accessory plate ^{CAT 7A+}

code	pack
ESSP1WH	2



2 gang accessory plate ^{CAT 7A+}

code	pack
ESSP2WH	2

EAB1 and EAB2 are fully adjustable to 47mm. Please see page 311 for more information.

Part M

For box assemblies and spacers that meet the requirements of Part M (DDA) please refer to page 104.



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Technical Information

Quick reference chart
XL 211 to 213

4 Compartment

XL 211 308 x 65mm	XL 212 308 x 65mm	XL 213 308 x 65mm
----------------------	----------------------	----------------------



Larger systems

Additional 88mm compartments can be added for larger capacity installations. For further information about larger systems please call our Technical Team on +44 (0)1424 856688.

Base unit

Pack 4 x 3m



ELTB200	ELTB200	ELTB200
---------	---------	---------

Extendable base

Pack 4 x 3m



ELEB200	ELEB200	ELEB200
---------	---------	---------

Main compartment cover

Pack 8 x 3m



2 x ETL1WH	2 x ETL1WH	2 x ETL1WH
------------	------------	------------

Angled cover

Pack 8 x 3m



2 x ELAC200WH	ELAC200WH	-
---------------	-----------	---

Square cover

Pack 8 x 3m



-	ELSC200WH	2 x ELSC200WH
---	-----------	---------------

Couplers

Pack 5



EC211WH	EC212WH	EC213WH
---------	---------	---------

End caps

Pack 5

left or right hand



EEC211WH	EEC211LHWH EEC211RHWH	EEC213WH
----------	--------------------------	----------

Internal bends

Pack 5



EIB211WH	EIB212WH	EIB213WH
----------	----------	----------

External bends

Pack 5



EXB211WH	EXB212WH	EXB213WH
----------	----------	----------

Flat angles

Pack 1

upward or downward



EFA211WH	EFA212UWH EFA212DWH	EFA213WH
----------	------------------------	----------

Flat tees

Pack 1

† Please refer to Flat Angle and Flat Tee information



EFT211WH	†	EFT213WH
----------	---	----------

† XL 212 trunking flat tees

Where profiles have one angled cover and one square cover, as with XL 212, it is possible to create a tee by changing the top or bottom cover to match the profile of the trunking.

For example:

- Upward tee – select XL 211 tee remove the angled bottom cover and replace with square cover.
- Downward tee – select XL 213 tee remove the square top cover and replace with angled cover.

Twin165 trunking is a mid-size, two-compartment system, designed as a compact variation of Twin Plus. Twin165 offers high capacity for up to Cat 7a data cabling for specification in commercial, industrial and educational environments.

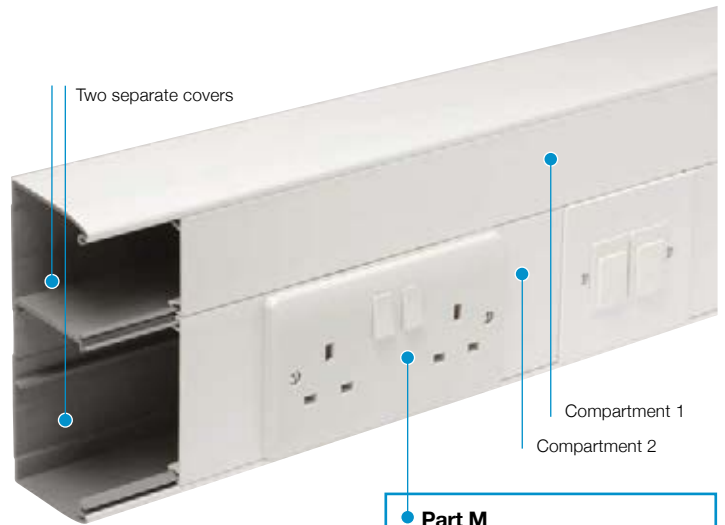


Product information

- 160 x 65mm
- 2 compartment trunking with 60/40 split
- Separate cover access to each compartment
- Suitable for dado application
- Adjustable bends allow between 85° and 95° to accommodate building tolerances

Data information

- Compliant up to Cat 7a
- Standard bend radius 25mm
- Data fittings available for bend radius up to 50mm
- Adjustable data box 32-47mm
- Steel screening divider



Standard Colour
WH
WH: White

Part M

For box assemblies and spacers that meet the requirements of Part M (DDA) please refer to page 104.

Basic components

Base unit	Cover small (Comp 1)	Cover large (Comp 2)
code pack	code pack	code pack
AY1120WH 4 x 3m	AY1130WH 8 x 3m	ETL1WH 8 x 3m

Twin165 fittings

Compartment 1 is the smaller compartment.
Compartment 2 is the larger compartment.

When ordering end caps, flat angles and tees, please take care to ascertain which compartment is to be installed uppermost to ensure you receive the correct fittings.

Fittings

Coupler	End cap LH (Comp 1 top)	End cap RH (Comp 1 top)	End cap LH (Comp 2 top)	Internal bend adjustable
code pack	code pack	code pack	code pack	code pack
AY1210WH 1	AY1220WH 1	AY1230WH 1	AY1240WH 1	AY1240WH 1

External bend adjustable

code pack

AY1250WH 1

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Technical Information

PVC-U PERIMETER TRUNKING SYSTEMS

Fittings



Flat angle up (comp 1 top)
Flat angle down (comp 2 top)

code	pack
AY1310WH	1



Flat angle down (comp 1 top)
Flat angle up (comp 2 top)

code	pack
AY1320WH	1



Flat tee up (comp 1 top)
Flat tee down (comp 2 top)

code	pack
AY1330WH	1



Flat tee down (comp 1 top)
Flat tee up (comp 2 top)

code	pack
AY1350WH	1

Components



Steel screening divider

code	pack
ESF200	1 x 1.5m

Note: optional steel screening divider to assist in compliance with BS EN 50174-2



Steel screening divider bonding strap

code	pack
ESF2	5



Bonding strap

code	pack
ESBS1	5

Boxes and plates



***RCD/MCB Housing**

code	pack
EAHC1MWH	1

*Up to 4 modules can be accommodated
Note: RCDs are not supplied by Marshall-Tufflex



1 gang accessory box

code	depth	pack
ESSB1WH	30mm	20



2 gang accessory box

code	depth	pack
ESSB2WH	30mm	10



Accessory box spacer

code	size	pack
ES1WH	14mm	4

For use between accessory boxes



1 gang adjustable depth box

code	depth	pack
EAB1WH	32 – 47mm	10

EAB1 is fully adjustable to 47mm. Please see page 311 for more information.



2 gang adjustable depth box

code	depth	pack
EAB2WH	32 – 47mm	5

EAB2 is fully adjustable to 47mm. Please see page 311 for more information.



1 gang accessory plate

code	pack
ESSP1WH	2



2 gang accessory plate

code	pack
ESSP2WH	2



Segregated flush back box 280 x 150mm Steel

code	depth	pack
ESFBB1	35mm	1

Part M

For box assemblies and spacers that meet the requirements of Part M (DDA) please refer to page 104.

Twin Plus is a large, segregated, two-compartment skirting and dado trunking system that provides high capacity cable containment for most commercial environments.



'Bio option' available to special order

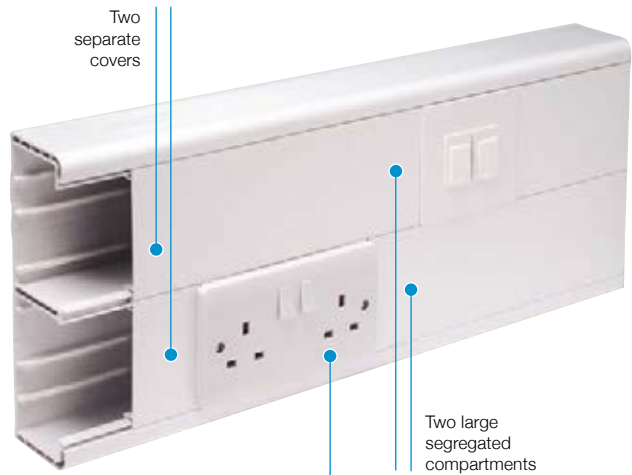
Product information

- 210 x 57mm
- 2 large segregated compartments
- Can be subdivided
- Separate cover access to each compartment
- Suitable for skirting and dado application

Data information

- Compliant up to Cat 7a
- 50mm bend radius fittings
- Adjustable data box 32-47mm
- Screened divider and data boxes

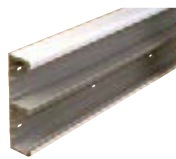
Standard Colour
WH
WH: White



Part M

For box assemblies and spacers that meet the requirements of Part M (DDA) please refer to page 104.

Basic components



Base unit

code	pack
EMT60WH	2 x 3m



Cover

code	pack
ETL1WH	8 x 3m

Fittings



Coupler

code	pack
EC60WH	1



End cap

code	pack
EEC60WH	1



Internal bend cover

code	pack
EIBC60WH	1

For additional retention use end cap retaining screws G1310 (Pack 40)



Internal bend assembly

code	pack
EIB60WH	1



External bend cover

code	pack
ESXBC60WH	1



External bend assembly - standard

code	pack
ESXB60WH	1

Capacity reduced by 50%

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Technical Information

PVC-U PERIMETER TRUNKING SYSTEMS

Fittings



External bend assembly - large ...CAT 7A*
 code pack
 EXB60WH 1



Flat angle assembly ...CAT 7A*
 code pack
 EFA60WH 1

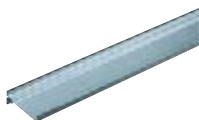


Flat tee assembly ...CAT 7A*
 code pack
 EFT60WH 1

Note: 135° versions are also available. For more information call the Technical Team on +44 (0)1424 856688



Components



Dividing fillet - PVC-U
 code pack
 LDF1 8 x 3m



Steel screening divider
 code pack
 ESF60 1 x 1.5m



Steel screening divider bonding strap
 code pack
 ESF2 5



Bonding strap
 code pack
 ESBS1 5

Note: optional steel screening divider to assist in compliance with BS EN 50174-2

Boxes and plates



***RCD/MCD housing**
 code pack
 EAHC1MWH 1

*Up to 4 modules can be accommodated
Note: RCDs are not supplied by Marshall-Tufflex



1 gang accessory box
 code depth pack
 ESSB1WH 30mm 20



2 gang accessory box
 code depth pack
 ESSB2WH 30mm 10



Accessory box spacer
 code size pack
 ES1WH 14mm 4

For use between accessory boxes



1 gang adjustable depth box ...CAT 7A*
 code depth pack
 EAB1WH 32 - 47mm 10



2 gang adjustable depth box ...CAT 7A*
 code depth pack
 EAB2WH 32 - 47mm 5



1 gang accessory plate ...CAT 7A*
 code pack
 ESSP1WH 2




2 gang accessory plate ...CAT 7A*
 code pack
 ESSP2WH 2

EAB1 and EAB2 are fully adjustable to 47mm. Please see page 311 for more information.

Part M

For assemblies and spacers that meet the requirements of Part M (DDA) please refer to page 104 of this section.

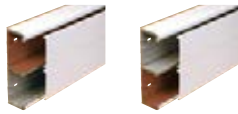


Twin Plus screened component chart

2 compartment

Twin Plus screening in compartment 1
210 x 57mm

Twin Plus screening in compartment 2
210 x 57mm



Base unit

Cover - screened	
pack	1 x 3m
Cover - unscreened	
pack	8 x 3m

EMT60CS1WH	EMT60CS1WH
ETL1CSWH	ETL1CSWH
ETL1WH	ETL1WH

Note:
Twin Plus can be installed with either compartment to the top.

Screening

Conductive spray (CS) is unique to Marshall-Tufflex and is applied in the factory to assist in screening from electromagnetic interference to data and communications cabling within trunking systems. The coating is applied to a range of data boxes, covers, clip-on components and fabricated fittings.



WARNING: A CS coating is not suitable for low voltage circuits. BS 7671:2008. For data/voice use only.

1 gang screened accessory box ...CAT 7A...

code	depth	pack
ESSB1SWH*	30mm	20

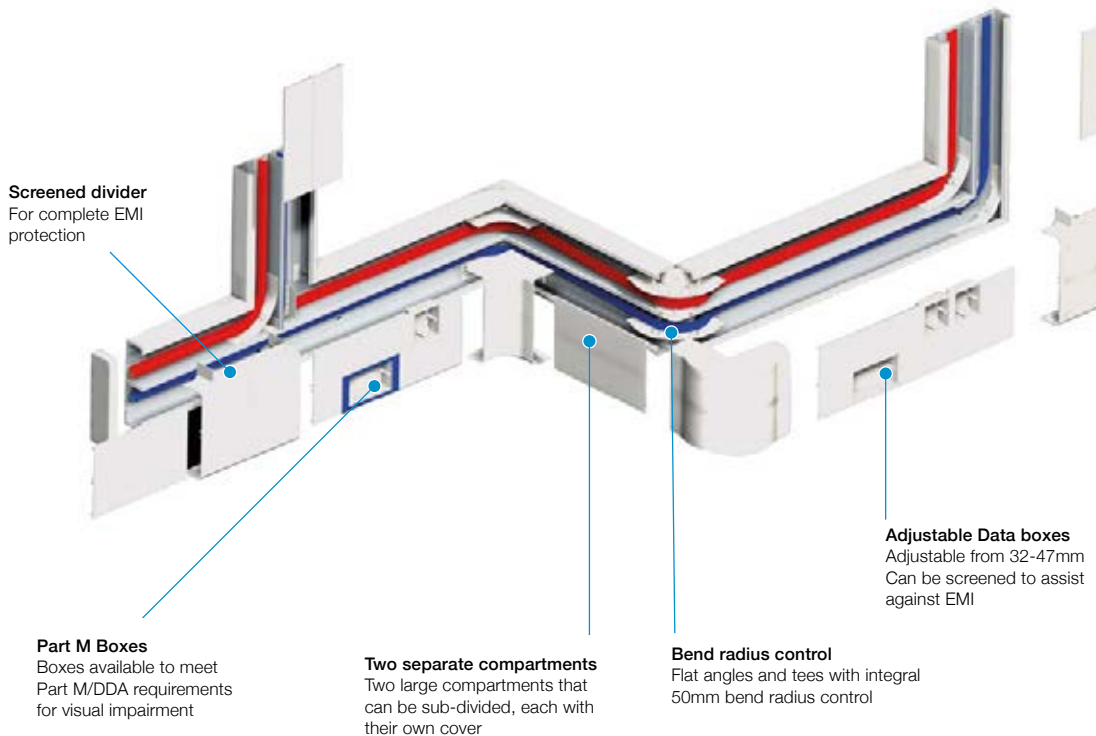
2 gang screened adjustable accessory box ...CAT 7A...

code	depth	pack
ESSB2SWH*	30mm	10

*Supplied complete with earth terminal

Twin Plus

Twin Plus is a high cable capacity trunking system with a variety of practical features for power and data installations



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Technical Information

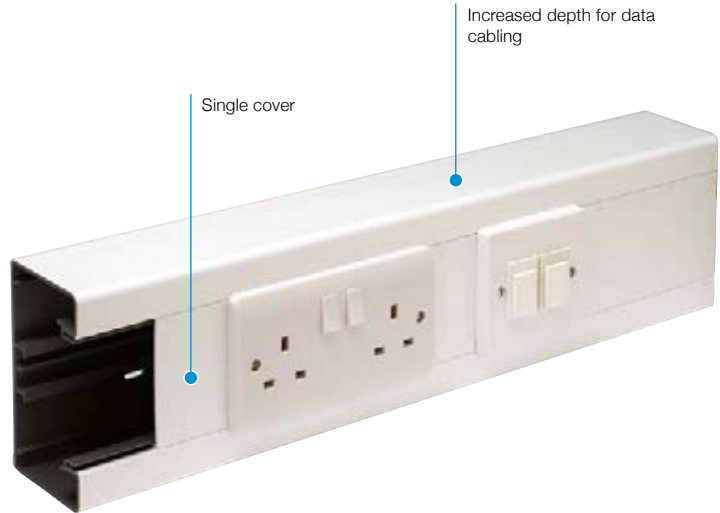
Series R 130 is an extra deep compact trunking that is economical for installation in the smaller office or workshop.



Product information

- 130 x 65mm
- Compliant up to Cat 7a
- 1 main compartment
- Can be subdivided into 2 or 3 compartments
- Single cover
- Suitable for dado application and as a feeder trunking
- Extra deep 40mm deep boxes
- Data compliant 25mm and 50mm bend radius

Standard Colour
WH
WH: White



Trunking assembly (base and cover)

code	pack
RTBD130WH	2 x 3m

Basic components

Fittings



Coupler

code	pack
RCP130WH	5



End cap

code	pack
RECPD130WH	12



Internal bend

code	pack
RIB130WH	1



External bend

code	pack
REB130WH	1



Flat angle Fabricated - up/down

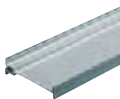
code	pack
RFAD130WH	1



Flat tee Fabricated - up/down

code	pack
RFTD130WH	1

Components



Dividing fillet For centre compartment

code	pack
ELDF200	8 x 3m



Segregator For top and bottom compartments

code	pack
RDF1	10 x 3m

Boxes



1 gang accessory box

code	depth	pack
RSSB10WH	40mm	12



2 gang accessory box

code	depth	pack
RSSB20WH	40mm	6



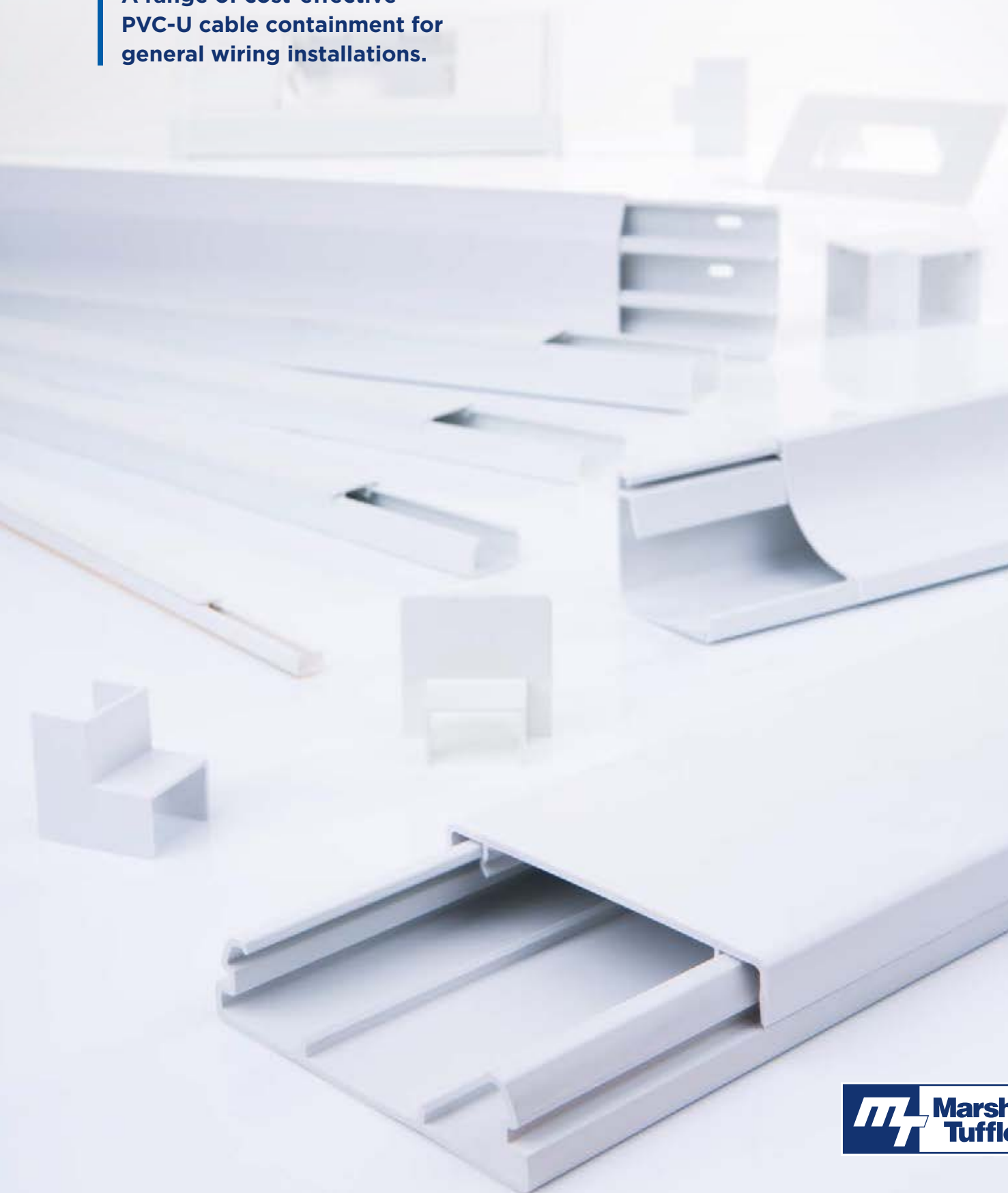
1 gang schuko accessory box

code	depth	pack
RSSBU10WH	40mm	12



PVC-U TRUNKING

A range of cost-effective
PVC-U cable containment for
general wiring installations.



PVC-U TRUNKING

PVC-U TRUNKING

Polyvinyl chloride unplasticised (PVC-U) is one of the most successful modern synthetic materials. It makes excellent use of scarce resources, is long-lasting and safe in production, use and is widely recycled.

PVC-U cable containment is easy to install, light to handle and very cost-effective. It is an excellent choice of material for the majority of commercial, education and healthcare environments and has been more thoroughly researched than almost any other synthetic material. PVC-U is also self extinguishing and therefore does not cause flame spread.

We have a wide range of PVC-U trunking solutions in different heights, designs, cable capacities for the distribution of power and data. Whatever the installation requirements, there will always be a perfect solution with Marshall-Tufflex.

Standard colour

The standard colour for each Marshall-Tufflex range is shown within each relevant product information section, although solid white RAL 9003 is our most popular colour option for PVC-U.

The below table identifies the relevant RAL colour reference for all our standard colour options, dependent on product range. However we would be happy to quote for any other colour requirements, please see the Special Colours section.

Standard Colours		
WH	RD	BN
WH: White RD: Red BN: Brown		

Material	Standard colour	Colour code suffix	RAL
PVC-U	Solid White	WH	9003
	Red	RD	3020
	Brown	BN	8017

Please note: it is dependent on the product range as to which colour is available as standard.

Special colours

To help enhance the style of an installation, different variations of solid colour are sometimes required.

We can provide special colours in either a solid PVC-U solution or a painted solution dependent on your client's preference. All special colour requirements will need to be specified as a RAL colour.

Please note: due to different processes and materials utilised, it may not always be possible to obtain an exact colour match between the extruded and moulded product.

Please note: these colours are made to order and therefore are subject to set up charges and a longer lead time. For more information and a quotation contact our Technical Team on +44 (0)1424 856688.



Bio antimicrobial trunking



Where hygiene is a priority, Marshall-Tufflex has a solution with integral antimicrobial properties that can be incorporated within the PVC-U perimeter trunking and deliver ongoing antimicrobial protection that prevents 99.9% of harmful bacteria.

Because the Marshall-Tufflex Bio trunking solution is integral to the PVC-U material, there is no reduction in effectiveness of the trunking throughout its life – even if it is scratched or damaged.

Bench Trunking is available in Bio but not available as standard and is made to order and therefore subject to set up charges and a longer lead time. For more information and a quotation contact our Technical Team on +44 (0)1424 856688.

Mini trunking

10 x 8mm to 38 x 38mm

Range of small size containment for general wiring. Standard and self-fix options are available with 1 or 2 compartments. Punched profiles for single compartment and self-fixing trunking now available.

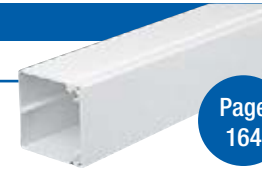


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Maxi trunking

50 x 50mm to 150 x 150mm

A mid-size containment that can be subdivided for general wiring. Larger sizes can accommodate wiring accessories.



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Sceptre trunking

100 x 25mm and 100 x 40mm

Smallest trunking system that can still accept a full range of standard wiring accessories. Suitable for unobtrusive, multiple outlet, surface installations.

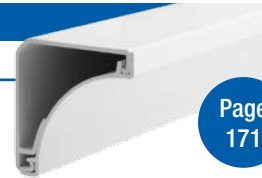


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Cornice trunking

50 x 50mm

A cornice containment system for distributing services around ceiling perimeters. This system can be used with Mini Trunking to supply switch drops and pendant lighting.

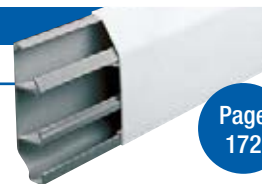


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Sovereign Plus

75 x 20mm

Skirting trunking with one piece cover.



Page 172

Bench trunking

105 x 105mm

Robust angular containment for distributing services on the desktop or workbench. Can accept standard wiring accessories.



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Note: you may use the rule on the left of this page to check profile sizes.



Environmental

- No increase in dioxin emission from Municipal Waste Incineration.
- No phthalates used in manufacture of PVC-U.
- Lead-free formulations are used for mouldings and extrusions.
- No use of cadmium-based stabilisers or pigments.
- Lowest oil content of a commodity plastic.



Recycling and sustainability

- PVC-U is a cost-effective, sustainable choice and comparable with other materials such as steel, aluminium, copper and wood.
- 100% recyclable material.
- Long life cycle.
- No painting or powder coating required.



EMI protection

- Some PVC-U systems are available with a coating that provides effective screening against electromagnetic interference with no reduction in cable capacity.



Fire performance

- The fire rating for PVC-U is excellent* and PVC-U has all the characteristics required for Fire Escape Time.
- Highly resistant to ignition.
- Does little to contribute to the spread of fire and is classified to Building Regs: Class 0.
- Has a low rate of smoke production during the early stages of a fire.
- Acts as an effective barrier to flame spread from malfunctioning electrical components within systems.
- Chars and is self-extinguishing.
- Does not produce flaming droplets or burning debris.

*see the independent report at www.beama.org.uk

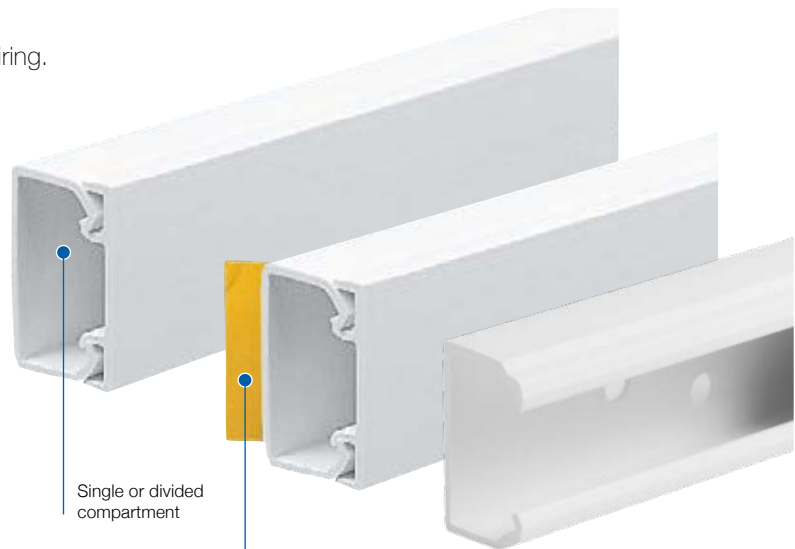
Mini trunking is an economical feeder trunking system with easy accessibility for wiring and re-wiring.

Product information

- A variety of sizes from 10 x 8mm to 38 x 38mm
- Single or divided compartment options
- Self-fixing systems and punched systems available
- Punched holes compatible with Firefly fire safety clips*

Data information

- 50mm bend radius fittings available for MMT4



Single or divided compartment

With or without self-fixing tape

See page 160 for quick reference chart

Standard Colours		
WH	RD	BN
WH: White RD: Red BN: Brown		

Colour options: Red and Brown solid colour options are available as standard items for selected products. Please indicate when ordering by replacing the WH colour code suffix with either RD for red or BN for brown.

Standard profiles



MMT0		
code	size	pack
MMT0WH	16 x 10mm	40 x 3m



MMT1		
code	size	pack
MMT1WH	16 x 16mm	30 x 3m



MMT2		
code	size	pack
MMT2WH	25 x 16mm	30 x 3m

Red and brown available as standard colours



MMT3		
code	size	pack
MMT3WH	38 x 16mm	15 x 3m



MMT3C - 2 compartment		
code	size	pack
MMT3CWH	38 x 16mm	15 x 3m



MMT4		
code	size	pack
MMT4WH	38 x 25mm	15 x 3m

Brown available as standard colour



MMT4C - 2 compartment		
code	size	pack
MMT4CWH	38 x 25mm	15 x 3m



MMT5		
code	size	pack
MMT5WH	50 x 25mm	12 x 3m



MMT6		
code	size	pack
MMT6WH	38 x 38mm	6 x 3m



*See page 237 for Firefly fire clips for Mini trunking

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Technical Information

Self fixing profiles



MMT00SF

code	size	pack
MMT00SFWH	10 x 8mm	40 x 3m

Brown available as standard colour



MMT0SF

code	size	pack
MMT0SFWH	16 x 10mm	40 x 3m



MMT1SF

code	size	pack
MMT1SFWH	16 x 16mm	30 x 3m



MMT2SF

code	size	pack
MMT2SFWH	25 x 16mm	30 x 3m

Red and brown available as standard colours



MMT3SF

code	size	pack
MMT3SFWH	38 x 16mm	15 x 3m



MMT4SF

code	size	pack
MMT4SFWH	38 x 25mm	15 x 3m

Brown is available as a standard colour

Punched profiles



**Punched profiles
MMTH2**

code	size	pack
MMTH2WH	25 x 16mm	30 x 3m

Red is available as a standard colour



**Punched profiles
MMTH2SF self fix**

code	size	pack
MMTH2SFWH	25x16mm	30x3m



**Punched profiles
MMTH4**

code	size	pack
MMTH4WH	38 x 25mm	15 x 3m



**Punched profiles
MMTH4SF self fix**

code	size	pack
MMTH4SFWH	38x25mm	15x3m

Components



Ceiling rose adaptor

code	size	pack
TCR2WH	2 K.O. for MMT1	10
	2 K.O. for MMT2	

Designed to accept all popular makes of ceiling rose. Supplied with fixing screws. Fixing centres 50,8mm. Internal depth 12mm. External diameter 81mm



**Surface box adaptors
MMT0/1/2/3**

code	size	pack
TA0WH	MMT0	50
TA1WH	MMT1	50
TA2WH	MMT2	50
TA3WH	MMT3	20

TA0 fits MMT1-KO



**Tapered adaptors
MMT1 & 2 to fit TA3
aperture**

code	size	pack
TA3/1LHWH	MMT1	20
TA3/1RHWH	MMT1	20
TA3/1CWH	MMT1	20
TA3/2LHWH	MMT2	20
TA3/2RHWH	MMT2	20
TA3/2CWH	MMT2	20



Conduit to mini adaptor

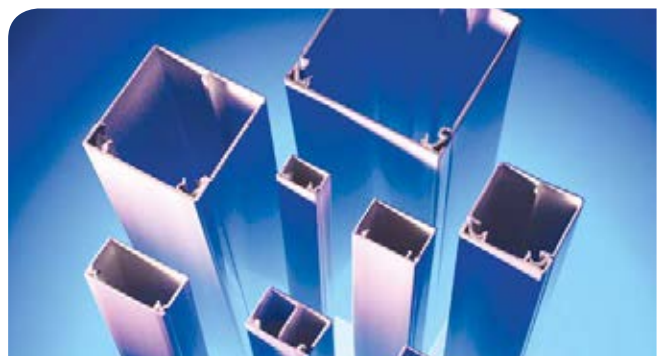
code	size	pack
TAC1/2WH	MMT1/20mm round	20

Accessories



PVC pipe cutter

code	pack
MTPC42	1



Please note

There are no fittings for MMT00SF, MMT0WH, and MMT0SFWH.

Couplers **End caps**

External coupler End cap

MMT1WH, MMT1SFWH
16 x 16mm



TC1WH
Pack 40

TEC1WH
Pack 100

MMT2WH, MMT2SFWH, MMTH2WH, MMTH2SFWH
25 x 16mm



TC2WH*
Pack 40

TEC2WH*
Pack 100

MMT3WH, MMT3SFWH
38 x 16mm



TC3WH
Pack 25

TEC3WH
Pack 50

MMT3CWH
38 x 16mm



TC3WH
Pack 25

TEC3WH
Pack 50

MMT4WH, MMT4SFWH, MMTH4WH, MMTH4SFWH
38 x 25mm



TC4WH**
Pack 25

TEC4WH**
Pack 30

MMT4CWH
38 x 25mm



TC4WH
Pack 25

TEC4WH
Pack 30

MMT5WH
50 x 25mm



TC5WH
Pack 20

TEC5WH
Pack 20

MMT6WH
38 x 38mm



TC6WH
Pack 10

TEC6WH
Pack 20

Internal bends

Square internal bend Radius internal bend cover Square external bend Radius external bend assembly Radius external bend cover



MMT1WH, MMT1SFWH
16 x 16mm



TIB1WH
Pack 50

TEB1WH
Pack 50

MMT2WH, MMT2SFWH, MMTH2WH, MMTH2SFWH
25 x 16mm



TIB2WH*
Pack 30

TEB2WH*
Pack 30

MMT3WH, MMT3SFWH
38 x 16mm



TIB3WH
Pack 25

TEB3WH
Pack 25

MMT3CWH
38 x 16mm



TIB3WH
Pack 25

TEB3WH
Pack 25

MMT4WH, MMT4SFWH, MMTH4WH, MMTH4SFWH
38 x 25mm



TIB4WH**

TIDB4CWH
Pack 1

TEB4WH**
Pack 25

TEDB4WH
Pack 1

TEDB4CWH
Pack 1

MMT4CWH
38 x 25mm



TIB4WH
Pack 25

TEB4WH
Pack 25

MMT5WH
50 x 25mm



TIB5WH
Pack 20








TEB5WH
Pack 20

MMT6WH
38 x 38mm



TIB6WH
Pack 10

TEB6WH
Pack 10

Tees						
Square equal tee	Radius equal tee assembly	Radius equal tee cover	Square unequal tee	Ceiling tee	Offset ceiling tee	Angle tee
						
TT1-1WH Pack 20	-	-	-	TCT1/1WH Pack 10	-	-
TT2-2WH* Pack 30	-	-	TT2-1WH Pack 30	TCT2/1WH TCT2/2WH Pack 10	TOCT2/1WH TOCT2/2WH Pack 10	TAT2LHWH TAT2RHWH Pack 10
TT3-3WH Pack 25	-	-	TT3-1WH TT3-2WH Pack 20	-	-	-
TT3-3WH Pack 25	-	-	TT3-1WH TT3-2WH Pack 20	-	-	-
TT4-4WH** Pack 20	TDT4-4WH Pack 1	TDT4-4CWH Pack 1	TT4-1WH TT4-2WH TT4-3WH Pack 20	TCT4/2WH Pack 10	-	-
TT4-4WH Pack 20	-	-	TT4-1WH TT4-2WH TT4-3WH Pack 20	TCT4/2WH Pack 10	-	-
TT5-5WH Pack 20	-	-	-	-	-	-
TT6-6WH Pack 10	-	-	-	-	-	-

Flat angles		
Square angle	Radius flat angle assembly	Square flat angle cover
		
TFB1WH Pack 60	-	-
TFB2WH* Pack 30	-	-
TFB3WH Pack 25	-	-
TFB3WH Pack 25	-	-
TFB4WH** Pack 20	TFDB4WH Pack 1	TFDB4CWH Pack 1
TFB4WH Pack 20	-	-
TFB5WH Pack 20	-	-
TFB6WH Pack 10	-	-


* Red and brown available as standard colours

** Brown available as standard colour


Please note

There are no fittings for MMT00SF, MMT0WH, and MMT0SFWH.


1 gang accessory boxes - Square

Depth	Mini trunking sizes	Knockout entries	Code	Pack	
19mm	MMT1/2	LH, RH, Centre	MSSB28WH	20	
19mm	MMT3	LH, RH, Centre	MSSB110WH	20	
32mm	MMT1/2	LH, RH, Centre	MSSB35WH	20	
32mm	MMT3	LH, RH, Centre	MSSB116WH	20	
44mm	MMT2/3	Centre entry for both MMT2 and MMT3. RH and LH side entry for MMT2.	MSSB18WH	10	
44mm	MMT3	LH, RH, Centre	MSSB120WH	10	



1 gang accessory boxes - Radius

Depth	Mini trunking sizes	Knockout entries	Code	Pack	
19mm	MMT1/2	LH, RH, Centre	MSSB27WH	20	
19mm	MMT3	LH, RH, Centre	MSSB112WH	20	
32mm	MMT1/2	LH, RH, Centre	MSSB20WH	20	
32mm	MMT3	LH, RH, Centre	MSSB118WH	20	
44mm	MMT2/3	For MMT2 = 1 top entry centre For MMT3 = 1 bottom entry centre	MSSB42WH	10	
44mm	MMT3	LH, RH, Centre	MSSB122WH	10	

1 gang shrouded entry boxes – Square

Depth	Mini trunking sizes	Knockout entries	Code	Pack	
32mm	MMT2	With integral moulded MMT2 adaptor	MSSB15WH	20	


Cover plates – Square and radius

Depth	Mini trunking sizes	Description	Code	Pack	
2mm	N/A	Flat	MSCP2WH	20	
9mm	N/A	Raised	MSSP10WH	10	


Earth terminal

Size	Mini trunking sizes	Description	Code	Pack	
-	-	Brass earthing terminal – 15Amp rating	MET1	100	


2 gang boxes – Square

Depth	Mini trunking sizes	Knockout entries	Code	Pack	
32mm	MMT2	LH, RH, Centre	MSSB36WH	10	
32mm	MMT3	LH, RH, Centre	MSSB216WH	10	
44mm	MMT2	LH, RH, Centre	MSSB24WH	5	
44mm	MMT3	LH, RH, Centre	MSSB220WH	5	


2 gang boxes – Radius

Depth	Mini trunking sizes	Knockout entries	Code	Pack	
32mm	MMT2	LH, RH, Centre	MSSB22WH	10	
32mm	MMT3	LH, RH, Centre	MSSB218WH	10	
44mm	MMT2/3	Centre entry	MSSB43WH	5	
44mm	MMT3	LH, RH, Centre	MSSB222WH	5	


2 x 1 gang box – Radius

Depth	Mini trunking sizes	Knockout entries	Code	Pack	
32mm	MMT2	2 x 1 gang MMT2 centre and side entry	MSSB82WH	10	


2 gang shrouded entry boxes – Square and radius

Depth	Mini trunking sizes	Knockout entries	Code	Pack	
35mm	MMT2/3	Side entries permit horizontal and vertical accessory mounting Shrouded 2-part entry boxes for use with MMT2 and 3 (25 x 16mm and 38 x 16mm)	MSSB200WH	10	

Cover plates – Square and radius

Depth	Mini trunking sizes	Description	Code	Pack	
2mm	N/A	Flat	MSCP3WH	10	
9mm	N/A	Raised	MSSP20WH	2	

Earth terminal

Depth	Mini trunking sizes	Description	Code	Pack	
–	–	Brass earthing terminal – 15Amp rating	MET1	100	

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**Technical
Information**

A mid-size feeder and distribution trunking that can be subdivided to carry power and data. Larger sizes can also accommodate wiring accessories.

Product information

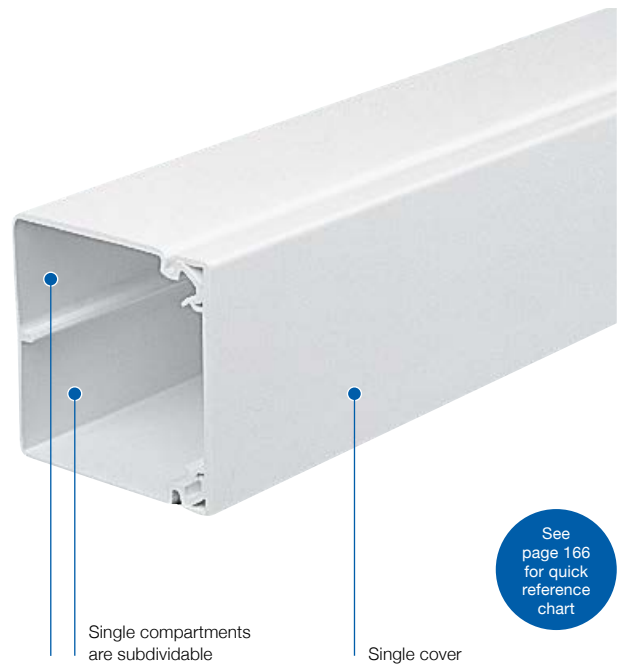
- A variety of sizes from 50 x 50mm to 150 x 150mm
- Single or divided compartment options

Data information

- Fabricated data slow bends

Standard Colour
WH
WH: White

Colour options: Optional colours and finishes are available but these may be subject to minimum quantity orders and longer lead times. For more information contact the Technical Team on +44 (0)1424 856688.



Trunking profiles



MTRS50		
code	size	pack
MTRS50WH	50 x 50mm	8 x 3m



MTRS75/50		
code	size	pack
MTRS75/50WH	75 x 50mm	4x3m



MTRS75		
code	size	pack
MTRS75WH	75 x 75mm	4 x 3m



MTRS100/50		
code	size	pack
MTRS100/50WH	100x50mm	4x3m



MTRS100		
code	size	pack
MTRS100WH	100 x 100mm	4x3m



MTRS150		
code	size	pack
MTRS150WH	150 x 150mm	2x3m



Fittings



Mini trunking adaptor		
code	size	pack
TTA2WH	MMT2	10
TTA4WH	MMT4	10

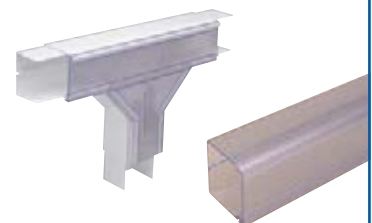
Note: only for 50mm trunking depth



Flanged coupler		
code	size	pack
TTRS1WH	MTRS100 TO MTRS100/50	1
TTRS2WH	MTRS100 TO MTRS75	1
TTRS3WH	MTRS100 TO MTRS75/50	1
TTRS4WH	MTRS100 TO MTRS50	1
TTRS5WH	MTRS100/50 TO MTRS75/50	1
TTRS6WH	MTRS100/50 TO MTRS50	1
TTRS7WH	MTRS75 TO MTRS75/50	1
TTRS8WH	MTRS75 TO MTRS50	1
TTRS9WH	MTRS75/50 TO MTRS50	1
TTRS10WH	MTRS150 TO MTRS100	1
TTRS11WH	MTRS150 TO MTRS75	1

Clear maxi trunking (MTRS50, MTRS100, MTRS100/50 and fabricated fittings only)

Is available and particularly useful for high security installations. For further information please contact our technical team on +44 (0)1424 856688. This range is subject to a set up charge.



Fittings



Spacer – 25mm

code	pack
MTRS100LID25WH	20

For use between accessory boxes



Clip on fittings

For individual components and part numbers please refer to fittings chart on next page.



Fabricated fittings

For individual components and part numbers please refer to fittings chart on next page.



Slow bend fittings for data

For individual components and part numbers please refer to fitting chart on next page.

Components



Dividing fillet

code	system	pack
MDFS50	50 x 50mm	10 x 3m
	75 x 50mm	
	100 x 50mm	
MDFS75	75 x 75mm	10 x 3m
MDFS100	100 x 100mm	10 x 3m
MDFS150	150 x 150mm	10 x 3m

Boxes and Plates



***RCD/MCB housing**

code	pack
TAHC1WH	1

*Up to 4 modules can be accommodated

Note: RCDs and MCBs are not supplied by Marshall-Tufflex



1 gang accessory box

code	pack
TSS03WH	20

For MTRS100/50 and MTRS100.
Internal depth 30mm



2 gang accessory box

code	pack
TSS04WH	10

For MTRS100/50 and MTRS100.
Internal depth 30mm



1 gang accessory plate CAT 7A*

code	pack
MTSPS1WH	15

For MTRS100/50 and MTRS100



2 gang accessory plate CAT 7A*

code	pack
MTSPS2WH	15

For MTRS100/50 and MTRS100



Fittings

Dividing fillet	Cable retainer	External coupler	Internal coupler	Flanged coupler	End cap
-----------------	----------------	------------------	------------------	-----------------	---------



MTRS50WH

50 x 50mm



MDFS50 Pack 10 x 3m	TCRS50 Pack 10	TCCS50WH Pack 10	TICS50WH Pack 10	TFCS50WH Pack 1	TECS50WH Pack 10
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MTRS75/50WH

75 x 50mm



MDFS50 Pack 10 x 3m	TCRS75 Pack 10	TCCS75/50WH Pack 10	TICS75/50WH Pack 10	TFCS75/50WH Pack 1	TECS75/50WH Pack 10
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MTRS75WH

75 x 75mm



MDFS75 Pack 10 x 3m	TCRS75 Pack 10	TCCS75WH Pack 10	TICS75WH Pack 5	TFCS75WH Pack 1	TECS75WH Pack 5
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MTRS100/50WH

100 x 50mm



MDFS50 Pack 10 x 3m	TCRS100 Pack 10	TCCS100/50WH Pack 10	TICS100/50WH Pack 5	TFCS100/50WH Pack 1	TECS100/50WH Pack 5
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MTRS100WH

100 x 100mm



MDFS100 Pack 10 x 3m	TCRS100 Pack 10	TCCS100WH Pack 2	TICS100WH Pack 5	TFCS100WH Pack 1	TECS100WH Pack 5
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MTRS150WH

150 x 150mm



MDFS150 Pack 10 x 3m	TCRS150 Pack 5	-	TICS150WH Pack 5	-	TECS150WH Pack 1
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Flat angles

90° flat angle (clip-on)	90° flat angle (moulded)	90° flat angle (fabricated)	90° data flat angle (fabricated)	135° flat angle (fabricated)
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MTRS50WH

50 x 50mm



TFAS50CWH Pack 1	TFAS50MWH Pack 1	TFAS50FWH Pack 1	TFAS50SBWH Pack 1	TFAS50ABWH Pack 1
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MTRS75/50WH

75 x 50mm



-	TFAS75/50MWH Pack 1	TFAS75/50FWH Pack 1	-	-
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MTRS75WH

75 x 75mm



-	TFAS75MWH Pack 1	TFAS75FWH Pack 1	TFAS75SBWH Pack 1	TFAS75ABWH Pack 1
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MTRS100/50WH

100 x 50mm



TFAS100/50CWH Pack 1	-	TFAS100/50FWH Pack 1	-	TFAS100/50ABWH Pack 1
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MTRS100WH

100 x 100mm



-	-	TFAS100FWH Pack 1	TFAS100SBWH Pack 1	TFAS100ABWH Pack 1
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MTRS150WH

150 x 150mm



-	-	TFAS150FWH Pack 1	-	-
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Internal bends					External bends				
Internal 90° bend (clip-on)	Internal 90° bend (moulded)	Internal 90° bend (fabricated)	Internal 90° Data bend (fabricated)	Internal 135° Data bend (fabricated)	External 90° bend (clip-on)	External 90° bend (moulded)	External 90° bend (fabricated)	External 90° Data bend (fabricated)	External 135° bend (fabricated)
TIAS50CWH Pack 1	TIAS50MWH Pack 1	TIAS50FWH Pack 1	TIAS50SBWH Pack 1	TIAS50ABWH Pack 1	TOAS50CWH Pack 1	TOAS50MWH Pack 1	TOAS50FWH Pack 1	TOAS50SBWH Pack 1	TOAS50ABWH Pack 1
-	-	TIAS75/50WH Pack 1	-	TIAS75/50ABWH Pack 1	-	-	TOAS75/50WH Pack 1	-	TOAS75/50ABWH Pack 1
-	-	TIAS75WH Pack 1	TIAS75SBWH Pack 1	TIAS75ABWH Pack 1	-	-	TOAS75WH Pack 1	TOAS75SBWH Pack 1	TOAS75ABWH Pack 1
TIAS100/50CWH Pack 1	-	TIAS100/50WH Pack 1	-	TIAS100/50ABWH Pack 1	TOAS100/50CWH Pack 1	-	TOAS100/50WH Pack 1	-	TOAS100/50ABWH Pack 1
-	-	TIAS100WH Pack 1	TIAS100SBWH Pack 1	TIAS100ABWH Pack 1	-	-	TOAS100WH Pack 1	TOAS100SBWH Pack 1	TOAS100ABWH Pack 1
-	-	TIAS150WH Pack 1	-	-	-	-	TOAS150WH Pack 1	-	-

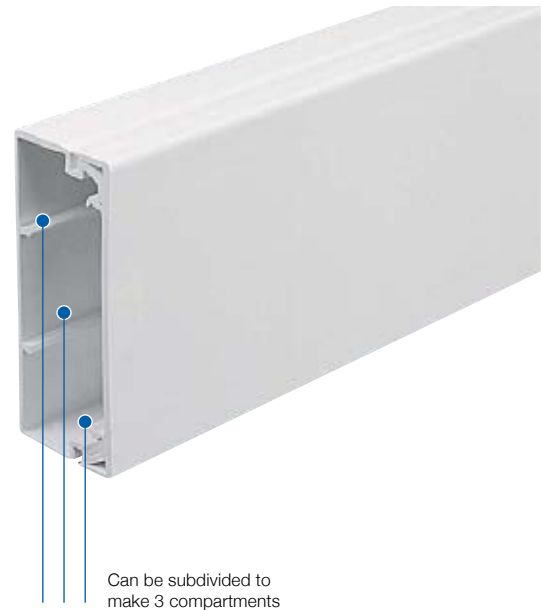
Tees					Crossovers	
Flat tee (moulded)	Flat tee (fabricated)	Data flat tee (gusseted)	External edge tee (fabricated)	Internal edge tee (fabricated)	Flat crossover (fabricated)	Data flat crossover (gusseted)
-	TFTS50WH Pack 1	TFTS50GTWH Pack 1	TTES50WH Pack 1	TTIS50WH Pack 1	-	-
TFTS75/50MWH Pack 1	TFTS75/50WH Pack 1	-	TTES75/50WH Pack 1	TTIS75/50WH Pack 1	-	-
-	TFTS75WH Pack 1	TFTS75GTWH Pack 1	TTES75WH Pack 1	TTIS75WH Pack 1	TCUS75WH Pack 1	-
-	TFTS100/50WH Pack 1	-	TTES100/50WH Pack 1	TTIS100/50WH Pack 1	TCUS100/50WH Pack 1	-
-	TFTS100WH Pack 1	TFTS100GTWH Pack 1	TTES100WH Pack 1	TTIS100WH Pack 1	TCUS100WH Pack 1	TCUS100GTWH Pack 1
-	TFTS150WH Pack 1	-	TTES150WH Pack 1	TTIS150WH Pack 1	-	-

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Technical Information

Sceptre trunking is the smallest trunking system that can still accept a full range of standard wiring accessories. It is suitable for unobtrusive, multiple outlet, surface installations.

Product information

- 100 x 25mm
- 100 x 40mm
- Can be subdivided
- Segregated accessory boxes



Standard Colour
WH
WH: White

Colour options: Optional colours and finishes are available but these may be subject to minimum quantity orders and longer lead times. For more information contact the Technical Team on +44 (0)1424 856688.

Trunking profiles



Sceptre DTR2

code	size	pack
DTR2WH	100 x 25mm	4 x 3m



Sceptre DTR1

code	size	pack
DTR1WH	100 x 40mm	4 x 3m

Fittings



Coupler

code	size	pack
DCJ2WH	100 x 25mm	5
DCJ1WH	100 x 40mm	5



End cap

code	size	pack
DEC2WH	100 x 25mm	5
DEC1WH	100 x 40mm	5



Internal corner

code	size	pack
DIB2MWH	100 x 25mm	5
DIB1WH	100 x 40mm	5



External corner

code	size	pack
DEB2MWH	100 x 25mm	5
DEB1WH	100 x 40mm	5



Flat angle

code	size	pack
DFB2MWH	100 x 25mm	5
DFB1WH	100 x 40mm	5



Flat tee (fabricated)

code	size	pack
DFT2WH	100 x 25mm	1
DFT1WH	100 x 40mm	1



Components



Dividing fillets

code	size	pack
DDF2	25mm	10 x 3m
DDF1	40mm	10 x 3m



Cable retainer

code	size	pack
TCRS100	100mm	10

Boxes and Plates



1 gang accessory box

code	pack
TSS01WH	10



2 gang accessory box

code	pack
TSS02WH	5



1 gang accessory plate CAT 7A+

code	pack
MTSPS1WH	15

Note: For use with both DTR1 and DTR2



2 gang accessory plate CAT 7A+

code	pack
MTSPS2WH	15

Note: For use with both DTR1 and DTR2

Assembly

The segregated accessory box has a 2 part assembly and an internal depth of 25mm. It is for use with DTR1 (100 x 40mm) trunking only.



Firefly

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FIREFLY FIRE SAFETY CLIPS: SAVING LIVES IN THE EVENT OF A FIRE

firefly[™]
FIXINGS
from Marshall-Tufflex

To comply with BS 7671:2008+A3:2015 IET Wiring Regulations, Marshall-Tufflex supply a range of Firefly fire clips to secure cables within or outside of mini trunking, maxi trunking or conduit. The clips are designed to prevent cables from falling in the event of a fire, keeping escape routes free and accessible.



- Fire safety clips to comply with BS 5839-1
- For use within mini trunking, maxi trunking and conduit
- Spring loaded design for easy installation or removal of cables
- Designed for quick installation and to maximise internal trunking space
- Internal version to fit within trunking prior to cables being installed
- External version to retrofit onto existing installations
- Melt point over 1000°C
- Kits available including all required fixings/screws ready for installation

See page
159 for
punched mini
trunking

Regulations

New regulations came into effect in July 2015, prohibiting the use of non-metallic clips or plastic trunking as being the sole means of support for cables. Firefly clips meet the requirements of BS 7671 Wiring Regulations to secure all surface cables in escape routes, preventing people from becoming entangled and allowing escape.

Firefly clips feature rounded ends, preventing damage to cables and injury to installers. The spring-loaded design makes it straightforward to install and to add or remove cables after the initial installation.

BS 7671:2008+A3:2015 IET Wiring Regulations

See section 521.11 of
the current IET Wiring
Regulations

See page 237 for product ordering information.

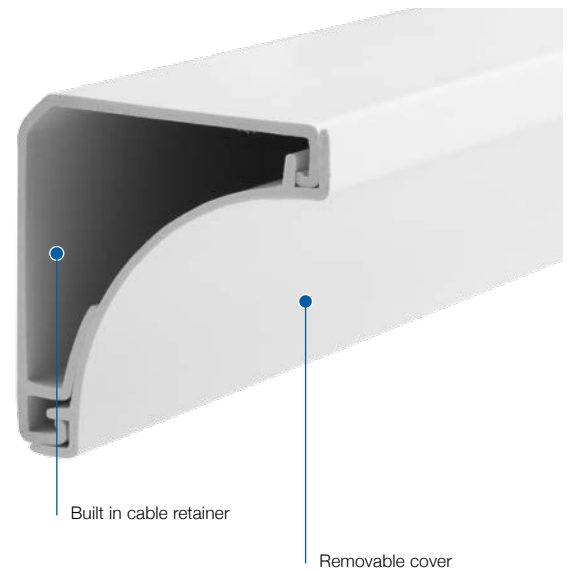
Cornice trunking provides elegant and unobtrusive concealment for surface wiring around ceilings.

Product information

- 50 x 50mm
- Designed for use with MMT1 and MMT2 mini trunking (see page 158)
- Adaptors available for cable runs across ceilings or down walls
- Built in cable retainer
- Use with mini trunking to supply pendant drops and surface accessories
- Removable cover

Standard Colour
WH
WH: White

Colour options: Optional colours and finishes are available but these may be subject to minimum quantity orders and longer lead times. For more information contact the Technical Team on +44 (0)1424 856688.



Trunking Profile



Cornice trunking

code	size	pack
MCT1WH	50 x 50	8 x 3m

Fittings



Coupler

code	pack
MCTC1WH	10



End cap

code	pack
MCEC1WH	10



Internal bend

code	pack
MCIB1WH	10



External bend

code	pack
MCEB1WH	10



Cable retainer

code	pack
MCBP1	10



Corner adaptor LH to Mini trunking

code	size	pack
MCCD1LHWH	MMT1	10
MCCD2LHWH	MMT2	10



Corner adaptor RH to Mini trunking

code	size	pack
MCCD1RHWH	MMT1	10
MCCD2RHWH	MMT2	10



Trunking adaptor to MMT1 Mini trunking

code	pack
MCTA1WH	10



Trunking adaptor to MMT2 Mini trunking

code	pack
MCTA2WH	10



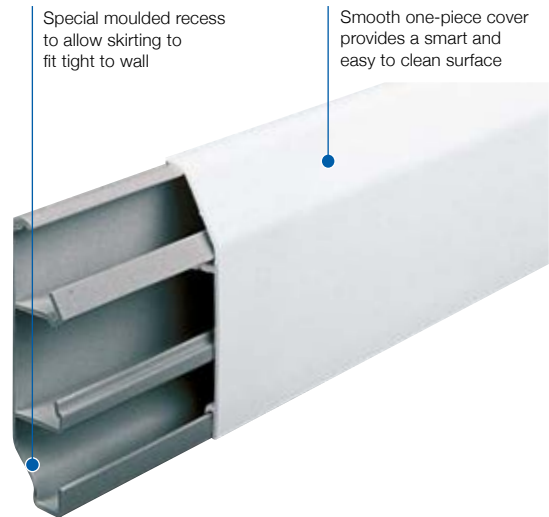
Sovereign Plus skirting trunking is a slim trunking system suitable for installation into hotels, small offices and residential properties.

Product information

- 75 x 20mm
- 3 compartments
- Suitable for skirting applications
- Overlapping fittings
- Accessory boxes designed to accept square and radius corner accessories
- Can be used with mini trunking
- Designed for use with MMT2 mini trunking (see page 158)

Standard Colour
WH
WH: White

Colour options: Optional colours and finishes are available but these may be subject to minimum quantity orders and longer lead times. For more information contact the Technical Team on +44 (0)1424 856688.



Trunking profile



Skirting trunking

code	size	pack
JE03WH	75 x 20	8 x 3

Fittings



Coupler

code	pack
JM22WH	20



End cap

code	size	pack
JM21WH	(left hand)	5
JM20WH	(right hand)	5



Internal bend

code	pack
JM23WH	10



External bend

code	pack
JM24WH	10



MMT2 adaptor (in line)

code	size	pack
JM25WH	25 x 16	5

Boxes and Plates



1 gang skirting accessory box

code	depth	pack
JM41WH	32mm	5



2 gang skirting accessory box

code	depth	pack
JM42WH	32mm	3

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Technical Information

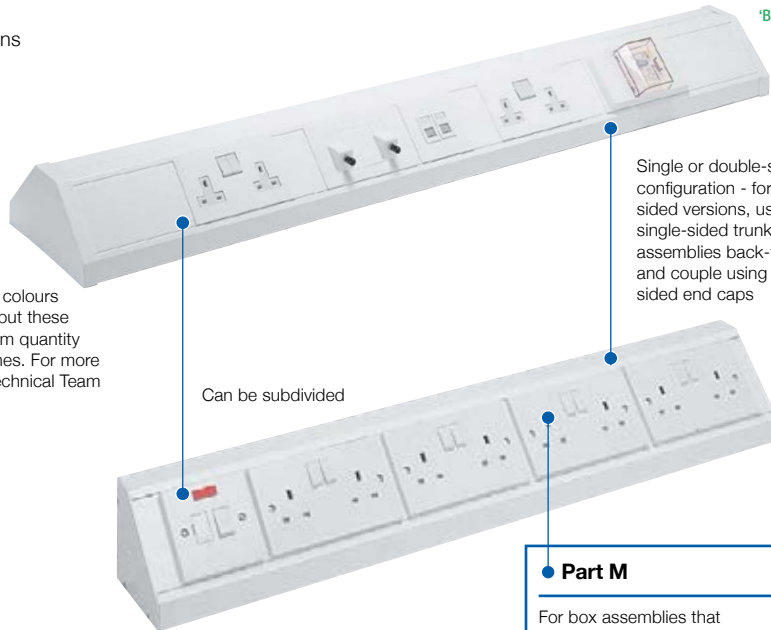
Bench trunking is a robust angled trunking that can be mounted directly on to desks, work benches or fitted under shelving.



'Bio option' available to special order

Product information

- 105 x 105mm
- Suitable for desk, bench or worktop applications
- Can be subdivided
- Fully compatible with Marshall-Tufflex and UK standard power and data accessories
- Adjustable data box 32-47mm
- Compliant up to Cat 7a



Single or double-sided configuration - for double sided versions, use two single-sided trunking assemblies back-to-back and couple using double-sided end caps

Can be subdivided

Standard Colour
WH
WH: White

Colour options: Optional colours and finishes are available but these may be subject to minimum quantity orders and longer lead times. For more information contact the Technical Team on +44 (0)1424 856688.

Part M

For box assemblies that meet the requirements of Part M (DDA) please refer to page 104.

Trunking Profiles



Trunking assembly

code	size	pack
MBT105WH	105 x 105mm	2 x 3m

Bench units



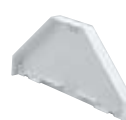
Coupler

code	pack
BTC105WH	1



Single sided end caps

code	pack
BEC105WH	2



Double sided end caps

code	pack
BECP210WH	2

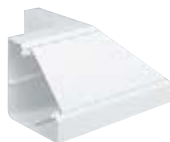


Internal bend

code	pack
BIA105WH	1

Couplers required with bends

Components



External bend

code	pack
BEA105WH	1

Couplers required with bends



Dividing fillet

code	pack
BDF105WH	4 x 3m

PVC-U TRUNKING

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Technical Information

Bench units



1 gang single sided unit
code pack
MBU1WH 1



1 gang double sided unit
code pack
MDBU1WH 1



2 gang single sided unit
code pack
MBU2WH 1



2 gang double sided unit
code pack
MDBU2WH 1



1 plus 2 gang single sided unit
code pack
MBU3WH 1



1 plus 2 gang double sided unit
code pack
MDBU3WH 1

Boxes and plates



***RCD/MCB housing**
code pack
BAHC1MWH 1

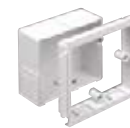
*Up to 4 modules can be accommodated
Note: RCDs and MCBs are not supplied by Marshall-Tufflex



1 gang accessory box
code depth pack
ESSB1WH 30mm 20

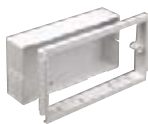


2 gang accessory box
code depth pack
ESSB2WH 30mm 10



1 gang adjustable depth box
code depth pack
EAB1WH 32 – 47mm 10

Fully adjustable to 47mm. Please see page 311 for more information.



2 gang adjustable depth box
code depth pack
EAB2WH 32 – 47mm 5

Fully adjustable to 47mm. Please see page 311 for more information.



1 gang accessory plate
code pack
ESSP1WH 2



2 gang accessory plate
code pack
ESSP2WH 2



13Amp DP 1 gang switched socket front fix
code pack
ESS1WH 1



13Amp DP 2 gang switched socket Twin earth, front fix
code pack
ESS2WH 1

ALUMINIUM TRUNKING SYSTEMS

Aluminium cable containment is an excellent choice of material for office areas that need a stylish but mechanically robust trunking and for industrial, workshop and laboratory installation, particularly where a high quality of screening performance is required.

ALUMINIUM TRUNKING SYSTEMS

ALUMINIUM TRUNKING SYSTEMS

The physical properties of aluminium offer the building industry a high quality material that is very suitable for internal cable management distribution. Aluminium is light to handle with high mechanical strength and impact-resistance. Extruded sections provide attractive profiles and products are finished with a high quality, powder-coat that provides a blemish-resistant surface.

Aluminium perimeter trunking systems provide the specifier, contractor and end-user with elegant, stream-lined containment that offers the practical advantages of inherent LSOH (low smoke zero halogen) and screening properties. Aluminium is an excellent choice for office and educational areas requiring a stylish yet robust trunking system, particularly effective where a high quality of screening performance and security is required.

Marshall-Tufflex offer a wide range of multi-compartment aluminium trunking in different heights, designs, cable capacities and numbers of compartments so whatever the requirements, there will always be a perfect solution with Marshall-Tufflex.

Choose the UK's number one in cable management.

Standard colour

The standard colour for each Marshall-Tufflex range is shown within each relevant product information section, although silver grey 9006 is our most popular colour option in aluminium trunking.

The below table identifies the relevant RAL colour reference for all our standard colour options, dependent on product range. However we would be happy to quote for any other colour requirements, please see the Special colours section.

Material	Standard colour	Colour code suffix	RAL
Aluminium	Silver Grey	SG	9006
	White	WH	9016

Standard Colours	
WH	SG
WH: White	SG: Silver Grey

Please note: it is dependent on the product range as to which colour is available as standard.

Special colours

To help enhance the style of an installation, different variations of solid colour are sometimes required.

We can provide special colours in a painted solution dependent on your client's preference. All special colour requirements will need to be specified as a RAL colour.

These colours are made to order and therefore are subject to set up charges and a longer lead time. For more information and a quotation contact our Technical Team on +44 (0)1424 856688.

Please note: due to different processes and materials utilised, it may not always be possible to obtain an exact colour match between the extruded and moulded product.





ALUMINIUM TRUNKING SYSTEMS



Environmental

- Aluminium is naturally found combined in over 270 different minerals, the chief source of which is bauxite ore.
- Its light weight means less strain on supporting structures, easier handling and reduced transport costs.



Recycling and sustainability

- 100% recyclable material.
- Can be recycled many times without loss of quality.
- Recycling facilities are well established.



EMI protection

- First class EMI screening performance especially at higher frequencies.



Fire performance

- Aluminium systems specified with polycarbonate fittings meet accepted requirements for LSOH.
- Withstands high temperatures with a melting point of 655°C (1211°F).
- Polycarbonate fittings are fire rated to UL94V0.

All aluminium systems are available with standard powder coat finishes in white RAL 9016 or silver-grey RAL 9006*. For other finishes, please call our Technical Team on +44 (0)1424 856688.

Sterling Profile 3001

167 x 50mm

Dado trunking with three separate compartments and individual covers for each compartment.

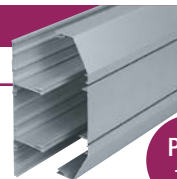


Page 184

XL301

220 x 65mm

Dado trunking with three deep compartments.



Page 188

Sterling Profile 3002

167 x 50mm

Skirting trunking with three separate compartments and individual covers for each compartment.

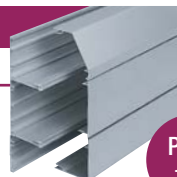


Page 184

XL302

220 x 65mm

Skirting trunking with three deep compartments



Page 188

Sterling Profile 3003

167 x 50mm

Dado and skirting trunking with three separate compartments and individual covers for each compartment.

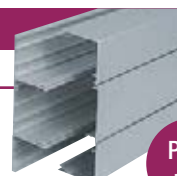


Page 184

XL303

220 x 65mm

Dado and skirting trunking with three deep compartments

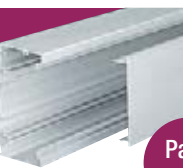


Page 188

Elegance 110

110 x 55mm

Dado and skirting trunking with a single cover.

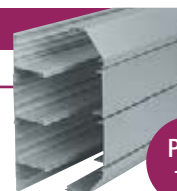


Page 180

XL311

308 x 65mm

Dado trunking with four deep compartments.



Page 192

Elegance 170

170 x 55mm

Dado and skirting trunking with a single cover.

*Only available in silver-grey RAL 9006 as standard.

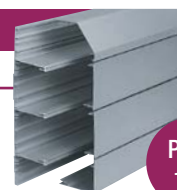


Page 182

XL312

308 x 65mm

Skirting trunking with four deep compartments.



Page 192

Twin Plus

210 x 57mm

Large capacity dado and skirting trunking with two deep compartments with in-built segregation of power and data.



Page 196

XL313

308 x 65mm

Dado and skirting trunking with four deep compartments.

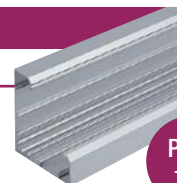


Page 192

Bench trunking

105 x 105mm

Desk and laboratory trunking.



Page 199

Note: you may use the rule on the left of this page to check profile sizes.

MT32 PREFABRICATED AND MODULAR WIRING SYSTEMS

MT32 prefabricated and modular wiring systems are designed to take all the hard work out of electrical installations by providing the complete pre-wired, pre-tested, plug and play electrical wiring system.

The system provides fast, safe, labour and cost saving installations that comply with BS 8488:2009+A1:2010 for prefabricated wiring systems intended for permanent connection in fixed installation.

The range of pre-wired, pre-tested and assembled interconnecting leads and accessory modules incorporate the Marshall-Tufflex compact 32Amp connector.



Female shielded connection

Male shielded connection

Complete pre-wired through accessory assembly incorporating MT32 trunking back box

Product information

- 32Amp rated system
- Available as LSOH 3 core 2.5mm² flex system specification that meets the requirement for high integrity earthing
- Suitable for ring and radial circuits
- Circuit testing only required on completion of final layout
- Reduced installation time – no cutting required on site
- Reduced health & safety risk

Pre-wired accessories



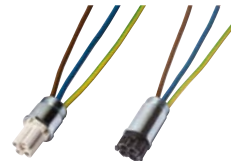
Extension cable 2.5mm²

code	length	pack
AA3330	0.5m	1
AA3332	1.5m	1
AA3333	3.0m	1
AA3335	5.0m	1



Connection cable free end 2.5mm²

code	length	pack
AA3732 (male)	1.5m	1
AA3532 (female)	1.5m	1



Male and female adaptors 2.5mm²

code	length	pack
AA7211 (male)	220mm	1
AA7212 (female)	220mm	1

For adapting distribution board to modular system
Note: to fit 20mm knockout

MT32 Connectors

The description 'male' (white) and 'female' (black) does not refer to the connector pins but describes and identifies the moulded connector housings.

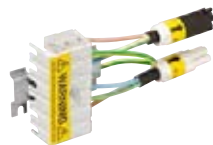
For further information please contact our Technical Team on +44 (0)1424 856688.



Adaptor cables 2.5mm²

code	length	pack
AA8901 (male/male)	0.5m	1
AA8902 (female/female)	0.5m	1

Required for ring circuit



Terminal block 2.5mm²

code	size	pack
AA6510 (female/male)	2.5mm ²	1



Pre-wired accessory 2.5mm²

code	size	pack
AA6221	2 gang	1



Elegance 110 aluminium is a small, rectangular, dado trunking system with a single cover. It is particularly useful for workshop or laboratory supply or in a commercial environment where extra mechanical strength is necessary.



Product information

- 110 x 55mm
- Compliant up to Cat 7a
- Can be subdivided into 2 or 3 compartments
- Suitable for dado and skirting applications
- Fully compatible with Marshall-Tufflex flush power and data accessories and standard UK wiring power and accessories
- Data compliant 25mm and 50mm bend radius

Standard Colours	
WH	SG
WH: White	SG: Silver Grey

Colour code suffix: to indicate the finish you require, add the required colour code to the end of the product code.

Colour options: Optional colours and finishes are available but these are subject to minimum quantity orders and longer lead times. For more information contact the Technical Team on +44 (0)1424 856688.



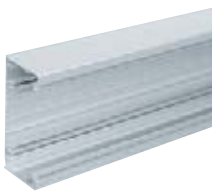
Can be divided into 2 or 3 compartments

Part M

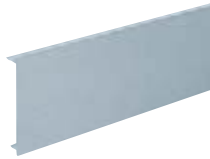
For 1 and 2 gang box assemblies with coloured flush plates to comply with Part M please refer to page 104.

ALUMINIUM TRUNKING SYSTEMS

Basic components



Base unit	
code	pack
LTB2SG	1



Main compartment cover	
code	pack
LTL1SG	1

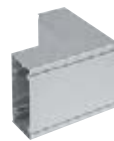
Fittings



End caps (screws included)	
code	pack
LECPSSG	1



Internal bend	
code	pack
LIBPSSG	1



External bend	
code	pack
LXBPSSG	1



Flat angle	
code	pack
LFASSG	1

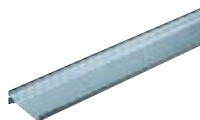


Flat tee	
code	pack
LFTSSG	1

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Technical Information

Components



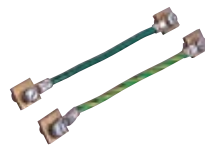
Dividing fillet

code	description	pack
LDF1	unscreened 8 x 3m	



Earth bonding kit

code	description	pack
LBT3		1



Bonding strap

code	description	pack
LBS1	base to base 32Amp	5



Bonding strap

code	description	pack
LBS2	cover to base	5

Coupler pin

code	description	pack
LDP1	ø2.0 x 20mm	10

To aid alignment of base profiles



Bonding strap

code	description	pack
LBS5	end cap to base	1

Boxes and plates



RCD/MCB housing

code	description	pack
EAHC1MWH	PVC-U	1

*Up to 4 modules can be accommodated
Note: RCDs and MCBs are not supplied by Marshall-Tufflex



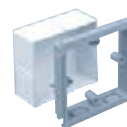
1 gang accessory box 30mm deep (polycarbonate)

code	description	pack
ESSB1SG		1
ESSBA1WH		1



2 gang accessory box 30mm deep (polycarbonate)

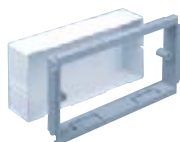
code	description	pack
ESSB2SG		1
ESSBA2WH		1



1 gang adjustable depth box ^{CAT 7A*}

code	depth	pack
EAB1SG	32-40mm	1

Fully adjustable to 47mm. Please see page 311 for more information.



2 gang adjustable depth box ^{CAT 7A*}

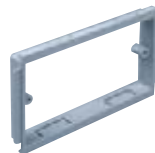
code	depth	pack
EAB2SG	32 - 40mm	1

Fully adjustable to 47mm. Please see page 311 for more information.



1 gang accessory plate ^{CAT 7A*}

code	description	pack
ESSP1SG		2



2 gang accessory plate ^{CAT 7A*}

code	description	pack
ESSP2SG		2

Screened boxes

Screening

Conductive spray (CS) is unique to Marshall-Tufflex and is applied in the factory to assist with screening from electromagnetic interference to data and communications cabling within trunking systems. The coating is applied to a range of data boxes, covers, clip-on components and fabricated fittings.

WARNING: A CS coating is not suitable for low voltage circuits.



1 gang screened accessory box ^{CAT 7A*}

code	depth	description	pack
ESSB1SWH*	30mm	PVC-U	20

2 gang screened accessory box ^{CAT 7A*}

code	depth	description	pack
ESSB2SWH*	30mm	PVC-U	10

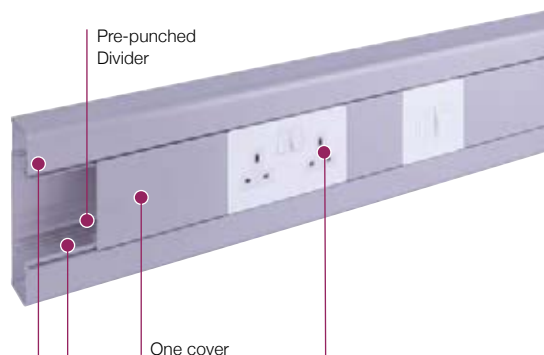
*Supplied complete with earth terminal

Elegance 170 aluminium is a sleek and rounded 170mm rectangular dado trunking system with a single cover, ideal for use in office or educational environments where extra mechanical strength and a higher cable capacity is required.



Product information

- 170 x 55mm
- Compliant up to Cat 7a
- "C" type section can be used as a single large compartment section or can be further subdivided into 2 or 3 compartments
- Suitable for dado and skirting applications
- Plain or pre-punched dividers for quick installation
- A range of fabricated fittings
- Part M compliant
- Data compliant 25mm and 50mm bend radius
- Compatible with Marshall-Tufflex flush power and data accessories and standard UK wiring power and accessories
- Standard silver-grey RAL 9006 powder coat finish.
- Can be used in conjunction with Conduit and Mini trunking systems



Part M

For 1 and 2 gang box assemblies with coloured flush plates to comply with Part M please refer to page 104.

Standard Colours
SG
SG: Silver Grey

Colour options: Optional colours and finishes are available but these will be subject to minimum quantity orders, longer lead times and set up charges. For more information contact the Technical Team on +44 (0)1424 856688.

ALUMINIUM TRUNKING SYSTEMS

Basic components



Base unit and cover

code	pack
LP1050SG	1 x 2.9m

Note: In order to subdivide Elegance 170 dividing fillets should be used

Fittings



End cap (screws included)	
code	pack
LP1030SG	1



Internal bend 90°	
code	pack
LP1020SG	1



External bend 90° slow	
code	pack
LP1026SG	1



Flat angle	
code	pack
LP1040SG	1



Flat tee	
code	pack
LP1045SG	1



Components



Galvanised steel dividing fillet (pre-punched)

code	length	pack
LP1005	1.45m	1



Plastic dividing fillet (un-punched)

code	length	pack
LP1006	1.45m	1



Earth bonding kit

code	pack
LBT3	1

Note: Fastons supplied suit 1.5mm to 2.5mm cable (blue) and 4.0mm to 6.0mm (yellow).



Bonding strap

code	description	pack
ESBS1	base to base	5



Bonding strap

code	description	pack
LBS2	cover to base	5



Bonding strap

code	description	pack
LBS5	end cap to base	1

Coupler pin

code	description	pack
LDP1	ø2.0 x 20mm	10

To aid alignment of base profiles

Boxes and plates



RCD/MCB housing

code	description	pack
EAHC1MWH	PVC-U	1

*Up to 4 modules can be accommodated

Note: RCDs and MCBs are not supplied by Marshall-Tufflex



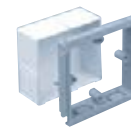
1 gang accessory box 30mm deep (polycarbonate)

code	pack
ESSB1SG	1
ESSBA1WH	1



2 gang accessory box 30mm deep (polycarbonate)

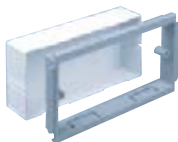
code	pack
ESSB2SG	1
ESSBA2WH	1



1 gang adjustable depth box ...CAT 7A*

code	depth	pack
EAB1SG	32-40mm	1

Fully adjustable to 47mm. Please see page 311 for more information.



2 gang adjustable depth box ...CAT 7A*

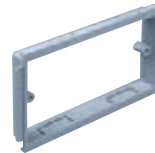
code	depth	pack
EAB2SG	32 - 40mm	1

Fully adjustable to 47mm. Please see page 311 for more information.



1 gang accessory plate ...CAT 7A*

code	pack
ESSP1SG	2



2 gang accessory plate ...CAT 7A*

code	pack
ESSP2SG	2

Screened boxes

Screening

Conductive spray (CS) is unique to Marshall-Tufflex and is applied in the factory to assist with screening from electromagnetic interference to data and communications cabling within trunking systems. The coating is applied to a range of data boxes, covers, clip-on components and fabricated fittings.

WARNING: A CS coating is not suitable for low voltage circuits.



1 gang screened accessory box ...CAT 7A*

code	depth	description	pack
ESSB1SWH*	30mm	PVC-U	20

2 gang screened accessory box ...CAT 7A*

code	depth	description	pack
ESSB2SWH*	30mm	PVC-U	10

*Supplied complete with earth terminal

Sterling Profile aluminium is a popular and stylish looking trunking system that offers a variety of trunking profiles with separate compartment covers.



Product information

- 167 x 50mm
- 3 segregated compartments
- Can be subdivided
- Suitable for dado applications
- A range of polycarbonate clip-on fittings with built-in overlaps
- Fully compatible with Sterling flush power and data accessories

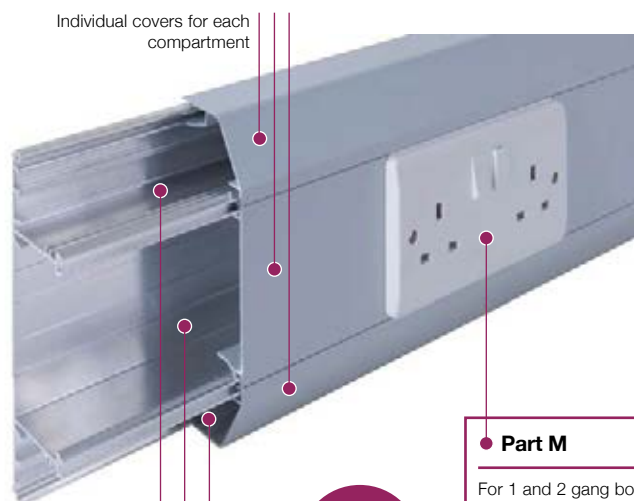
Data information

- Compliant up to Cat 7a
- Data compliant 25mm and 50mm bend radius
- Adjustable data box 32-40mm
- Screened divider and data boxes

Standard Colours	
WH	SG
WH: White	SG: Silver Grey

Colour code suffix: to indicate the finish you require, add the required colour code to the end of the product code.

Colour options: Optional colours and finishes are available but these are subject to minimum quantity orders and longer lead times. For more information contact the Technical Team on +44 (0)1424 856688.



Compartment can be subdivided

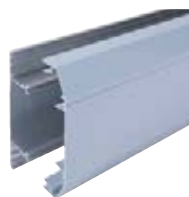
See page 187 for quick reference chart

Part M

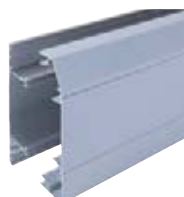
For 1 and 2 gang box assemblies with coloured flush plates to comply with Part M please refer to page 104.

ALUMINIUM TRUNKING SYSTEMS

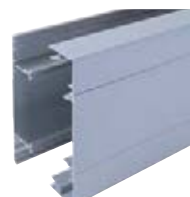
Trunking Profiles



Sterling Profile 3001
size: 167 x 50mm



Sterling Profile 3002
size: 167 x 50mm



Sterling Profile 3003
size: 167 x 50mm

Basic components



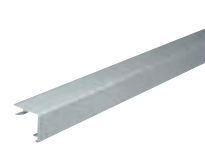
Base unit
code pack
ETB300MMF* 4 x 3m



Main compartment cover
code pack
LTL1SG 1 x 3m



Angled cover
code pack
ETAC300SG 1 x 3m



Square cover
code pack
ETSC300SG 1 x 3m

*MF=Mill finish

p298 **Technical Information**

Profile 3001 fittings



Profile 3001 Coupler

code	description	pack
ECP401SG	polycarbonate	1



Profile 3001 End cap

code	description	pack
EECP401SG	polycarbonate	1



Profile 3001 Internal bend

code	description	pack
EIBP401SG	polycarbonate	1



Profile 3001 External bend

code	description	pack
EXBP401SG	polycarbonate	1



Profile 3001 Flat angle - up/down

code	description	pack
EFAP3001SG	aluminium	1



Profile 3001 Flat tee - up/down

code	description	pack
EFTP3001SG	aluminium	1

Profile 3002 fittings



Profile 3002 Coupler

code	description	pack
ECP402SG	polycarbonate	1



Profile 3002 End cap

code	description	pack
EECP402LHSG	polycarbonate	1
EECP402RHSG	polycarbonate	1

LH = Left hand RH = Right hand



Profile 3002 Internal bend

code	description	pack
EIBP402SG	polycarbonate	1



Profile 3002 External bend

code	description	pack
EXBP402SG	polycarbonate	1



Profile 3002 Flat angle - upward

code	description	pack
EFAP3002USG	aluminium	1



Profile 3002 Flat angle - downward

code	description	pack
EFAP3002DSG	aluminium	1

Sterling Profile 3002 flat tees

Where profiles have one angled cover and one square cover, as with Sterling Profile 3002, it is possible to create a tee by changing the top or bottom cover so that covers match the profile of the trunking. For example:

- Upward tee – select Profile 3001 tee remove the angled bottom cover and replace with square cover.
- Downward tee – select Profile 3003 tee remove the square top cover and replace with angled cover.

Profile 3003 fittings



Profile 3003 Coupler

code	description	pack
ECP403SG	polycarbonate	1



Profile 3003 End cap

code	description	pack
EECP403SG	polycarbonate	1



Profile 3003 Internal bend

code	description	pack
EIBP403SG	polycarbonate	1



Profile 3003 External bend

code	description	pack
EXBP403SG	polycarbonate	1



Profile 3003 Flat angle - up/down

code	description	pack
EFAP3003SG	aluminium	1

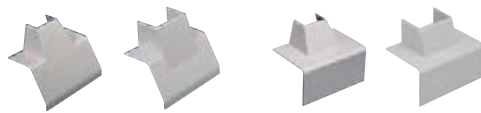


Profile 3003 Flat tee - up/down

code	description	pack
EFTP3003SG	aluminium	1

ALUMINIUM TRUNKING SYSTEMS

Fittings



Angled mini-trunking adaptor (polycarbonate)

code	Description	pack
EATA402SG	MMT2	5
EATA404SG	MMT4	1

Square mini – trunking adaptor (polycarbonate)

code	Description	pack
ESTA402SG	MMT2	5
ESTA404SG	MMT4	1

Components



Dividing fillet (PVC-U)

code	description	pack
EDF1	outer 8 x 3m	



Earth bonding kit

code	description	pack
LBT3		1



Bonding strap

code	description	pack
LBS1	base to base 32Amp	5



Bonding strap

code	description	pack
LBS2	cover to base	5

Coupler pin

code	description	pack
LDP1	ø2.0 x 20mm	10

To aid alignment of base profiles



Main crossover bridge (PVC-U)

code	pack
EMCB1	5



Angled cable retainer (PVC-U)

code	pack
EACR1	10



Main cable retainer (PVC-U)

code	pack
EMCR1	10

Boxes and plates



RCD/MCB housing

code	description	pack
EAHC1MWH	PVC-U	1

*Up to 4 modules can be accommodated
Note: RCDs and MCBs are not supplied by Marshall-Tufflex



1 gang accessory box 30mm deep (polycarbonate)

code	pack
ESSB1SG	1
ESSBA1WH	1



2 gang accessory box 30mm deep (polycarbonate)

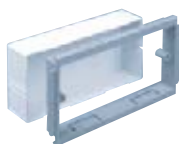
code	pack
ESSB2SG	1
ESSBA2WH	1



1 gang adjustable depth box

code	depth	pack
EAB1SG	32-40mm	1

Fully adjustable to 47mm. Please see page 311 for more information.



2 gang adjustable depth box

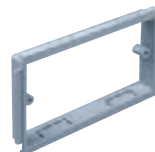
code	depth	pack
EAB2SG	32 – 40mm	1

Fully adjustable to 47mm. Please see page 311 for more information.



1 gang accessory plate

code	pack
ESSP1SG	2



2 gang accessory plate

code	pack
ESSP2SG	2

Quick reference chart
Sterling Profile aluminium
component chart

Base unit

Pack 4 x 3m
Milled aluminium



Main compartment cover

Pack 1 x 3m



Angled cover

Pack 1 x 3m



Square cover

Pack 1 x 3m



Couplers

Pack 1



End caps

Pack 1
Left or right handed



Internal bends

Pack 1
Internal base corner needs to be mitred



External bends

Pack 1
External base corner needs to be mitred



Flat angles

Pack 1
Upward or downward



† Flat tees

Pack 1
† See Flat Tee information below



3 compartment		
Profile 3001 167 x 50mm	Profile 3002 167 x 50mm	Profile 3003 167 x 50mm
ETB300MMF	ETB300MMF	ETB300MMF
LTL1SG	LTL1SG	LTL1SG
2 x ETAC300SG	1 x ETAC300SG	-
-	1x ETSC300SG	2 x ETSC300SG
ECP401SG	ECP402SG	ECP403SG
EECP401SG	EECP402LHSG EECP402RHSG	EECP403SG
EIBP401SG	EIBP402SG	EIBP403SG
EXBP401SG	EXBP402SG	EXBP403SG
EFAP3001SG	EFAP3002USG EFAP3002DSG	EFAP3003SG
EFTP3001SG	†	EFTP3003SG

† Sterling Profile 3002 flat tees

Where profiles have one angled cover and one square cover, as with Sterling Profile 3002, it is possible to create a tee by changing the top or bottom cover so that covers match the profile of the trunking. For example:

- Upward tee – select Profile 3001 tee remove the angled bottom cover and replace with square cover.
- Downward tee – select Profile 3003 tee remove the square top cover and replace with angled cover.

Screened boxes

Screening

Conductive spray (CS) is unique to Marshall-Tufflex and is applied in the factory to assist with screening from electromagnetic interference to data and communications cabling within trunking systems. The coating is applied to a range of data boxes, covers, clip-on components and fabricated fittings.

WARNING: A CS coating is not suitable for low voltage circuits.



1 gang screened accessory box

code	depth	description	pack
ESSB1SWH*	30mm	PVC-U	20

2 gang screened accessory box

code	depth	description	pack
ESSB2SWH*	30mm	PVC-U	10

*Supplied complete with earth terminal



XL aluminium trunking 301 to 303 comprises a range of deep, 3-compartment systems that provide extra capacity and screening performance levels for data cabling.

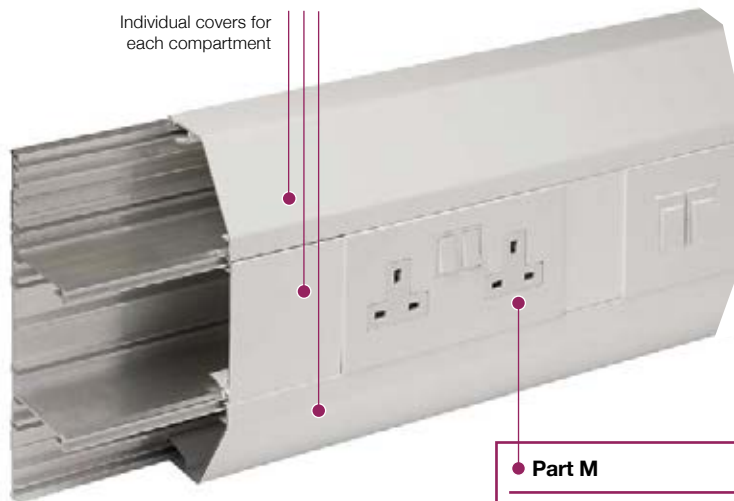


Product information

- 220 x 65mm
- 3 deep segregated compartments
- Compartments can be subdivided
- Suitable for dado and skirting applications (XL301 is recommended for dado application only)
- Includes a range of polycarbonate clip-on fittings with built-in overlaps
- Fully compatible with Sterling flush power and data accessories

Data information

- Compliant up to Cat 7a*
- Data compliant 25mm and 50mm bend radius
- External bends feature internal segregators
- Adjustable data box 32mm - 47mm
- Screened divider and data boxes



Individual covers for each compartment

Standard Colours	
WH	SG
WH: White	SG: Silver Grey

Colour code suffix: to indicate the finish you require, add the required colour code to the end of the product code.

Colour options: Optional colours and finishes are available but these are subject to minimum quantity orders and longer lead times. For more information contact the Technical Team on +44 (0)1424 856688.

See page 191 for quick reference chart

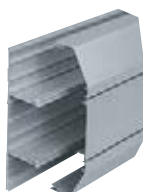
Part M

For 1 and 2 gang box assemblies with coloured flush plates to comply with Part M please refer to page 104.

***Data fittings**

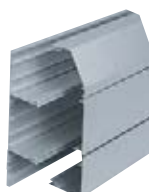
For made to order fittings to meet Cat 7a requirements please contact our Technical Team on +44 (0)1424 856688

Trunking profiles

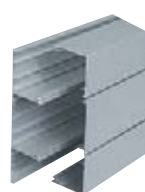


***XL 301**
size 220 x 65mm

*For dado installation only

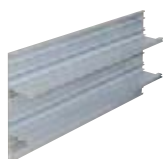


XL 302
size 220 x 65mm



XL 303
size 220 x 65mm

Basic components



Base unit
code pack
ELTB300 4 x 3m



Main compartment cover
code pack
LTL1SG 1 x 3m



Angled cover
code pack
ELAC300SG 1 x 3m



Square cover
code pack
ELSC300SG 1 x 3m



XL 301 fittings



XL 301 Coupler

code	description	pack
EC301SG	polycarbonate	1



XL 301 End cap

code	description	pack
EEC301SG	polycarbonate	1



XL 301 Internal bend

code	description	pack
EIB301SG	polycarbonate	1



XL 301 External bend

code	description	pack
EXB301SG	polycarbonate	1



XL 301 Flat angle – up/down

code	description	pack
EFA301SG	aluminium	1



XL 301 Flat tee – up/down

code	description	pack
EFT301SG	aluminium	1

XL 302 fittings



XL 302 Coupler

code	description	pack
EC302SG	polycarbonate	1



XL 302 End cap

code	description	pack
EEC302LHSG	polycarbonate	1
EEC302RHSG	polycarbonate	1

LH = Left hand RH = Right hand



XL 302 Internal bend

code	description	pack
EIB302SG	polycarbonate	1



XL 302 External bend

code	description	pack
EXB302SG	polycarbonate	1



XL 302 Flat angle – upward

code	description	pack
EFA302USG	aluminium	1



XL 302 Flat angle – downward

code	description	pack
EFA302DSG	aluminium	1

XL Trunking 302 flat tees

Where profiles have one angled cover and one square cover, as with XL 302, it is possible to create a tee by changing the top or bottom cover so that covers match the profile of the trunking. For example:

- Upward tee – select XL 301 tee remove the angled bottom cover and replace with square cover.
- Downward tee – select XL 303 tee remove the square top cover and replace with angled cover.

XL 303 fittings



XL 303 Coupler

code	description	pack
EC303SG	polycarbonate	1



XL 303 End cap

code	description	pack
EEC303SG	polycarbonate	1



XL 303 Internal bend

code	description	pack
EIB303SG	polycarbonate	1



XL 303 External bend

code	description	pack
EXB303SG	polycarbonate	1



Flat angle – up/down XL 303

code	description	pack
EFA303SG	aluminium	1



XL 303 Flat tee – up/down

code	description	pack
EFT303SG	aluminium	1

ALUMINIUM TRUNKING SYSTEMS

Components



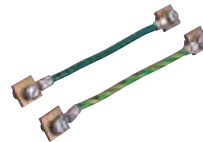
Dividing fillet

code	description	pack
ELDF200	8 x 3m	



Earth bonding kit

code	description	pack
LBT3		1



Bonding strap

code	description	pack
LBS1	base to base 32Amp	5



Bonding strap

code	description	pack
LBS2	cover to base	5

Coupler pin

code	description	pack
LDP1	ø2.0 x 20mm	10

To aid alignment of base profiles

Boxes and plates



RCD/MCB housing

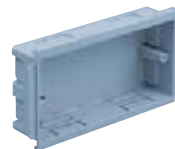
code	description	pack
EAHC1MWH	PVC-U	1

*Up to 4 modules can be accommodated
Note: RCDs and MCBs are not supplied by Marshall-Tufflex



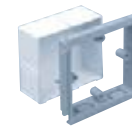
1 gang accessory box 30mm deep (polycarbonate)

code	description	pack
ESSB1SG		1
ESSBA1WH		1



2 gang accessory box 30mm deep (polycarbonate)

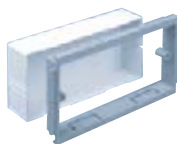
code	description	pack
ESSB2SG		1
ESSBA2WH		1



1 gang adjustable depth box

code	depth	pack
EAB1SG	32-40mm	1

Fully adjustable to 47mm. Please see page 311 for more information.



2 gang adjustable depth box

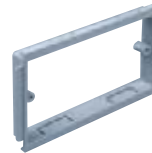
code	depth	pack
EAB2SG	32 - 40mm	1

Fully adjustable to 47mm. Please see page 311 for more information.



1 gang accessory plate

code	description	pack
ESSP1SG		2



2 gang accessory plate

code	description	pack
ESSP2SG		2

Screened boxes

Screening

Conductive spray (CS) is unique to Marshall-Tufflex and is applied in the factory to assist with screening from electromagnetic interference to data and communications cabling within trunking systems. The coating is applied to a range of data boxes, covers, clip-on components and fabricated fittings.

WARNING: A CS coating is not suitable for low voltage circuits.



1 gang screened accessory box

code	depth	description	pack
ESSB1SWH*	30mm	PVC-U	20

2 gang screened accessory box

code	depth	description	pack
ESSB2SWH*	30mm	PVC-U	10

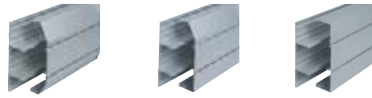
*Supplied complete with earth terminal

Quick reference chart

XL Aluminium 301 to 303

3 Compartment

XL 301 220 x 65mm	XL 302 220 x 65mm	XL 303 220 x 65mm
----------------------	----------------------	----------------------



Base unit

Pack 4 x 3m
Features earth bonding rail and screw ports to aid the fastening of pipe clips and gas valves etc



ELTB300	ELTB300	ELTB300
---------	---------	---------

Main compartment cover

Pack 1 x 3m



LTL1SG	LTL1SG	LTL1SG
--------	--------	--------

Angled cover

Pack 1 x 3m



2 x ELAC300SG	1 x ELAC300SG	-
---------------	---------------	---

Square cover

Pack 1 x 3m



-	1 x ELSC300SG	2 x ELSC300SG
---	---------------	---------------

Couplers

Pack 1



EC301SG	EC302SG	EC303SG
---------	---------	---------

End caps

Pack 1
left or right hand



EEC301SG	EEC302LHSG EEC302RHSG	EEC303SG
----------	--------------------------	----------

Internal bends

Pack 1



EIB301SG	EIB302SG	EIB303SG
----------	----------	----------

External bends

Pack 1



EXB301SG	EXB302SG	EXB303SG
----------	----------	----------

Flat angles

Pack 1
upward or downward



EFA301SG	EFA302USG EFA302DSG	EFA303SG
----------	------------------------	----------

† Flat tees

Pack 1
† See Flat Tee information below



EFT301SG	†	EFT303SG
----------	---	----------

† XL Trunking 302 flat tees

Where profiles have one angled cover and one square cover, as with XL 302, it is possible to create a tee by changing the top or bottom cover so that covers match the profile of the trunking. For example:

- Upward tee – select XL 301 tee remove the angled bottom cover and replace with square cover.
- Downward tee – select XL 303 tee remove the square top cover and replace with angled cover.

p303
Technical Information

XL aluminium trunking 311 to 313 comprises a range of deep, multi-compartment systems that provide extra capacity and screening performance levels for data cabling. XL 311, 312 and 313 offer the facility to extend height for higher density cabling.



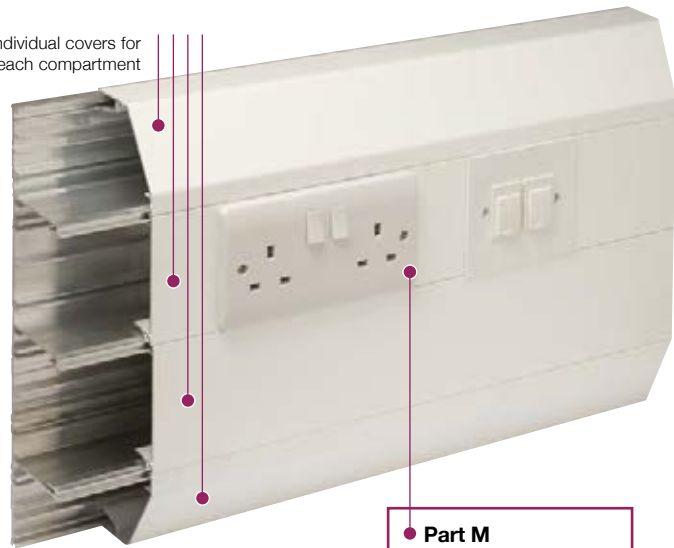
Product information

- 308 x 65mm
- 4 or more deep segregated compartments
- Compartments can be subdivided
- Suitable for dado and skirting applications (XL 311 is recommended for dado application only)
- Includes a range of polycarbonate clip-on fittings with built-in overlaps
- Fully compatible with Sterling flush power and data accessories

Data information

- Compliant up to Cat 7a*
- Data compliant 25mm and 50mm bend radius
- External bends feature internal segregators
- Adjustable data box 32mm - 47mm
- Screened divider and data boxes

Individual covers for each compartment



Standard Colours	
WH	SG
WH: White	SG: Silver Grey

Colour code suffix: to indicate the finish you require, add the required colour code to the end of the product code.

Colour options: Optional colours and finishes are available but these are subject to minimum quantity orders and longer lead times. For more information contact the Technical Team on +44 (0)1424 856688.

See page 195 for quick reference chart

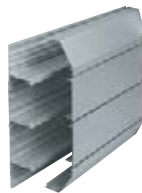
Part M

For 1 and 2 gang box assemblies with coloured flush plates to comply with Part M please refer to page 104.

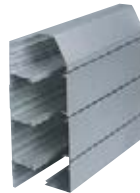
#Data fittings

For made to order fittings to meet Cat 7a requirements please contact our Technical Team on +44 (0)1424 856688

Trunking profiles



***XL 311**
size 308 x 65mm
*For dado installation only

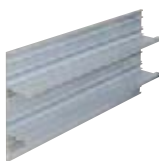


XL 312
size 308 x 65mm



XL 313
size 308 x 65mm

Basic components



Base unit
code pack
ELTB300 4 x 3m



Main compartment cover
code pack
LTL1SG 1



Angled cover
code pack
ELAC300SG 1 x 3m



Square cover
code pack
ELSC300SG 1 x 3m



Extendable base*
code pack
ELEB300 1 x 3m

* To increase number of compartments

p303
Technical Information

XL 311 fittings



XL 311 Coupler

code	description	pack
EC311SG	polycarbonate	1



XL 311 End cap

code	description	pack
EEC311SG	polycarbonate	1



XL 311 Internal bend

code	description	pack
EIB311SG	polycarbonate	1



XL 311 External bend

code	description	pack
EXB311SG	polycarbonate	1



XL 311 Flat angle – up/down

code	description	pack
EFA311SG	aluminium	1



XL 311 Flat tee – up/down

code	description	pack
EFT311SG	aluminium	1

XL 312 fittings



XL 312 Coupler

code	description	pack
EC312SG	polycarbonate	1



XL 312 End cap

code	description	pack
EEC312LHSG	polycarbonate	1
EEC312RHSG	polycarbonate	1

LH = Left hand RH = Right hand



XL 312 Internal bend

code	description	pack
EIB312SG	polycarbonate	1



XL 312 External bend

code	description	pack
EXB312SG	polycarbonate	1



XL 312 Flat angle – upward

code	description	pack
EFA312USG	aluminium	1



XL 312 Flat angle – downward

code	description	pack
EFA312DSG	aluminium	1

XL Trunking 312 flat tees

Where profiles have one angled cover and one square cover, as with XL 312, it is possible to create a tee by changing the top or bottom cover so that covers match the profile of the trunking. For example:

- Upward tee – select XL 311 tee remove the angled bottom cover and replace with square cover.
- Downward tee – select XL 313 tee remove the square top cover and replace with angled cover.

XL 313 fittings



XL 313 Coupler

code	description	pack
EC313SG	polycarbonate	1



XL 313 End cap

code	description	pack
EEC313SG	polycarbonate	1



XL 313 Internal bend

code	description	pack
EIB313SG	polycarbonate	1



XL 313 External bend

code	description	pack
EXB313SG	polycarbonate	1



XL 313 Flat angle – up/down

code	description	pack
EFA313SG	aluminium	1



XL 313 Flat tee – up/down

code	description	pack
EFT313SG	aluminium	1

End cap retaining screws

When installing end caps, additional retention can be achieved by using end cap retaining screws G1310 (pack 40).

ALUMINIUM TRUNKING SYSTEMS

Components



Dividing fillet

code	description	pack
ELDF200	8 x 3m	



Earth bonding kit

code	description	pack
LBT3		1



Bonding strap

code	description	pack
LBS1	base to base 32 amp 5	



Bonding strap

code	description	pack
LBS2	cover to base	5

Coupler pin

code	description	pack
LDP1	ø2.0 x 20mm	10

To aid alignment of base profiles

Boxes and plates



RCD/MCB housing

code	description	pack
EAHC1MWH	PVC-U	1

*Up to 4 modules can be accommodated
Note: RCDs and MCBs are not supplied by Marshall-Tufflex



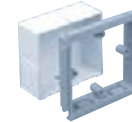
1 gang accessory box 30mm deep (polycarbonate)

code	description	pack
ESSB1SG		1
ESSBA1WH		1



2 gang accessory box 30mm deep (polycarbonate)

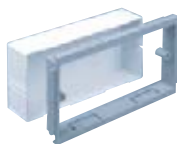
code	description	pack
ESSB2SG		1
ESSBA2WH		1



1 gang adjustable depth box

code	depth	pack
EAB1SG	32-40mm	1

Fully adjustable to 47mm. Please see page 311 for more information.



2 gang adjustable depth box

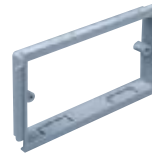
code	depth	pack
EAB2SG	32 - 40mm	1

Fully adjustable to 47mm. Please see page 311 for more information.



1 gang accessory plate

code	description	pack
ESSP1SG		2



2 gang accessory plate

code	description	pack
ESSP2SG		2

Screened boxes

Screening

Conductive spray (CS) is unique to Marshall-Tufflex and is applied in the factory to assist with screening from electromagnetic interference to data and communications cabling within trunking systems. The coating is applied to a range of data boxes, covers, clip-on components and fabricated fittings.

WARNING: A CS coating is not suitable for low voltage circuits.



1 gang screened accessory box

code	depth	description	pack
ESSB1SWH*	30mm	PVC-U	20

2 gang screened accessory box

code	depth	description	pack
ESSB2SWH*	30mm	PVC-U	10

*Supplied complete with earth terminal

Quick reference chart
XL Aluminium 311 to 313

4 Compartment			
	XL 311 308 x 65mm	XL 312 308 x 65mm	XL 313 308 x 65mm
	ELTB300	ELTB300	ELTB300
	ELEB300	ELEB300	ELEB300
	2 x LTL1SG	2 x LTL1SG	2 x LTL1SG
	2 x ELAC300SG	1 x ELAC300SG	-
	-	1 x ELSC300SG	2 x ELSC300SG
	EC311SG	EC312SG	EC313SG
	EEC311SG	EEC312LHSG EEC312RHSG	EEC313SG
	EIB311SG	EIB312SG	EIB313SG
	EXB311SG	EXB312SG	EXB313SG
	EFA311SG	EFA312USG EFA312DSG	EFA313SG
	EFT311SG	†	EFT313SG

Base unit

Pack 4 x 3m

Features earth bonding rail and screw ports to aid the fastening of pipe clips and gas valves etc

Extendable base

Pack 1 x 3m

Additional 88mm compartment

Main compartment cover

Pack 1 x 3m

Angled cover

Pack 1 x 3m

Square cover

Pack 1 x 3m

Couplers

Pack 1

End caps

Pack 1

left or right hand

Internal bends

Pack 1

External bends

Pack 1

Flat angles

Pack 1

upward or downward

† Flat tees

Pack 1

† See Flat Tee information below

XL Trunking 312 flat tees

Where profiles have one angled cover and one square cover, as with XL 312, it is possible to create a tee by changing the top or bottom cover so that covers match the profile of the trunking. For example:

- Upward tee – select XL 311 tee remove the angled bottom cover and replace with square cover.
- Downward tee – select XL 313 tee remove the square top cover and replace with angled cover.

Twin Plus aluminium is an extra deep cable management solution incorporating two large segregated high capacity compartments. Twin Plus is specifically designed for carrying large quantities of Cat 7a data cabling.



Product information

- 210 x 57mm
- 2 large permanent segregated compartments
- Each compartment can be subdivided
- Suitable for dado and skirting applications
- Bends angles and tees with a large bend radius
- Includes a range of clip-on fittings with built-in overlaps
- Fully compatible with Sterling flush power and data accessories
- All fittings are polycarbonate

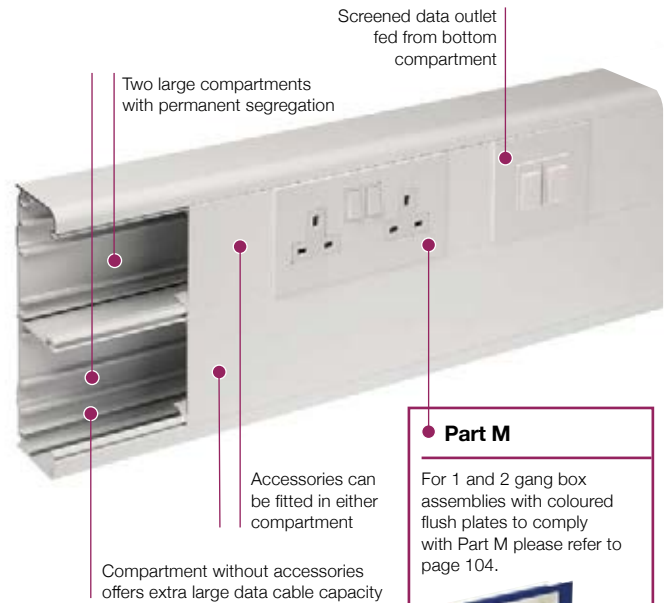
Data information

- Compliant up to Cat 7a#
- 50mm bend radius fittings
- Adjustable data box 32-47mm
- Screened divider and data boxes

Standard Colours	
WH	SG
WH: White	SG: Silver Grey

Colour code suffix: to indicate the finish you require, add the required colour code to the end of the product code.

Colour options: Optional colours and finishes are available but these are subject to minimum quantity orders and longer lead times. For more information contact the Technical Team on +44 (0)1424 856688.



Part M

For 1 and 2 gang box assemblies with coloured flush plates to comply with Part M please refer to page 104.

#Data fittings

For made to order fittings to meet Cat 7a requirements please contact our Technical Team on +44 (0)1424 856688

ALUMINIUM TRUNKING SYSTEMS

Basic components



Base unit

code	pack
EMTA60SG	1 x 3m



Main compartment cover (aluminium)

code	pack
LTL1SG	1 x 3m

Fittings (Polycarbonate)



Coupler

code	pack
EC60SG	1



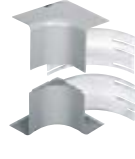
End cap

code	pack
EEC60SG	1



Internal bend cover

code	pack
EIBC60SG	1



Internal bend assembly

code	pack
EIB60SG	1



Standard external bend cover

code	pack
ESXBC60SG	1

End cap retaining screws

When installing end caps, additional retention can be achieved by using end cap retaining screws G1310 (pack 40).



Fittings (Polycarbonate)



External bend assembly - standard CAT 7A+
 code description pack
ESXB60SG 1
 Capacity reduced by 50%



External bend assembly - large CAT 7A+
 code description pack
EXB60SG 1



Flat angle cover
 code description pack
EFAC60SG 1



Flat angle assembly CAT 7A+
 code description pack
EFA60SG 1
 Covers and cable inserts in Polycarbonate



Flat tee assembly CAT 7A+
 code description pack
EFTA60SG 1
 Flat tees include covers, cable inserts in Polycarbonate with base in aluminium

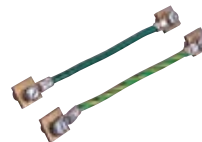
Components



Dividing fillet (PVC-U)
 code description pack
LDF1 8 x 3m



Earth bonding kit
 code description pack
LBT3 1



Bonding strap
 code description pack
LBS1 base to base 32 amp 5



Bonding strap
 code description pack
LBS2 cover to base 5

Coupler pin
 code description pack
LDP1 ø2.0 x 20mm 10
 To aid alignment of base profiles

Boxes and plates



RCD/MCB housing
 code description pack
EAHC1MWH PVC-U 1
 *Up to 4 modules can be accommodated
Note: RCDs and MCBs are not supplied by Marshall-Tufflex



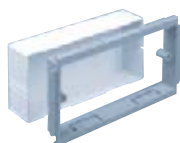
1 gang accessory box 30mm deep (polycarbonate)
 code description pack
ESSB1SG 1
ESSBA1WH 1



2 gang accessory box 30mm deep (polycarbonate)
 code description pack
ESSB2SG 1
ESSBA2WH 1



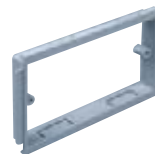
1 gang adjustable depth box CAT 7A+
 code depth pack
EAB1SG 32-40mm 1
 Fully adjustable to 47mm. Please see page 311 for more information.



2 gang adjustable depth box CAT 7A+
 code depth pack
EAB2SG 32 - 40mm 1
 Fully adjustable to 47mm. Please see page 311 for more information.



1 gang accessory plate CAT 7A+
 code description pack
ESSP1SG 2



2 gang accessory plate CAT 7A+
 code description pack
ESSP2SG 2

Screening

Conductive spray (CS) is unique to Marshall-Tufflex and is applied in the factory to assist with screening from electromagnetic interference to data and communications cabling within trunking systems. The coating is applied to a range of data boxes, covers, clip-on components and fabricated fittings.

WARNING: A CS coating is not suitable for low voltage circuits.



1 gang screened accessory box

...CAT 7A

code	depth	description	pack
ESSB1SWH*	30mm	PVC-U	20

2 gang screened accessory box

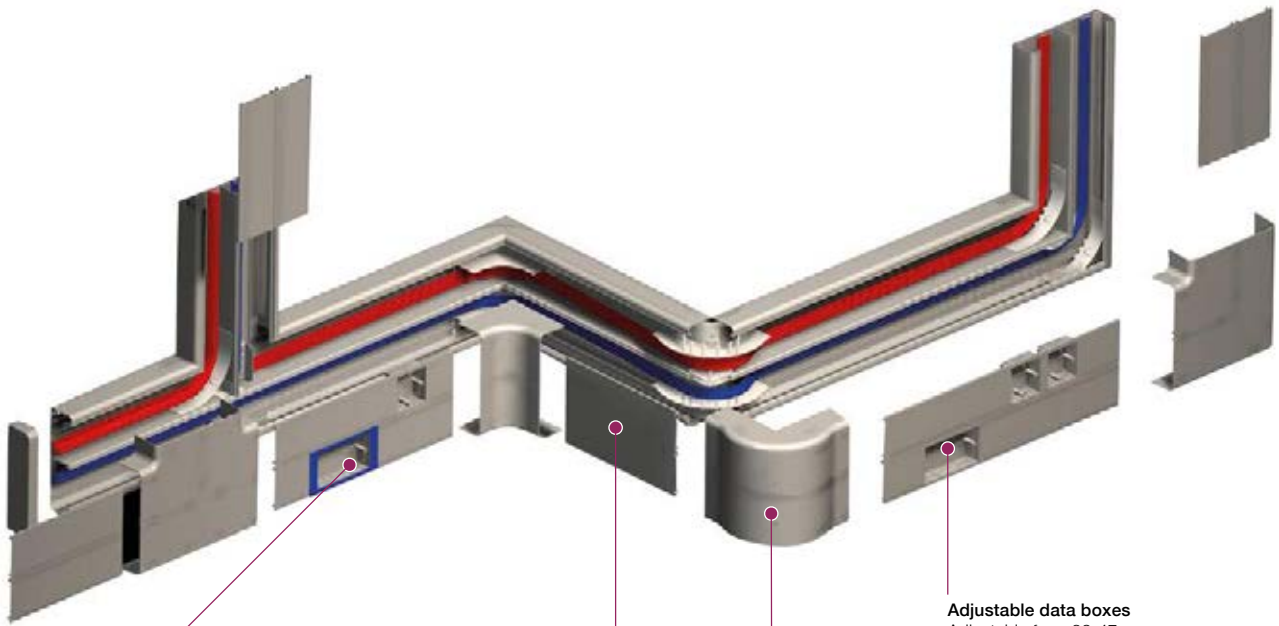
...CAT 7A

code	depth	description	pack
ESSB2SWH*	30mm	PVC-U	10

*Supplied complete with earth terminal

Twin Plus aluminium

Twin Plus aluminium is a high cable capacity trunking system with a variety of practical features for power and data installations



Part M boxes
Boxes available to meet Part M/DDA requirements for visual impairment

Two separate compartments
Two large compartments that can be sub-divided, each with their own cover

Polycarbonate flat tees and angles
With integral 50mm bend radius control

Adjustable data boxes
Adjustable from 32-47mm
Can be screened against EMI

Bench trunking aluminium is a robust angled trunking that can be mounted directly on to desks, work benches or fitted under shelving.



Product information

- 105 x 105mm
- Suitable for desk, bench or worktop applications
- Can be subdivided
- Fully compatible with Sterling flush power and data accessories

Data information

- Compliant up to Cat 7a#
- Adjustable data box 32-47mm
- Screened divider and data boxes



Can be subdivided

Standard Colours	
WH	SG
WH: White	SG: Silver Grey

Colour code suffix: to indicate the finish you require, add the required colour code to the end of the product code.

Colour options: Optional colours and finishes are available but these are subject to minimum quantity orders and longer lead times. For more information contact the Technical Team on +44 (0)1424 856688.

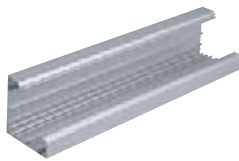
Part M

For 1 and 2 gang box assemblies with coloured flush plates to comply with Part M please refer to page 104.

#Data fittings

For made to order fittings to meet Cat 7a requirements please contact our Technical Team on +44 (0)1424 856688

Basic components



Base unit

code	size	pack
MBTAB105SG	105 x 105mm	1 x 3m



Cover

code	pack
MBTAL105SG	1 x 3m

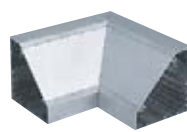
Fittings



End cap (steel)

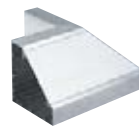
code	pack
BECA105SG	1

with fixing screws



Internal angle (aluminium)

code	pack
BIAA105SG	1



External angle (aluminium)

code	pack
BEAA105SG	1

Bench units



1 gang bench unit

code	description	pack
MBUA1SG	no socket	1
MBSA1SG	ESS1SG socket	1



2 gang bench unit

code	description	pack
MBUA2SG	no socket	1
MBSA2SG	ESS2SG socket	1



1 & 2 gang bench unit

code	description	pack
MBUA3SG	no sockets	1

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Technical Information

Components



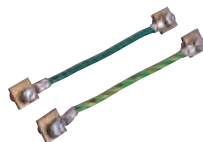
Dividing fillet (PVC-U)

code	description	pack
BDF105WH	4 x 3m	



Earth bonding kit

code	description	pack
LBT3		1



Bonding strap

code	description	pack
LBS1	base to base 32 amp	5



Bonding strap

code	description	pack
LBS2	cover to base	5

Coupler pin

code	description	pack
LDP1	ø2.0 x 20mm	10

To aid alignment of base profiles



Bonding strap

code	description	pack
LBS3	end cap to base	1

Boxes and plates



RCD/MCB housing

code	description	pack
EAHC1MWH	PVC-U	1

*Up to 4 modules can be accommodated
Note: RCDs and MCBs are not supplied by Marshall-Tufflex



1 gang accessory box 30mm deep (polycarbonate)

code	description	pack
ESSB1SG		1
ESSBA1WH		1



2 gang accessory box 30mm deep (polycarbonate)

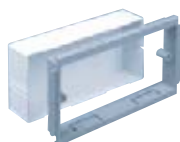
code	description	pack
ESSB2SG		1
ESSBA2WH		1



1 gang adjustable depth box

code	depth	pack
EAB1SG	32-40mm	1

Fully adjustable to 47mm. Please see page 311 for more information.



2 gang adjustable depth box

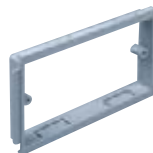
code	depth	pack
EAB2SG	32 - 40mm	1

Fully adjustable to 47mm. Please see page 311 for more information.



1 gang accessory plate

code	description	pack
ESSP1SG		2



2 gang accessory plate

code	description	pack
ESSP2SG		2

Screened boxes

Screening

Conductive spray (CS) is unique to Marshall-Tufflex and is applied in the factory to assist with screening from electromagnetic interference to data and communications cabling within trunking systems. The coating is applied to a range of data boxes, covers, clip-on components and fabricated fittings.

WARNING: A CS coating is not suitable for low voltage circuits.



1 gang screened accessory box

code	depth	description	pack
ESSB1SWH*	30mm	PVC-U	20

2 gang screened accessory box

code	depth	description	pack
ESSB2SWH*	30mm	PVC-U	10

*Supplied complete with earth terminal

STEEL TRUNKING SYSTEMS

Steel trunking systems incorporate clean lines with a functionality that provides greater mechanical strength combined with first class fire performance and excellent screening capability.

STEEL TRUNKING SYSTEMS

Steel has a mechanical strength that makes it a robust and durable option for public areas where there is a high footfall. Steel trunking provides specifiers, contractors and end-users with reliable, practical systems with hard-wearing, clean lines and all the advantages of inherent LSOH (low smoke zero halogen) and screening properties.

Our compact Steel trunking systems incorporate stylish clean lines with a functionality that provides greater mechanical strength combined with first class fire performance, excellent screening capability and increased capacity for power and data services.

- Ease of installation - our base unit has two standard mounting holes of 6.5mm every 500mm
- Multiple earthing possibilities in the trunking, at the multi-purpose clip and with the coupler set
- Base systems held by internal coupler sets with scraping cams
- Friction fit covers
- Simple to cut system – empty base with no rail to cut through
- Wide range of fittings and accessories

Standard colour

The standard colour for each Marshall-Tufflex range is shown within each relevant product information section, although solid white RAL 9010 is our most popular colour option for steel trunking.

The below table identifies the relevant RAL colour reference for all our standard colour options, dependent on product range. However we would be happy to quote for any other colour requirements, please see the Special colours section.

Material	Standard colour	Colour code suffix	RAL
Steel	White	WH	9010

Standard Colour
WH
WH: White RAL 9010

Please note: it is dependent on the product range as to which colour is available as standard.

Special colours

To help enhance the style of an installation, different variations of solid colour are sometimes required.

We can provide special colours in a painted solution dependent on your client's preference. All special colour requirements will need to be specified as a RAL colour.

Please note: these colours are made to order and therefore are subject to set up charges and a longer lead time. For more information and a quotation contact our Technical Team on +44 (0)1424 856688.



System 130

130 x 63mm

A compact rectangular dado trunking also suitable as a feeder trunking.

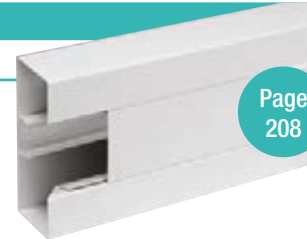


Page 206

System 170

170 x 63mm

A mid-size rectangular dado and skirting trunking also suitable as a feeder trunking.



Page 208

Information

Please note: our steel systems may be subject to lead times. For further information please call our Technical Team on +44 (0)1424 856688.

Note: you may use the rule on the left of this page to check profile sizes.



Environmental

- Steel is very friendly to the environment.
- Compared to other materials it requires relatively low amounts of energy to produce.
- The steel industry has made immense efforts to limit environmental pollution in the last decades.
- Energy consumption and carbon dioxide emissions have decreased by half of what they were in the 1960s.
- Dust emissions have been reduced by even more.



Recycling and sustainability

- 100% recyclable material.
- Can be recycled many times without loss of quality.
- The steel industry has been recycling for more than 150 years.
- Recycling one ton of steel saves 1,100 kilos of iron ore, 630 kilos of coal and 55 kilos of limestone.
- Structural steel typically contains around 95% recycled steel content.
- Recycling facilities are well established.



EMI protection

- Steel naturally has very strong EMI protective properties.



Fire performance

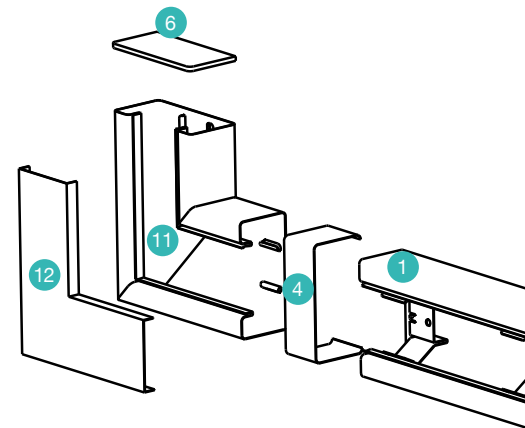
- Steel trunking systems meet accepted requirements for LSOH.
- Withstands high temperatures with a melting point of approximately 1370°C (2500°F).
- Type and thickness of any coating needs to be considered as this can affect fire performance.

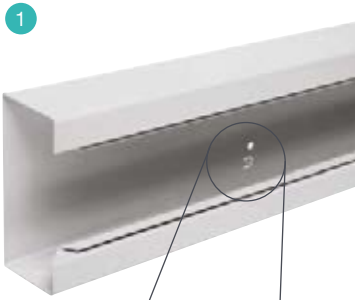
Our compact Steel trunking systems incorporate stylish clean lines with a functionality that provides greater mechanical strength combined with first class fire performance and excellent screening capability.

- Ease of installation - our base unit has two standard mounting holes of 6.5mm every 500mm
- Multiple earthing possibilities in the trunking, at the multi-purpose clip and with the coupler set
- Base systems held by internal coupler sets with scraping cams
- Friction fit covers
- Simple to cut system – empty base with no rail to cut through
- Wide range of fittings and accessories

Description	System 130	System 170
1 Base unit 2 metre	351215	351216
2 Cover 1 metre	351210	351210
Cover 1.5 metre	351230	351230
3 Dividing fillet*	351189	351189
4 External tolerance sleeve	351075	351076
5 External joint cover	351105	351106
6 End cap	351045	351046
7 Internal bend base	351275	351276
8 External bend base	351305	351306
9 External bend cover	351240	351240
10 Universal int/ext bend	351175	351176
11 Flat angle base up/down	351335	351336
12 Flat angle cover	351260	351260
13 Flat tee base – up/down	351395	351396
14 Internal coupling/bonding set	351525	351526
15 Universal multi-purpose clip	351319	351319

* Please note 3 Universal multi-purpose clips (see page 207) are needed per length of trunking, and 2 Universal multi-purpose clips are needed to hold each dividing fillet in place.



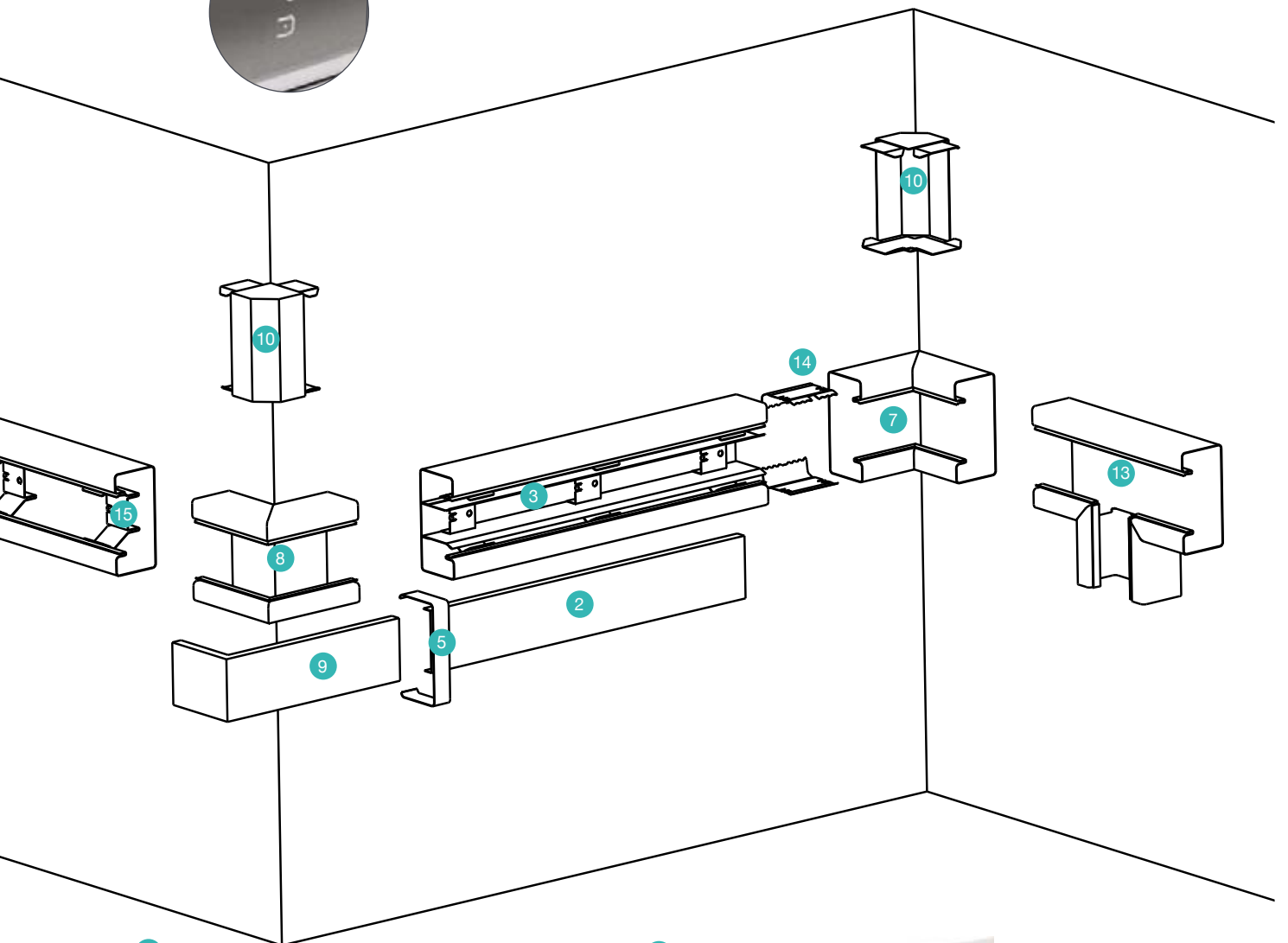


Two standard mounting holes of 6.5mm every 500mm for easy mounting.

Trunking bases have a 6.4mm earth tag at every 500mm.



Dividing fillets allow the systems to be subdivided into two or three compartments.



Multi-purpose clip allows separation of power and data cables - ensuring a 50mm distance between cables or can accommodate the dividing fillet.



Markings on the base help to position the wiring device boxes, measure and cut trunking to the desired length.

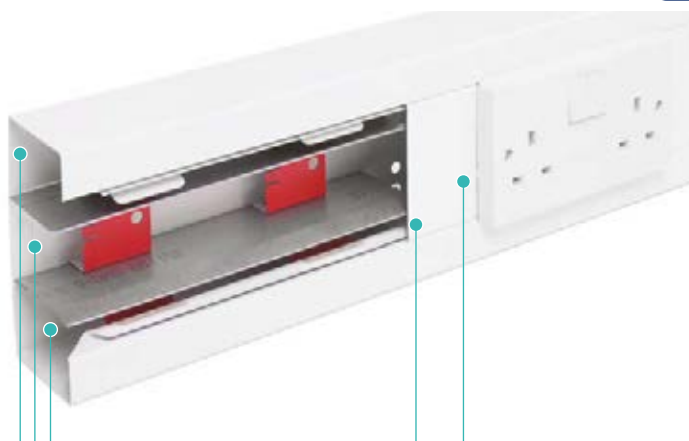
STEEL TRUNKING SYSTEMS

Steel System 130 is stylish compact pre-galvanised trunking system with extra depth and a resilient white powder-coat finish that helps to prevent smearing and marking.

COMPLIANT UP TO
CAT 7A

Product information

- 130 x 63mm
- 1 main compartment
- Can be subdivided
- Suitable for dado application
- Data compliant 25mm and 50mm bend radius
- Compliant up to Cat 7a



Can be subdivided into 3 compartments

Single cover

Friction-fit covers and bonding assemblies eliminate need for separate bonding straps

Standard Colour
WH
WH: White RAL 9010

Please note that our steel systems may be subject to lead times. For further information please call the Technical Team on +44 (0)1424 856688.

Basic components



Base unit

code	size	pack
351215	130 x 63mm	1 x 2m



Cover

code	length	pack
351210	1m	10 x 1m
351230	1.5m	10 x 1.5m

Fittings



External tolerance sleeve

code	width	pack
351075	40mm	5



External joint cover

code	width	pack
351105	25mm	5



End cap

code	pack
351045	5

For use with LBS3



Internal bend base

code	pack
351275	1



External bend base

code	pack
351305	1



External bend cover

code	pack
351240	1

Fittings



Universal int/ext bend		
code	size	pack
351175		1



Flat angle base – up/down		
code	size	pack
351335		1



Flat angle cover		
code	size	pack
351260		1



Flat tee base – up/down		
code	size	pack
351395		1

Components



Dividing fillets		
code	size	pack
351189	1m	10 x 1m



Universal multi-purpose clip		
code	size	pack
351319		1

Please note 3 Universal multi-purpose clips (see page 204) are needed per length of trunking, and 2 Universal multi-purpose clips are needed to hold each dividing fillet in place.



Internal coupling/bonding set		
code	size	pack
351525		10 sets

Please note each set consists of 2 pieces



End cap bonding strap		
code	size	pack
LBS3		1

Accessories

Touch-up paint
RAL 9010

code	size	pack
351029	25ml	1

Boxes



1 gang accessory box		
code	depth	pack
RSSB10WH	40mm	12



2 gang accessory box		
code	depth	pack
RSSB20WH	40mm	6



Cover spacer for accessory boxes		
code	width	pack
WG01085	50mm	10

Steel System 170 is a mid-sized pre-galvanised trunking system with extra depth and a resilient white powder-coat finish that helps to prevent smearing and marking.

COMPLIANT UP TO
CAT 7A

Product information

- 170 x 63mm
- 1 main compartment
- Can be subdivided
- Suitable for dado and skirting application
- Data compliant 25mm and 50mm bend radius
- Compliant up to Cat 7a



Can be subdivided into 3 compartments

Single cover

Friction-fit covers and bonding assemblies eliminate need for separate bonding straps

Standard Colour
WH
WH: White RAL 9010

Please note that our steel systems may be subject to lead times. For further information please call the Technical Team on +44 (0)1424 856688.



Base unit

code	size	pack
351216	170 x 63mm	1 x 2m



Cover

code	length	pack
351210	1m	10 x 1m
351230	1.5m	10 x 1.5m

Basic components

Fittings



External tolerance sleeve

code	width	pack
351076	40mm	5



External joint cover

code	width	pack
351106	25mm	5



End cap

code	pack
351046	5

For use with LBS3



Internal bend base

code	pack
351276	1



External bend base

code	pack
351306	1



External bend cover

code	pack
351240	1

Fittings



Universal int/ext bend		
code	size	pack
351176		1



Flat angle base – up/down		
code	size	pack
351336		1



Flat angle cover		
code	size	pack
351260		1



Flat tee base – up/down		
code	size	pack
351396		1

Components



Dividing fillets		
code	size	pack
351189	1m	10 x 1m



Universal multi-purpose clip		
code	size	pack
351319		1

Please note 3 Universal multi-purpose clips (see page 204) are needed per length of trunking, and 2 Universal multi-purpose clips are needed to hold each dividing fillet in place.



Internal coupling/bonding set		
code	size	pack
351526		10 sets

Please note each set consists of 2 pieces



End cap bonding strap		
code	size	pack
LBS3		1

Accessories

Touch-up paint RAL 9010		
code	size	pack
351029	25ml	1

Boxes



1 gang accessory box		
code	depth	pack
RSSB10WH	40mm	12



2 gang accessory box		
code	depth	pack
RSSB20WH	40mm	6



Cover spacer for accessory boxes		
code	width	pack
WG01085	50mm	10

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 and the team's expertise enables us to provide quotations for specialist solutions. We aim to complete all standard quotes within 1 working day, although more complex quotations such as 'take offs' can take longer.



Contact our Technical Services team on +44 (0)1424 856688 or email technical@marshall-tufflex.com

Award winning customer service

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

In 2017 Marshall-Tufflex were proud to be shortlisted in four categories at the prestigious Electrical Wholesaler Awards including Best Customer Service, Best Overall Supplier and Best Sales Representative.

Contact our Customer Services team on +44 (0)1424 856600 or email sales@marshall-tufflex.com



BIM (Building Information Modelling)

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 or www.bimstore.co.uk



Same day collection*



Our popular same day collection service gives our customers an unrivalled two-hour turnaround on product orders, allowing them to collect from our dedicated collection points in Manchester and London. Orders can also be collected next day from our Hastings depot.

Manchester

Europa Trading Estate, Stoneclough Road, Radcliffe, Manchester M26 1GG

London

101c Blackhorse Lane, London E17 6DJ

- Orders can be collected two hours after order placement from Manchester and London.
- Orders placed by 3.30pm will be available for collection until 5.30pm.
- Orders received by 5pm will be ready for collection from 10am the following day.

Hastings

55-65 Castleham Road, St Leonards-on-Sea TN38 9NU

- Orders placed by 12.30pm can be collected from 10am the next day from our Hastings depot.

* Subject to stock availability

For details regarding collections, please contact our Customer Services team on +44 (0)1424 856600 or email sales@marshall-tufflex.com



Follow us on Twitter @MTufflex

CONDUIT SYSTEMS

Round and oval PVC-U conduit systems and fittings and MT Supertube, a high impact alternative to steel conduit suitable for installation where LSOH and EMC are a requirement.

Round conduit made from super high impact PVC-U.

Product information

Conduit

- Light or heavy gauge options
- Meet requirements for BS 4607, BS EN 61386-1:2008, BS EN 61386-21:2004+A11:2010 and BS EN 61386-25:2011 where applicable

Boxes

- Provision for MET1 brass earth terminal
- All boxes have threaded brass inserts



Standard Colours	
WH	BK
WH: White BK: Black	

Light & heavy gauge



Light gauge

code	O.D	pack
CR2WH	20mm	30 x 3m
CR3WH	25mm	30 x 3m
CR4WH	32mm	10 x 3m
CR9WH	38mm	10 x 3m
CR10WH	50mm	10 x 3m

For black replace the last two letters of the code with BK

Heavy gauge

code	O.D	pack
CR6WH	20mm	30 x 3m
CR7WH	25mm	30 x 3m
CR8WH	32mm	10 x 3m
CR11WH	38mm	10 x 3m
CR12WH	50mm	10 x 3m

For black replace the last two letters of the code with BK

See page 237 for Conduit Fire Clips

Round conduit fittings



Expansion couplers

code	size	pack
MEC2WH	20mm	25
MEC3WH	25mm	10

Should be fitted over a clear gap between two round rigid conduits

Straight couplers

code	size	pack
MC2WH	20mm	100
MC3WH	25mm	50
MC4WH	32mm	25
MC5WH	38mm	10
MC6WH	50mm	10

Reducers

code	size	pack
MR2WH	25 x 20mm	50

Plastic plugs – red only (for heavy gauge conduit)

code	size	pack
MPP2	20mm	100
MPP3	25mm	100
MPP4	32mm	50



Inspection elbows

code	size	pack
MIE2WH	20mm	20

For 25mm size use Inspection Bend

Inspection bends

code	size	pack
MIB2WH	20mm	20
MIB3WH	25mm	20

Inspection tees

code	size	pack
MIT2WH	20mm	20
MIT3WH	25mm	20

Plain bends

code	size	pack
MNB2WH	20mm	25
MNB3WH	25mm	10
MNB4WH*	32mm	20
MNB5WH*	38mm	5
MNB6WH*	50mm	2

*Couplers required



Adaptors (Female thread)

code	size	pack
MAB2WH	20mm	100
MAB3WH	25mm	50
MAB4WH	32mm	25
MAB5WH	38mm	15
MAB6WH	50mm	10



Adaptors (Male thread)

code	size	pack
MA7WH	20mm	100
MA8WH	25mm	50



Adaptors (Clip-in spout)

code	size	pack
MCA2WH*	20mm	100
MCA3WH	25mm	50

* Not available in black



Male bushes

code	size	pack
MMB2WH	20mm	100
MMB3WH	25mm	100
MMB4WH	32mm	25
MMB5WH	38mm	10
MMB6WH	50mm	10



Threaded lockrings

code	size	pack
MLR2WH	20mm	100
MLR3WH	25mm	50



Round 'U' clips

code	size	pack
MMC2WH	20mm	100
MMC3WH	25mm	50
MMC4WH	32mm	25



Strap saddles

code	size	pack
MSS2WH	20mm	100
MSS3WH	25mm	100
MSS4WH	32mm	50
MSS5WH	38mm	25
MSS6WH	50mm	25



Spacer bar saddles

code	size	pack
MSB2WH	20mm	100
MSB3WH	25mm	100
MSB4WH	32mm	50
MSB5WH	38mm	10
MSB6WH	50mm	10



Spacer bar snap saddle

code	size	pack
MSBS2WH	20mm	100



Threaded cable gland

code	size	cable size	pack
MCG2WH	20mm	ø7-10.5	100
MCG2AWH	20mm	ø4-7	25
MCG3WH	25mm	ø8-13	25
MCG4WH	32mm	ø18-24	10



Locknuts (for use with cable glands)

code	size	pack
MLN2WH	20mm	100
MLN3WH	25mm	25
MLN4WH	32mm	10



Plain body cable gland

code	conduit	cable size	pack
MCGP2WH	20mm	ø7-10.5	25
MCGP2AWH	20mm	ø4-7	25



Conduit to mini adaptor

code	size	pack
TAC1/2WH	MMT1/20mm round	20



Loop-in boxes

code	size	pack
0MRB12WH	plain	20
2MRB12WH	4 x ø20mm KO	20
3MRB12WH	2 x ø25mm KO	20



Terminal

code	size	pack
2MRB2WH	20mm	20
3MRB2WH	25mm	20



Through

code	size	pack
2MRB3WH	20mm	20
3MRB3WH	25mm	20

Circular boxes

PVC-U plain bored circular boxes are suitable for suspending loads of up to 3kg centrally at 60°C maximum. Fixing centres are at 50.8mm and fitted with M4 brass inserts.



Angle

code	size	pack
2MRB4WH	20mm	20
3MRB4WH	25mm	20



Tee

code	size	pack
2MRB5WH	20mm	20
3MRB5WH	25mm	20



4-way

code	size	pack
2MRB6WH	20mm	20
3MRB6WH	25mm	10



Branch 2-way or U

code	size	pack
2MRB13WH	20mm	20
3MRB13WH	25mm	20



Branch 3-way or Y

code	size	pack
2MRB14WH	20mm	20
3MRB14WH	25mm	20



Twin through way or H

code	size	pack
2MRB15WH	20mm	20
3MRB15WH	25mm	10



Back outlet

code	size	pack
2MRB1WH	20mm	20
3MRB1WH	25mm	10



Terminal/back outlet

code	size	pack
2MRB7WH	20mm	20
3MRB7WH	25mm	10



Through/back outlet

code	size	pack
2MRB8WH	20mm	20



Angle/back outlet

code	size	pack
2MRB9WH	20mm	20
3MRB9WH	25mm	10



Tee/back outlet

code	size	pack
2MRB10WH	20mm	20



4-way/back outlet

code	size	pack
2MRB11WH	20mm	20



Circular rubber gasket

code	size	pack
MRG1	66mm diam	100

Black only



Circular lids

code	size	pack
MCL1WH	flush fitting (65mm diam)	100
MCL2WH	overlapping (85mm diam)	100



Brass earthing terminal

code	rating	pack
MET1	15Amp	100



Circular extension rings

code	size	pack
MER1WH	12mm	20
MER2WH	20mm	20
MER3WH	25mm	20
MER4WH*	32mm	20
MER5WH*	38mm	10

Circular Extension Rings have two lugs fitted with M4 brass inserts and two plain bored lugs

*Not available in black

Square adaptable boxes



Terminal

code	size	pack
4SJB1WH	32mm	1
5SJB1WH*	38mm	1

*Not available in black



Through

code	size	pack
4SJB2WH	32mm	1
5SJB2WH*	38mm	1

*Not available in black



Angle

code	size	pack
4SJB3WH	32mm	1
5SJB3WH	38mm	1



Tee

code	size	pack
4SJB4WH	32mm	1
5SJB4WH	38mm	1



Four-way

code	size	pack
4SJB5WH	32mm	1
5SJB5WH	38mm	1

Square boxes

PVC-U square adaptable boxes have 32mm or 38mm entries. Boxes have a 75 x 75 x 60mm internal size.



***Conduit solvent cement**

code	pack
MSC	1x250ml

*Child resistant lid

HEALTH & SAFETY DATA SHEETS ARE AVAILABLE FROM www.marshall-tufflex.com AND IN THE INTEREST OF SAFETY, THE SOLVENT CEMENTS ARE REGISTERED WITH THE NATIONAL POISON INFORMATION SERVICE

Accessories



Bending spring heavy gauge (green end)

code	conduit size	pack
MBSH2	20mm	1
MBSH3	25mm	1
MBSH4	32mm	1
MBSH5	38mm	1
MBSH6	50mm	1



Bending spring light gauge (white end)

code	conduit size	pack
MBSL2	20mm	1
MBSL3	25mm	1
MBSL4	32mm	1



Nylon draw tape

code	pack
MDT10	1 x 10m
MDT20	1 x 20m
MDT30	1 x 30m



Cheese head screws

code	pack
M4 X 8MM	200
M4 X 12MM	200
M4 X 20MM	100
M4 X 25MM	100



Channel (white only)

code	dimensions	pack
ECC21WH	13 x 8mm	50 x 2m
ECC22WH	25 x 9mm	50 x 2m
ECC23WH	38 x 9mm	50 x 2m



Cable protection guard (black only)

code	dimensions	pack
MTCG19BK	19x19mm	10x3m
MTCG25BK	25x25mm	10x3m
MTCG40BK	40x40mm	10x3m
MTCG55BK	55x55mm	10x3m
MTCG80BK	80x80mm	5x3m



PVC pipe cutter

code	pack
MTPC42	1

For further details see page 222

Corrugated conduit



Corrugated conduit (polypropylene)

code	O.D	pack
CC2000WH	20mm	1 x 50m
CC2500WH	25mm	1 x 50m



Straight adaptors (nylon)

code	size	pack
CC2010WH	20mm	25
CC2510WH	25mm	25

Surface mounted



1 gang – square corners

code	depth	pack
*MSSB10KWH	32mm	20
MSSB17KWH	44mm	10



2 gang – square corners

code	depth	pack
*MSSB11KWH	32mm	10
MSSB23KWH	44mm	5



1 gang – radius corners

code	depth	pack
MSSB19KWH	32mm	20
MSSB40KWH	44mm	10



2 gang – radius corners

code	depth	pack
MSSB21KWH	32mm	10
MSSB41KWH	44mm	5

*All standard surface boxes have 20mm KOs except MSSB10K and MSSB11K which have 20mm pre-punched holes

Flush mounted



1 gang – adjustable lug

code	depth	pack
MSSB1WH	35mm	12
MSSB47WH	47mm	10

Entries: 2 x ø20mm on each of 4 sides (MSSB1 and MSSB47)



2 gang – adjustable lug

code	depth	pack
MSSB3WH	35mm	6

Entries: 4 x ø20mm on horizontal sides, 2 x ø20mm on vertical sides

Surface and flush mounted boxes

Surface mount boxes

1 gang = 87 x 87mm with 60.3 fixing centres
2 gang = 147 x 87mm with 120.6 fixing centres

Flush mount boxes

1 gang = 74 x 74mm with 60.3 fixing centres
2 gang = 134 x 74mm with 120.6 fixing centres

Cover plates



1 gang – flat

code	depth	pack
MSCP2WH	2mm	20

Size: 86 x 86mm O/A



1 gang – raised

code	depth	pack
MSSP10WH	9mm	10

Size: 85 x 85mm O/A



Flush mounted 1 gang cover – clip-on4

code	depth	pack
MSCP1WH	5.3mm	20

Size: 78 x 78mm O/A



2 gang – flat

code	depth	pack
MSCP3WH	2mm	10

Size: 86 x 146mm O/A



2 gang – raised

code	depth	pack
MSSP20WH	9mm	2

Size: 85 x 145mm O/A



Brass earthing terminal

code	rating	pack
MET1	15Amp	100

Please note our cover plates are only available in white as standard

PVC-U oval conduit and fittings are typically used to protect cables buried in shallow voids or chased into walls. Oval conduit is made from super high impact PVC-U.

Product information

- Low depth conduit
- PVC-U conduit is a recyclable material
- PVC-U is a non-flame propagating material
- The range exceeds BS and EN standards

Standard Colour
WH
WH: White



Oval conduit and fittings



Oval conduit

code	O.D	dimensions	pack
EC016WH	13mm	13 x 8mm	50 x 3m
EC017WH	16mm	16 x 10mm	50 x 3m
EC018WH	20mm	23 x 11mm	50 x 3m
EC019WH	25mm	29 x 11mm	20 x 3m
EC020WH	32mm	32 x 11mm	20 x 3m

Oval clips

code	size	pack
MOC1WH	13mm	100
MOC2WH	16mm	100
MOC3WH	20mm	100
MOC4WH	25mm	100
MOC5WH	32mm	100

Oval strap saddle

code	size	pack
MOCSS20WH	20mm	50
MOCSS25WH	25mm	50



Oval bush

code	size	pack
MOCB20WH	20mm	25
MOCB25WH	25mm	25

Oval connector

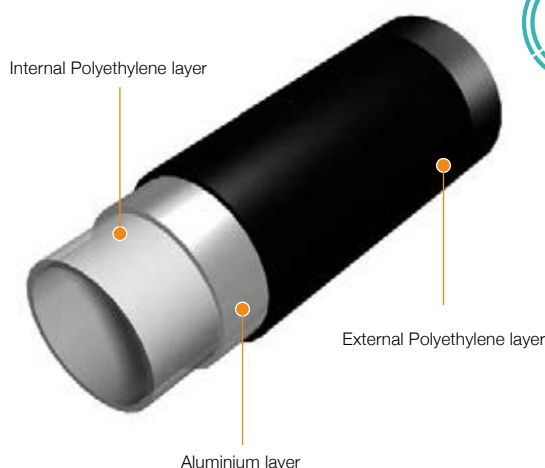
code	size	pack
MOCC20WH	20mm	25
MOCC25WH	25mm	25

Oval to round adaptors

code	size	pack
MOR2WH	20mm oval/ ø20mm	50

CONDUIT SYSTEMS

MT Supertube is a unique, LSOH, 3-layer heavy gauge conduit comprising polyethylene internal and external layers over a continuous aluminium tube that provides additional mechanical strength. MT Supertube has excellent EMI screening performance and is a practical and cost-saving alternative to standard galvanised conduits.



Product information

- Ø20mm and Ø25mm
- LSOH conduit
- Excellent screening performance
- Suitable for rail, marine and tunnel applications
- ZERO WASTE: available in continuous lengths of up to 100 metres, meaning fewer fittings per installation
- Longer lengths also prevent ingress of water
- Extra security from data interference
- Suitable for in-screed applications
- Withstands temperatures from -40°C to +120°C
- Nail penetration: MT Supertube complies with requirements for BS 7671, BS EN 61386-1:2008
- BS 8436 is specification for 300/500V screened electric cable

Standard Colours	
WH	BK
WH: White BK: Black	

Colour code suffix: to indicate the finish you require, add the required colour code to the end of the product code. Other colour options are available but may be subject to longer lead times and minimum order quantities. For further information contact the Technical Team on +44 (0)1424 856688.

MT SUPERTUBE is a time saving alternative to galvanised steel conduit.

See page 221 for the MT Supertube cost and labour saving comparison.

FIRE SECURITY

MT Supertube FR Plus

MT Supertube is available to meet the requirements of LUL (London Underground Ltd) engineering standard 2-01001-002:issue A1, material classification EQ/1 (equipment/limited and dispersed).

*Please note MT Supertube FR Plus is not a standard stock item and therefore lead times and minimum order quantities will apply.

Coils and lengths



MT Supertube conduit

code	size	pack
22003WH	20mm	30 x 3m
22503WH	25mm	30 x 3m

MT Supertube coils

code	size	pack
22010BK	20mm	1 x 100m
22505BK	25mm	1 x 50m

MT Supertube FR Plus conduit

code	size	pack
220FR03WH*	20mm	30 x 3m
225FR03WH*	25mm	30 x 3m

MT Supertube FR Plus coils

code	size	pack
220FR10BK*	20mm	1 x 100m
225FR05BK*	25mm	1 x 50m

Tools



Tube cutter

code	size	pack
20001	20-25mm	1

Stripping tool (pre-set)

code	size	pack
20002	20-25mm	1

Compact tube bender

code	size	pack
20003	20-25mm	1

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Technical Information

Fittings (metal)



Female adaptor with brass bush

code	size	pack
22077BK	20mm	10
22577BK	25mm	10



Male adaptor thread insert

code	size	pack
22078MF	20mm	10
22578MF	25mm	10



Coupler

code	size	pack
22079BK	20mm	10
22579BK	25mm	10

Fittings (polycarbonate)



Spacer bar snap saddle LSOH

code	size	pack
22051BK	20mm	100



Spacer bar saddle LSOH

code	size	pack
22552BK	25mm	100



U-clip LSOH

code	size	pack
22053BK	20mm	100
22553BK	25mm	50

Boxes (metal)



Terminal box

code	size	pack
22072BK	20mm	10
22572BK	25mm	10



Tee box

code	size	pack
22075BK	20mm	10
22575BK	25mm	10



Through box

code	size	pack
22073BK	20mm	10
22573BK	25mm	10



Angle box

code	size	pack
22074BK	20mm	10
22574BK	25mm	10



Flush lid

code	pack
20007BK	1

MT Supertube EMI protection boxes and fittings

- Provision to accept a 4mm earthing screw
- All boxes supplied with conduit retaining screw
- All boxes are designed to comply with the requirements of BS 7671
- Taper push-fit conduit entry
- Fittings are available in black and white

CONDUIT SYSTEMS





Male adaptor

code	size	pack
22042BK	20mm	25
22542BK	25mm	25



Coupler

code	size	pack
22044BK	20mm	100
22544BK	25mm	50



Spacer bar snap saddle

code	size	pack
22051BK	20mm	100



Spacer bar saddle

code	size	pack
22552BK	25mm	100



U-clip

code	size	pack
22053BK	20mm	100
22553BK	25mm	50



Inspection elbow

code	size	pack
22045BK	20mm	20



Inspection bend

code	size	pack
22546BK	25mm	20



Inspection tee

code	size	pack
22047BK	20mm	20
22547BK	25mm	20



Sealant

code	size	pack
20006	30ml	1x30ml

HEALTH & SAFETY DATA SHEETS ARE AVAILABLE FROM www.marshall-tufflex.com AND IN THE INTEREST OF SAFETY, THE SOLVENT CEMENTS ARE REGISTERED WITH THE NATIONAL POISON INFORMATION SERVICE



Loop-in box

code	size	pack
22011BK	2 x ø20mm KO	20
22511BK	2 x ø25mm KO	20



Terminal box

code	size	pack
22012BK	20mm	20
22512BK	25mm	20



Through box

code	size	pack
22013BK	20mm	20
22513BK	25mm	20



Angle box

code	size	pack
22014BK	20mm	20
22514BK	25mm	20



Tee box

code	size	pack
22015BK	20mm	20
22515BK	25mm	20



4-way box

code	size	pack
22016BK	20mm	20
22516BK	25mm	10



Flush lid

code	pack
20005BK	100

MT Supertube LSOH boxes and fittings

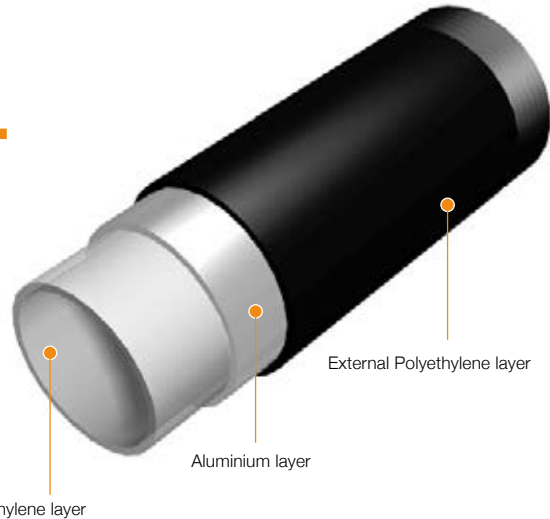
- Suitable for suspending a load of up to 3kg centrally at 60°C maximum
- Fixing centres 50.8mm fitted with M4 brass inserts
- Provision for brass earthing terminals
- Boxes comply with the requirements of BS 7671 Wiring Regulations and BS 4607 where applicable
- Fittings are available in black and white

MT Supertube

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A TIME SAVING ALTERNATIVE TO GALVANISED STEEL CONDUIT

MT Supertube has a three layer Low Smoke Zero Halogen (LSOH) polyethylene and aluminium construction offering extremely good EMI cable protection and resistance to extremes of temperature and chemicals. It is lightweight yet has the strength of steel meaning it's quick to install and simple to store and carry on site.



- Combines the strength of metal with the flexibility of PVC-U conduit
- Fast installation
- Supplied in coils for easy movement around site without the need for hoists
- Assists in conforming to the EMC directive in regard to EMI shielding
- Fewer in line fittings required and minimal wastage
- Forms easily by hand and to a required radius when utilising the tube bender
- Can be buried in concrete and detected by a cat detector
- Useful as vacuum tube for 'aspirated' smoke detection (Heathrow)
- Maintenance free



Contractor cost & labour saving example *(based on contractor purchase price)*

Costs calculated on using 100m of 20mm conduit with 8 off 90° bends and estimated manpower costs of £30 per hour.

Galvanised steel

Material cost @ £2.20 per metre + fittings = £230
 Labour @ 30mins per metre = 2 metres per hour
 50 hours @ £30 = £1500
 Galvanised steel overall costs = £1730

MT Supertube

Material cost @ £2.75 per metre + fittings = £288.71
 Labour @ 10mins per metre = 6 metres per hour
 16.67 hours @ £30 = £500
 MT Supertube overall costs = £788.71

The savings on this job amount to £941.29

54% cheaper than galvanised steel

It is also possible to reduce overall project costs by using MT Supertube as it can be bent into position by hand therefore reducing the need for as many fittings.

See page 218 for product ordering information.

CONDUIT SYSTEMS

Cable Protection Guard

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PROTECTION FOR CABLES ON TELEGRAPH POLES AND BRICKWORK



Cable protection guard is the perfect solution to protect cables from impact and damage on telegraph poles and exposed brickwork. Highly shock-resistant but light in weight, it is easy to transport and install thanks to pre-drilled screw holes.

- Manufactured in high quality PVC-U for extra impact protection
- Supplied with pre-drilled screw holes for easy installation
- Lightweight and easily transported
- Available in 5 different diameter sizes

Cable protection guard (black only)

code	dimensions	pack
MTCG19BK	19 x 19mm	10x3m
MTCG25BK	25 x 25mm	10x3m
MTCG40BK	40 x 40mm	10x3m
MTCG55BK	55 x 55mm	10x3m
MTCG80BK	80 x 80mm	5x3m

ACCESSORY BOXES AND ENCLOSURES

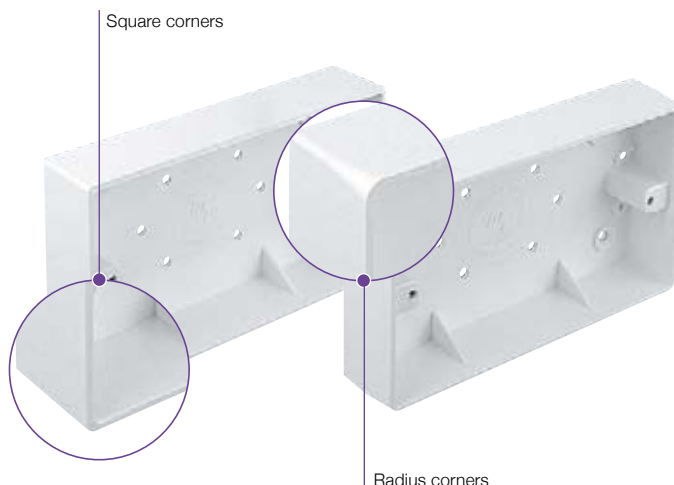
Surface and flush accessory boxes and enclosures are manufactured from super high impact PVC-U.



Standard fixed accessory boxes without knockouts for surface installation.

Product information

- 1 gang 87 x 87mm (external dimension)
- 2 gang 87 x 147mm
- M3.5 brass inserts
- Can be cut and drilled without the risk of shattering
- Boxes comply with BS 4662:2006+A1:2009
- Radius and square corner variants



Standard Colour
WH
WH: White

Square corners



1 gang accessory box square corners

code	depth	pack
MSSB10WH	32mm	20
MSSB17WH	44mm	10



2 gang accessory box square corners

code	depth	pack
MSSB11WH	32mm	10
MSSB23WH	44mm	5

Radius corners



1 gang accessory box radius corners

code	depth	pack
MSSB26WH	19mm	20
MSSB19WH	32mm	20
MSSB40WH	44mm	10



2 gang accessory box radius corners

code	depth	pack
MSSB21WH	32mm	10
MSSB41WH	44mm	5



Dual gang accessory box

code	depth	pack
MSSB81WH	32mm	10

Cover plates



Cover plate – flat

code	description	pack
MSCP2WH	1 gang	20
MSCP3WH	2 gang	10

Depth 2mm



Raised cover plate – raised

code	description	pack
MSSP10WH	1 gang	10
MSSP20WH	2 gang	2

Depth 9mm

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Technical Information

Flush mounted boxes for use within stud walls for alleviating the necessity of using noggins. Boxes feature a wide securing flange around the outer rim.

Product information

- Wide securing flange to prevent box passing through cavity
- Swivelling snap out clamps will tightly grip a range of standard thickness building boards
- Earth terminal provision incorporated
- British Patent Application No. 8208041

Snap out clamps with size identification by colour:

Wall thickness adjustment	Clamp colour
1 - 9mm	Grey
6 - 14mm	White
18 - 25mm	Green
9 - 26mm	Black



Wide securing flanges

Standard Colour
WH
WH: White

Standard



1 gang

34mm internal depth

code	adjustment	pack
MDLB3WH	1-9mm	20
MDLB1WH	6-14mm	20
MDLB7WH	18-25mm	20

2 gang

34mm internal depth

code	adjustment	pack
MDLB4WH	1-9mm	10
MDLB2WH	6-14mm	10
MDLB8WH	18-25mm	10

Dual gang

34mm internal depth

code	adjustment	pack
MDLB20WH	1-9mm	5
MDLB22WH	6-14mm	5
MDLB24WH	18-25mm	5

Shallow



1 gang

25mm internal depth

code	adjustment	pack
MDLB13WH	1-9mm	10

2 gang

25mm internal depth

code	adjustment	pack
MDLB14WH	1-9mm	10

FIRE SECURITY

Intumescent fire barrier pads

Fire Barrier Pads are now a requirement of Document B of the UK Building Regulations. For information on Fire Barrier Pads please refer to page 235 in our Fire and Security section or contact our Technical Team on +44 (0)1424 856688.



Deep



1 gang

46mm internal depth

code	adjustment	pack
MDLB29WH	9-26mm	10

2 gang

46mm internal depth

code	adjustment	pack
MDLB30WH	9-26mm	5

Accessories



Brass earthing terminal

code	Rating	pack
MET1	15 Amp	100



Acoustic hoods

code	description	pack
MDLA1	1 gang	10
MDLA2	2 gang	10

Circular flush mounted boxes

Product information

- Wide securing flange to prevent box passing through cavity
- For board thickness from 9 to 32mm measured from the face of the board
- Swivelling snap out clamps fix the box firmly into position (screws provided)

Standard Colour
WH
WH: White

Colour options: Other colours are available but may be subject to minimum order quantities and longer lead times. For further information please contact the Technical Team on +44 (0)1424 856688.



Wide securing flanges

Dry lining boxes



Double back entry - loop in 34mm internal depth (red clamps)

code	fix. centre	pack
MDCRB2WH	50.8/60.3mm	10

Ø cut out = 70mm

FIRE SECURITY

Intumescent fire barrier pads

Fire Barrier Pads are now a requirement of Document B of the UK Building Regulations. For information on Fire Barrier Pads please refer to page 235 in our Fire and Security section or contact our Technical Team on +44 (0)1424 856688.



Moulded enclosures

Product information

- Degree of protection IP66.
- Raised pads in base of box to allow accessory mounting nuts to be recessed.
- Silicon rubber lid seal supplied as standard.
- Brass inserts M3.5 with stainless countersunk fixing screws.
- Suitable for drilling or cutting.
- Raised flat lid for strength.



Moulded enclosure unit (Adaptable box)

code	external size	pack
MTAB75AWH	81 x 81 x 67mm	10
MTAB100AWH	106 x 106 x 67mm	10
MTAB150BWH	155 x 155 x 92mm	4

Also available in black

Earth rod box

Product information

- Protects connection to earth rod.
- Earth rod/cable entry ø7-10.5mm.



Earth rod box Green only

code	external size	pack
MECB75GN	81 x 81 x 67mm	10
MECB100GN	106 x 106 x 67mm	10

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Technical
Information

POWER, VOICE AND DATA ACCESSORIES FOR TRUNKING

A range of flush and surface accessories that are compatible with Marshall-Tufflex trunking systems.

POWER, VOICE AND DATA ACCESSORIES FOR TRUNKING

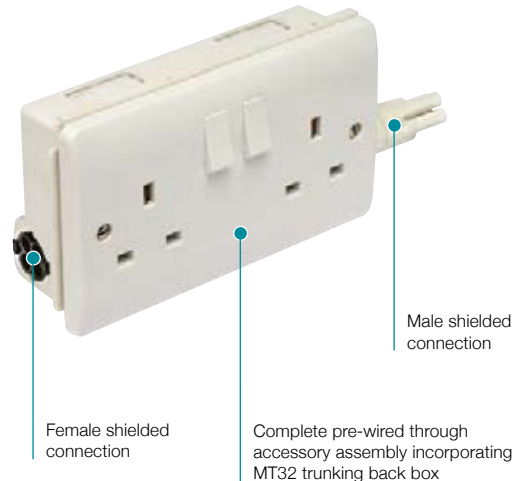
MT32 PREFABRICATED AND MODULAR WIRING SYSTEMS



MT32 prefabricated and modular wiring systems are designed to take all the hard work out of electrical installations by providing the complete pre-wired, pre-tested, plug and play electrical wiring systems.

MT32 is a modular plug and play system designed to simplify electrical installation of power within perimeter trunking and underfloor installations. The system provides fast, safe, labour and cost saving installations that comply with BS 8488:2009 for prefabricated wiring systems intended for permanent connection in fixed installation.

The range of pre-wired, pre-tested and assembled interconnecting leads and accessory modules incorporate the Marshall-Tufflex compact 32Amp connector.



Product information

- 32Amp rated system
- Available as LSOH 3 core 2.5mm² flex system specification that meets the requirement for high integrity earthing
- Suitable for ring and radial circuits
- Circuit testing only required on completion of final layout
- Reduced installation time – no cutting required on site
- Reduced health & safety risk

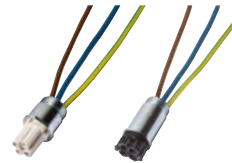
Pre-wired accessories



Extension cable 2.5mm ²		
code	length	pack
AA3330	0.5m	1
AA3332	1.5m	1
AA3333	3.0m	1
AA3335	5.0m	1



Connection cable free end 2.5mm ²		
code	length	pack
AA3732 (male)	1.5m	1
AA3532 (female)	1.5m	1



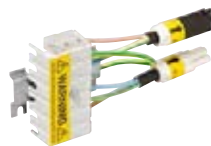
Male and female adaptors 2.5mm ²		
code	length	pack
AA7211 (male)	220mm	1
AA7212 (female)	220mm	1

For adapting distribution board to modular system
Note: to fit 20mm knockout



Adaptor cables 2.5mm ²		
code	length	pack
AA8901 (male/male)	0.5m	1
AA8902 (female/female)	0.5m	1

Required for ring circuit



Terminal block 2.5mm ²		
code	size	pack
AA6510 (female/male)	2.5mm ²	1



Pre-wired accessory 2.5mm ²		
code	size	pack
AA6221	2 gang	1

MT32 Connectors

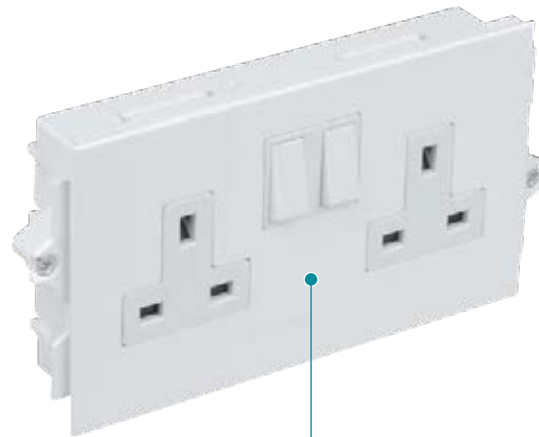
The description 'male' (white) and 'female' (black) does not refer to the connector pins but describes and identifies the moulded connector housings.

For further information please contact our Technical Team on +44 (0)1424 856688.

A range of power accessories that comply with BS 1363.

Product information

- Supplied as complete modules including back boxes
- Suitable for all PVC-U and aluminium dado and skirting trunking (excluding Sovereign Plus, Maxi, Sceptre and Series R)
- Suitable for bench trunking, powerpoles and posts
- Flush finish
- Twin sockets have dual earth entry



Standard Colour
WH
WH: White

Colour options: optional colours and finishes are available but these may be subject to minimum quantity orders and longer lead times. For more information contact the Technical Team on +44 (0)1424 856688.

MT32 Prefabricated and modular wiring

For further information about our fully pre-wired, pre-tested and assembled accessories, please refer to page 228 in this section.

Wiring accessories



13Amp DP 1 gang switched socket

code	pack
ESS1WH	1



13Amp DP 2 gang switched socket

code	pack
ESS2WH	1

Twin sockets are supplied with two earth terminals



13Amp DP 2 gang switched socket (front fix)

code	pack
ESS3WH	1



13Amp DP 1 gang vertical mount switched socket

code	pack
ESS11WH	1

Note: for PowerPoles, Posts and trunking



Accessory box spacer

code	size	pack
ES1WH	14mm	4

For use between accessory boxes

POWER, VOICE AND DATA ACCESSORIES FOR TRUNKING

p311
Technical Information

Voice and data plates that incorporate apertures to accommodate LJ6C outlets.

Product information

- Flush mounting plates
- Standard LJ6C accessories with 22 x 37mm apertures

Standard Colour
WH
WH: White

Colour options: optional colours and finishes are available but these may be subject to minimum quantity orders and longer lead times. For more information contact the Technical Team on +44 (0)1424 856688.



Boxes with flush plates



Flush module

code	description	pack
EM116WH	1 x 6c	1

Flush module

code	description	pack
EM126WH	2 x 6c	1

Components



Blank fascia

code	size	pack
FM93WH	6c	1

Accessory box spacer

code	size	pack
ES1WH	14mm	4

For use between accessory boxes

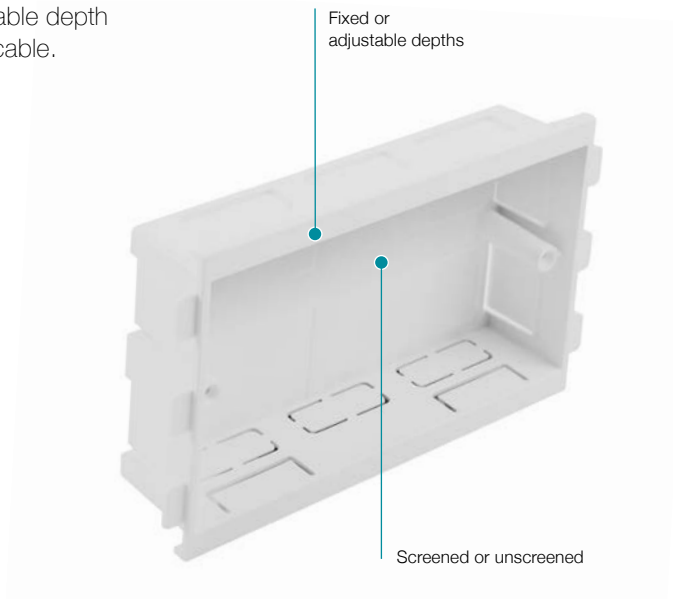
A range of standard and screened options, including adjustable depth boxes that are particularly suitable for data or 4mm² power cable.

Product information

- Accept standard UK accessories
- Standard screw fixing centres
- Adjustable depth
- Part M compliance (see page 104)

Standard Colour
WH
WH: White

Colour options: optional colours and finishes are available but these may be subject to minimum quantity orders and longer lead times. For more information contact the Technical Team on +44 (0)1424 856688.



Boxes for UK accessories



1 gang accessory box

code	depth	pack
ESSB1WH	30mm	20



2 gang accessory box

code	depth	pack
ESSB2WH	30mm	10



1 gang adjustable depth box ...CAT 6...

code	depth	pack
EAB1WH	32 – 47mm	10



2 gang adjustable depth box ...CAT 6...

code	depth	pack
EAB2WH	32 – 47mm	5

EAB1 and EAB2 are fully adjustable to 47mm. Please see page 311 for more information.



1 gang accessory box *Screened ...CAT 6...

code	depth	pack
ESSB1SWH*	30mm	20

*Screened boxes supplied complete with earth terminal



2 gang accessory box *Screened ...CAT 6...

code	depth	pack
ESSB2SWH*	30mm	10

*Screened boxes supplied complete with earth terminal



1 gang accessory plate ...CAT 6...

code	pack
ESSP1WH	2



2 gang accessory plate ...CAT 6...

code	pack
ESSP2WH	2

Part M

For boxes that meet the requirements of Part M (DDA) please refer to page 104.



POWER, VOICE AND DATA ACCESSORIES FOR TRUNKING



A range of trunking accessory boxes and mounting plates that accept international standard accessories

Product information

- MTOP10 and 20 and ETOP10, 20 and 30 plates accept Legrand's 45mm range of outlets
- MTOP11 and 21 and ETOP11, 21 and 31 plates are for Ave sockets
- ETOP180 accepts standard US and international outlets

Standard Colour
WH
WH: White

Colour options: optional colours and finishes are available but these may be subject to minimum quantity orders and longer lead times. For more information contact the Technical Team on +44 (0)1424 856688.



ETOP faceplates can be inserted directly into trunking base profiles without the need for an accessory box

Boxes and plates for International accessories



1 gang 45mm accessory plate

code	aperture	pack
ETOP10WH	45 x 45mm	20
ETOP11WH	50 x 45mm	20



2 gang 45mm accessory plate

code	aperture	pack
ETOP20WH	90 x 45mm	15
ETOP21WH	100 x 45mm	10



3 gang 45mm accessory plate

code	aperture	pack
ETOP30WH	135 x 45mm	10
ETOP31WH	150 x 45mm	10



Duplex 83.5mm accessory plate

code	depth	pack
ETOP180WH	2mm	15



1 gang surface mount outlet plate

code	aperture	pack
MTOP10WH	45 x 45mm	30
MTOP11WH	50 x 45mm	30



2 gang surface mount outlet plate

code	aperture	pack
MTOP20WH	90 x 45mm	20
MTOP21WH	100 x 45mm	20

MTOP faceplates

- 1 gang plates require ESSB1 boxes.
- 2 gang plates require ESSB2 boxes.



1 gang schuko accessory box

code	depth	pack
ESSBU1WH	40mm	10



2 gang schuko accessory box

code	depth	pack
ESSBU2WH	40mm	5

FIRE AND SECURITY SYSTEMS

A range of products designed to British Standard regulations, specifically suited for wiring fire alarm systems and for protection against fire.



Callmaster accessory boxes are designed for emergency applications including call points, smoke and heat detectors, panic alarms, warning lights, sounders and emergency stops.

Product information

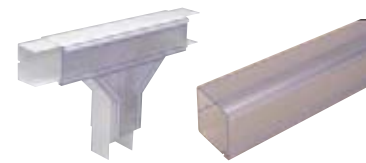
- Callmaster accessory boxes come complete with both internal pot retainers for mineral insulated (MI) cables and cable clamps included for use with conventional and fire performance cable
- Pre-punched holes in Mini trunking every 200mm for ease of installation
- Punched holes are positioned to be compatible with Firefly fire safety clips
- No need for cable glands and shrouds
- Available with one or two entries for terminal or through wiring
- Suitable for single or twin cable runs to each entry
- Compatible for use with MMT2 red or white mini trunking

Standard Colours	
WH	RD
WH: White RD: Red	



Clear maxi and mini trunking

Is available and particularly useful for high security installations. For further information please contact our technical team on +44 (0)1424 856688.



Trunking and fittings



Mini-trunking

code	size	pack
MMTH2RD	25x16mm	30x3m
MMTH2WH	25x16mm	30x3m



Coupler

code	description	pack
TC2RD	MMT2	40
TC2WH	MMT2	40



End cap

code	description	pack
TEC2RD	MMT2	100
TEC2WH	MMT2	100



Internal bend

code	description	pack
TIB2RD	MMT2	30
TIB2WH	MMT2	30



External bend

code	description	pack
TEB2RD	MMT2	30
TEB2WH	MMT2	30



Flat bend

code	description	pack
TFB2RD	MMT2	30
TFB2WH	MMT2	30



Equal tee

code	description	pack
TT2-2RD	MMT2	30
TT2-2WH	MMT2	30

Boxes



1G accessory box – 1 entry

code	depth	pack
MCM10RD	35mm	5
MCM10WH	35mm	5

with earth terminal



1G accessory box – 2 entry

code	depth	pack
MCM20RD	35mm	5
MCM20WH	35mm	5

with earth terminal



Circular accessory box

code	depth	pack
MCMR20RD	24mm	5
MCMR20WH	24mm	5

with earth terminal



Double back entry (loop-in) 34mm internal depth

code	fix. centre	pack
MDCRB2WH	50.8/60.3mm	10

Ø cut out = 70mm



20mm plain body cable glands

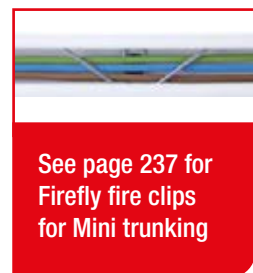
code	cable dia.	pack
MCGP2WH	7-10.5mm	25
MCGP2AWH	4-7mm	25



Plain bored circular boxes

code	type	pack
2MRB2WH	Terminal-1E	20
2MRB3WH	Through-2E	20
2MRB4WH	Angle-2E	20
2MRB5WH	Tee-3E	20
2MRB13WH	U-2E	20

For use with 20mm plain body cable glands and ø20mm conduit

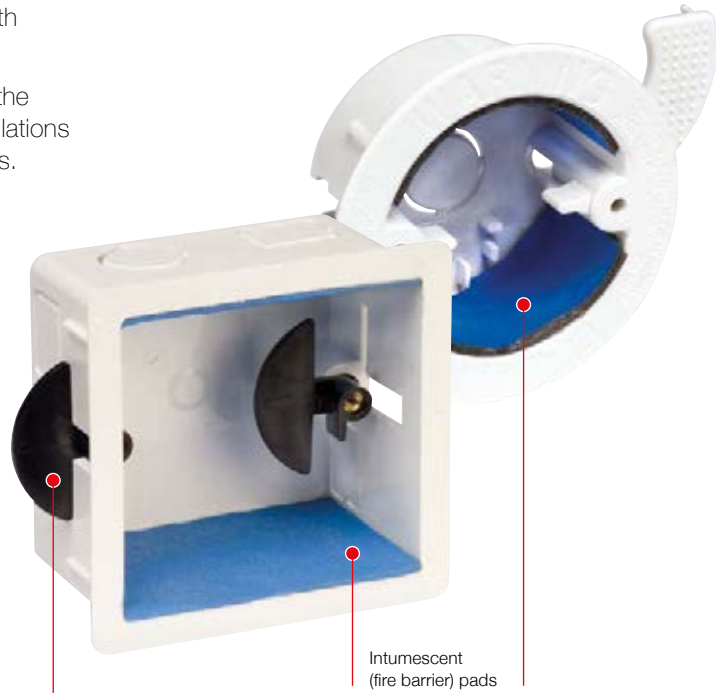


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Technical Information

Marshall-Tufflex dry lining boxes are available with Envirograf® intumescent (fire barrier) pads.

With fire barrier pads fitted, boxes comply with the requirements of BS7671:2008 IEE Wiring Regulations and Document B of the UK Building Regulations.



Snap out clamps with size identification by colour:

Wall thickness adjustment	Clamp colour
1 - 9mm	Grey
6 - 14mm	White
18 - 25mm	Green
9 - 26mm	Black

Snap out clamps

Intumescent (fire barrier) pads

Flush mounted dry lining accessory boxes



1 gang 34mm internal depth

code	adj.	pack
MDLB3FWH	1-9mm	20
MDLB1FWH	6-14mm	20
MDLB7FWH	18-25mm	20

Note: adj. = adjustment

2 gang 34mm internal depth

code	adj.	pack
MDLB4FWH	1-9mm	10
MDLB2FWH	6-14mm	10
MDLB8FWH	18-25mm	10



1 gang 46mm internal depth

code	adj.	pack
MDLB29FWH	9-26mm	10

2 gang 46mm internal depth

code	adj.	pack
MDLB30FWH	9-26mm	5

Circular dry lining boxes



Double back entry (loop-in) 34mm internal depth

code	fix. centre	pack
MDCRB2FWH	50.8/60.3mm	10

Ø cut out = 70mm

Acoustic hoods
For information on acoustic hoods please refer to page 225.

Problem	Solution
	
Without pads	With pads
<p>In the event of a fire, the cover plate of a socket, switch or light fitting may sag and disintegrate, leaving a perfect escape route for a fire to travel up the cavity, into an adjoining room or ceiling. When Envirograf® pads are fitted, they will expand in the presence of heat and create an effective fire barrier. This solution has been specifically designed to help electrical contractors and building design professionals meet and comply with the current regulations.</p> <p>Fire Protection is also available for other Marshall-Tufflex product ranges. Wraps can be supplied around PVC-U trunking or conduit systems and pillows to fill a trunking void. Many different shapes, sizes and thicknesses are available so for further details please contact our Technical Hotline on +44 (0)1424 856688.</p>	

FIRE AND SECURITY SYSTEMS

p312
Technical Information

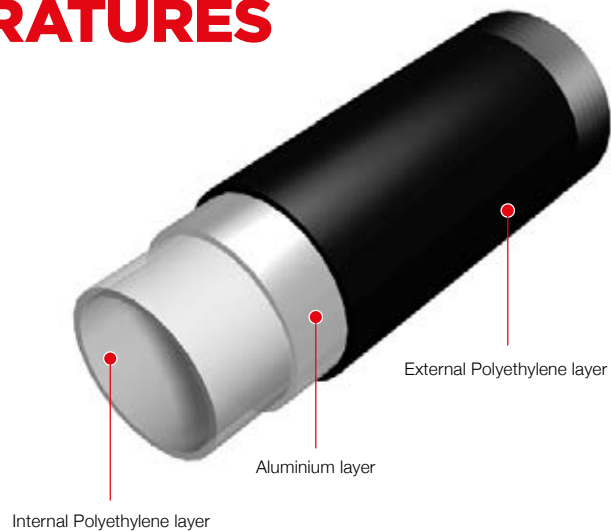
MT Supertube FR Plus

p218

LSOH CONDUIT FOR EXTREME TEMPERATURES

MT Supertube FR Plus is a LSOH, 3-layer heavy gauge conduit that has been specifically formulated to withstand temperatures up to 289°C. Comprising polyethylene internal and external layers over a continuous aluminium tube that provides additional mechanical strength.

MT Supertube FR Plus has excellent EMI/EMC screening performance and meets the requirements of LUL (London Underground Ltd) engineering standard 2-01001-002 issue A1, material classification EQ/1 9 equipment/limited and dispersed).



- 20mm and 25mm
- LSOH conduit with excellent screening performance
- Suitable for rail, marine and tunnel applications
- Available in continuous lengths of up to 100 metres, meaning fewer fittings per installation
- Longer lengths also prevent ingress of water
- Extra security
- Suitable for in-screed applications
- Withstands temperatures from -40°C to +289°C
- Nail penetration: MT Supertube FR Plus, complies with requirements for BS 7671, BS 8436 and BS EN 61386

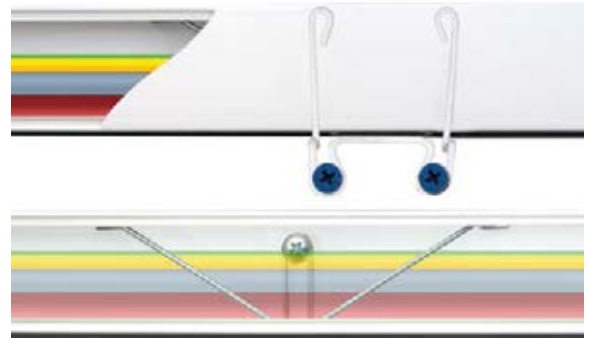


For product ordering details, please see page 218

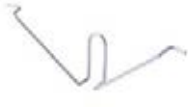







To comply with the latest fire regulations, Marshall-Tufflex supply a range of Firefly fire clips to secure cables within or outside of mini trunking, maxi trunking or conduit. The clips are designed to prevent cables from falling in the event of a fire, helping to keep escape routes free and accessible.

Product information

- Fire safety clips to comply with BS 5839-1
- For use with mini trunking, maxi trunking and conduit
- Spring loaded design for easy installation or removal of cables
- Designed for quick installation and to maximise internal trunking space
- Internal version to fit within trunking prior to cables being installed
- External version to retrofit onto existing installations
- Melt point over 1000°C
- Kits available including all required fixings/screws ready for installation
- Independently tested and certified by an accredited test house
- Patent applied for





Trunking clips

																											
Fire clip internal MMT2	Fire clip internal MMT3	Fire clip internal MMT4	Fire clip internal MMT5																								
<table border="1"><thead><tr><th>code</th><th>trunking size</th><th>pack</th></tr></thead><tbody><tr><td>FCMMT2</td><td>25 x 16mm</td><td>100</td></tr></tbody></table>	code	trunking size	pack	FCMMT2	25 x 16mm	100	<table border="1"><thead><tr><th>code</th><th>trunking size</th><th>pack</th></tr></thead><tbody><tr><td>FCMMT3</td><td>38 x 16mm</td><td>100</td></tr></tbody></table>	code	trunking size	pack	FCMMT3	38 x 16mm	100	<table border="1"><thead><tr><th>code</th><th>trunking size</th><th>pack</th></tr></thead><tbody><tr><td>FCMMT4</td><td>38 x 25mm</td><td>100</td></tr></tbody></table>	code	trunking size	pack	FCMMT4	38 x 25mm	100	<table border="1"><thead><tr><th>code</th><th>trunking size</th><th>pack</th></tr></thead><tbody><tr><td>FCMMT5</td><td>50 x 25mm</td><td>100</td></tr></tbody></table>	code	trunking size	pack	FCMMT5	50 x 25mm	100
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FCXMMT2	25 x 16mm	100																									
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FCXMMT4	38 x 25mm	100																									

Kits

																																																															
Fire clip internal kit - masonry	Fire clip internal kit - cavity	Fire clip external kit - masonry	Fire clip external kit - cavity																																																												
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Conduit clips

									
Fire clip 20mm round conduit	Fire clip 25mm round conduit								
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code	pack								
FCCR20	100								
code	pack								
FCCR25	100								

***Kit contents**

Please note: the quantity stated refers to the number of fire clips within the kit, each kit also contains the appropriate number of screws.

Each Masonry kit is supplied with:
Masonry screws, washers and 1 x Ø4mm drill bit

Each Cavity kit is supplied with:
Cavity fixings and screws

See page 159 for punched mini trunking

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Technical Information

FIRE AND SECURITY SYSTEMS

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 and the team's expertise enables us to provide quotations for specialist solutions. We aim to complete all standard quotes within 1 working day, although more complex quotations such as 'take offs' can take longer.



Contact our Technical Services team on +44 (0)1424 856688 or email technical@marshall-tufflex.com

Award winning customer service

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

In 2017 Marshall-Tufflex were proud to be shortlisted in four categories at the prestigious Electrical Wholesaler Awards including Best Customer Service, Best Overall Supplier and Best Sales Representative.

Contact our Customer Services team on +44 (0)1424 856600 or email sales@marshall-tufflex.com



BIM (Building Information Modelling)

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 or www.bimstore.co.uk



Same day collection*



Our popular same day collection service gives our customers an unrivalled two-hour turnaround on product orders, allowing them to collect from our dedicated collection points in Manchester and London. Orders can also be collected next day from our Hastings depot.

Manchester

Europa Trading Estate, Stoneclough Road, Radcliffe, Manchester M26 1GG

London

101c Blackhorse Lane, London E17 6DJ

- Orders can be collected two hours after order placement from Manchester and London.
- Orders placed by 3.30pm will be available for collection until 5.30pm.
- Orders received by 5pm will be ready for collection from 10am the following day.

Hastings

55-65 Castleham Road, St Leonards-on-Sea TN38 9NU

- Orders placed by 12.30pm can be collected from 10am the next day from our Hastings depot.

* Subject to stock availability

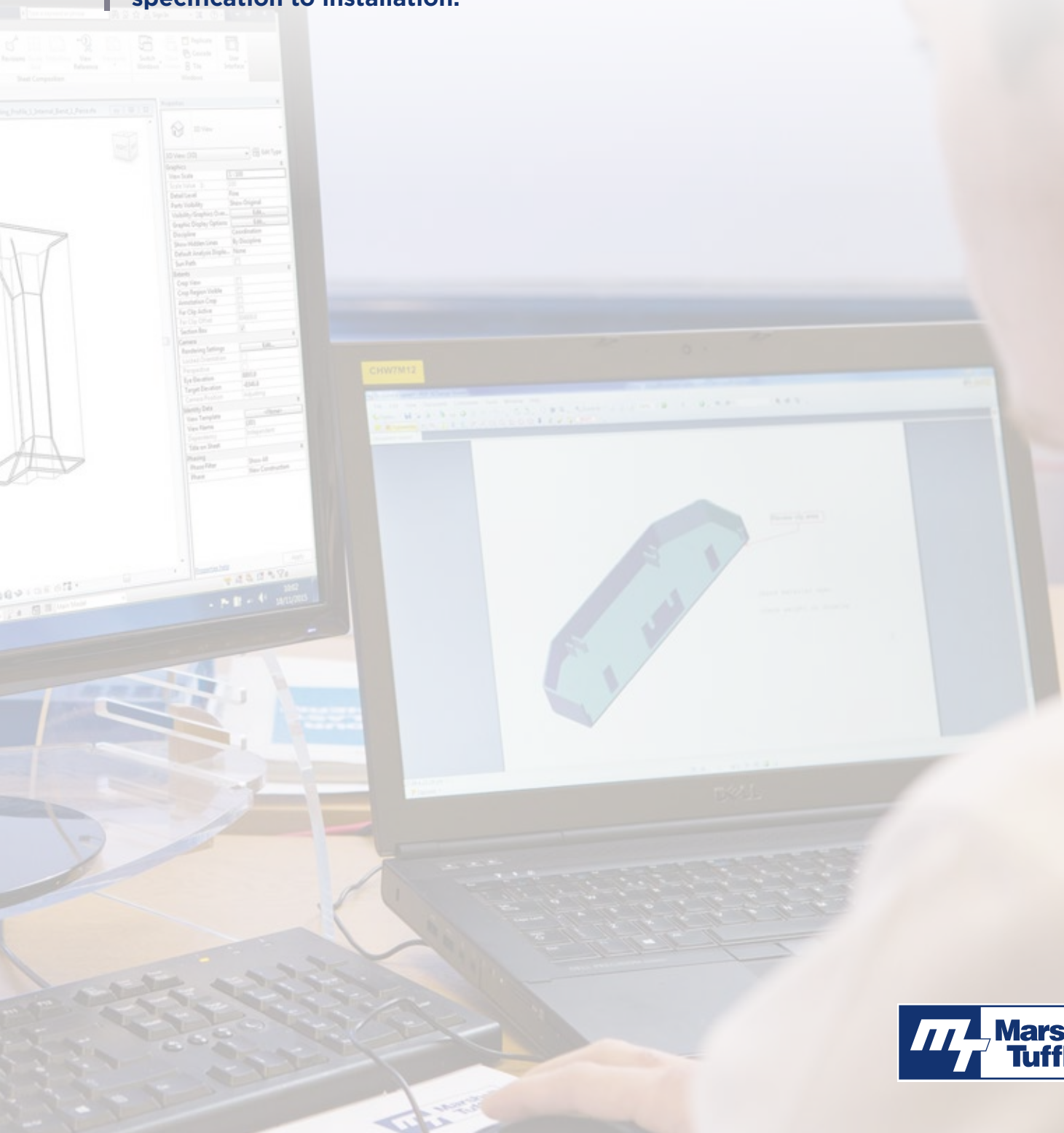
For details regarding collections, please contact our Customer Services team on +44 (0)1424 856600 or email sales@marshall-tufflex.com



Follow us on Twitter @MTufflex

TECHNICAL INFORMATION

This information is intended to provide the specifier or contractor with guidance on all aspects of Marshall-Tufflex cable management products, from specification to installation.



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PVC-U material data

Marshall-Tufflex cable management products are manufactured in Extra Super High Impact PVC-U grade material, capable of withstanding the most hazardous conditions on site and which exceeds the most stringent requirements of the British Standards.

Characteristics

Specific gravity		1.42
Co Efficient of Linear Expansion		$7 \times 10^{-5}/m^{\circ}C$
Water Absorption		Negligible
Electric Strength		To the requirements of BS 4678, BS EN 50085
Fire Performance	BS 476 PT6 & PT7 BS 4678 BS EN 50085 UL94 BS EN 61386-1 BS 4607	PASS PASS PASS V-0 @1.6mm PASS PASS
Oxygen Index		42%
Tensile Strength		492/562 kg/cm ²
Insulation Resistance		To the requirements of BS 4678, BS 4607, BS EN 50085, BS EN 61386-1
Chemical Resistance		See below
Vicat Softening Point (conduit & trunking)		80°C BS EN ISO 306
Vicat Softening Point (moulded fittings)		76°C BS EN ISO 306

Chemical resistance

The material is virtually unaffected by solutions of inorganic acids, alkalis and salts and is resistant to many organic chemicals. It may be softened by some organic materials such as ketones and aromatic compounds. It will not corrode. See Chemical Resistance table on page 241 for further details.

Fire resistance

The material used in Marshall-Tufflex conduit and trunking are self-extinguishing and comply with the requirements of BS 476 Parts 6 and 7 and BS 4678. Non-flame propagating to BS EN 50085 and BS EN 61386-1. (See Characteristics table above)

Thermal properties

Marshall-Tufflex conduit and trunking is designed to accommodate variations of ambient temperature equating to 5.25mm/3m for a temperature rise of 25°C.

Operating temperatures: -5°C to +60°C.
Thermal conductivity: 0.19 w/m°C.

Impact resistance

High impact resistance. The material is formulated to comply with the -5°C clause of BS 4678 Part 4 (1982) Cable Trunking Standard and the -5°C Heavy Gauge Requirements of BS EN 61386-1.

Standards

Trunking systems are manufactured to comply with the requirements of BS 4678-4:1982 and BS EN 50085-1:2005+A1:2013 where applicable. Conduit systems comply with the requirements of BS 4607-5:1982+A3:2010 and BS EN 61386-1:2008.

PVC-U chemical resistance table

The resistance of unplasticised PVC-U to a wide range of chemicals is listed in the following table.

The symbols used to denote performance are as follows:

✓ Satisfactory

Some attack or absorption: the material may be considered for use when alternative materials are unsatisfactory and where limited life is acceptable. When PVC is to be used with such chemicals, full scale trials under realistic conditions are necessary.

≈ Unsatisfactory: so rated because of decomposition, solution, swelling loss of ductility etc, of the samples tested.

For clarification and for details of resistance to other chemicals please call our Technical Team on +44 (0)1424 856688.

Note: To determine the suitability of PVC-U for external applications we strongly recommend you contact our Technical Team on +44 (0)1424 856688.

Chemical	Concentration	Unplasticised PVC	
		20°C	60°C
acetaldehyde	40% aq. solution	✓	≈
acetic acid	60% aq. solution	✓	✓
acetic anhydride		≈	≈
acetone	Traces	≈	≈
alcohol, ethyl	40% w/w water	✓	#
alcohol, isopropyl		✓	✓
alcohol, menthyl	6% aq. solution	✓	✓
	100%	✓	#
aliphatic hydrocarbons		✓	✓
aluminium chloride		✓	✓
aluminium hydroxide		✓	✓
ammonia	0,88S.G., aq solution	✓	✓
	Anhydrous gas	≈	≈
	Anhydrous liquid	≈	≈
ammonium chloride		✓	✓
ammonium hydroxide		✓	✓
aniline		≈	≈
animal oils		✓	✓
aqua regia	Dilute	✓	✓
	Concentrated	✓	≈
barium sulphate		✓	✓
beer		✓	
benzene		≈	≈
benzoyl chloride		≈	≈
borax		✓	✓
boric acid		✓	✓
brine		✓	✓
bromide	Traces, gas	#	≈
	100% (dry gas)	≈	≈
	Liquid	≈	≈
calcium chloride	Aq. solution	✓	✓
	20% in methyl alcohol	✓	

Chemical	Concentration	Unplasticised PVC	
		20°C	60°C
calcium hydroxide		✓	✓
calcium hypochlorite		✓	✓
carbon dioxide		✓	✓
carbonic acid		✓	✓
carbon monoxide		✓	✓
carbon tetrachloride		#	≈
castor oil		✓	
chloric acid		✓	
chlorine	100% (dry gas)	✓	#
	10% (moist gas)	#	
chlorine water	Sat. solution	#	#
chloroform		≈	≈
chrome alum		✓	✓
chromic acid	Plating solution	✓	✓
cider		✓	
citric acid		✓	✓
copper chloride		✓	✓
copper cyanide		✓	✓
copper nitrate		✓	✓
copper sulphate		✓	✓
cyclohexanone		≈	≈
detergent, synthetic	All concentrations	✓	✓
developers, photographic		✓	✓
dextrin		✓	✓
dextrose		✓	✓
dialzo salts		✓	✓
dichlorodifluoromethane		✓	
diethyl ether		≈	≈
emulsifiers	All concentrations	✓	✓
emulsions, photographic		✓	✓
ethyl acetate		≈	≈
ethylene glycol		✓	✓
ethylene oxide		≈	≈
fatty acids		✓	✓
ferric chloride		✓	✓
ferric nitrate		✓	✓
ferric sulphate		✓	✓
ferric ammonium citrate		✓	✓
ferrous chloride		✓	✓
ferrous sulphate		✓	✓
fixing solution, photographic		✓	✓
fluorine		#	#
formaldehyde	40% w/w water	✓	✓
formic acid	50% solution	✓	#
	100% solution	✓	≈
fructose		✓	✓
fruit pulp		✓	✓
glucose		✓	✓
glycerol		✓	✓
grape sugar		✓	✓
heptane		✓	✓
hydrobromic acid	100%	✓	✓
hydrochloric acid	22% aq. solution	✓	✓
	concentrated	✓	✓
hydrochloric acid	40% aq. solution	✓	#
	60% aq. solution	#	≈
	concentrated	≈	≈

Chemical	Concentration	Unplasticised PVC		Chemical	Concentration	Unplasticised PVC	
		20°C	60°C			20°C	60°C
hydrogen bromide	anhydrous	✓	✓	propylene glycol		✓	✓
hydrogen chloride	anhydrous	✓	✓	propylene oxide		≈	≈
hydrogen fluoride	anhydrous	✓	✓	saccharose		✓	✓
hydrogen peroxide	3% (10vol)	✓	✓	sea water		✓	✓
	12% (40 vol)	✓	✓	silver nitrate		✓	✓
	30% (100 vol)	✓	✓	soap solution		✓	✓
	90% and above	✓	✓	sodium bicarbonate		✓	✓
hydrogen sulphide		✓	✓	sodium bisulphite		✓	✓
iodine	solution in potassium iodide	≈	≈	sodium borate		✓	✓
lactic acid	10% aq. solution	✓	✓	sodium bromide		✓	✓
	100%	≈	≈	sodium carbonate		✓	✓
lanoline		✓	✓	sodium chlorate		✓	✓
linoleic acid		✓	✓	sodium chloride		✓	✓
linseed oil		✓	✓	sodium cyanide		✓	✓
magnesium hydroxide		✓	✓	sodium ferricyanide		✓	✓
maleric acid	50% aq. solution	✓		sodium ferrocyanide		✓	✓
	concentrated	✓	#	sodium fluoride		✓	✓
metallic soaps (water soluble)		✓	✓	sodium hydroxide	40% aq. solution	✓	✓
methyl bromide		≈	≈		concentrated	✓	✓
methyl chloride		≈	≈	sodium hypochlorite 15%Cl		✓	✓
methyl cyclohexanone		≈	≈	sodium hyposulphate		✓	✓
methyl ethyl ketone		≈	≈	sodium nitrate		✓	✓
methyl isobutyl ketone		≈	≈	sodium peroxide		✓	✓
methylated spirit		✓		sodium silicate		✓	✓
methylene chloride		≈	≈	sodium sulphate		✓	✓
milk		✓	✓	sodium sulphide	25% aq. solution	✓	✓
mineral oil		✓	✓		concentration	✓	✓
mixed acids	(sulphic/nitric various proportions)	#	≈	sodium sulphite		✓	✓
molasses		✓	✓	soft soap		✓	✓
naptha		✓	✓	surface active agents All concentrations (emulsifiers, synthetic detergents and wetting agents)		✓	✓
napthalene		≈	≈	starch		✓	✓
nicotine		✓	✓	stearic acid		✓	✓
nitric acid	5% aq. solution	✓		sucrose		✓	✓
	50% aq. solution	✓	#	sulphur	Colloidal	✓	✓
nitrobenzene		≈	≈	sulphur dioxide	Dry	✓	✓
oleic acid		✓	✓		Liquid	#	≈
oxalic acid		✓	✓	sulphuric acid	80% aq. solution	✓	✓
oxygen		✓	✓		90% aq. solution	✓	#
ozone		✓	✓		Fuming	≈	≈
paraffin		✓	✓	sulphurous acid	10% aq. solution	✓	✓
pentane		✓		tallow		✓	✓
petrol		✓	✓	tanning extracts		✓	✓
phosphoric acid	30% aq. solution	✓	✓	tartaric acid		✓	✓
	95% aq. solution	✓	✓	transformer oil		✓	✓
photographic developers		✓	✓	trichloroethane		≈	≈
potassium bromide		✓	✓	trichloroethylene		≈	≈
potassium carbonate		✓	✓	turpentine		✓	✓
potassium cyanide		✓	✓	vegetable oils		✓	✓
potassium ferricyanide		✓	✓	vinegar		✓	✓
potassium				water		✓	✓
hydroxide	10% aq. solution	✓	✓	wetting agents	All concentrations	✓	✓
	concentrated	✓	✓	wines and spirits		✓	
potassium hypochlorite		✓	✓	xylene		≈	≈
potassium permanganate		✓	✓	zinc carbonate		✓	✓
propane		✓		zinc chloride		✓	✓
				zinc sulphide		✓	✓

Polycarbonate material data

Chemical resistance

Polycarbonate is resistant to most mineral and organic acids, a number of fats and oils, saturated aliphatic and aromatic hydrocarbons and alcohols, with the exception of methyl alcohol. It is not resistant to alkalis, ammonia gas and its solution or to amines.

Characteristics

Vicat softening point – ISO 306	VST/B 145°C
Flammability to UL94 @ 1.5mm	94V-2
Flammability – oxygen index	35%
Density	1.2g/cm3
Water absorption (in water)	0.35%

ABS high impact FR material data

Fire Retardant (FR) ABS has a good chemical resistance to inorganic salt solutions, alkalis, mineral acids (except strong oxidising acids) and some mineral, vegetable and animal based oils. It is attacked by organic solvents such as alcohols, esters, ketones and ethers.

Characteristics

Vicat softening point	ISO 306	96°C
Density	1.18g/cm ³	
Material	UL listed	
Fire performance	BS 4678 BS EN 50085 UL94	PASS PASS V-O @ 1.6mm
Water absorption (in water)	DIN53495/L	0.3%

Aluminium material data

Grade HE9TF: Screen Insert.

Grade 6063T5: Series 2 PowerPole and PowerPost, Bench Trunking Aluminium, Sterling Profile Aluminium, XL Aluminium, Twin Plus Aluminium.

Grade 6060T5: Elegance 170.

Tensile strength: 190N/mm²

Co Efficient of linear expansion: 24 x 10⁻⁶/m°C.

Thermal conductivity: 120w/m°C.

GRP ladder and tray material data

Fire behaviour

Properties	Standard references	Press Moulded Fittings	Pultruded Extrusions	Units
Flammability	ASTM D 6194 / IEC 60695-2-12 Glow-wire flammability index (GWFI) test method for materials.	960	960	°C
Flammability	UL 94 Test for flammability of plastic materials.	V0	V0	-
Fire propagation	NF P 92-501 Fire behaviour of building materials.	Not tested	Not tested	-
Flame spread & smoke developed index	ASTM E84 / UL 723 Surface burning characteristics of building materials.	FSI = 25	FSI = 35	Index
	Class following the Uniform Building Code.	Class I	Class II	-
Flammability & smoke index	NF F 16-101 Fire behaviour of materials for rolling stock.	I2	I2	Index
		F0	F1	Index
Limiting oxygen index	ASTM D 2863 / ISO 4589-2 Plastics - Determination of burning behaviour by oxygen index. Part 2 : Ambient - temperature test.	> 32%	> 32%	%
Flammability & smoke index	VKF Materials and building parts. Part B : Test methods.	5.3	5.3	Index
Fire behaviour	DIN 4102-1 Fire behaviour of building materials and elements. Part 1: Classification of building materials.	B2	B2	-
Fire behaviour	DIN 5510-2 Preventive fire protection in railway vehicles.	S4 / SR2 / ST2	S4 / SR2 / ST2	Index
	Part 2 : Fire behaviour and fire side effects of materials and parts.	FED(30 min.) = 0,09	FED(30 min.) = 0,04	Index
	Appendix C : FED (30 min.) < 1			
Fire behaviour	EN 45545-2 Railway applications - Fire protection on railway vehicles. Part 2 : Requirements for fire behaviour of materials and components.	None	None	HL
	Applicable requirement : R6			
	ISO 5660-1 Parameter MARHE	103,7	101,3	kW/m ²
	EN ISO 5659-2 (50 kW/m ²) Parameter DS(4)	376,2	331,2	-
Fire behaviour	EN ISO 5659-2 (50 kW/m ²) Parameter VOF4	454,6	488,5	-
	EN 45545-2 Appendix C (50kW/m ²) Parameter CITG at 4 min.	0,016	0,015	-
	EN 45545-2 Appendix C (50kW/m ²) Parameter CITG at 8 min.	0,068	0,064	-

GRP ladder and tray material data – continued

Mechanical behaviour

Properties	Standard references	Press Moulded Fittings	Pultruded Extrusions	Units
Tensile strength at break point	ISO 527-5 Plastics - Determination of tensile properties. Part 5 : Unidirectional fibre-reinforced plastic composites.	~ 55	~ 187	MPa
Tensile modulus	ISO 527-5 Plastics - Determination of tensile properties. Part 5 : Unidirectional fibre-reinforced plastic composites.	~ 7200	~ 11900	MPa
Accelerated ageing test by UV exposure	ISO 4892-2 / ISO 527-5 Methods of exposure to laboratory light sources - Part 2 : Xenon-arc sources.	Good mechanical and chromatic behaviour	Good mechanical and chromatic behaviour	-
Accelerated ageing test by salt spray exposure	ISO 9227 / ISO 527-5 Corrosion tests in artificial atmospheres - Salt spray tests.	Good mechanical and chromatic behaviour	Good mechanical and chromatic behaviour	-
Accelerated ageing test by UV and salt spray exposure	ISO 4892-2 / ISO 9227 / ISO 527-5 UV and salt spray exposure.	Good mechanical and chromatic behaviour	Good mechanical and chromatic behaviour	-

Electrical behaviour

Properties	Standard references	Press Moulded Fittings	Pultruded Extrusions	Units
Measure of surface resistivity & discharge	IEC 60079-0 Explosive atmospheres.	~ 4.10 ⁹	> 10 ¹¹	Ω
	Part 0 : Equipment - General requirements.	IIA, IIB, IIC	IIA, IIB, IIC	-
Dielectric strength	IEC 60243-1 Electric strength of insulating materials. Part 1 : Tests at power frequencies.	~ 6,5	Not tested	kV/mm
Proof tracking index	IEC 60112 Method for the determination of the proof and the comparative tracking indices of solid insulating materials.	575	600	V

Marine approval

Properties	Standard references	Press Moulded Fittings	Pultruded Extrusions	Units
Approval for vessels and drilling platforms	ABS (American Bureau of Shipping)	K ² Approved	KP - UL Approved	

Others

Properties	Standard references	Press Moulded Fittings	Pultruded Extrusions	Units
Density		1,8	1,8	g/cm3
Thermal conductivity		0,3	0,3	W/m.K
Coefficient of linear thermal expansion	ISO 11359-2 Plastics - Thermo mechanical analysis (TMA). Part 2 : Determination of coefficient of linear thermal expansion.	~ 36 x 10-6	~ 10 x 10-6	cm/cm/K
Water absorption	ISO 62 Plastics - Determination of water absorption.	0,16	0,3	%
Glass content		> 20%	> 45%	%
Linear shrinkage		0,1	0,1	%
Rockwell hardness		not tested	not tested	HRm
Barcol hardness		> 50	> 50	Barcol
Material temperature range*		-80°C to +130°C	-80°C to +130°C	°C
Continuous operating temperature range		-50°C to +80°C	-50°C to +80°C	°C
Material resistance to high temperatures		good, no flexion	good, no flexion	°C

* Reduced mechanical resistance when ambient temperature is increasing.

GRP Material Chemical Resistance Table

Chemical	Concentration	Performance
Water	-	Good Performance
Acids	10%	Medium Performance
Base	10%	Good Performance
Ethanol	-	Good Performance
Benzine	-	Good Performance
Benzol	-	Medium Performance
Mineral Oil	-	Good Performance
Vegetable and animal fat	-	Good Performance
Chemical products	-	Good Performance

Storage of GRP material

It is best to store GRP products prior to installation at temperatures higher than 0°C and less than 40°C. However the GRP products may be stored at temperatures between -60°C to over 130°C

Information on recycling and environmental impact for the GRP products

Thermoset composite material is made of glass and polyester resin. It can be recycled in waste treatment stations for a further waste processing. This material is inert and has no environmental impact as GRP waste can be re-used in outside applications as raw material for the road building or in cement production.

GRP cable ladders pultruded

Resin types (all zero halogen)

Polyester (standard)	good all round performance, mechanical strength, corrosion resistance, fire behaviour, temperature rating
Acrylic (on request)	excellent resistance to fire in a corrosive environment
Vymilester (on request)	highly resistant to a specific range of chemical agents (H2SO4HCl...)
Carbon loaded polyester (on request)	antistatic properties for highly explosive atmospheres

Power and data segregation

It is important when installing power and data cables in the same installation that the installation complies with the relevant standard. If any conflicts in separation distances arise then the greater separation distance must always apply. To comply with the correct separation distance between power and data cables please refer to BS EN 50174-2:2009+A2:2014 section 6.

There are a number of factors that will affect the separation distance of power and data cables these are listed below:

- Total number of power circuits
- The total load on the power circuit
- The type of data cable being installed
- The installation method of the power and data cables

Every installation is different so it is important to refer to the installation standard for each installation to ensure compliance.

Types of data cable – different categories of cable

Data cables are classified in a number of different categories such as Cat 5e and Cat 6 etc. Generally speaking the higher the category number the higher the performance specification. Data cable is backwards compatible so a Cat 6 installation will always perform to a higher specification than a Cat 5 installation. The basic principle of data cable is very similar across all the different categories and is based on 4 pair twisted cable which is shielded to protect from external EMI and alien or cross talk interference from adjacent cables.

Understanding segregation methods

Incorrect installation		All cables installed in same compartment with no separation.
Correct installation		Cables separated by means of physical barrier in accordance with BS EN 50174-2:2009+A2:2014 section 6
		Cables separated by minimum distance in accordance with BS EN 50174-2:2009+A2:2014 section 6
Key		

Data cable comparison table

Data Cable type	*Cable diameter	Frequency	Speed	Notes
Cat 5e	6mm	Up to 100MHz	Up to 1000MBps	Cat 5e has its limitations and will not be able to support emerging 10GBase-T Ethernet
Cat 6	7.2mm	Up to 250MHz	Up to 10GBps	Cat 6 will run at a much higher performance than Cat 5e supporting more than double the speed and frequency, running to a much tighter specification.
Cat 6a	7.4mm	Up to 500MHz	Up to 10GBps	Cat 6a is designed to support 10GBase-T over a maximum distance of 100 metres.
Cat 7	7.9mm	Up to 600MHz	Up to 10GBps	Cat 7 and Cat 7a data cables are shielded including both the individual cables and the overall cables being screened.
Cat 7a	8.2mm	Up to 1000MHz	Up to 10GBps	

*Please note that cable diameters have been calculated on an average figure from a range of data cable manufacturers.

45% Cable capacity

It is important to follow the Wiring Regulations when installing cables in trunking. By following the Wiring Regulations you minimise the potential of heat rise and cable damage and maintain data throughput when installing new circuits. For further information on trunking cable capacity and grouping factors please refer to the latest BS 7671:2008 Wiring Regulations.

Conductor type	Size	Cable factor
Stranded PVC power	1.5mm ²	8.0
Stranded PVC power	2.5mm ²	11.9
Stranded PVC power	4.0mm ²	16.6
*Data cable	Ø5.5mm	23.8
*Data cable	Ø6.0mm	28.3
*Data cable	Ø6.5mm	33.2
*Data cable	Ø7.0mm	38.5
*Data cable	Ø8.4mm	55.4

Please note that made to order fabricated fittings can be manufactured to meet your Cat 7a data cable minimum bend radius. Please contact our technical department on +44 (0)1424 856688 for further information.

Marshall-Tufflex cable management systems are suitable for a variety of data category cables.

The information in the table below is based on average data cable diameters taken from a number of data cable manufacturers.

In all cases it is highly recommended to contact the data cable manufacturer to confirm the specification and minimum bend radius of the data cable prior to installation.

Guidance to determine minimum bend radius

Data Cable	Un-Shielded	Shielded
Cat 5	Up to 10 x cable diameter	-
Cat 5e	Up to 10 x cable diameter	Up to 7 x cable diameter
Cat 6	Up to 8 x cable diameter	Up to 7 x cable diameter
Cat 6a	Up to 8 x cable diameter	Up to 6 x cable diameter
Cat 7	-	Up to 6 x cable diameter
Cat 7a	-	Up to 6 x cable diameter

Installation guidance laying vs pulling

It is important to consider the installation method prior to installing data cables. Incorrect method or poor installation techniques can alter the cable characteristics and degrade the overall specification of the data cable. When pulling cables into trunking systems it is important to note the manufacturer's maximum pulling force as this can reduce the minimum bend radii of the data cable. Laying data cables into a trunking system ensures that minimum bend radius can be achieved and that the data cables installed complies with the required specifications for the installation.

Types of screening available materials of screening

The shielding of data cables is important as this stops the signal generated within the data cable radiating and interfering with signals in nearby cables and circuitry. The shielding also protects the signal from surrounding cables and other external influences. The two main types of shielding material are metallic foil and metallic braid. A number of factors should be considered before selecting the type of shielding for an installation.

- The flexibility of the data cable
- The mechanical strength
- The required shield effectiveness
- Ease of stripping and terminating

Once the correct type of shielding has been selected it is important that the shielding is bonded correctly for it to be effective in protecting against signal interference.

Data cable types advantages/disadvantages

Advantages

- Screened cables offer better protection against electromagnetic interference compared to un-screened data cables.
- Screened and unshielded cables work fine at 1Gigabit Ethernet data rates but screened data cables will outperform at data rates such as 10Gigabit due to their ability to support higher frequency transmissions

Disadvantages

- Unshielded data cables require a physical barrier and or separation distance between power cables must be increased.

Data aperture sizes – LJ6C and Euro modules

LJ6C data modules are suitable for use in trunking systems, floor boxes or any systems that has an industry standard LJ6C aperture. The aperture size for the LJ6C module is 22mm x 37mm but may differ slightly between manufacturers. The Euro data modules have a slightly larger aperture at 25mm x 50mm. Coordinating accessory plates can accommodate one or multiple Euro data modules.

PVC-U vs aluminium trunking advantages/disadvantages

PVC-U trunking systems are low cost, light weight and can be easily fabricated whilst on site, however PVC-U is a non-conductive material so offers no protection against EMI. When using a PVC-U trunking for data installation it is important to segregate and screen the data cables from power and control cables.

This can be easily overcome by either using our range of conductive copper sprayed multi compartment trunking systems or by using the steel screening divider. Steel screening dividing strips can be easily retro fitted to an existing PVC-U trunking installation.

Aluminium trunking systems are lightweight and easy to handle and have high impact and mechanical strength compared to a PVC-U trunking installation. Aluminium trunking systems offer great protection against EMI especially at higher frequencies. Both material options aid and support compliant installations.

GRP ladder and tray

Overview

GRP (Glass Reinforced Polyester) has, good stability to UV, great mechanical strength and is 40% lighter than steel. GRP is a non-conductive insulating material, resistant to temperatures from -80°C to +130°C and has excellent resistance to fire and corrosion being self-extinguishing and zero halogen.

Approvals

- BS 7671:2008+A1:2011
- EC Directive 2014/5/EC
- Low Voltage Directive

Mechanical Behaviour

- Breaking point to NEMA FG1
- IEC 61537
- Tensile strength at break point to ISO 527-5
- Modulus of elasticity to ISO 527-5
- Accelerated aging to ISO 4892-2 & ISO 9227

Electrical behaviour

- Surface resistivity to IEC 6079-0
- IEC 60093
- Breakage voltage to IEC 60243-1
- Comparative tracking index IEC 60112

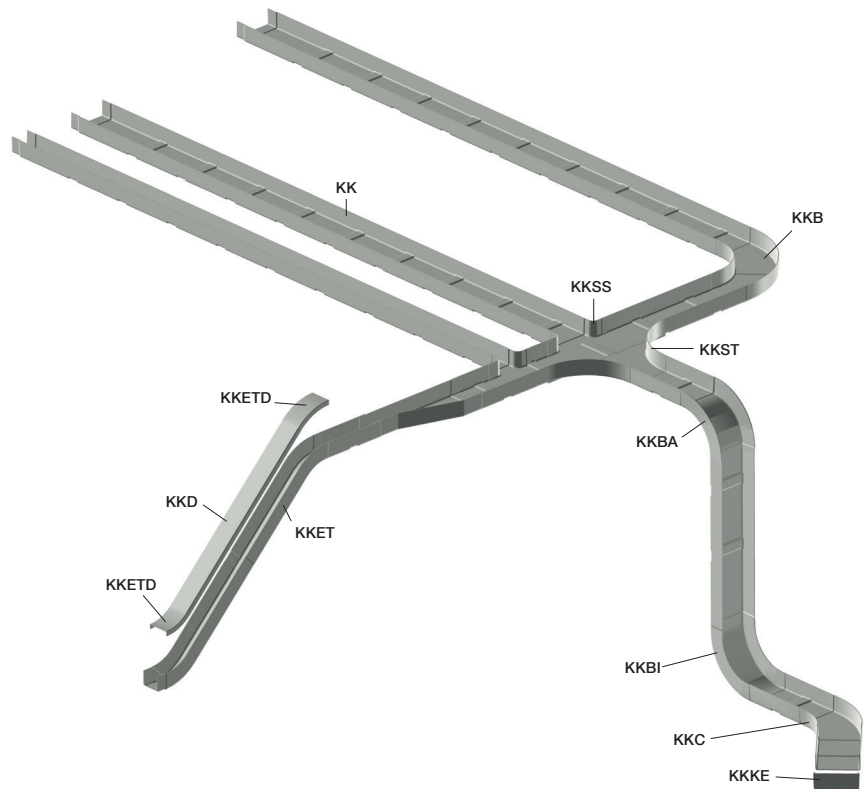
Density to DIN 53479

- Linear Thermal Dilatation to DIN 53752
- Water Absorption to ISO 62

Fire Behaviour

- Inflammability to IEC 60695-2-12/UL94
- UL 723
- DIN 5510-2
- NF-F-16101
- Spread of flame to BS 476 part 7 class 2/ ASTM E84 (Up to Class 1 on request)
- Fire propagation to BS 476 Part 6
- Smoke emissions to BS 6853 App B53
- Fire standard to DIN 4102 part 12

GRP tray



KKB

During installation care must be taken to position a support at each end of the cable tray fitting. It is also recommended that the large radius fitting is fixed laterally to each end of adjoining cable tray.

KK

Each length of tray comes complete with built in, self adjusting coupler. An expansion gap of 8mm must be considered for thermal movement.

KKSS

During installation care must be taken to position a support at each end of the cable tray fitting.

KKST

During installation care must be taken to position a support at each end of the cable tray entry

KKRR

During installation every reducer must be supported at each end. It is also recommended that the reducer fitting is fixed laterally to each end of adjoining cable tray.

KKBA

During installation care must be taken to position a support at each end of the cable tray entry. It is also recommended that the outside elbow fitting is fixed laterally to each end of adjoining cable tray.

KKETD

Covers are attached using either DF50/DF80 stainless steel cover clips. In strong winds the quantity of clips should be increased.

KKD

For a stronger assembly, covers with a width greater than 400mm are strengthened. Strengthening ribs are visible on the outside of the cover. Covers are attached using either DF50/DF80 stainless steel cover clips. In strong winds the quantity of clips should be increased.

KKET

During installation all fittings must be supported at every cable entry, and central support for all fittings with a radius greater than 250mm, and/or with width greater than 400mm. It is also recommended that the change in elevation fitting is fixed laterally to each end of adjoining cable tray.

KKBI

During installation care must be taken to position a support at each end of the cable tray entry. It is also recommended that the inside elbow fitting is fixed laterally to each end of adjoining cable tray.

KKC

To ensure correct installation, the horizontal elbow must be fixed laterally to each end of the adjoining cable tray.

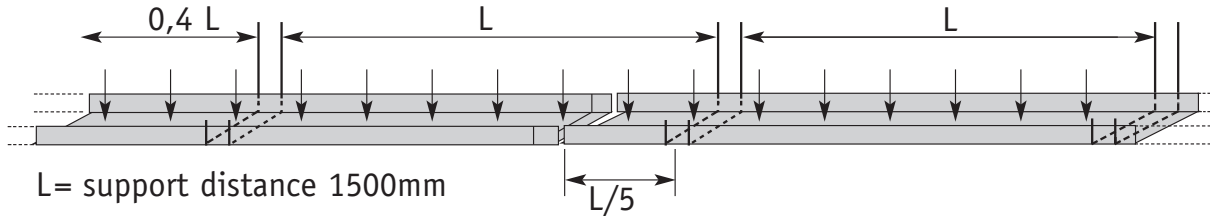
KKKE

Mounting accessories required for this fitting - 2 x M6x16 Bolts (to be ordered separately)

Standard span pressed tray

Load characteristics

Coefficient of safety > 1.7 (in accordance with IEC 61537) this data is given for ladders coupled with splice plates and bolts.



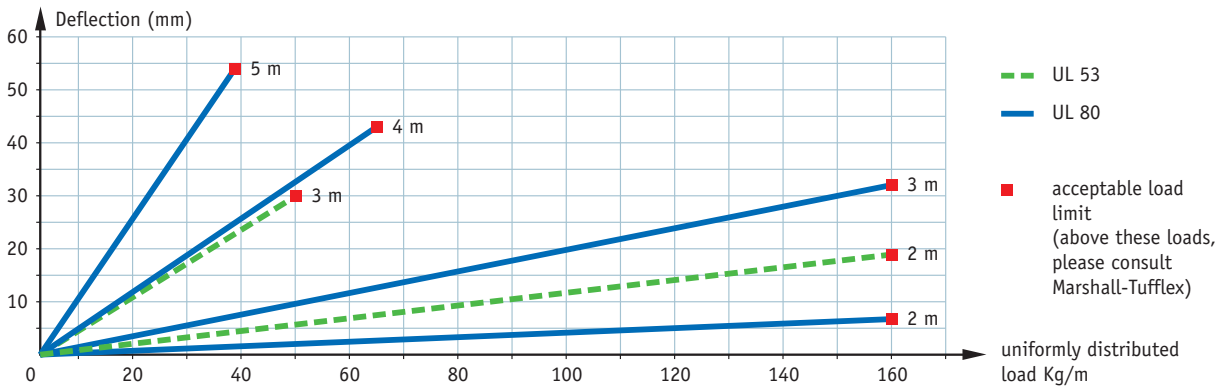
The deflection values are measured with the position of the junction between 2 ladders at a distance $L/5$ from a support. If this distance is not respected, it is necessary to raise the deflection values by about 30% when fully loaded.

	Useful area (mm ²)	Weight of cables kg/m	Maximum admissible load kg/m according to the distance between supports					
			2m	3m	4m	5m	6m	
UL...53	150 – 300	4420 – 9520 = 250	160	50				
	400 – 600	12920 – 19720 = 550		50				
UL...80	150 – 300	7690 – 16840 = 450	160	160	60	30		
	400 – 600	22940 – 35140 = 1000			60	30		

Optimal conditions, for cost reduction on your installation.

Series UL load diagram: supporting distances from 2 to 5m.

For 100mm and 150mm wall height refer to Marshall-Tufflex.



Localised loads

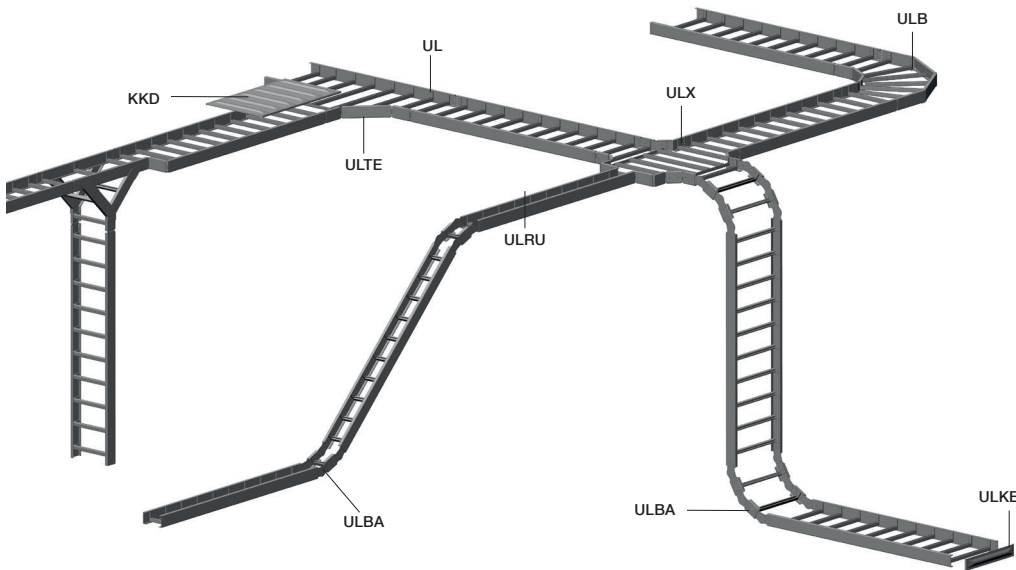
To be able to compare this to a uniformly distributed load it is necessary to double the value of the localised load. Example:

A 60kg local load at the centre of a ladder with 3m of support distance.
Equivalent load: $60 \times 2 = 120\text{kg}$ uniformly distributed along 3m (ie 40kg/m).

Loading characteristics

- Deflection <5mm (1/300).
- Coefficient of safety >1.7 (in accordance with IEC 61537) using the interlocking and self-adjustable coupling without fasteners.
- Loading diagram details (below) in accordance with IEC 61537, at an ambient temperature of 25°C.

GRP pultruded ladder



ULB

During installation you must take care to position a support under each elbow at each cable ladder end. If the bending radius is greater than 250mm and/or the width greater than 400mm, an additional intermediary support is necessary.

UL

Cable ladders are supplied with non-perforated rungs. Should you require perforated ladder rungs please contact a member of the technical team who will be happy to assist in your enquiry.

ULX

During installation all fittings must be supported at every cable entry. A central support is required for all fittings with a bend radius greater than 250mm and/or the width greater than 400mm

ULRU

During installation the stainless steel splice plates must be fixed on each cable ladder end using 8 x M6 x 16 bolts. (to be ordered separately)

KKD

For a stronger assembly, covers with a width greater than 400mm are strengthened. Strengthening ribs are visible on the outside of the cover. Covers are attached using either DF50/DF80 stainless steel cover clips. In strong winds the quantity of clips should be increased.

ULTE

During installation all fittings must be supported at every cable entry. A central support is required for all fittings with a bend radius greater than 250mm and/or the width greater than 400mm

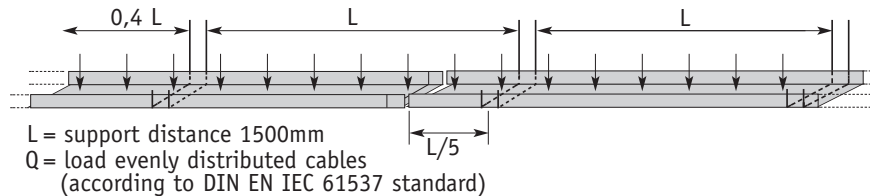
ULBA

During installation the metallic splice plates must be fixed at each cable ladder end using 4 x M6 x 16 bolts. (to be ordered separately). If the bending radius is greater than 250mm and/or the width greater than 400mm, an additional intermediary support is necessary.

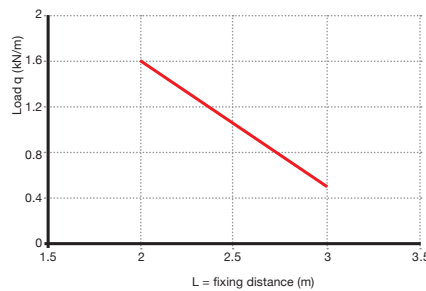
ULKE

Mounting this accessory requires 2 x M6 x 16 bolts. (to be ordered separately)

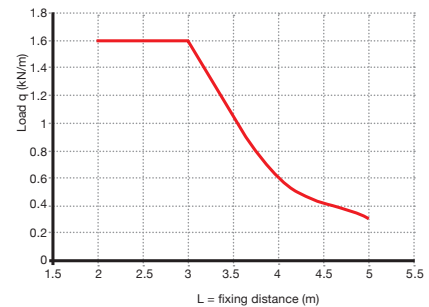
Load characteristics



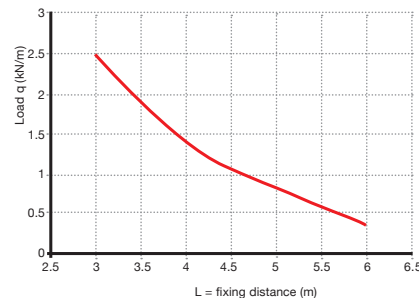
53mm High Cable Ladder



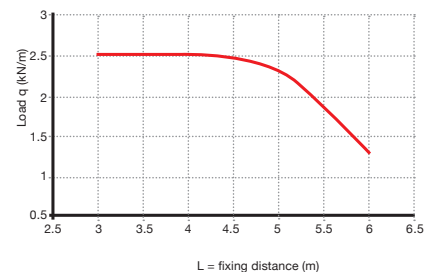
80mm High Cable Ladder



100mm High Cable Ladder



150mm High Cable Ladder



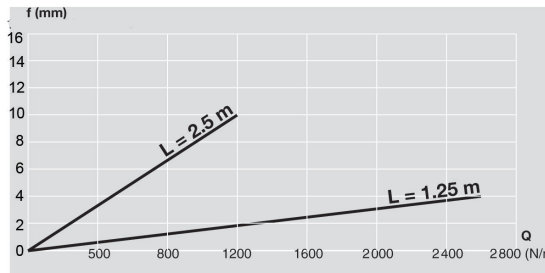
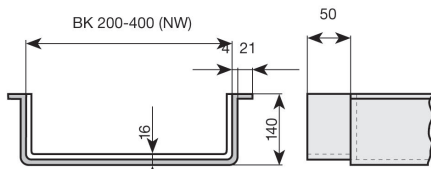
Warning: the deflection is measured with a junction position between 2 cable trays at a distance of L/5 from the support. If this distance is not respected, it is necessary to raise the deflection values by approx 30%.

GRP ground ducts

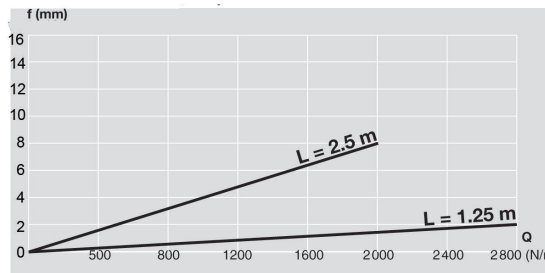
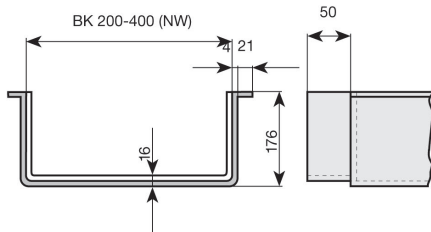
Load characteristics of ground duct

BK Height 140 mm

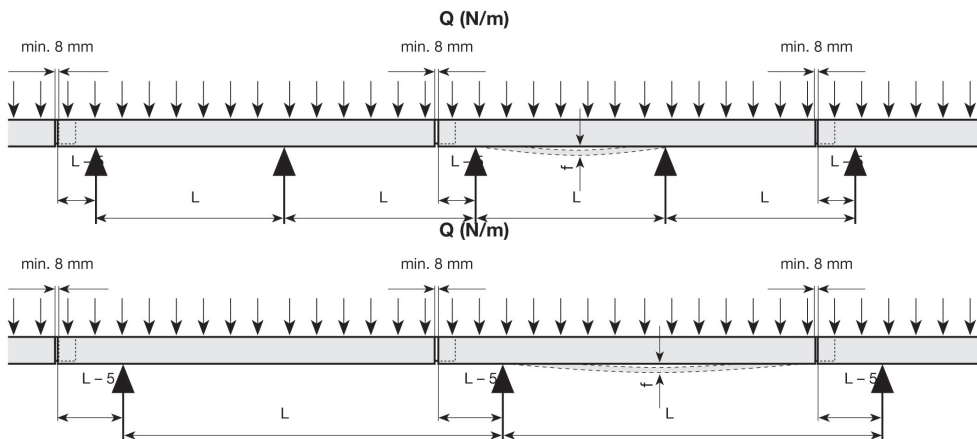
F = Deflection
L = Support Distance
Q = Distributed Load



BK Height 176 mm

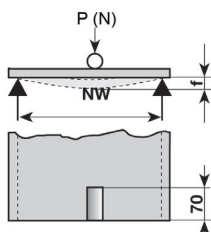


Tested in normal conditions of use



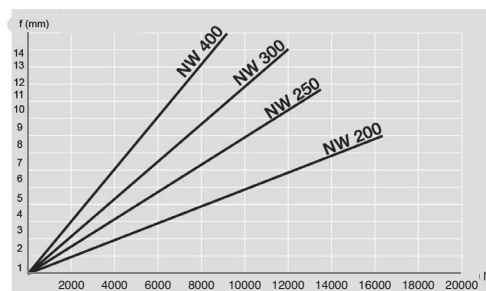
Load diagrams of plate covers

P = Load in N
f = Deflection
NW = Nominal width BK

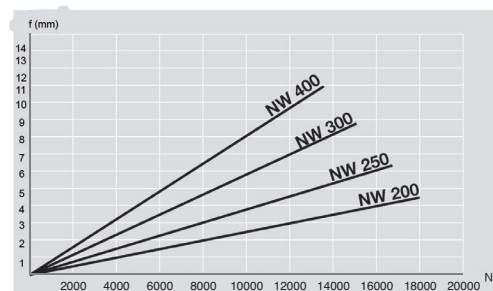


Load at edge of piece

BKDR 5mm



BKDR 8mm



Material

Electrogalvanised (ELECTROZINC/EZ)

A steel base coated with a zinc layer by electrolysis, by means of submerging the lengths in a bath composed of a zinc solution, in accordance with BS EN ISO 2081. Depending on the type of zinc layer, it shall have a different degree of protection on the steel, avoiding corrosion and enhancing the visual appearance of the length. This treatment is carried out once the length has been formed. The IEC 61537 Standard classifies the degree of resistance to corrosion of the system's components depending on the steel's electrolytic covering, belonging to Class 1 those with a minimum thickness of 5µm and to Class 2 those of 12µm. Marshall-Tufflex uses Class 2 as its standard material in order to guarantee the quality of its products against corrosion. This treatment is used in dry environments free of pollutants.

Hot Dip Galvanised Steel (HDG) Non-standard material

Laminated or rust removed galvanised after forming steel according to BS EN ISO 1461 Standard. The steel's protection is covered by a zinc coating which varies depending on the steel's thickness, offering a uniform covering. The zinc coating's thickness depends on the thickness of the base material. The IEC 61537 Standard classifies the resistance against corrosion of these galvanised steels as Class 5 for the covering of 45µm, Class 6 for 55µm, Class 7 for 70µm and Class 8 for 85µm. Hot dip galvanised steel is used in humid environments, granting a high protection during adverse atmospheric situations, light chemical situations, light marine situations and urban situations.

Stainless Steel AISI 316 (I316) Non-standard material

Denominated 14401 according to the numerical classification established by the BS EN 10088 Standard. Steel's protection happens due to the great affinity which metals such as chromium have with oxygen, which gives place to the creation of a protective chromium oxide layer which avoids the corrosion of iron. Type I316 stainless steels are similar to type 1304, but they contain a 2.5% of molybdenum which confers it a greater resistance to localised corrosion. It is ideal for use in very corrosive environments, even at high temperatures. Under special conditions, and always under order, there is the possibility of conducting a passivation process. Passivation is a treatment which enhances stainless steel's protection against corrosion by means of forming a relatively inert film on the surface of a material which protects it against the action of external agents. The passivation

film or layer does not allow these agents to interact, reducing or stopping the chemical reaction from happening.

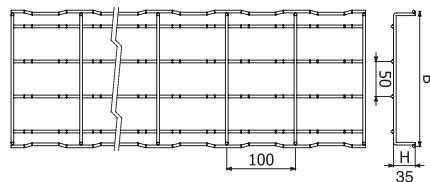
IEC 61537 Standard classifies this steel's resistance to corrosion as Class 9B without the passivation treatment and as Class 9D with the passivation treatment.

Stainless Steel AISI 316L, denominated 14401 according to the numerical classification established by the BS EN 10088 Standard has the same characteristics regarding corrosion as steel AISI 316, but offers a higher degree of welding and easier forming of the lengths with a thickness of more than 6mm.

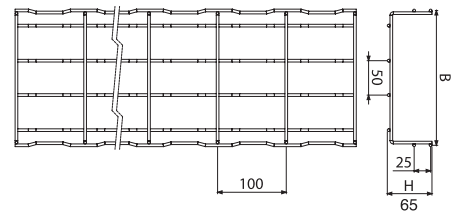
Dimensions

Height 35mm

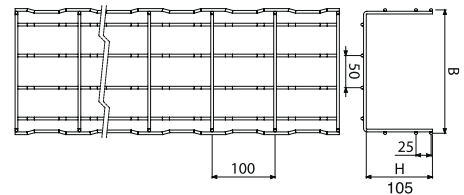
Standard Wire Basket



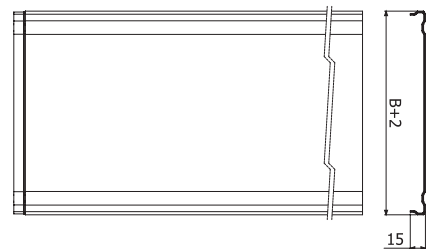
Height 65mm



Height 105mm



Cover



Working temperature

	Minimum working temperature	Maximum working temperature	According to Standard
Standard Wire Basket 35mm	-50°C	+150°C	IEC 61537
Fast-Coupling Wire Basket 65mm	-50°C	+150°C	IEC 61537
Fast-Coupling Wire Basket 105mm	-50°C	+150°C	IEC 61537

Resistance to corrosion

Atmospheric corrosion

Atmospheric corrosion happens when metal is exposed to liquids, solids or gases, Humidity, salt corrosive gases and dirt are its main factors. Atmospheric corrosion takes place in open air conditions, areas with poor ventilation and marine environments.

Saline corrosion happens when a metallic surface is exposed to different saline concentration levels forming a galvanic pile. At times where the surface is exposed to the lowest degree of saline concentration this will then behave as an anode for the corrosion to take place.

Chemical corrosion

Chemical corrosion happens when metal is directly exposed to chemical solutions. Depending on the concentration of the solution, contact time, cleaning frequency and ambient temperature the level of corrosion will be higher or lower.

Galvanic corrosion

Galvanic corrosion is the most common type of corrosion, and happens when two different metals are in contact with one another. When two different metals come into contact a small galvanic pair is created, as one metal acts as an anode the other acts as a cathode. The metal with the most negative reduction potential shall oxidise whilst the metal with the most positive charge shall have less corrosion.

Storage conditions

The product must be stored in a dry and well ventilated area. The product must not be stored outside even in low humidity conditions.

Free base area

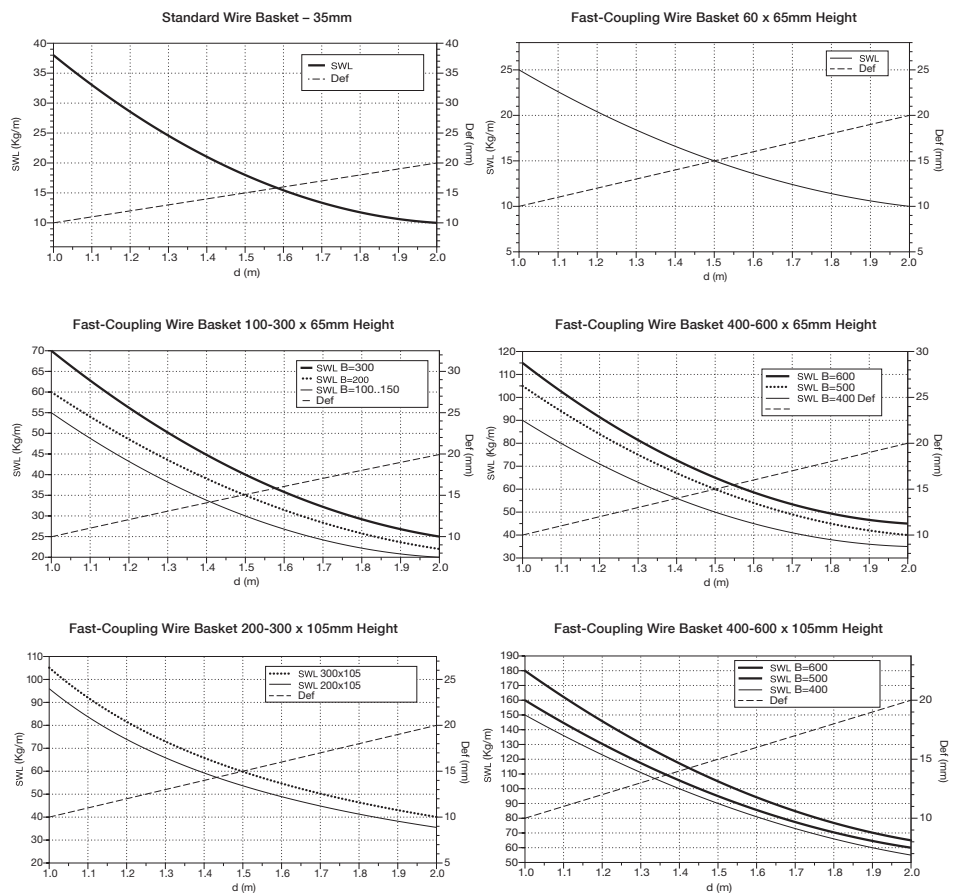
Base size	Classification	Free base area
60	Z	More than 90%
100	Y	Over 80% and up to 90%
150	Y	Over 80% and up to 90%
200	Y	Over 80% and up to 90%
300	Y	Over 80% and up to 90%
400	Y	Over 80% and up to 90%
500	Y	Over 80% and up to 90%
600	Y	Over 80% and up to 90%

To show the installation designer the level of ventilation allowed for the cable tray, the IEC 61537 standard established that the manufacturer has to inform of the percentage of the base 'free' (without material, in solid cable trays this means the "degree of perforation").

Safe working load (SWL)

The safe working load (SWL) is the maximum load which can be applied during normal use, without danger. Therefore, the workload shall always be less than the SWL.

The SWL of our products are calculated in accordance with IEC 61537. For any further information contact our Technical Team in +44 (0)1424 856688.



Cable capacities

- All calculations allow for a 45% space factor.

As there can be differences between data cable sizes, Marshall-Tufflex recommend that cable dimensions are confirmed with the manufacturing company.

Basket Width (mm)	35mm Standard Basket			65mm Fast-coupling Wire Basket			105mm Fast-coupling Wire Basket		
	Without Matting	Flexible Matting	Rigid Matting	No Cablelay	With Cablelay Matting	With Cablelay Rigid	No Cablelay	With Cablelay Matting	With Cablelay Rigid
Data Cable: Ø5.5mm									
60	-	-	-	43	39	41	-	-	-
100	51	42	46	89	80	84	-	-	-
150	79	65	72	142	127	134	-	-	-
200	109	89	99	193	173	183	365	345	355
300	-	-	-	297	266	281	562	531	546
400	-	-	-	401	358	380	759	716	738
500	-	-	-	505	451	478	956	902	929
600	-	-	-	609	544	577	1153	1088	1120
Data Cable: Ø6mm									
60	-	-	-	36	33	34	-	-	-
100	42	35	39	74	67	71	-	-	-
150	66	54	60	119	107	113	-	-	-
200	92	75	83	162	145	153	307	290	298
300	-	-	-	249	223	236	472	446	459
400	-	-	-	337	301	319	638	602	620
500	-	-	-	424	379	402	803	758	781
600	-	-	-	512	457	485	969	914	941
Data Cable: Ø6.5mm									
60	-	-	-	31	28	29	-	-	-
100	36	30	33	63	57	60	-	-	-
150	56	46	51	101	91	96	-	-	-
200	78	64	71	138	124	131	261	247	254
300	-	-	-	212	190	201	402	380	391
400	-	-	-	287	256	272	543	513	528
500	-	-	-	362	323	342	684	646	665
600	-	-	-	436	389	413	825	779	802
Data Cable: Ø7mm									
60	-	-	-	26	24	25	-	-	-
100	31	26	28	54	49	52	-	-	-
150	49	40	44	87	78	83	-	-	-
200	67	55	61	119	106	113	225	213	219
300	-	-	-	183	164	173	347	327	337
400	-	-	-	247	221	234	468	442	455
500	-	-	-	312	278	295	590	557	573
600	-	-	-	376	336	356	712	671	691
Data Cable: Ø8.4mm									
60	-	-	-	18	16	17	-	-	-
100	21	18	20	38	34	36	-	-	-
150	34	28	31	60	54	57	-	-	-
200	47	38	42	82	74	78	156	148	152
300	-	-	-	127	114	120	241	227	234
400	-	-	-	172	153	163	325	307	316
500	-	-	-	216	193	205	410	386	398
600	-	-	-	261	233	247	494	466	480

Load table

Find out the load capacity of all our wire baskets. We recommend that you plan for extra space in cable pathways during the initial installation to allow capacity for future cable additions.

For spacing factors please refer to current Wiring Regulations BS 7671:2008 and all current amendments.

MT Code	Description	Weight kg/m
MT2/3616	Standard 100x35mm	0.55
MT2/3617	Standard 150x35mm	0.69
MT2/3618	Standard 200x35mm	0.83
MT2/3619	Standard 300x35mm	1.18
MT2/7389	Fast coupling 60x65mm	0.54
MT2/7248	Fast coupling 100x65mm	0.79
MT2/7249	Fast coupling 150x65mm	0.84
MT2/7250	Fast coupling 200x65mm	1.09
MT2/7251	Fast coupling 300x65mm	1.60
MT2/7394	Fast coupling 400x65mm	1.94
MT2/7395	Fast coupling 500x65mm	2.72
MT2/7396	Fast coupling 600x65mm	3.13
MT2/7397	Fast coupling 200x105mm	1.59
MT2/7398	Fast coupling 300x105mm	1.93
MT2/7399	Fast coupling 400x105mm	2.71
MT2/7400	Fast coupling 500x105mm	3.12
MT2/7401	Fast coupling 600x105mm	3.53

EMC and data

It is recommended to separate power and data circuits by a minimum of 20cm. (EN 50174-2)

Where power and data circuits must cross, this must be done at 90 degrees.

Wire Basket systems without electrical continuity do not protect against electromagnetic fields. Make sure electrical continuity is preserved by using the appropriate earth bonding accessories.

Electrical continuity

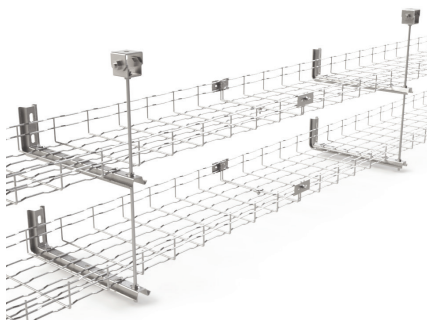
Our Fast-Coupling Wire Basket conforms to IEC 61537. The wire mesh basket has an impedance lower than:

- ⚡ 50mΩ across the joint
- ⚡ 5mΩ per metre in a straight section

Fire resistance

Marshall-Tufflex and Basor Electric certifies that the wire basket installed with the below mentioned characteristics complies with Class E90 of function maintenances, in accordance with Standard DIN 4102, Section 12.

This system incorporates Standard Wire Basket with a height of 65mm. This system uses Fast Fix Wall Bracket supports fixed to the wall and reinforced on the ceiling using the Variable Support Bracket, M8 Threaded Rod and M8 Nut on one side, as per the below image.



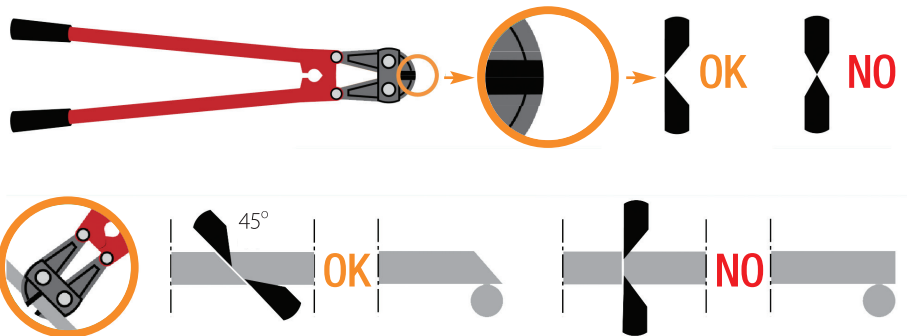
The distance between supports is of 1.2m and the maximum load is of 10kg/m. The system may have one or two levels.

Earth bonding

For earth bonding requirements please refer to the current Wiring Regulations BS 7671:2008 and all current amendments.

Cutting

Always use asymmetrical cut wire cutters. Cut as close as you can to where horizontal and vertical rods cross each other, as shown.

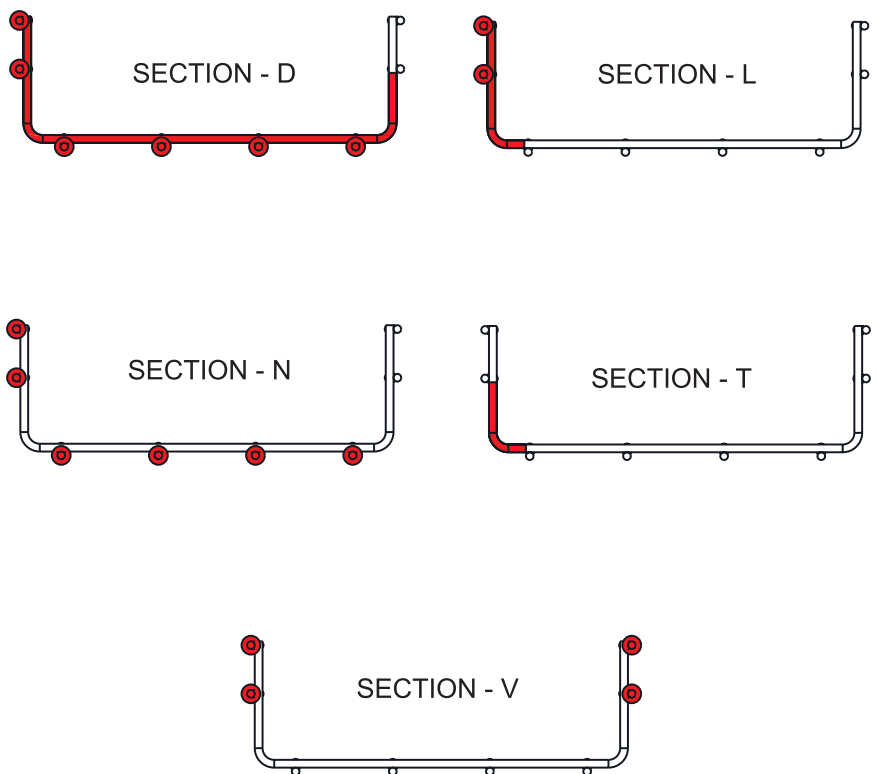


We recommend always placing the basket on a flat surface to make the cuts.

Wire gauge:

- 100mm - 200mm Width = 4.0mm
- 300mm - 400mm Width = 4.3mm
- 500mm - 600mm Width = 4.6mm

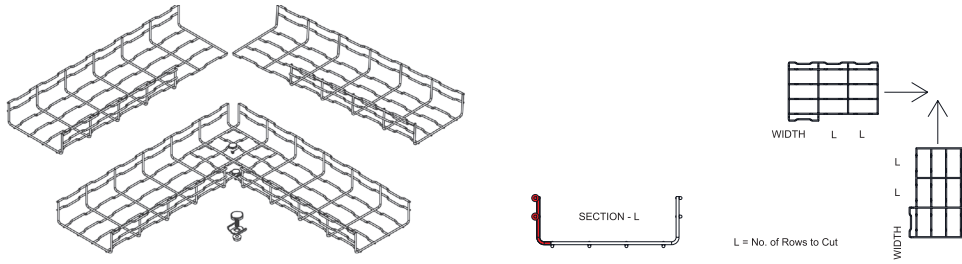
The below drawings show in red the section cuts that are needed for the bends, tees and changing levels as explained in the Installation section on pages 256-257.



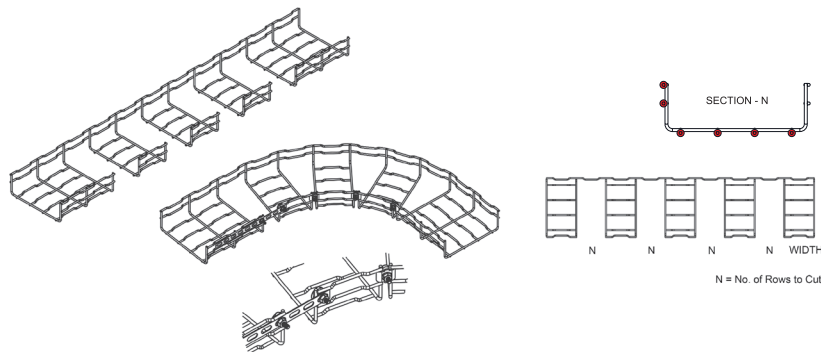
Installation

The following drawings show in red the sections that should be removed to make the associated join or bend.

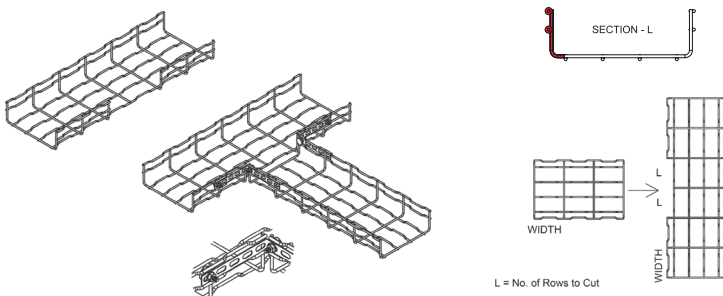
Horizontal bend from two straight sections



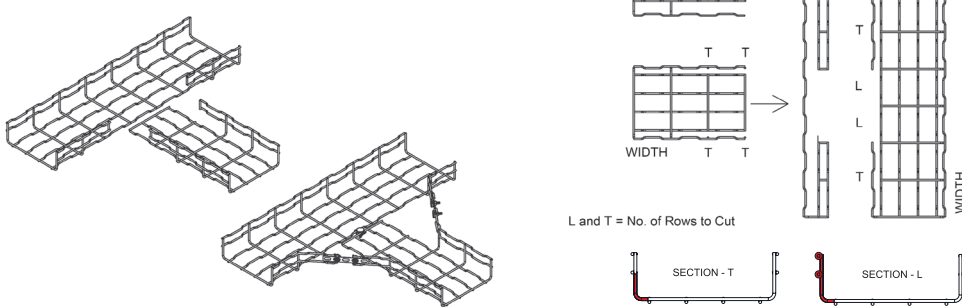
Horizontal bends long radius – right angle



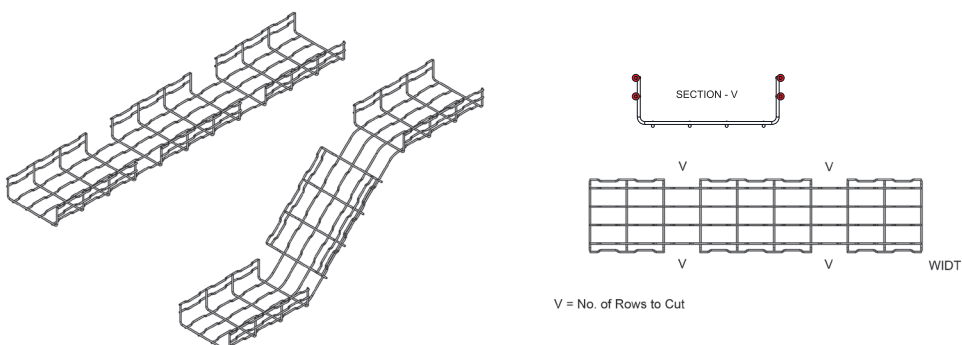
Horizontal tees



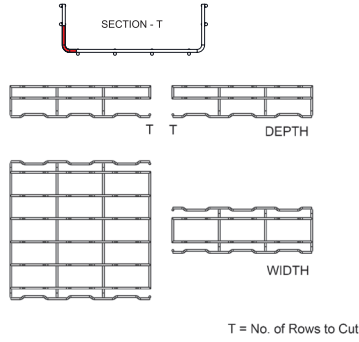
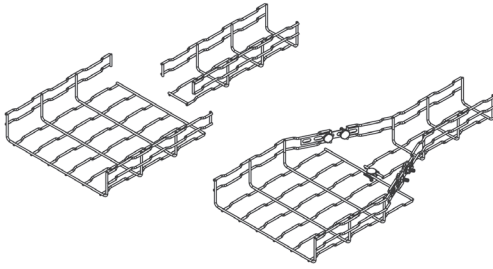
Tee with large radius



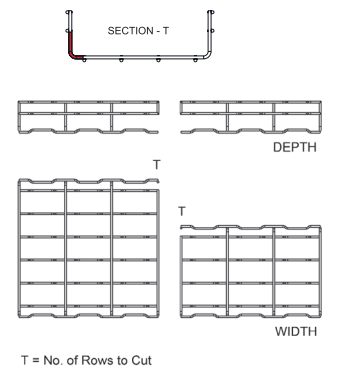
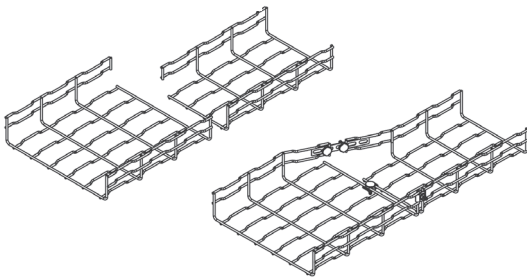
Vertical inside and outside bends



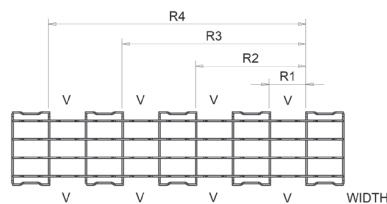
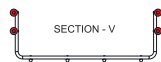
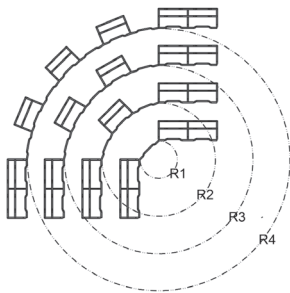
Reducers straight



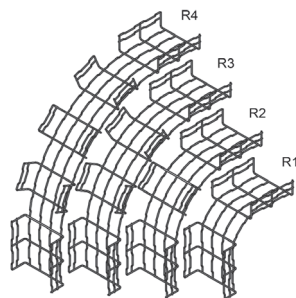
Reducers left or right



Vertical bends



V = No. of Rows to Cut



Radius	Radius diameter	Number of rows that will need to be cut
R1	64mm	1 row
R2	190mm	2 rows
R3	320mm	3 rows
R4	445mm	4 rows

MT32 Pre-wired underfloor power distribution

Singles cabling system

Extension, connection, adaptor and terminal cables

Cable Type	6491B (HO1Z-R) to BS 7211 (LS0H)
Size	4.0mm ² x 3 (PE) or 4.0mm ² x 4 (CE)
Connector Self Lock Retention	> 80N
Male/Female Connector Diameter	19.2mm
Terminal Block	6 x 4.0mm ²
Adaptor (4.0mm ²)	20mm

Underfloor Distribution System

Conduit assembly, tap off and adaptor

Cable Type	6491X (BASEC BS 6004 H07V-R)
Protective Earth (P.E)	4.0mm ² x 3 (Grey Plug)
Clean Earth (C.E)	4.0mm ² x 4 (Red Plug)
Protection: Conduit Assembly	25mm Steel flexible conduit (>1kN Tensile Load to BS EN 61386-23)
Protection: Tap Off	20mm Steel flexible conduit (>1kN Tensile Load to BS EN 61386-23)

General specification

Approvals: System	Designed to comply with BS 7671:2008 IEE Wiring Regulations
Approvals: Connector	Designed to comply with EN 61535:2009 (Fixed installation couplers for permanent connection)
Normal Voltage	250 volts
Frequency	50/60 Hertz
Volt Drop Line & Neutral Connector	1.0 mV/A/M
Volt Drop Line & Neutral (Flexible Cabling System) 2.5mm	19.0 mV/A/M
Volt Drop Line & Neutral (Underfloor) 4.0mm	12.0 mV/A/M
Connector Impedance	1.0m Ω/connector
Connector, Body Material	PA66 – GF25
Connector Colour Female	Black
Connector Colour Male	White
Compatibility	Keyed against incorrect insertion
Operating Temperature (Ambient)	-5°C to + 40°C
Safety	PE contact engages first
Degree of Protection	Engaged IP2XC

Earthing requirements for the installation of equipment having High Protective/Conductor currents. BS 7671: 2008

Reg. 543.7

The scope of Reg. 543.7.1.203 requires that every final circuit intended to supply one or more items of equipment, where the total protective conductor current is likely to exceed 10mA. in normal use, shall have a high integrity protective connection.

Singles Cabling System 4.0mm²

Final Circuit

MT32 singles systems conform to the high integrity protective requirement by virtue of having a single copper protective conductor of 4mm², (Reg 543.7.1.203) with the protective conductor being enclosed throughout in trunking or flexible conduit to provide additional protection against mechanical damage.

Note: Different key ways apply between 2.5mm² and 4.0mm²

Installation

MT32 pre-wired socket range

Fitting

- Plug in incoming pre-wired lead (from previous socket or distribution board) to appropriate connector mounted in socket assembly box.
- Connect selected pre-wired lead to outgoing connector mounted on opposite side of socket assembly box.
- Clip complete assembly into trunking compartment.
- When trunking cover is fitted, it should be slid between back box frame and the loosened accessory face plate.
- Front plate is then fully tightened down to clamp accessory in place.
- For pre-made close coupled assemblies, use lid spacer (ES1WH) between boxes.

MT32 system with non-Marshall-Tufflex socket assemblies

Fitting

- For non-Marshall-Tufflex accessories, use pre-assembled outlet box unit.
- Connect cable tails to accessory in accordance with wiring regulations and fit accessory to back box.
- Connect pre-wired incoming and outgoing leads and fit to trunking (as above).
- For close coupled assemblies, use lid spacer (ES1WH) between boxes.

Powertrack

Powertrack is an underfloor busbar system rated at 63Amp maximum. It is available in Standard or CE (Clean Earth) versions.

Lengths

- Powertrack lengths of 1.2m, 1.8m, 2.4m and 3.6m with tap-off outlets at 300mm

Safety

- Snap-fit feed units, couplers and tap-offs are key and colour-coded to avoid assembly errors.



Standard = grey



CE = red

- A shutter is operated on insertion to prevent accidental contact.
- Avoid exceeding the maximum power rating of the track. This is ascertained by the maximum power requirement for each floor outlet box

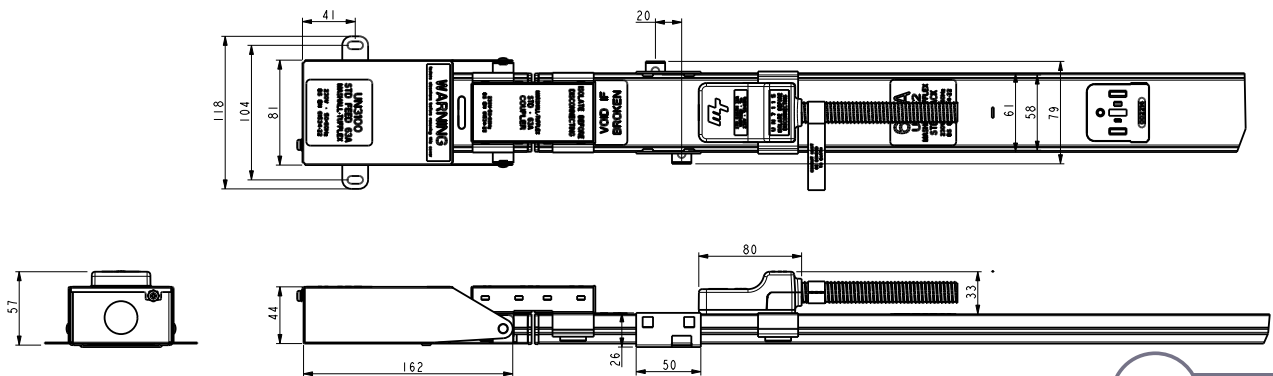
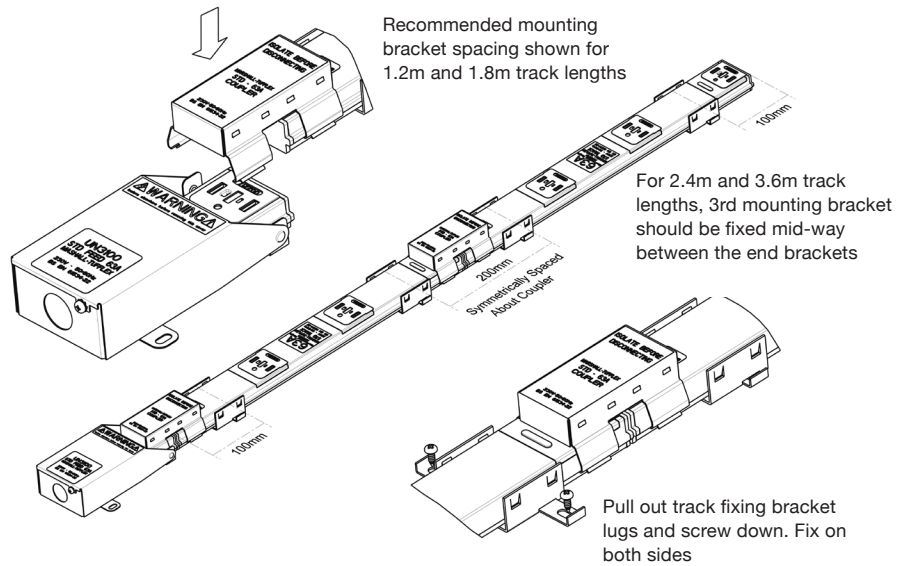
Positioning

- For the most economic format, it is advised that Powertrack is arranged in parallel runs with Powertrack feed units orientated to the incoming supply.
- For optimum layout flexibility, spacing should be a maximum of 5.5m between each length of track and 2.5m from the perimeter when using a standard 3m tap-off to a floor box.

Installation

- Lay out track lengths and feed unit as required to suit final assembly
- Position and secure the feed unit in place
- Carefully engage the first track length on to the feed unit socket
- Ensure the clip action is secure at the coupler and unit feed also that alignment is correct in laying the track length to the floor
- Secure the track length in place along its length at recommended spacing shown below using the brackets provided
- Additional track lengths can now be placed as below.
- Ensure the assembly is secure and prepare to make electrical connections

Please refer to the full installation instructions, EL182 available at www.marshall-tufflex.com or by contacting the Technical Team on +44 (0)1424 856688.



p80 Product Information

TECHNICAL INFORMATION

Electrical Characteristics			
Rated Current		63	Amps
Rated Voltage		230	Volts
Frequency		50/60	Hz
Conditional Short Circuit Rating	(Protection device: BS 1361 fuse)	16	KA
Conductor Resistance Line & Neutral		4.4	mΩ/m
Volt Drops Line & Neutral	Powertrack	4.4	mV/A/m
	Feed Unit + Coupler	2.2	mV/A
	Tap-Off	0.73	mV/A
	4mm ² Cable	11.0	mV/A/m
	Coupler	1.5	mV/A
	Interlink Unit	4.5	mV/A
	16mm ² Cable (1.2m)	3.9	mV/A/m
Earth Fault Loop Impedance:	Line to Earth (Casing)	2.8	mΩ/m
	Line to Earth (Conductor)	3.2	mΩ/m
	Line to Earth (Conductor + Casing)	2.8	mΩ/m
	Feed Unit + Coupler	2.2	mΩ
	Tap-Off	0.73	mΩ
	4mm ² Cable	11.0	mΩ/m
	Coupler	1.5	mΩ
	Interlink Unit	4.5	mΩ
	16mm ² Cable	3.9	mΩ/m
Mechanical Data			
Number of Copper Conductors		2 or 3	
Conductor Cross-section Area	Nominal	20	mm ²
Powertrack Casing Copper Equivalent	(Where casing is protective Earth)	12	mm ²
Cable Termination Capacity		16	mm ²
Tap-Off Cable 32A		4.0	mm ²
Tap-Off Cable 13A or 16A		4.0	mm ²
Tap-Off Conduit Sizes	Rating: Heavy duty conduit <1KN Tensile Load to BS EN 61386-23	Ø20	mm
Flexible Interlink Cable		16	mm ²
Flexible Interlink Conduit	Rating: Heavy duty conduit <1KN Tensile Load to BS EN 61386-23	Ø25	mm
Feed Conduit Entry		1 x Ø25	mm
IP Rating		40	
Minimum void depth (track + tap-off)		59	mm
Materials specification			
Powertrack Casing	Galvanised Steel		
Conductors	High Conductivity Copper/brass		
Powertrack Insulators	PBT		
Sockets/Tap-Off Plug/Joint Mouldings	Polycarbonate		
Shutter	PBT		
Tap-Off/Interlink Flexible Conduit	Galvanised Steel		
Tap-Off Cable	BASEC BS 6004 H07V-R		
Tap-Off/Coupler Blade	Copper		
Feed Unit Case	Galvanised Steel		
Flexible Interlink Cable	BASEC BS 6004 H07V-R		
Feed/Flexible Interlink Housing	Galvanised Steel		

Technical Specifications

Third party certified and tested to comply with:

BS EN 61534-1: 2011

BS EN 61534-22: 2009

BS 5733: 1995 where applicable.

Marshall-Tufflex is registered by BSI to BS EN ISO 9001: 2008

MT Powertrack is designed to comply with the requirements of BS 7671: 2008 (IEE Wiring Regulations).

ASTA Type Test Certification

Powertrack is independently tested by Intertek to BS EN 61534-22:2009 clauses 15.4, 18.4.3.2, & 18.4.3.3

Regulation 543.7

Installations to BS 7671:2008

Earthing requirements for the installation of equipment having high protective/ conductor currents.

The scope of Reg. 543.7.1.203 requires that every final circuit intended to supply one or more items of equipment, where the total protective conductor current is likely to exceed 10mA. in normal use, shall have a high protective connection.

All MT Powertrack tap-off units conform to the high integrity protective requirement by virtue of using a protective conductor of 4mm² enclosed within a flexible conduit, thus providing additional protection against mechanical damage. Regulation 543.7.1.203.

32Amp 3 metre tap-off unit

The 32Amp tap-off unit comprises of an unfused tap-off* a flexible metal conduit with integral 4mm² conductors.

These units are designed to comply with regulation 434.2.1(i) of BS 7671:2008 by virtue of the following:

- 1 Maximum length of cable is <3 metres.
- 2 Minimum risk of faults as the item is factory assembled and fully tested.
- 3 Fully protected by flexible steel conduit located within raised access floor that offers further protection.

*Fused 3 metre tap-offs are available if required.

5 metre tap-off unit

Tap-off units in excess of 3 metres should only be used if they contain a fuse or the powertrack is protected by a 32Amp rated protective device.

Raised floor boxes

Three and four compartment boxes and a range of grommets that can be configured to meet client requirements for accessing multiple services concealed below a raised floor system.

Technical specifications

Raised floor boxes are third party tested to comply with:

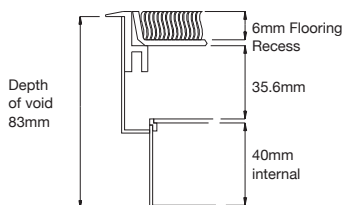
- BS EN 61534-22:2009
- BS EN 60670-1:2005
- BS EN 60670-23:2008
- BS EN 50085-1:2005
- BS EN 50085-2-2:2008

Material

- Lid/trim: flame retardant polypropylene grey RAL 7011
- Box assembly: galvanised steel
- Load plate: 3mm zinc plated steel
- Accessory plate: galvanised steel

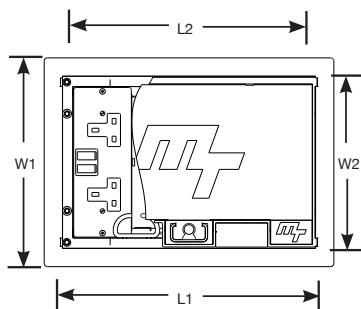
Installation

- Box module has 20 and 25mm knockouts (pre-wired options available).
- Mounting plates:
3 compartment = 185 x 95mm
4 compartment = 185 x 71mm
- Standard accessory mounting plates available depending on suitability of floor box configuration.
- Cable covers protect cables when lid is closed.
- Detailed installation instructions are supplied in box.



Dimensions

- For dimensions of non standard boxes and trims, contact Technical Hotline on +44 (0)1424 856688.



Dimensions

No of compartments	Nominal trim size (L1 x W1)	Cut out dimensions (L2 x W2)	Accessory Plate Dimensions
3	357 x 257mm	322 x 222mm	185 x 95mm
4	357 x 257mm	322 x 222mm	185 x 71mm
		General tolerance +3mm	

Care should be taken to ensure that box edges are smoothed and free from burrs. Carpet tile cut size for lid is 303 x 166mm.

Load testing

Load testing of floor boxes to:

- BS EN 61534-22:2009
- BS EN 50085-2-2:2008

The floor boxes have been tested to and comply with the loading requirements of the aforementioned standards.

There are two loading criteria for the floor boxes:

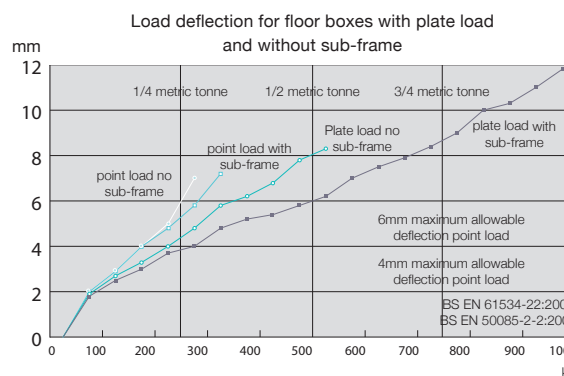
- A point loading; to simulate foot traffic or light furniture like a chair leg / caster sitting on the lid. The maximum permissible deflection is 6mm (BS EN 61534-22:2009 and BS EN 50085-2-2:2008)
- A plate loading; to simulate heavy foot traffic or larger furniture loads. the maximum permissible deflection is 4mm (BS EN 61534-22:2009) or 6mm (BS EN 50085-2-2:2008)

Note: The maximum permissible permanent deflection after the load has been removed is 3mm for both standards.

The loading graphs show the deflection based on floor boxes without and with a sub-frame. The point loading value is approaching 1/4 of a metric tonne without sub-frame and reaching 1/4 of a metric tonne with sub-frame. In both cases the permanent deflection is less than 1/4 mm.

For plate loading without sub-frame the value is approaching 1/4 of a metric tonne with 4mm deflection and 1/3 of a metric tonne with 6mm deflection. With the sub-frame fitted the loading reaches 1/4 of a metric tonne with 4mm deflection and 1/2 a metric tonne with 6mm deflection. In both cases the permanent deflection is reaching 0.5mm.

Note: floor boxes fitted with sub-frame can exceed more than 1 metric tonne plate load before lid failure. In all tests (with and without sub-frame) the required loading was reached without damage to the plastic trim or compromised the lid.



p82 Product Information

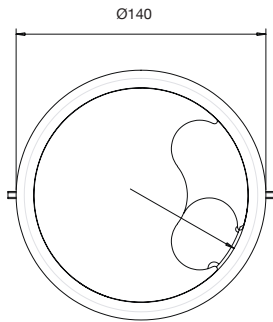
TECHNICAL INFORMATION

Grommets

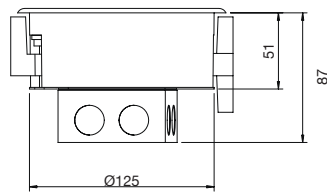
Material

- ABS Flame retardant
- Flammability: UL94 V-0 at 2.0mm
- Colour: polypropylene grey RAL 7011
- Lid: captive screwdown
- Lid recess: 15mm for extra strength
- Through power/data options

Dimensions



Cut out dimensions



In-screed system

Three and four compartment boxes configured to meet client requirements for accessing multiple services concealed within an in-screed floor system.

Standard system is suitable for screed depths of 63mm to 85mm. For other screed depths please contact the Technical Team on +44 (0)1424 856688.

Material

- Lid/trim: polypropylene grey RAL 7011
- Frame assembly: galvanised steel
- Modular boxes: galvanised steel
- Load plate: galvanised steel

Installation

- Layout planning essential as alterations are not possible once screed is laid.
- Place floor boxes and junction boxes in position with top of boxes level and in line with expected finished floor level, with the sub-frame raised 10mm.
- Adjust boxes to screed depth by adjusting sub frame height.
- When boxes are in correct position, use PVC-U or steel duct to link between.
- To use conduit for linking boxes, utilize the Ø20mm knockout in the blank plate.

- Floor boxes can only be used as through boxes.
- Junction boxes have all round access with internal segregation.
- Duct adaptors and blank ends are not supplied for junction and service boxes. These must be ordered separately to individual requirements.
- Use a connector to join lengths of ducting.
- Flat and vertical bends or junction boxes are used where a change of direction is required.
- An optional steel screeding plate (USFSP1) is available to replace the box lid temporarily when screeding the floor.

Wiring accessories and mounting plates

- 3 compartment box: 185 x 95mm
- 4 compartment box: 185 x 71mm
- For use with standard 60.3mm and 120.6mm accessories with blank or pre-punched plates for data/telecoms etc.

Desk units

Flip up units

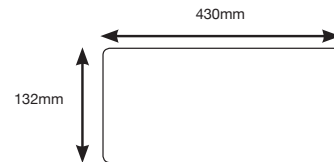
- Units have bi-directional access and are suitable for installation to BS 6396.
- Up to 4 x individually fused 3.15 sockets.
- Up to 4 x data outlets.

Fitting

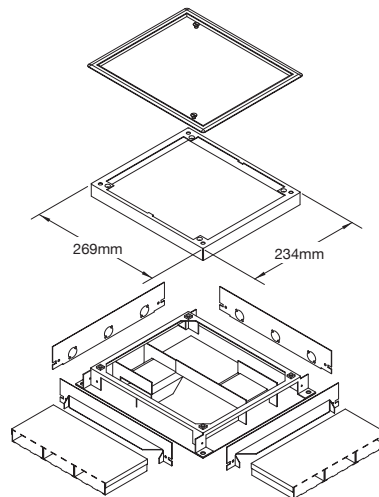
- Simple, secure ratchet with hidden screw fixing.

Desk cut out size

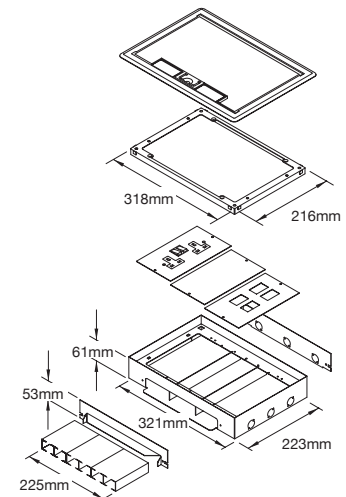
- 132 x 430mm.
- Unit casing depth 90mm from top surface of desk.
- It is recommended that at least 400mm is clear below the cut out to allow cables to move freely.
- Cut out width is constant (132mm).
- Cut out length (430mm) will vary according to order requirements.



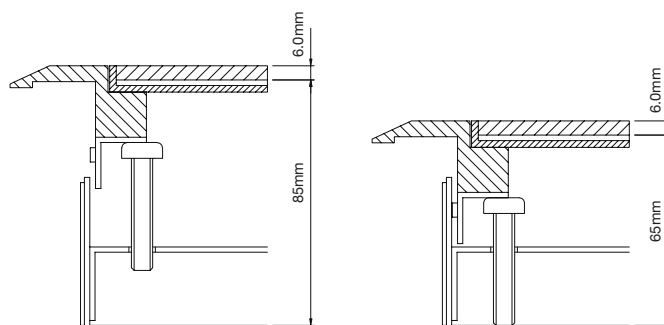
Junction box



Floor outlet box

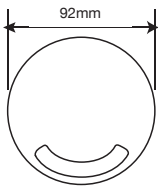


Box screed depth adjustment



Desk grommets

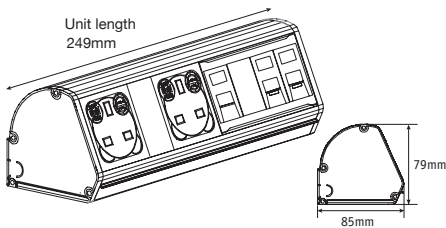
Dimensions



Cut out size

Box type	Diameter
DG1	80mm
General tolerance	2mm

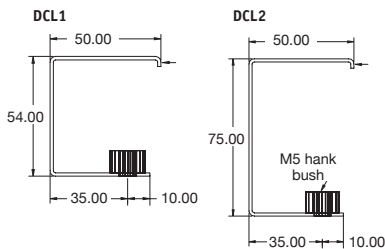
Curved surface unit



Adjustable desk clamp

Adjustable clamps suit desks from 5mm – 48mm thick.

- For use with curved surface units only.



Power and data modules

Standards

- BS 1363-1
- BS 1363-2 (where applicable)
- BS 5733:2010+A1:2014
- EN 50581:2012
- EN 301 489-34(2012)
- IEC 60884-1:2005

For more information please contact our Technical Team on +44 (0)1424 856688.

Material

Power and Power and Data Modules are constructed from high strength flame retardant black polycarbonate mouldings. RCBO – constructed from aluminium casing.

Insulation

Reinforced insulation.

Earth Bonding:

- **Power Modules**
An external earth terminal allows connection of earth bonding leads without dismantling the unit. Please use suitable tools to cut earth lead from Power Modules if required.
- **Power and Data Modules**
Our Power and Data Modules units are supplied as standard with a prefitted 250mm earth lead to 5mm ring terminal.

Fusing

To enable compliance to BS 6396 the UK sockets are fitted with Ø5 x 20mm anti-surge ceramic fuses, with colour-coded fuse clips to denote the rating (3.15Amp or 5Amp).

RCBO rating

30mA 16Amp

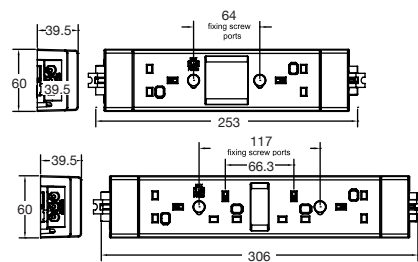
Quality and testing:

100% testing – continuity, polarity, insulation & earth

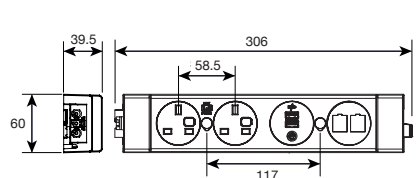
- **Power and Data Modules only**
- USB charger: Output voltage and resistance
- Data & AV: All sockets continuity tested

Dimensions

Power modules



Power and data modules



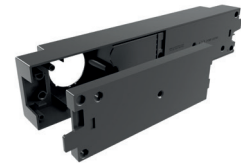
Configuration

- **Power modules**
Power only
- **Power and data modules**
2 x UK fused sockets plus 2 configurable gangs for Power, USB charging or data/AV
- **RCBOs**
Designed to be connected directly to underfloor track.
- Input connections via tap-off.
- Output connection via Weiland GST18/3.

Connection options

Power and Data Modules - Built in GST18/3 male for power in, plus optional GST18/3 female connector for power out on certain configurations.

Two modules units can be securely clipped together via the inbuilt GST18/3 connectors e.g. a DM5001 and DM5030 (both with 3.15Amp fuses) can be joined to form a BS 6396 compliant 6 socket unit.

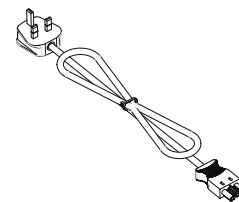


The rear section of the Power and Data Modules can be removed for onsite data/AV installation.

Cable type

In-feed power cable shown with optional Weiland connector.

- 13Amp rating
- Specification of cable length is necessary



Power module earth lead

Size: 1.5mm²
Length: 250mm with 5mm ring terminal.

Series 2 PowerPole

Double sided PowerPole

with 4 hinged lids and 14 ESSB1WH outlets (NPPE36001441)

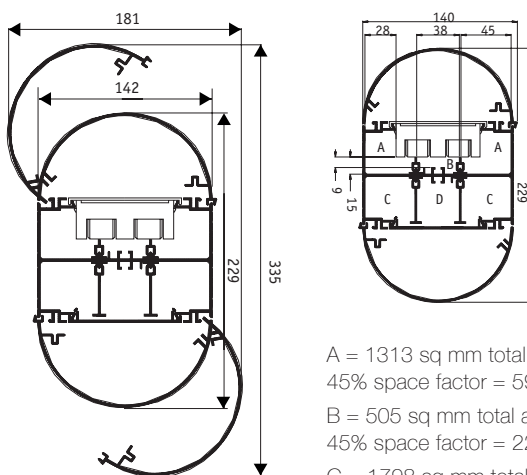
Code	Description	Quantity
FF	NPPMB3600 Square PowerPole base 3600mm long	1
A	NPPHLA/W# Hinged lid assembly	4
P	NPPCL1720 Clip on lid 1720mm long	2
Q	NPPCL50 Clip on lid 50mm long	2
R	NPPCL200 Clip on lid 200mm long	2
J	NPPUT Hinged lid upper trim	4
K	NPPLT Hinged lid lower trim	4
GG	NPPTC3 Oval top sliding cover	1
HH	NPPBF5 Oval base foot	1
B	NPPBH1 Bulkhead	8
II	PPBF3 Base foot (galvanised)	2
E	NPPCC1 Cable clip	8
C	ESSB1 Single gang box	14
D	ES1 Spacing cover	12
F	NPPH1 Stainless steel hinges	8
I	PPSN1 Sliding nut	3
H	NPPLH1 Disc latch	12
M	NPPMC1 Magnet catch	12
G	NPPLBS1 Hinged lid bonding strap	4
LBS2	Clip on lid bonding strap	6
L	PPBT1 16mm bonding terminal assembly	1
S	*PHAS1 Top adjusting slide 250mm long	1
T	NPPFB2 Top fixing bracket	1
W	MDFS100W1630 100mm dividing fillet 1630mm long	4
Y	MDFS50W710 50mm dividing fillet 710mm long	4
Z	MDFS50W200 50mm dividing fillet 200mm long	4
AA	MDFS15W632 15mm dividing fillet 632mm long	4
JJ	MDFS50W175 50mm dividing fillet 175mm long	4
V	ETL1W633 Sterling lid 633mm long	2

#Please use A or W to denote anodised or white

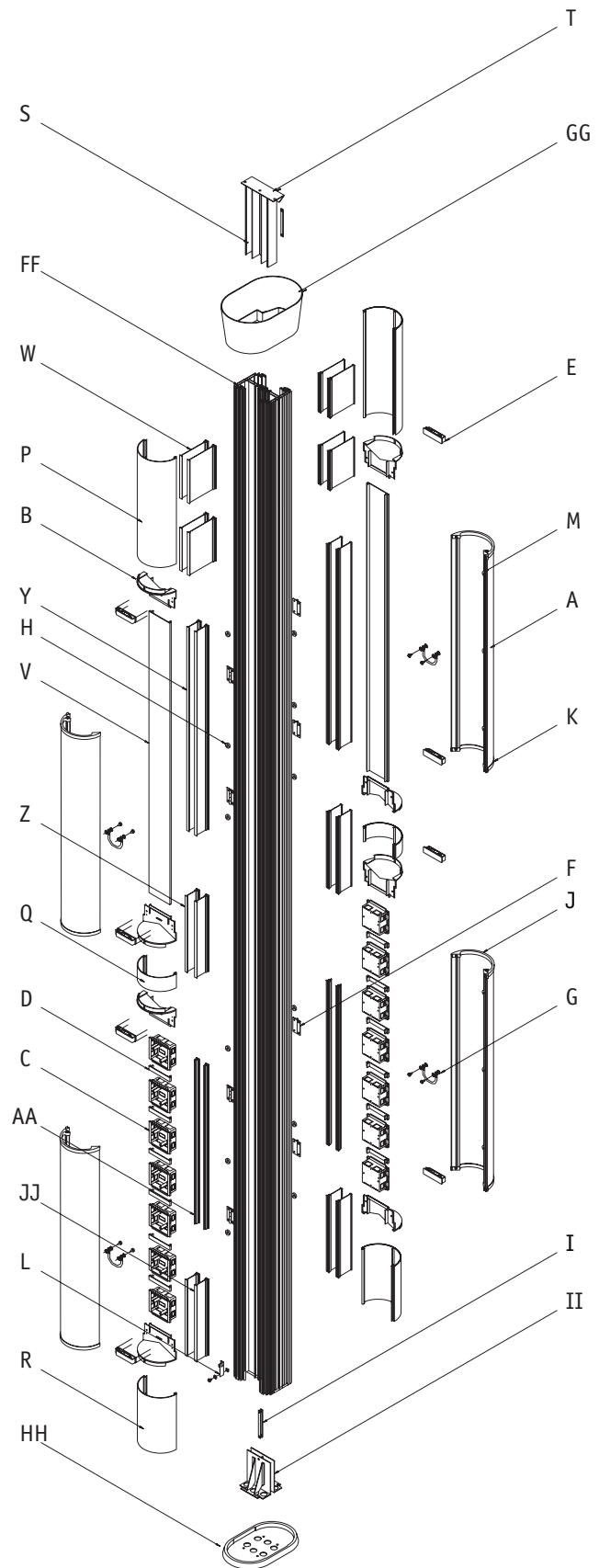
Note: The Sterling PowerPole is suitable for both solid and suspended ceilings up to 3.6 metres high. An alternative adjusting slide which can be extended to one metre is available for additional heights within the ceiling void (*PHAS2).

Full installation instructions are included within each pack.

Dimensions and cable capacities



- A = 1313 sq mm total area
45% space factor = 591 sq mm.
- B = 505 sq mm total area
45% space factor = 227 sq mm.
- C = 1798 sq mm total area
45% space factor = 809 sq mm.
- D = 1628 sq mm total area
45% space factor = 733 sq mm.



Series 2 PowerPole – continued

Single sided PowerPole

with 2 hinged lids and 7 ESSB1 outlets (NPPC3600721)

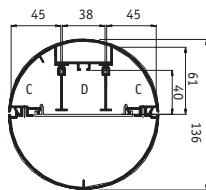
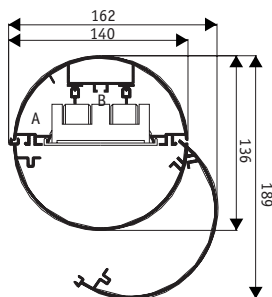
Code	Description	Quantity
BB	NPPB3600 Semi-circular PowerPole base 3600mm	1
A	NPPHLA/W# Hinged lid assembly	2
P	NPPCL1730 Clip on lid 1730mm long	1
Q	NPPCL50 Clip on lid 50mm long	1
R	NPPCL200 Clip on lid 200mm long	1
J	NPPUT Hinged lid upper trim	2
K	NPPLT Hinged lid lower trim	2
O	NPPTC2 Top sliding cover	1
N	NPPBF4 Circular base foot	1
B	NPPBH1 Bulkhead	4
U	PPBF6 Base foot (galvanised)	1
E	NPPCC1 Cable clip	4
C	ESSB1 Single gang box	7
D	ES1 Spacing cover	6
F	NPPH1 Stainless steel hinges	4
I	PPSN1 Sliding nut	2
H	NPPLH1 Disc latch	5
M	NPPMC1 Magnet catch	6
G	NPPLBS1 Hinged lid bonding strap	2
LBS2	Clip on lid bonding strap	3
L	PPBT1 16mm bonding terminal assembly	1
S	*PHAS1 Top adjusting slide 250mm long	1
T	NPPFB2 Top fixing bracket	1
AA	MDFS15W632 15mm dividing fillet 632mm long	2
Z	MDFS50W200 50mm dividing fillet 200mm long	2
Y	MDFS50W710 50mm dividing fillet 710mm long	2
X	MDFS50W145 50mm dividing fillet 145mm long	2
W	MDFS100W1630 100mm dividing fillet 1630mm long	2
V	ETL1W633 Sterling lid 633mm long	1

#Please use A or W to denote anodised or white

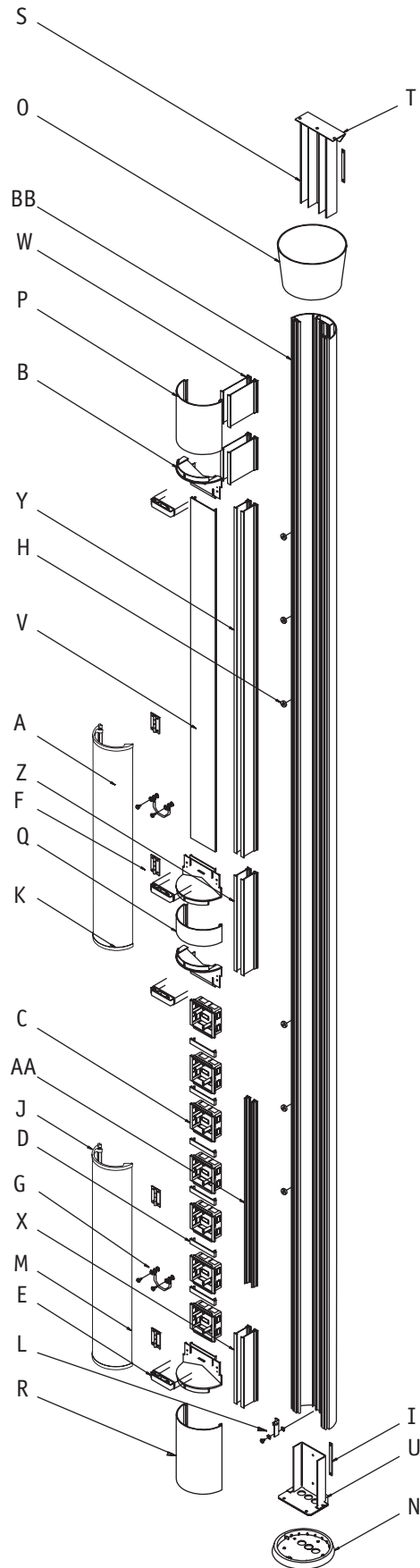
Note: The Sterling PowerPole is suitable for both solid and suspended ceilings up to 3.6 metres high. An alternative adjusting slide which can be extended to one metre is available for additional heights within the ceiling void (*PHAS2).

Full installation instructions are included within each pack.

Dimensions and cable capacities



- A = 1238 sq mm total area
45% space factor = 557 sq mm.
- B = 505 sq mm total area
45% space factor = 227 sq mm.
- C = 1798 sq mm total area
45% space factor = 809 sq mm.
- D = 1628 sq mm total area
45% space factor = 733 sq mm.



TECHNICAL INFORMATION

Double sided PowerPole

Code	Description	Quantity
PP36001	250mm adj. slide incl	1 pack
PP36002	1150mm adj. slide incl	1 pack
A	NPPFB2 Fixing Bracket	1
B	PHAS1/2 *Adjusting Slide	1
C	PPSN1 Sliding Nut	3
D	PPTC1 Top Cover (white only)	1
E	PL1 Lid 3600mm	2
F	PPMB1 Pole 3600mm	1
G	ESSB1 Single Gang Box	6
I	PPBF3 Base Foot (Metal)	1 pair
J	PPBF1 Base Foot (white only)	1
K	ES1 Spacing Cover	5
L	PPBT1 16mm Bonding Terminal Ass.	1
PPF1	#Fixing Kit	1

Accessory Kits

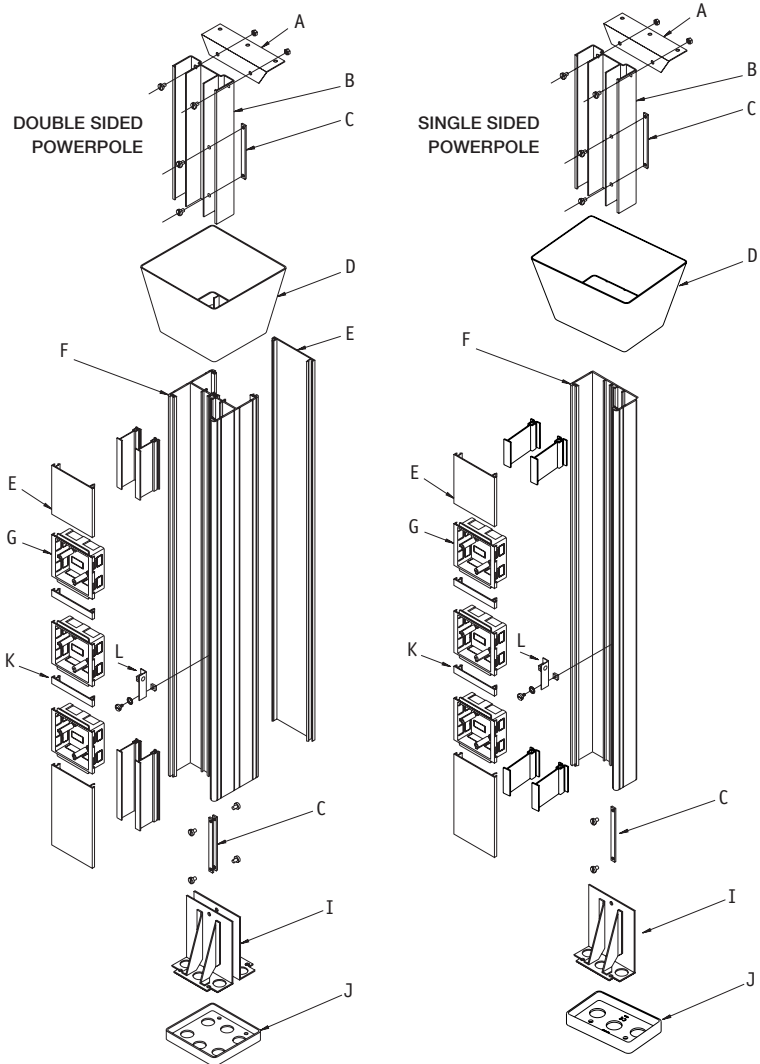
Accessory kits are available to order using the code PPAKIT and include the items within the above table marked in bold text.

*The Sterling PowerPole is suitable for both solid and suspended ceilings up to 3.6 metres high. An alternative adjusting slide which can be extended to one metre is available for additional heights within the ceiling void.

Full installation instructions are included within each pack.

PPF2 Fixing Kit includes the following items:

- 5 x M5x8 slotted pan head steel m/c screws
- 4 x M5 internal tooth steel lock washers
- 1 x M5 Square (8x8x4) pressed steel nut
- 1400mm Extension Pole body kits available to increase Pole height to 5.0m.



Single sided PowerPole

Code	Description	Quantity
PPS36001	250mm adj. slide	1 pack
PPS36002	1150mm adj. slide	1 pack
A	NPPFB2 Fixing Bracket	1
B	PHAS1/2 *Adjusting Slide	1
C	PPSN1 Sliding Nut	3
D	PPTC2 Top Cover (white only)	1
E	PL1 Lid 3600mm	1
F	PPSS1 Single Sided Pole 3600mm	1
G	ESSB1 Single Gang Box	6
I	PPBF3 Base Foot (Metal)	1
J	PPBF4 Base Foot (white only)	1
K	ES1 Spacing Cover	5
L	PPBT1 16mm Bonding Terminal Ass.	1
PPF1	#Fixing Kit	1

Accessory Kits

Accessory kits are available to order using the code PPAKIT and include the items within the above table marked in bold text.

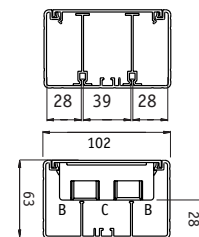
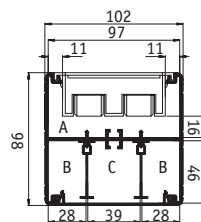
*The Sterling PowerPole is suitable for both solid and suspended ceilings up to 3.6 metres high. An alternative adjusting slide which can be extended to one metre is available for additional heights within the ceiling void.

Full installation instructions are included within each pack.

#PPF2 Fixing Kit includes the following items:

- 5 x M5x8 slotted pan head steel m/c screws
- 4 x M5 internal tooth steel lock washers
- 1 x M5 Square (8x8x4) pressed steel nut
- 1400mm Extension Pole body kits available to increase Pole height to 5.0m.

Dimensions and cable capacities



Double sided PowerPole

A = 2017 sq mm total area 45% space factor = 907 sq mm.

Without Accessory Box

A = 4284 sq mm total area 45% space factor = 1927 sq mm.

B = 1148 sq mm total area 45% space factor = 516 sq mm.

C = 1547 sq mm total area 45% space factor = 696 sq mm.

Single sided PowerPole

B = 1115 sq mm total area 45% space factor = 502 sq mm.

C = 1119 sq mm total area 45% space factor = 504 sq mm.

Double sided PowerPost

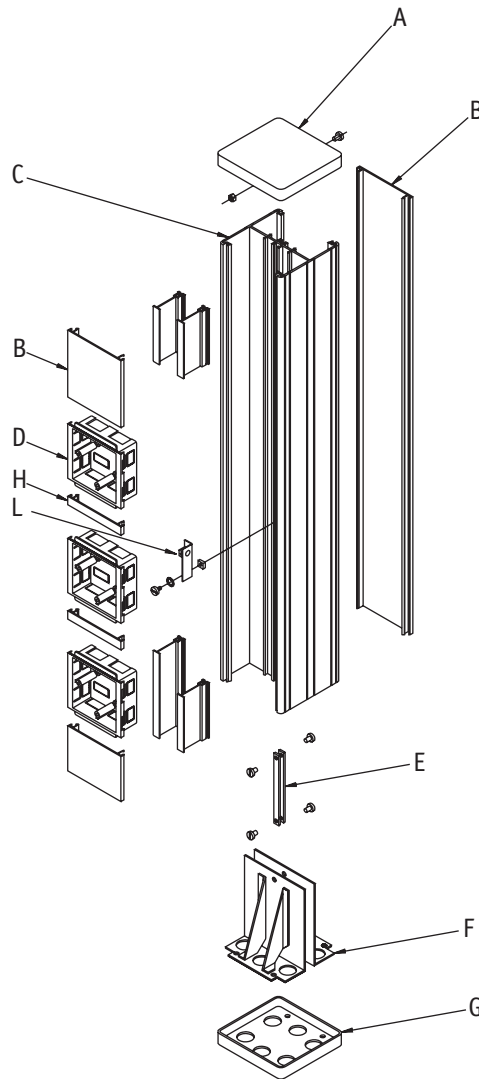
Code	Description	Quantity
PP685		1 pack
A	PPC1 Cap	1
B	PL2 Lid	2
C	PPMB2 Post	1
D	ESSB1 Single Gang Box	6
E	PPSN1 Sliding Nut	2
F	PPBF3 Base Foot (Metal)	1 pair
G	PPBF1 Base Foot (white only)	1
H	ES1 Spacing Cover	5
L	PPBT1 16mm Bonding Terminal Ass.	1
PPF2	#Fixing Kit	1

The standard height of the PowerPost is 685mm and the overall height, including cap and base, is 692mm.

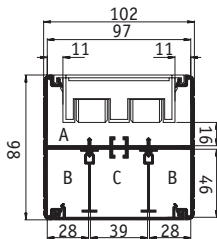
Full installation instructions are included within each pack.

#PPF2 Fixing Kit includes the following items:

- 5 x M5x8 slotted pan head steel m/c screws
- 4 x M5 internal tooth steel lock washers
- 1 x M5 Square (8x8x4) pressed steel nut



Dimensions and cable capacities



A = 2017 sq mm total area
45% space factor = 907 sq mm.

Without Accessory Box

A = 4284 sq mm total area
45% space factor = 1927 sq mm.

B = 1148 sq mm total area
45% space factor = 516 sq mm.

C = 1547 sq mm total area
45% space factor = 696 sq mm.

Double sided PowerPost

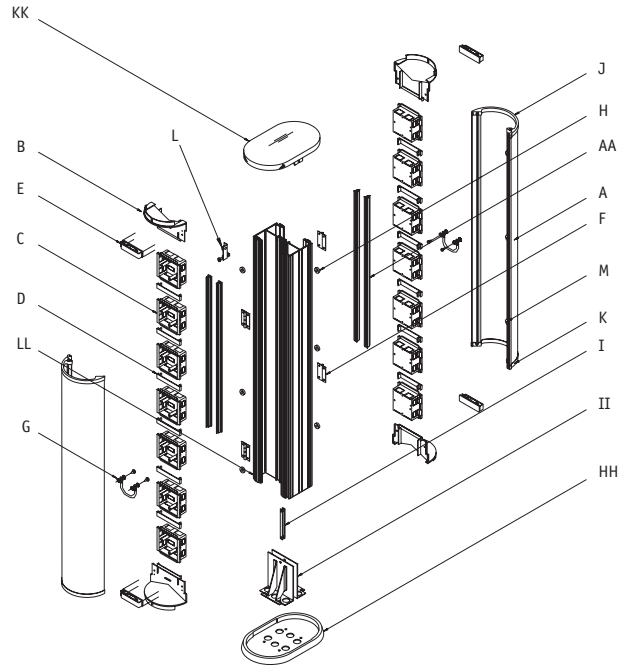
with 2 hinged lids and 14 ESSB1 outlets (NPPE811142)

Code	Description	Quantity
LL	NPPMB811 Square PowerPost base 811mm long	1
A	NPPHLA/W# Hinged lid assembly	2
J	NPPUT Hinged lid upper trim	2
K	NPPLT Hinged lid lower trim	2
KK	NPPC3 Oval Top cap	1
HH	NPPBF5 Oval base	1
B	NPPBH1 Bulkhead	4
C	ESSB1 Single gang box	14
D	ES1 Spacing cover	12
II	PPBF3 Base foot (galvanised)	2
E	NPPCC1 Cable clip	4
AA	MDFS15W632 Dividing fillet 632mm long	4
F	NPPLH1 Stainless steel hinges	4
L	PPBT1 16mm bonding terminal assembly	1
G	NPPLBS1 Hinged lid bonding strap	2
H	NPPLH1 Disc latch	6
M	NPPMC1 Magnet catch	6
I	PPSN1 Sliding nut	2

#Please use A or W to denote anodised or white

Overall height 838mm.

Full installation instructions are included within each pack.



Single sided PowerPost

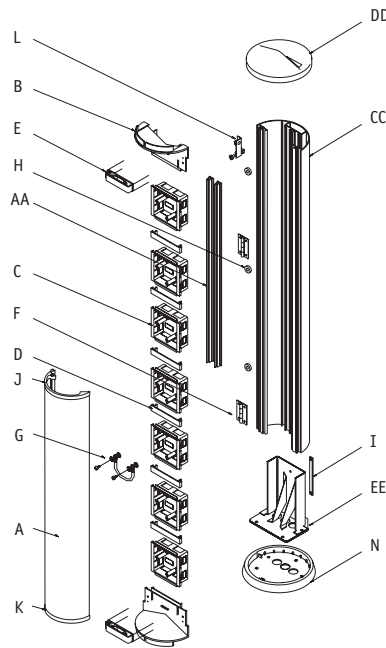
with 1 hinged lid and 7 ESSB1 outlets (NPPC80671)

Code	Description	Quantity
CC	NPPB806 Semi-circular PowerPost base 806mm	1
A	NPPHLA/W# Hinged lid assembly	1
J	NPPUT Hinged lid upper trim	1
K	NPPLT Hinged lid lower trim	1
DD	NPPC2 Top cap	1
EE	NPPBF7 Circular post base foot (galvanised)	1
N	NPPBF4 Circular base foot	1
B	NPPBH1 Bulkhead	2
E	NPPCC1 Cable clip	2
D	ES1 Spacing cover	6
C	ESSB1 Single gang box	7
AA	MDFS15W632 Dividing fillet 632mm	2
H	NPPLH1 Disc latch	3
M	NPPMC1 Magnet catch	3
F	NPPH1 Stainless steel hinges	2
G	NPPLBS1 Hinged lid bonding strap	1
L	PPBT1 16mm bonding terminal assembly	1
I	PPSN1 Sliding nut	1

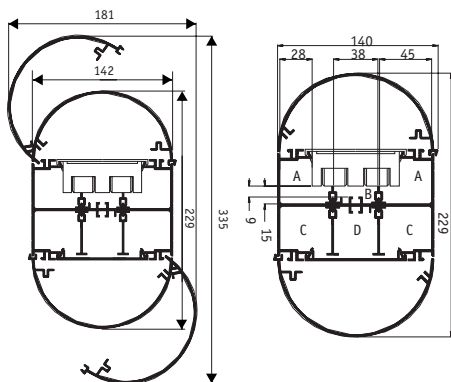
#Please use A or W to denote anodised or white

Overall height 838mm.

Full installation instructions are included within each pack.



Dimensions and cable capacities



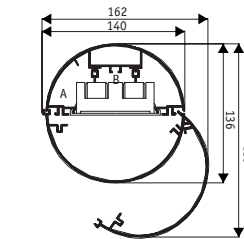
Double sided PowerPost

A = 1313 sq mm total area 45% space factor = 591 sq mm.

B = 505 sq mm total area 45% space factor = 227 sq mm.

C = 1798 sq mm total area 45% space factor = 809 sq mm.

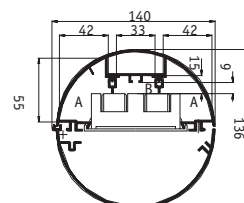
D = 1628 sq mm total area 45% space factor = 733 sq mm.



Single sided PowerPost

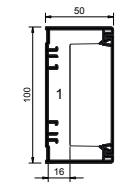
A = 1238 sq mm total area 45% space factor = 557 sq mm.

B = 505 sq mm total area 45% space factor = 227 sq mm.



PVC-U perimeter trunking capacity guide

Trunking sizes up to 150mm

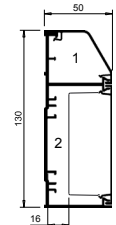


Mono 10 no box

1 = 4141mm² total area
1 = 1863mm² 45% space factor

With box in comp 1

1 = 1874mm² total area
1 = 843mm² 45% space factor

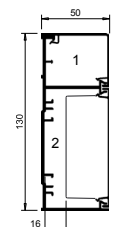


Compact 1 no box

1 = 1280mm² total area
1 = 576mm² 45% space factor
2 = 3763mm² total area
2 = 1693mm² 45% space factor

With box in comp 2

2 = 1497mm² total area
2 = 673mm² 45% space factor

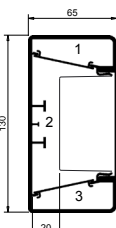


Compact 2 no box

1 = 1534mm² total area
1 = 690mm² 45% space factor
2 = 3763mm² total area
2 = 1693mm² 45% space factor

With box in comp 2

2 = 1497mm² total area
2 = 673mm² total area

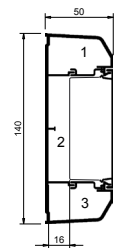


Series R 130 with box and segregators

1 & 3 = 957mm² total area
1 & 3 = 431mm² 45% space factor
2 = 2210mm² total area
2 = 995mm² 45% space factor

Without segregators

1 = 4272mm² total area
1 = 1922mm² 45% space factor

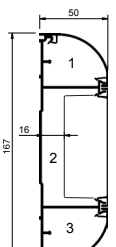


Mono Plus 20 - no box

1 & 3 = 1024mm² total area
1 & 3 = 461mm² 45% space factor
2 = 3451mm² total area
2 = 1553mm² 45% space factor

With box in comp 2

2 = 1185mm² total area
2 = 533mm² 45% total area

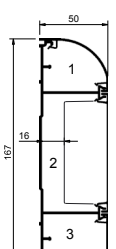


Sterling Curve Profile 1 - no box

1 & 3 = 1170mm² total area
1 & 3 = 527mm² 45% space factor
2 = 3858mm² total area
2 = 1736mm² 45% space factor

With box in comp 2

2 = 1376mm² total area
2 = 619mm² 45% total area



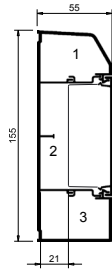
Sterling Curve Profile 2 - no box

1 = 1170mm² total area
1 = 527mm² 45% space factor
2 = 3858mm² total area
2 = 1736mm² 45% space factor
3 = 1542mm² total area
3 = 694mm² 45% space factor

With box in comp 2

2 = 1376mm² total area
2 = 619mm² 45% space factor

Trunking sizes from 150mm to 200mm

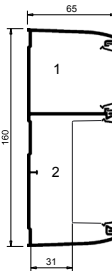


Mono Plus 30 no box

1 = 1450mm² total area
1 = 652mm² 45% space factor
2 = 3829mm² total area
2 = 1723mm² 45% space factor
3 = 1646mm² total area
3 = 741mm² 45% space factor

With box in comp 2

2 = 1563mm² total area
2 = 703mm² 45% space factor

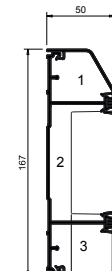


Twin165 no box

1 = 3272mm² total area
1 = 1472mm² 45% space factor
2 = 5404mm² total area
2 = 2431mm² 45% space factor

With box in comp 2

2 = 3100mm² total area
2 = 1395mm² 45% space factor

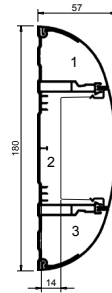


Sterling Profile 2 no box

1 = 1266mm² total area
1 = 570mm² 45% space factor
2 = 3858mm² total area
2 = 1736mm² 45% space factor
3 = 1542mm² total area
3 = 694mm² 45% space factor

With box in comp 2

2 = 1376mm² total area
2 = 619mm² 45% space factor

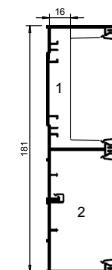


Odyssey no box

1 & 3 = 1256mm² total area
1 & 3 = 565mm² 45% space factor
2 = 4022mm² 45% total area
2 = 1810mm² 45% space factor

With box in comp 2

2 = 1230mm² total area
2 = 554mm² 45% space factor



Compact 3 - no box

1 = 3763mm² total area
1 = 1693mm² 45% space factor
2 = 3700mm² total area
2 = 1665mm² 45% space factor

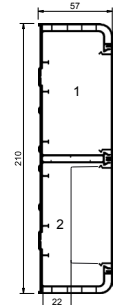
With box in comps 1 and 2

1 = 1503mm² total area
1 = 676mm² 45% space factor
2 = 1440mm² total area
2 = 648mm² 45% space factor

Conductor type	Size	Cable factor
Stranded PVC power	1.5mm ²	8.0
Stranded PVC power	2.5mm ²	11.9
Stranded PVC power	4.0mm ²	16.6

For Data cable information, please see page 246

Trunking sizes over 200mm

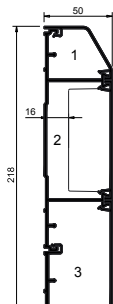


Twin Plus - no box

1 & 2 = 4755mm² total area
1 & 2 = 2140mm² 45% space factor

With box in comps 1 or 2

1 & 2 = 2431mm² total area
1 & 2 = 1094mm² 45% space factor

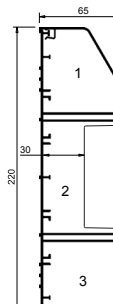


Sterling Profile 4 no box

1 = 1266mm² total area
1 = 570mm² 45% space factor
2 = 3858mm² total area
2 = 1736mm² 45% space factor
3 = 3716mm² total area
3 = 1672mm² 45% space factor

With box in comp 2 or 3

2 = 1376mm² total area
2 = 619mm² 45% space factor
3 = 1234mm² total area
3 = 555mm² 45% space factor



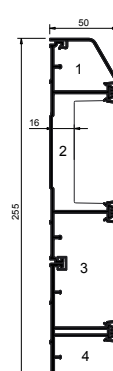
XL 202

XL 202 - no box

1 = 2824mm² total area
1 = 1271mm² 45% space factor
2 = 4771mm² total area
2 = 2147mm² 45% space factor
3 = 3531mm² total area
3 = 1589mm² 45% space factor

With box in comp 2

2 = 2504mm² total area
2 = 1127mm² 45% space factor

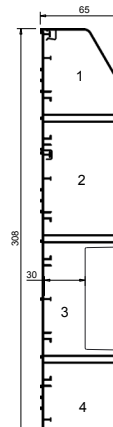


Sterling Profile 12 no box

1 = 1266mm² total area
1 = 570mm² 45% space factor
2 = 3858mm² total area
2 = 1736mm² 45% space factor
3 = 3566mm² total area
3 = 1605mm² 45% space factor
4 = 1430mm² total area
4 = 644mm² 45% space factor

With box in comp 2 or 3

2 = 1376mm² total area
2 = 619mm² 45% space factor
3 = 1084mm² total area
3 = 488mm² 45% space factor



XL 212 - no box

1 = 2824mm² total area
1 = 1271mm² 45% space factor
2 = 4771mm² total area
2 = 2147mm² 45% space factor
3 = 4732mm² total area
3 = 2130mm² 45% space factor
4 = 3531mm² total area
4 = 1589mm² 45% space factor

With box in comps 2 or 3

2 = 2511mm² total area
2 = 1130mm² 45% space factor
3 = 2466mm² total area
3 = 1109mm² 45% space factor

Compact trunking

Material

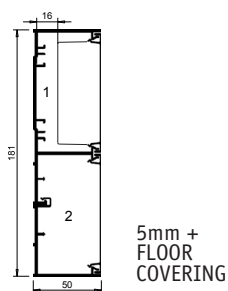
PVC-U is flame retardant and self-extinguishing. PVC-U is 100% recyclable.

Installation

Positioning

Compact 1, 2 & 3 suitable for dado. Should Compact 3 be used as skirting system, a clearance of 5mm is recommended above the floor covering to allow the profile fittings to clip over the cover.

If Compact 2 is installed close to desk/bench top – invert so small compartment is on bottom.



Expansion/contraction

PVC-U expands and contracts at a uniform rate of approx 5.25mm in a 3 metre length for a temperature change of 25°C. Therefore, a 3mm gap between each length of trunking base is recommended. Fittings have a 10mm overlap on each side to allow for thermal movement of the covers.

Fitting

- The base is supplied with pre-cut elongated holes at 250mm centres.
- To fasten base, use No 8 round head screws and washers.
- Avoid over-tightening to permit thermal movement.
- The use of plastic caps over screw heads is recommended to protect installed cables.
- To cut the trunking, use a fine-toothed panel or power jig-saw.
- External moulded fittings overlap the joints by up to 10mm to cover cutting inaccuracies.
- A variable angle jig-saw or chop saw is recommended for cutting 45 degree mitres.

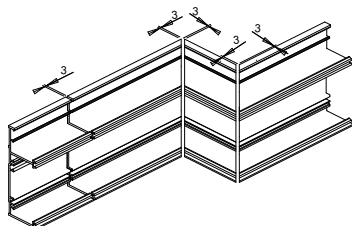
Single lengths

Where it is required to fit a single length of trunking (under 3 metres) between two inside walls and no accessory box is fitted, it is advisable to install a coupler in the centre of the run to facilitate the removal of the cover.

Joints and bends

Base joints should have a 3mm gap to allow for expansion.

- Internal, external bends and flat angles, the base must be mitred 45 degrees to ensure total enclosure of trunking, including any internal fitted segregator.
- External moulded fittings overlap the joints by up to 10mm to cover cutting inaccuracies.
- Flat angles, tees and crossovers are also available pre-fabricated.

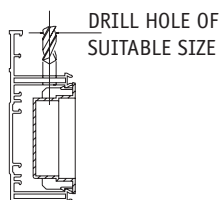


Bend radius control

The data internal and external bend radius control fittings for Compact Trunking provide a bend radius of 50mm.

Accessory boxes

- For mounting an accessory box in the alternative compartment to supply, drill the main web adjacent to the box position.
- Remove the appropriate knock out and clip the box into the trunking base.
- For boxes in the same compartment as the supply, remove the appropriate box knock-outs and clip the box into trunking base.
- When boxes are installed consecutively, a 14mm wide spacer (ES1) is required to cover the space between the boxes.
- Part M box assemblies with contrasting coloured faceplates are available to meet the requirements of DDA regulations for Visual Impairment.
- If Compact 3 is used as a skirting system. All power accessories should be installed in the top compartment.



Covers

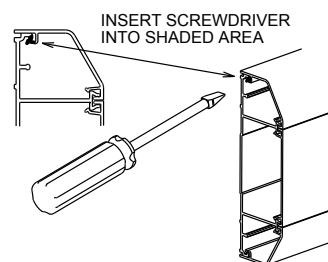
Covers are designed to limit unauthorised removal and to remain in position during normal conditions irrespective of impact and minor undulations of the mounting surface.

Covers – fitting

Covers are clipped into place from front. If accessory boxes are installed, the ETL1 cover is butt-joined to the edge of the box. Cut edges of the cover are subsequently concealed by the accessory. For fittings, a gap of 25mm is left between the two cover ends to permit the fitting to clip to base.

Covers – removal

To remove a cover, first detach a coupler, internal or external bend component to gain access. The main cover can then be gently eased off the base. To remove the outer cover, firstly ease from the base by inserting the blade of a terminal screwdriver between the captive legs of the cover and the base and then peel off.



Screening

Special conductive spray coating can be applied to one compartment, the cover, accessory boxes and fittings, to screen data cables against EMI interference.

For data/voice circuits only:

Warning: Owing to its relatively high surface resistance, CS coating SHOULD NOT be in contact with low voltage circuits BS 7671:2008 50 V.A.C. – 1000 V.A.C. unless additional measures are undertaken.

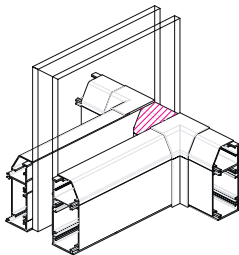
Antimicrobial

For technical details of antimicrobial Bio Compact trunking, please refer to Laboratory and Healthcare section.

Compact trunking – continued

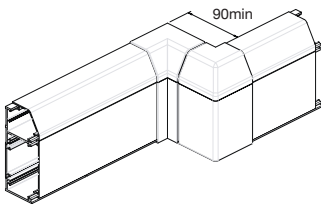
Method of continuation through a partition wall

Continue the main lateral run of base through the partition wall. Fit short lengths of cover where the trunking passes through the partition. The partition wall trunking is then butted up to the main run and the joint covered by an internal bend fitting.

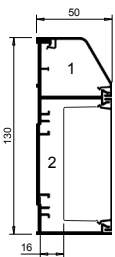


Offset dimensions

The minimum set that can be accommodated in the same plane (from internal to external bend), is shown below.

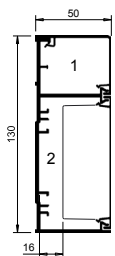


Dimensions



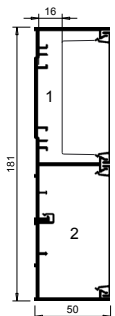
Compact 1 trunking – with box

Compartment 1 total area = 1280mm²
Compartment 2 total area = 1497mm²



Compact 2 trunking – no box

Compartment 1 total area = 1534mm²
Compartment 2 total area = 3763mm²



Compact 3 trunking – no box

Compartment 1 total area = 3763mm²
Compartment 2 total area = 3700mm²

Cable capacities

- All calculations allow for a 45% space factor.

As there can be differences between data cable sizes, Marshall-Tufflex recommend that cable dimensions are confirmed with the manufacturing company.

Cable capacity chart	Compartment 1		Compartment 2	
	No box	With box	No box	With box

PVC power cable 1.5mm² stranded copper

Compact 1	72	–	212	84
Compact 2	86	–	212	84
Compact 3	212	85	208	81

PVC power cable 2.5mm² stranded copper

Compact 1	48	–	142	57
Compact 2	58	–	142	57
Compact 3	142	57	140	54

PVC power cable 4.0mm² stranded copper

Compact 1	35	–	102	41
Compact 2	42	–	102	41
Compact 3	102	41	100	39

Data cable: Ø5.5mm

Compact 1	24	–	71	28
Compact 2	29	–	71	28
Compact 3	71	28	70	27

Data cable: Ø6.0mm

Compact 1	20	–	60	24
Compact 2	24	–	60	24
Compact 3	60	24	59	23

Data cable: Ø6.5mm

Compact 1	18	–	53	21
Compact 2	21	–	53	21
Compact 3	53	21	52	20

Data cable: Ø7.0mm

Compact 1	15	–	44	17
Compact 2	18	–	44	17
Compact 3	44	18	43	17

Data cable: Ø8.4mm

Compact 1	10	–	31	12
Compact 2	12	–	31	12
Compact 3	31	12	30	12

Mono and Mono Plus trunking – PVC-U

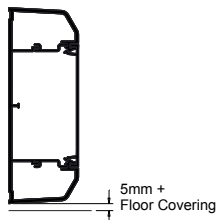
Material

PVC-U is flame retardant and self-extinguishing. It provides a 100% recyclable material with good sustainability.

Installation

Positioning

- Mono 10
For dado application only.
- Mono Plus 20 and 30
When used as a skirting system, sufficient clearance should be allowed between the floor covering and the profile fittings that clip over the cover i.e. 5mm + floor covering is recommended.



Expansion/contraction

PVC-U expands and contracts at a uniform rate of approx 5.25mm in a 3 metre length for a temperature change of 25°C. Therefore, a 3mm gap between each length of trunking base is recommended. Adequate allowance is made within the fittings for thermal movement of the covers, which have a 7mm overlap on each side.

Fitting

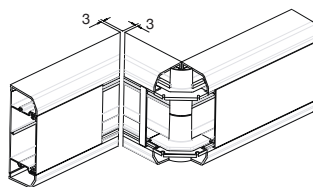
- The base is supplied with pre-cut elongated holes at 250mm centres.
- Internal couplers on base units are not required.
- To fasten base, use No 8 round head screws and washers.
- Avoid over-tightening to permit thermal movement.
- The use of plastic caps over screw heads is recommended to protect installed cables.
- To cut the trunking, use a fine-toothed panel or power jig-saw.
- External moulded fittings overlap the joints by up to 10mm to cover cutting inaccuracies.
- A variable angle jig-saw or chop saw is recommended for cutting 45 degree mitres.
- Mono Plus 20 and 30
Cut the compartment segregators (x 2 provided) to lengths to fit between accessory boxes and corners. Fit into position after wiring has been completed.

Single lengths

Where it is required to fit a single length of trunking (under 3 metres) between two inside walls and no accessory box is fitted, it is advisable to install a coupler in the centre of the run to facilitate the removal of the cover.

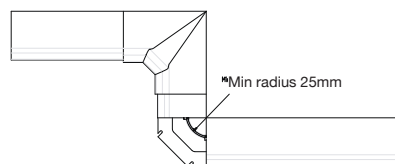
Joints and bends

- Base joints should have a 3mm gap to allow for expansion.
- External moulded fittings overlap the joints by up to 7mm to cover cutting inaccuracies.
- Mono 10
For external bends and flat angles, the base must be mitred 45 degrees to ensure total enclosure of trunking, including any internal fitted segregator. Tees are fabricated.
- Mono Plus 20 and 30
External bends should be cut square at the corner and in internal segregator inserted as shown below, to give additional retention to the clip-on fitting. Flat angles and tees are prefabricated.



Bend radius control

- Mono 10
Not applicable
- Mono Plus 20 and 30
The data bend radius control fittings for Mono Plus trunking provide a bend radius of 25mm.



Accessory boxes

- If the accessory box is to be fed from a supply in either of the outer compartments, remove the appropriate knock out (top or bottom) and clip the box into the trunking base.
- For boxes supplied from the main compartment, remove the appropriate box knock-outs and clip the box into trunking base.
- When boxes are installed consecutively, a 14mm wide spacer (ES1) is required to cover the space between the boxes.
- Part M box assemblies with contrasting coloured faceplates are available to meet the requirements of DDA regulations for Visual Impairment.

Covers

The cover has been designed to limit unauthorised removal and to remain in position during normal conditions, irrespective of impact and minor undulations of the mounting surface.

Covers – fitting

The cover is clipped into place from the front. If accessory boxes are installed, the cover is butt-joined to the edge of the box and the cut edges of the cover is subsequently concealed by the accessory. For fittings, a gap of 25mm is left between the two cover ends to permit the fitting to clip to the base.

Covers – removal

To remove the cover, first detach a coupler, internal or external bend component to gain access. The main cover can then be gently eased off the base.

Screening

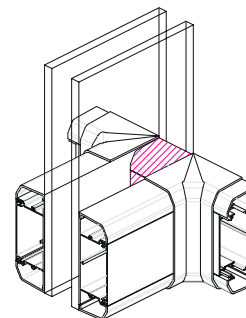
Refer to the Technical Team on +44 (0)1424 856688.

Antimicrobial

For technical details of antimicrobial Mono 10 and Mono Plus 20 Bio trunking, please refer to Laboratory and Healthcare section.

Method of continuation through a partition wall

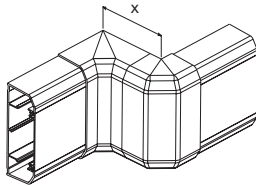
Continue the main lateral run of base through the partition wall with a short length of cover fitted where the trunking passes through the partition. The partition wall trunking is then butted up to the main run and the joint covered by an Internal bend. (as shown below)



Mono and Mono Plus trunking – PVC-U – continued

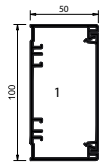
Offset dimensions

The minimum set that can be accommodated in the same plane (from internal to external bend), is shown below.

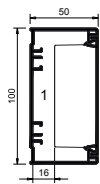


x =
 100mm min (Mono 10)
 105mm min (Mono Plus 20)
 110mm min (Mono Plus 30)

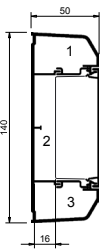
Dimensions



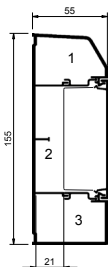
Mono 10 trunking – no box
 Compartment 1 total area = 4141mm²



Mono 10 trunking – with box
 Compartment 1 total area = 1874mm²



Mono Plus 20 trunking – with box
 Compartment 1 total area = 1024mm²
 Compartment 2 total area = 1185mm²
 Compartment 3 total area = 1024mm²



Mono Plus 30 trunking – with box
 Compartment 1 total area = 1450mm²
 Compartment 2 total area = 1563mm²
 Compartment 3 total area = 1646mm²

Cable capacities

• All calculations allow for a 45% space factor.

As there can be differences between data cable sizes, Marshall-Tufflex recommend that cable dimensions are confirmed with the manufacturing company.

Cable capacity chart	Compartment 1		Compartment 2		Compartment 3	
	No box	With box	No box	With box	No box	With box

PVC power cable 1.5mm² stranded copper

Mono 10	233	105	–	–	–	–
Mono Plus 20	58	–	194	67	58	–
Mono Plus 30	82	–	215	88	93	–

PVC power cable 2.5mm² stranded copper

Mono 10	157	71	–	–	–	–
Mono Plus 20	39	–	131	45	39	–
Mono Plus 30	55	–	145	59	62	–

PVC power cable 4.0mm² stranded copper

Mono 10	112	51	–	–	–	–
Mono Plus 20	28	–	94	32	28	–
Mono Plus 30	39	–	104	42	45	–

Data cable: Ø5.5mm

Mono 10	78	35	–	–	–	–
Mono Plus 20	19	–	65	22	19	–
Mono Plus 30	27	–	72	30	31	–

Data cable: Ø6.0mm

Mono 10	66	30	–	–	–	–
Mono Plus 20	16	–	55	19	16	–
Mono Plus 30	23	–	61	25	26	–

Data cable: Ø6.5mm

Mono 10	58	26	–	–	–	–
Mono Plus 20	14	–	48	17	14	–
Mono Plus 30	20	–	54	22	23	–

Data cable: Ø7.0mm

Mono 10	48	22	–	–	–	–
Mono Plus 20	12	–	40	14	12	–
Mono Plus 30	17	–	45	18	19	–

Data cable: Ø8.4mm

Mono 10	34	15	–	–	–	–
Mono Plus 20	8	–	28	10	8	–
Mono Plus 30	12	–	31	13	13	–

Odyssey trunking

Material

Odyssey accessory boxes and fittings are flame retardant ABS which is 100% recyclable.

Installation

Positioning

For dado, horizontal or vertical installation.

Expansion/contraction

PVC-U expands and contracts at a uniform rate of approx 5.25mm in a 3 metre length for a temperature change of 25°C. Therefore, a 3mm gap between each length of trunking base is recommended.

Adequate allowance is made within the fittings for thermal movement of the covers, which have a 10mm overlap on each side.

Fitting

- The base is supplied with pre-cut elongated holes at 250mm centres.
- Internal couplers on base units are not required.
- To fasten base, use No 8 round head screws and washers.
- Avoid over-tightening to permit thermal movement.
- The use of plastic caps over screw heads is recommended to protect installed cables.
- To cut the trunking, use a fine-toothed panel or power jig-saw.
- External moulded fittings overlap the joints by up to 10mm to cover cutting inaccuracies.
- A variable angle jig-saw or chop saw is recommended for cutting 45 degree mitres.

Single lengths

Where it is required to fit a single length of trunking (under 3 metres) between two inside walls and no accessory box is fitted, it is advisable to install a coupler in the centre of the run to facilitate the removal of the covers.

Joints and bends

All base joints should have a 3mm gap to allow for expansion.

- **Internal bends:** the two base sections should be cut square and butt joined at the corner. The internal end cap component should be fitted to the open end to maintain trunking integrity.
- **External bends:** the base must be cut square with the corner and the internal radius control segregator fitted into the two base sections. Adjustable bends: these allow 85° to 95° to accommodate building tolerances.
- **Flat bends and tees:** have moulded and segregated base units. These are fitted into position and the trunking base then cut to butt up to mouldings.

Cutting is not critical as the external moulded clip-on fittings cover the joints and overlap the trunking covers by 10mm each side, thus covering any inaccuracies.

Bend radius control

The bend radius control fittings for Odyssey provide a bend radius of 25mm, 50mm and 65mm.

Accessory boxes

Accessory boxes are mounted in the centre compartment. If supplied from either of the outer compartments, drill the main web adjacent to the box position. Remove the appropriate knock out and clip the box into the trunking base. For boxes in the same compartment as the supply, remove the appropriate box knock-outs and clip the box into trunking base.

- If boxes DD1510 and DD1520 are installed consecutively, a cut section of centre cover should be fitted between them.
- If DD1540 or DD1550 are installed, Adaptor DD1590 must be fitted either side to align with curved cover.
- If DD1540 or DD1550 are installed consecutively, use the spacer provided and at each end of a run use accessory adaptor DD1590 to align with curved cover.
- Part M coloured accessory boxes are available to meet the requirements of DDA regulations for Visual Impairment.

Covers

The covers have been designed to limit unauthorised removal and remain in position during normal conditions, irrespective of impact and minor undulations of the mounting surface.

Covers – fitting

Outer covers are fitted first. Locate front clip feature into the base and then roll the cover to the back of the trunking until the rear clip feature positively locates – it is possible to hear the click when this is located correctly. The centre cover is then clipped into place from the front. If accessory boxes are installed, the centre cover is butt joined beneath the moulded flange of the box (Odyssey box DD1510/DD1520) or adaptor (DD1590). The cut edges of lids are then concealed.

A gap of 15mm should be left between cover joints to permit fittings to clip to the base.

Covers – removal

To remove a cover, first detach a coupler, internal or external bend component to gain access. The main cover can then be gently eased off the base. To remove the outer cover, firstly ease from the base by inserting the blade of a terminal screwdriver between the captive legs of the cover and the base and then peel off.

Screening

Special conductive spray coating can be applied to one compartment, the cover, accessory boxes and fittings, to screen data cables against EMI interference.

- **For data/voice circuits only:**
Warning: Owing to its relatively high surface resistance, CS coating SHOULD NOT be in contact with low voltage circuits BS 7671:2008 50 V.A.C. – 1000 V.A.C. unless additional measures are undertaken.

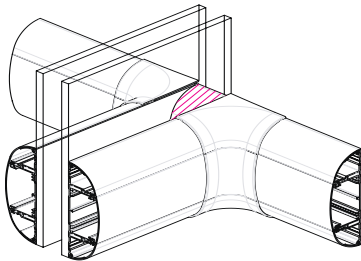
Antimicrobial

For technical details of antimicrobial Odyssey Bio trunking, please refer to Laboratory and Healthcare section.

Odyssey trunking – continued

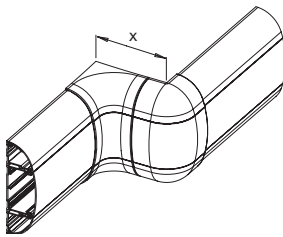
Method of continuation through a partition wall

Continue the main lateral run of base through the partition wall with short lengths of cover fitted where the trunking passes through the partition. The partition wall trunking is then butted up to the main run and the joint covered by an Internal bend. (as shown below)



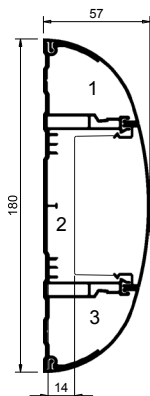
Offset dimensions

The minimum set that can be accommodated in the same plane (from internal to external bend), is shown below.



- x =
- Fixed bend offset 138mm
- Adjustable bend offset 165mm
- Adjustable external bend, fixed internal bend offset 163mm
- Adjustable internal bend, fixed external bend offset 140mm

Dimensions



Odyssey trunking – with box

Compartment 1 & 3 total area = 1278mm²
 Compartment 2 total area = 859mm²

Odyssey trunking – no box

Compartment 2 total area = 3972mm²

Cable capacities

- All calculations allow for a 45% space factor.

As there can be differences between data cable sizes, Marshall-Tufflex recommend that cable dimensions are confirmed with the manufacturing company.

Cable capacity chart	Compartment 1		Compartment 2		Compartment 3	
	No box	With box	No box	With box	No box	With box
PVC power cable 1.5mm ² stranded copper	71	-	226	69	71	-
PVC power cable 2.5mm ² stranded copper	47	-	152	47	47	-
PVC power cable 4.0mm ² stranded copper	34	-	109	33	34	-
Data cable: Ø5.5mm	24	-	76	23	24	-
Data cable: Ø6.0mm	20	-	64	20	20	-
Data cable: Ø6.5mm	18	-	56	17	18	-
Data cable: Ø7.0mm	15	-	47	14	15	-
Data cable: Ø8.4mm	10	-	33	10	10	-

Series R trunking

Material

PVC-U is flame retardant and self-extinguishing. It provides a 100% recyclable material with good sustainability.

Installation

Positioning

Series R is suitable for dado.

Expansion/contraction

PVC-U expands and contracts at a uniform rate of approx 5.25mm in a 3 metre length for a temperature change of 25°C. Therefore, a 3mm gap between each length of trunking base is recommended.

Adequate allowance is made within the fittings for thermal movement of the covers, which have a 10mm overlap on each side.

Fitting

- The base is supplied with pre-cut elongated holes at 250mm centres.
- Internal couplers on base units are not required.
- To fasten base, use No 8 round head screws and washers.
- Avoid over-tightening to permit thermal movement.
- The use of plastic caps over screw heads is recommended to protect installed cables.
- To cut the trunking, use a fine-toothed panel or power jig-saw.
- External moulded fittings overlap the joints by up to 10mm to cover cutting inaccuracies.
- A variable angle jig-saw or chop saw is recommended for cutting 45 degree mitres.

Single lengths

Where it is required to fit a single length of trunking (under 3 metres) between two inside walls and no accessory box is fitted, it is advisable to install a coupler in the centre of the run to facilitate the removal of the cover.

Joints and bends

All base joints should have a 3mm gap to allow for expansion.

- **Internal bends and external bends:** trunking body must be mitred at 45° to ensure total enclosure of trunking, including any internal fitted segregator.
- **Flat angles and tees:** are prefabricated. Trunking bases should be cut to butt up to fittings.

Cutting is not critical as the external moulded clip-on fittings cover the joints and overlap the trunking covers by 10mm each side, thus covering any inaccuracies.

Bend radius control

Please contact the Technical Team on +44 (0)1424 856688

Accessory boxes

All accessory boxes are mounted in the main, centre compartment. The appropriate knockout removal depends whether supply is to be run in the centre compartment or either/both of the outer segregated compartments. When knockouts are removed, clip the box into the trunking body. When boxes are installed consecutively, a short cut length of centre cover (14mm min.) is required to cover the space between boxes.

Covers

The cover has been designed to remain in position irrespective of impact during normal conditions, minor undulations of the mounting surface, and to limit unauthorised removal.

Covers – fitting

The single cover is clipped into place from the front. If accessory boxes are installed, the covers are butt-joined to the edge of the box (RSSB1/2). The cut edges the cover are subsequently concealed by the accessory.

Covers – removal

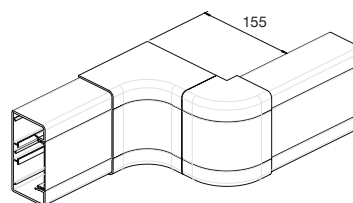
To remove the cover, first detach a coupler, internal or external bend component to gain access. The cover can then be gently eased off the base.

Method of continuation through a partition wall

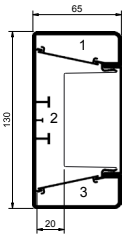
- Continue the main lateral run of base through the partition wall with short lengths of cover fitted where the trunking passes through the partition. The partition wall trunking is then butted up to the main run and the joint covered by an Internal bend.

Offset dimensions

The minimum set that can be accommodated in the same plane (from internal to external bend), is shown below.

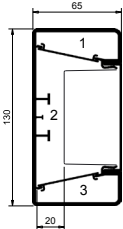


Series R – continued



Series R 130 – with box and segregators

Compartment 1 & 3 total area = 957mm²
 Compartment 2 total area = 2210mm²
 Compartment 2 (45% space factor) = 995mm²



Series R 130 – with box, no segregators

Compartment total area = 4272mm²
 Compartment (45% space factor) = 1992mm²

Cable capacities

- All calculations allow for a 45% space factor.

As there can be differences between data cable sizes, Marshall-Tufflex recommend that cable dimensions are confirmed with the manufacturing company.

Cable capacity chart	Compartment 1		Compartment 2		Compartment 3	
	No box	With box	No box	With box	No box	With box
PVC power cable 1.5mm² stranded copper						
Series R 130	89	–	–	40	89	–
PVC power cable 2.5mm² stranded copper						
Series R 130	60	–	–	27	60	–
PVC power cable 4.0mm² stranded copper						
Series R 130	43	–	–	19	43	–
Data cable: Ø5.5mm						
Series R 130	30	–	–	13	30	–
Data cable: Ø6.0mm						
Series R 130	25	–	–	11	25	–
Data cable: Ø6.5mm						
Series R 130	22	–	–	10	22	–
Data cable: Ø7.0mm						
Series R 130	19	–	–	8	19	–
Data cable: Ø8.4mm						
Series R 130	13	–	–	6	13	–

Sterling Profile trunking

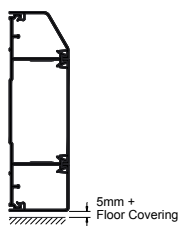
Material

PVC-U is flame retardant and self-extinguishing. It provides a 100% recyclable material with good sustainability.

Installation

Positioning

When used as a skirting system, sufficient clearance should be allowed between the floor covering and the profile fittings that clip over the cover i.e. 5mm + floor covering is recommended.



Expansion/contraction

PVC-U expands and contracts at a uniform rate of approx 5.25mm in a 3 metre length for a temperature change of 25°C. Therefore, a 3mm gap between each length of trunking base is recommended. Fittings have a 10mm overlap on each side to allow for thermal movement of the covers.

Fitting

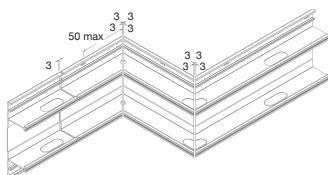
- The base is supplied with pre-cut elongated holes at 250mm centres.
- Internal couplers on base units are not required.
- To fasten base, use No 8 round head screws and washers.
- Avoid over-tightening to permit thermal movement.
- The use of plastic caps over screw heads is recommended to protect installed cables.
- To cut the trunking, use a fine-toothed panel or power jig-saw.
- External moulded fittings overlap the joints by up to 10mm to cover cutting inaccuracies.
- A variable angle jig-saw or chop saw is recommended for cutting 45° mitres.
- To increase number of compartments to any number required, use base extension EBE1WH and extendable base EEB1.

Single lengths

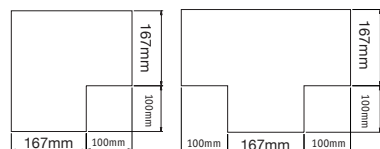
Where it is required to fit a single length of trunking (under 3 metres) between two inside walls and no accessory box is fitted, it is advisable to install a coupler in the centre of the run to facilitate the removal of the cover.

Joints and bends

- Base joints should have a 3mm gap to allow for expansion.
- Internal, external bends and flat angles, the base must be mitred 45° to ensure total enclosure of trunking, including any internal fitted segregator.
- Flat angles, tees and crossovers are available prefabricated.
- External moulded fittings overlap the joints by up to 10mm to cover cutting inaccuracies.



Template dimensions for Flat angle and Tee

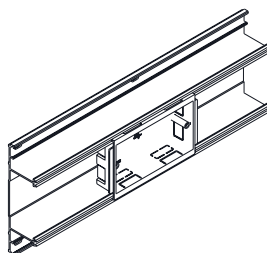


Bend radius control

The data internal and external bend radius control fittings for Sterling Profile trunking provide a bend radius of 50mm.

Accessory boxes

- For mounting an accessory box in the alternative compartment to supply. Fit the box and remove the closest knockout in the main web.
- Remove the appropriate knock out and clip the box into the trunking base.
- For boxes in the same compartment as the supply, remove the appropriate box knock-outs and clip the box into trunking base.
- When boxes are installed consecutively, a 14mm wide spacer (ES1) is required to cover the space between the boxes.
- Part M box assemblies with contrasting coloured faceplates are available to meet the requirements of DDA regulations for Visual Impairment.



Covers

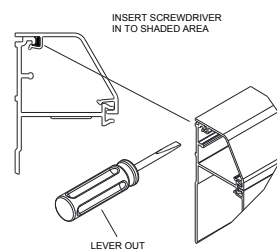
Covers are designed to limit unauthorised removal and to remain in position during normal conditions irrespective of impact and minor undulations of the mounting surface.

Covers – fitting

Covers are clipped into place from front. If accessory boxes are installed, the ETL1 cover is butt-joined to the edge of the box. Cut edges of the cover are subsequently concealed by the accessory. For fittings, a gap of 25mm is left between the two cover ends to permit the fitting to clip to base.

Covers – removal

To remove a cover, first detach a coupler, internal or external bend component to gain access. The main cover can then be gently eased off the base. To remove the outer cover, firstly ease from the base by inserting the blade of a terminal screwdriver between the captive legs of the cover and the base and then ease away from the base.



Screening

Special conductive spray coating can be applied to one compartment, the cover, accessory boxes and fittings, to screen data cables against EMI interference.

• For data/voice circuits only:

Warning: Owing to its relatively high surface resistance, CS coating SHOULD NOT be in contact with low voltage circuits BS 7671:2008 50 V.A.C. – 1000 V.A.C. unless additional measures are undertaken.

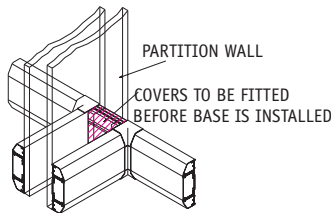
Antimicrobial

For technical details of antimicrobial Sterling Profile Bio trunking, please refer to Laboratory and Healthcare section on page 34.

Sterling Profile trunking – continued

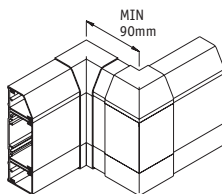
Method of continuation through a partition wall

- Continue the main lateral run of base through the partition wall.
- Fit short lengths of cover where the trunking passes through the partition.
- The partition wall trunking is then butted up to the main run and the joint covered by an internal bend fitting.

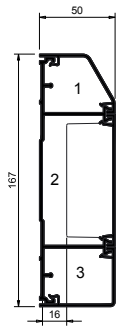


Offset dimensions

The minimum set that can be accommodated in the same plane (from internal to external bend), is shown below.



Dimensions

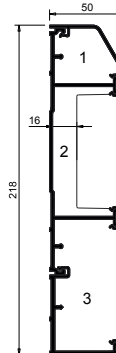


Sterling Profile 2 no box

- 1 = 1266mm² total area
- 1 = 570mm² 45% space factor
- 2 = 3858mm² total area
- 2 = 1736mm² 45% space factor
- 3 = 1542mm² total area
- 3 = 694mm² 45% space factor

With box in comp 2

- 2 = 1376mm² total area
- 2 = 619mm² 45% space factor

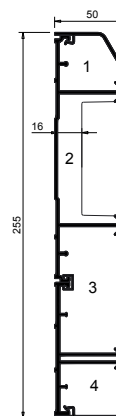


Sterling Profile 4 no box

- 1 = 1266mm² total area
- 1 = 570mm² 45% space factor
- 2 = 3858mm² total area
- 2 = 1736mm² 45% space factor
- 3 = 3716mm² total area
- 3 = 1672mm² 45% space factor

With box in comp 2 or 3

- 2 = 1376mm² total area
- 2 = 619mm² 45% space factor
- 3 = 1234mm² total area
- 3 = 555mm² 45% space factor

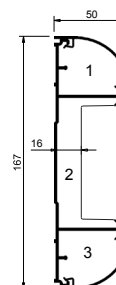


Sterling Profile 12 no box

- 1 = 1266mm² total area
- 1 = 570mm² 45% space factor
- 2 = 3858mm² total area
- 2 = 1736mm² 45% space factor
- 3 = 3566mm² total area
- 3 = 1605mm² 45% space factor
- 4 = 1430mm² total area
- 4 = 644mm² 45% space factor

With box in comp 2 or 3

- 2 = 1376mm² total area
- 2 = 619mm² 45% space factor
- 3 = 1084mm² total area
- 3 = 488mm² 45% space factor

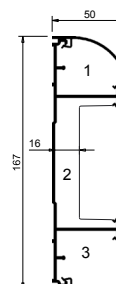


Sterling Curve Profile 1 – no box

- 1 & 3 = 1170mm² total area
- 1 & 3 = 527mm² 45% space factor
- 2 = 3858mm² total area
- 2 = 1736mm² 45% space factor

With box in comp 2

- 2 = 1376mm² total area
- 2 = 619mm² 45% total area



Sterling Curve Profile 2 – no box

- 1 = 1170mm² total area
- 1 = 527mm² 45% space factor
- 2 = 3858mm² total area
- 2 = 1736mm² 45% space factor
- 3 = 1542mm² total area
- 3 = 694mm² 45% space factor

With box in comp 2

- 2 = 1376mm² total area
- 2 = 619mm² 45% space factor

Other Sterling Profile dimensions

Other Sterling Profiles are a combination of the ones shown on this page and can be calculated using the compartment dimensions shown here.

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Product Information

Sterling Profile

Cable capacities

- All calculations allow for a 45% space factor.

As there can be differences between cable sizes, Marshall-Tufflex recommend that cable dimensions are confirmed with the manufacturing company.

Cable capacity chart	Compartment 1		Compartment 2		Compartment 3		Compartment 4
	No box	With box	No box	With box	No box	With box	No box
PVC power cable 1.5mm² stranded copper							
Sterling Profile 1	71	-	217	77	71	-	-
Sterling Profile 2	71	-	217	77	87	-	-
Sterling Profile 3	87	-	217	77	87	-	-
Sterling Curve Profile 1	66	-	217	77	66	-	-
Sterling Curve Profile 2	66	-	217	77	87	-	-
Sterling Profile 4	71	-	217	77	209	69	-
Sterling Profile 5	87	-	217	77	209	69	-
Sterling Profile 6	209	69	217	77	209	69	-
Sterling Profile 11	71	-	217	77	201	61	71
Sterling Profile 12	71	-	217	77	201	61	80
Sterling Profile 13	80	-	217	77	201	61	80
PVC power cable 2.5mm² stranded copper							
Sterling Profile 1	48	-	146	52	48	-	-
Sterling Profile 2	48	-	146	52	58	-	-
Sterling Profile 3	58	-	146	52	58	-	-
Sterling Curve Profile 1	44	-	146	52	44	-	-
Sterling Curve Profile 2	44	-	146	52	58	-	-
Sterling Profile 4	48	-	146	52	141	47	-
Sterling Profile 5	58	-	146	52	141	47	-
Sterling Profile 6	141	47	146	52	141	47	-
Sterling Profile 11	48	-	146	52	135	41	48
Sterling Profile 12	48	-	146	52	135	41	54
Sterling Profile 13	54	-	146	52	135	41	54
PVC power cable 4.0mm² stranded copper							
Sterling Profile 1	34	-	105	37	34	-	-
Sterling Profile 2	34	-	105	37	42	-	-
Sterling Profile 3	42	-	105	37	42	-	-
Sterling Curve Profile 1	32	-	105	37	32	-	-
Sterling Curve Profile 2	32	-	105	37	42	-	-
Sterling Profile 4	34	-	105	37	101	33	-
Sterling Profile 5	42	-	105	37	101	33	-
Sterling Profile 6	101	33	105	37	101	33	-
Sterling Profile 11	34	-	105	37	97	29	34
Sterling Profile 12	34	-	105	37	97	29	39
Sterling Profile 13	39	-	105	37	97	29	39
Data cable: Ø5.5mm²							
Sterling Profile 1	24	-	73	26	24	-	-
Sterling Profile 2	24	-	73	26	29	-	-
Sterling Profile 3	29	-	73	26	29	-	-
Sterling Curve Profile 1	22	-	73	26	22	-	-
Sterling Curve Profile 2	22	-	73	26	29	-	-
Sterling Profile 4	24	-	73	26	70	23	-
Sterling Profile 5	29	-	73	26	70	23	-
Sterling Profile 6	70	23	73	26	70	23	-
Sterling Profile 11	24	-	73	26	67	20	24
Sterling Profile 12	24	-	73	26	67	20	27
Sterling Profile 13	27	-	73	26	67	20	27

Cable capacity chart	Compartment 1		Compartment 2		Compartment 3		Compartment 4
	No box	With box	No box	With box	No box	With box	No box
Data cable: Ø6.0mm²							
Sterling Profile 1	20	-	61	22	20	-	-
Sterling Profile 2	20	-	61	22	25	-	-
Sterling Profile 3	25	-	61	22	25	-	-
Sterling Curve Profile 1	19	-	61	22	19	-	-
Sterling Curve Profile 2	19	-	61	22	25	-	-
Sterling Profile 4	20	-	61	22	59	20	-
Sterling Profile 5	25	-	61	22	59	20	-
Sterling Profile 6	59	20	61	22	59	20	-
Sterling Profile 11	20	-	61	22	57	17	20
Sterling Profile 12	20	-	61	22	57	17	23
Sterling Profile 13	23	-	61	22	57	17	23
Data cable: Ø6.5mm²							
Sterling Profile 1	18	-	54	19	18	-	-
Sterling Profile 2	18	-	54	19	22	-	-
Sterling Profile 3	22	-	54	19	22	-	-
Sterling Curve Profile 1	16	-	54	19	16	-	-
Sterling Curve Profile 2	16	-	54	19	22	-	-
Sterling Profile 4	18	-	54	19	52	17	-
Sterling Profile 5	22	-	54	19	52	17	-
Sterling Profile 6	52	17	54	19	52	17	-
Sterling Profile 11	18	-	54	19	50	15	18
Sterling Profile 12	18	-	54	19	50	15	20
Sterling Profile 13	20	-	54	19	50	15	20
Data cable: Ø7.0mm²							
Sterling Profile 1	15	-	45	16	15	-	-
Sterling Profile 2	15	-	45	16	18	-	-
Sterling Profile 3	18	-	45	16	18	-	-
Sterling Curve Profile 1	14	-	45	16	14	-	-
Sterling Curve Profile 2	14	-	45	16	18	-	-
Sterling Profile 4	15	-	45	16	43	14	-
Sterling Profile 5	18	-	45	16	43	14	-
Sterling Profile 6	43	14	45	16	43	14	-
Sterling Profile 11	15	-	45	16	42	13	15
Sterling Profile 12	15	-	45	16	42	13	17
Sterling Profile 13	17	-	45	16	42	13	17
Data cable: Ø8.4mm²							
Sterling Profile 1	10	-	31	11	10	-	-
Sterling Profile 2	10	-	31	11	13	-	-
Sterling Profile 3	13	-	31	11	13	-	-
Sterling Curve Profile 1	10	-	31	11	10	-	-
Sterling Curve Profile 2	10	-	31	11	13	-	-
Sterling Profile 4	10	-	31	11	30	10	-
Sterling Profile 5	13	-	31	11	30	10	-
Sterling Profile 6	30	10	31	11	30	10	-
Sterling Profile 11	10	-	31	11	29	9	10
Sterling Profile 12	10	-	31	11	29	9	12
Sterling Profile 13	12	-	31	11	29	9	12

Twin165 trunking

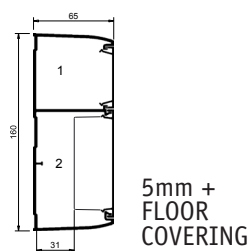
Material

PVC-U is flame retardant and self-extinguishing. It provides a 100% recyclable material with good sustainability.

Installation

Positioning

When used as a skirting system, sufficient clearance should be allowed between the floor covering and the profile fittings that clip over the cover i.e. 5mm + floor covering is recommended.



Expansion/contraction

PVC-U expands and contracts at a uniform rate of approx 5.25mm in a 3 metre length for a temperature change of 25°C. Therefore, a 3mm gap between each length of trunking base is recommended.

Adequate allowance is made within the fittings for thermal movement of the covers, which have a 7mm overlap on each side.

Fitting

- The base is supplied with pre-cut elongated holes at 250mm centres.
- Internal couplers on base units are not required.
- To fasten base, use No 8 round head screws and washers.
- Avoid over-tightening to permit thermal movement.
- The use of plastic caps over screw heads is recommended to protect installed cables.
- To cut the trunking, use a fine-toothed panel or power jig-saw.
- External moulded fittings overlap the joints by up to 10mm to cover cutting inaccuracies.
- A variable angle jig-saw or chop saw is recommended for cutting 45° mitres.

Single lengths

Where it is required to fit a single length of trunking (under 3 metres) between two inside walls and no accessory box is fitted, it is advisable to install a coupler in the centre of the run to facilitate the removal of the cover.

Joints and bends

- Base joints should have a 3mm gap to allow for expansion.
- Internal and external bends: Base should be cut square to bend base component.
- Flat angles and tees are pre-fabricated.
- External moulded fittings overlap the joints by up to 7mm to cover cutting inaccuracies.
- End caps to be screw fixed to base.

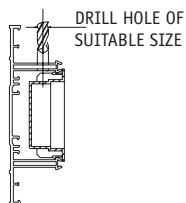
Bend radius control

The bend radius control fittings for Twin165 provide a bend radius of 50mm

Accessory boxes

The accessory box is mounted in the larger compartment (compartment 2). If supply is from the smaller compartment, drill the main web adjacent to the box position. Remove the appropriate knock out and clip the box into the trunking base. For boxes supplied from the main compartment, remove the appropriate box knock-outs and clip the box into trunking base. When boxes are installed consecutively, a 14mm wide spacer (ES1) is required to cover the space between the boxes.

- Part M box assemblies with contrasting coloured faceplates are available to meet the requirements of DDA regulations for Visual Impairment.



Covers

The covers have been designed to remain in position irrespective of impact during normal conditions, minor undulations of the mounting surface, and to limit unauthorised removal.

Covers – fitting

Covers are clipped into place from the front. If accessory boxes are installed, the covers are butt-joined to the edge of the box. For the fitting of couplers, a gap of 25mm is left between the two cover ends.

Covers – removal

To remove a cover, first detach a coupler, internal or external bend component to gain access. Both covers can then be gently eased off the base.

Screening

Special conductive spray coating can be applied to one compartment, the cover, accessory boxes and fittings, to screen data cables against EMI interference.

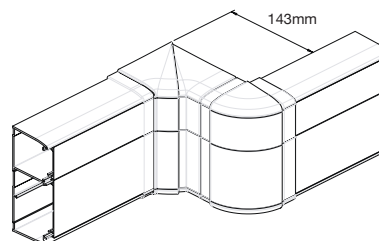
- **For data/voice circuits only:**
Warning: Owing to its relatively high surface resistance, CS coating SHOULD NOT be in contact with low voltage circuits BS 7671 (2008) 50 V.A.C. – 1000 V.A.C. unless additional measures are undertaken.
- Part M box assemblies with contrasting coloured faceplates are available to meet the requirements of DDA regulations for Visual Impairment.

Antimicrobial

For technical details of antimicrobial Twin165 Bio trunking, please refer to Laboratory and Healthcare section

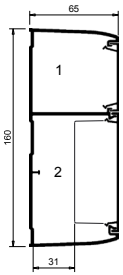
Offset dimensions

The minimum set that can be accommodated in the same plane (from internal to external bend), is shown below.



Twin165 – continued

Dimensions



Twin165 trunking – no accessory box

Compartment 1 = 3272mm² total area
 Compartment 1 = 1472mm² 45% space factor
 Compartment 2 = 5404mm² total area
 Compartment 2 = 2431mm² 45% space factor

Twin165 trunking – with accessory box

Compartment 1 = 3272mm² total area
 Compartment 1 = 1472mm² 45% space factor
 Compartment 2 = 3100mm² total area
 Compartment 2 = 1395mm² 45% space factor

Cable capacities

- All calculations allow for a 45% space factor.

As there can be differences between data cable sizes, Marshall-Tufflex recommend that cable dimensions are confirmed with the manufacturing company.

Cable capacity chart	Compartment 1		Compartment 2	
	No box	With box	No box	With box
PVC power cable 1.5mm ² stranded copper	184	–	304	174
PVC power cable 2.5mm ² stranded copper	124	–	204	117
PVC power cable 4.0mm ² stranded copper	89	–	146	84
Data cable: Ø5.5mm	62	–	102	59
Data cable: Ø6.0mm	52	–	86	49
Data cable: Ø6.5mm	46	–	76	43
Data cable: Ø7.0mm	38	–	63	36
Data cable: Ø8.4mm	27	–	44	25

Twin Plus trunking

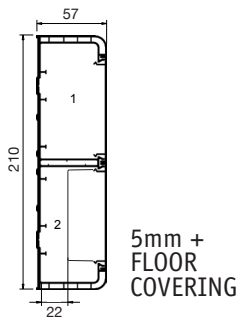
Material

PVC-U is flame retardant and self-extinguishing. It provides a 100% recyclable material with good sustainability.

Installation

Positioning

When used as a skirting system, sufficient clearance should be allowed between the floor covering and the profile fittings that clip over the cover i.e. 5mm + floor covering is recommended.



Expansion/contraction

PVC-U expands and contracts at a uniform rate of approx 5.25mm in a 3 metre length for a temperature change of 25°C. Therefore, a 3mm gap between each length of trunking base is recommended.

Adequate allowance is made within the fittings for thermal movement of the covers, which have a 10mm overlap on each side.

Fitting

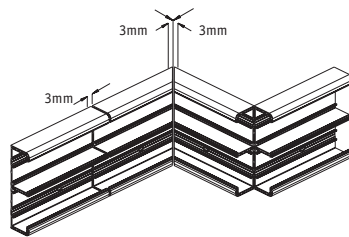
- The base is supplied with pre-cut elongated holes at 250mm centres.
- Internal couplers on base units are not required.
- To fasten base, use No 8 round head screws and washers.
- Avoid over-tightening to permit thermal movement.
- The use of plastic caps over screw heads is recommended to protect installed cables.
- To cut the trunking, use a fine-toothed panel or power jig-saw.
- External moulded fittings overlap the joints by up to 10mm to cover cutting inaccuracies.
- A variable angle jig-saw or chop saw is recommended for cutting 45° mitres.

Single lengths

Where it is required to fit a single length of trunking (under 3 metres) between two inside walls and no accessory box is fitted, it is advisable to install a coupler in the centre of the run to facilitate the removal of the cover.

Joints and bends

- Base joints should have a 3mm gap to allow for expansion.
- External bends: base should be cut square.
- Internal bends and flat angles, the base must be mitred 45° to ensure total enclosure of trunking, including any internal fitted segregator.
- Tees and crossovers are available prefabricated.
- External moulded fittings overlap the joints by up to 7mm to cover cutting inaccuracies.



Bend radius control

The bend radius control fittings for Twin Plus provide a bend radius of 50mm

Accessory boxes

If the accessory box is to be mounted in the alternative compartment to the supply, drill the main web adjacent to the box position. Remove the appropriate knock out and clip the box into the trunking base. For boxes in the same compartment as the supply, remove the appropriate box knock-outs and clip the box into trunking base. When boxes are installed consecutively, a 14mm wide spacer (ES1) is required to cover the space between the boxes.

- Part M box assemblies with contrasting coloured faceplates are available to meet the requirements of DDA regulations for Visual Impairment.

Covers

The covers have been designed to remain in position irrespective of impact during normal conditions, minor undulations of the mounting surface, and to limit unauthorised removal.

Covers – fitting

Covers are clipped into place from the front. If accessory boxes are installed, the covers are butt-joined to the edge of the box. For the fitting of couplers to conceal the cover joint, a gap of 30mm is left between the two cover ends.

Covers – removal

To remove a cover, first detach a coupler, internal or external bend component to gain access. Both covers can then be gently eased off the base.

Screening

Special conductive spray coating can be applied to one compartment, the cover, accessory boxes and fittings, to screen data cables against EMI interference.

• For data/voice circuits only:

Warning: Owing to its relatively high surface resistance, CS coating SHOULD NOT be in contact with low voltage circuits BS 7671:2008 50 V.A.C. – 1000 V.A.C. unless additional measures are undertaken.

Antimicrobial

For technical details of antimicrobial Twin Plus Bio trunking, please refer to Laboratory and Healthcare section.

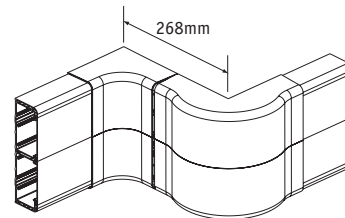
Method of continuation through a partition wall

Continue the main lateral run of base through the partition wall with short lengths of cover fitted where the trunking passes through the partition. The partition wall trunking is then butted up to the main run and the joint covered by an internal bend.

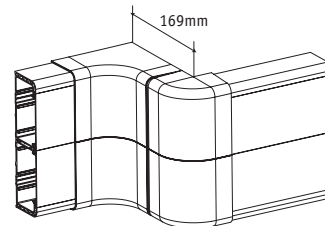
Offset dimensions

The minimum set that can be accommodated in the same plane (from internal to external bend), is shown below.

Large data capacity bend

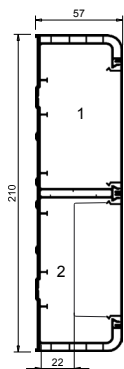


Standard bend



Twin Plus trunking – continued

Dimensions



Twin Plus trunking – with accessory box

- 1 = 2431mm² total area
- 1 = 1094mm² 45% space factor
- 2 = 2431mm² total area
- 2 = 1094mm² 45% space factor

Twin Plus trunking – no accessory box

- 1 = 4755mm² total area
- 1 = 2139mm² 45% space factor
- 2 = 4755mm² total area
- 2 = 2139mm² 45% space factor

Cable capacities

- All calculations allow for a 45% space factor.

As there can be differences between data cable sizes, Marshall-Tufflex recommend that cable dimensions are confirmed with the manufacturing company.

Cable capacity chart	Compartment 1		Compartment 2	
	No box	With box	No box	With box
PVC power cable 1.5mm ² stranded copper	267	137	267	137
PVC power cable 2.5mm ² stranded copper	180	92	180	92
PVC power cable 4.0mm ² stranded copper	129	66	129	66
Data cable: Ø5.5mm	90	46	90	46
Data cable: Ø6.0mm	76	39	76	39
Data cable: Ø6.5mm	66	34	66	34
Data cable: Ø7.0mm	56	28	56	28
Data cable: Ø8.4mm	39	20	39	20

XL trunking

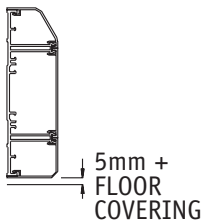
Material

PVC-U is flame retardant and self-extinguishing. It provides a 100% recyclable material with good sustainability.

Installation

Positioning

When used as a skirting system, sufficient clearance should be allowed between the floor covering and the profile fittings that clip over the cover i.e. 5mm + floor covering is recommended.



Expansion/contraction

PVC-U expands and contracts at a uniform rate of approx 5.25mm in a 3 metre length for a temperature change of 25°C. Therefore, a 3mm gap between each length of trunking base is recommended.

Adequate allowance is made within the fittings for thermal movement of the covers, which have a 10mm overlap on each side.

Fitting

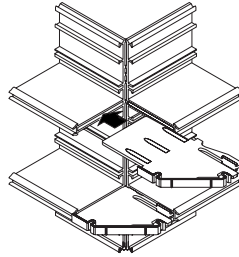
- The base is supplied with pre-cut elongated holes at 250mm centres.
- Internal couplers on base units are not required.
- To fasten base, use No 8 round head screws and washers.
- Avoid over-tightening to permit thermal movement.
- The use of plastic caps over screw heads is recommended to protect installed cables.
- To cut the trunking, use a fine-toothed panel or power jig-saw.
- External moulded fittings overlap the joints by up to 10mm to cover cutting inaccuracies.
- A variable angle jig-saw or chop saw is recommended for cutting 45° mitres.

Single lengths

Where it is required to fit a single length of trunking (under 3 metres) between two inside walls and no accessory box is fitted, it is advisable to install a coupler in the centre of the run to facilitate the removal of the cover.

Joints and bend

- Base joints should have a 3mm gap to allow for expansion.
- External bends: base should be cut square and segregators inserted as shown in drawing below.



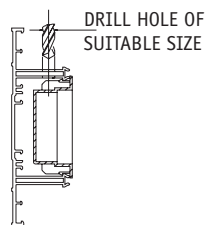
- Internal bends and flat angles, the base must be mitred 45° to ensure total enclosure of trunking, including any internal fitted segregator.
- Tees and crossovers are available prefabricated.
- External moulded fittings overlap the joints by up to 7mm to cover cutting inaccuracies.

Bend radius control

For data bend radius control fittings for XL, please contact the Technical Team on +44 (0)1424 856688.

Accessory boxes

- If accessory box main compartment is supplied from an outer compartment, drill the main web adjacent to the box position.
- Remove the appropriate knock out and clip the box into the trunking base.
- For boxes in the same compartment as the supply, remove the appropriate box knock-outs and clip the box into trunking base.
- When boxes are installed consecutively, a 14mm wide spacer (ES1) is required to cover the space between the boxes.
- Part M box assemblies with contrasting coloured faceplates are available to meet the requirements of DDA regulations for Visual Impairment.



Covers

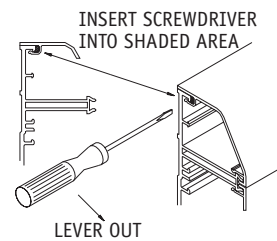
The covers have been designed to remain in position irrespective of impact during normal conditions, minor undulations of the mounting surface, and to limit unauthorised removal.

Covers – fitting

Covers are clipped into place from the front. If accessory boxes are installed, the covers are butt-joined to the edge of the box (ESSB1 and 2 only) and the cut edges of lids are subsequently concealed by the accessory. For fittings, a gap of 30mm is left between the two cover ends to permit the fitting to clip to the base.

Covers – removal

To remove a cover, first detach a coupler, internal or external bend component to gain access. The main cover can then be gently eased off the base. To remove the outer cover, firstly ease from the base by inserting the blade of a terminal screwdriver between the captive legs of the cover and the base and then peel off.



Screening

Special conductive spray coating can be applied to one compartment, the cover, accessory boxes and fittings, to screen data cables against EMI interference.

• For data/voice circuits only:

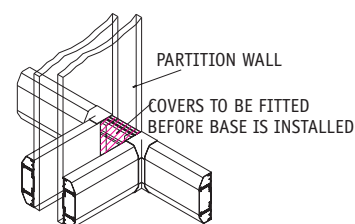
Warning: Owing to its relatively high surface resistance, CS coating SHOULD NOT be in contact with low voltage circuits BS 7671:2008 50 V.A.C. – 1000 V.A.C. unless additional measures are undertaken.

Antimicrobial

For technical details of antimicrobial XL Bio trunking, please refer to Laboratory and Healthcare section.

Method of continuation through a partition wall

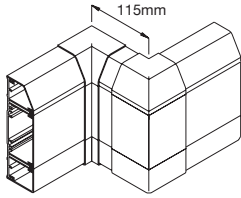
Continue the main lateral run of base through the partition wall with short lengths of cover fitted where the trunking passes through the partition. The partition wall trunking is then butted up to the main run and the joint covered by an Internal bend. (as shown below)



XL trunking – continued

Offset dimensions

The minimum set that can be accommodated in the same plane (from internal to external bend), is shown below.



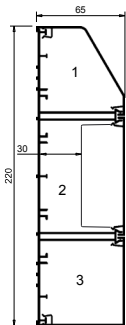
Dimensions

XL 202 Trunking - with box

- 1 = 2824mm² total area
- 1 = 1270mm² 45% space factor
- 2 = 2504mm² total area
- 2 = 1126mm² 45% space factor
- 3 = 3531mm² total area
- 3 = 1589mm² 45% space factor

XL 202 Trunking - no box

- 2 = 4771mm² total area
- 2 = 2147mm² 45% space factor

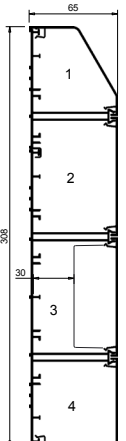


XL 212 Trunking - no box

- 1 = 2824mm² total area
- 1 = 1270mm² 45% space factor
- 2 = 4771mm² total area
- 2 = 2147mm² 45% space factor
- 3 = 4732mm² total area
- 3 = 2129mm² 45% space factor
- 4 = 3531mm² total area
- 4 = 1589mm² 45% space factor

XL 212 Trunking - with box in comp 2 or 3

- 2 = 2511mm² total area
- 2 = 1130mm² 45% space factor
- 3 = 2466mm² total area
- 3 = 1109mm² 45% space factor



Cable capacities

- All calculations allow for a 45% space factor.

As there can be differences between data cable sizes, Marshall-Tufflex recommend that cable dimensions are confirmed with the manufacturing company.

Other Sterling Profile dimensions

Other XL trunking profiles are a combination of the ones shown on this page and can be calculated using the compartment dimensions shown here.

Cable capacity chart	Compartment 1		Compartment 2		Compartment 3		Compartment 4
	No box	With box	No box	With box	No box	With box	No box
PVC power cable 1.5mm² stranded copper							
XL 201	159	-	268	141	159	-	-
XL 202	159	-	268	141	199	-	-
XL 203	199	-	268	141	199	-	-
XL 211	159	-	268	141	266	139	159
XL 212	159	-	268	141	266	139	199
XL 213	199	-	268	141	266	139	199
PVC power cable 2.5mm² stranded copper							
XL 201	107	-	180	95	107	-	-
XL 202	107	-	180	95	134	-	-
XL 203	134	-	180	95	134	-	-
XL 211	107	-	180	95	179	93	107
XL 212	107	-	180	95	179	93	134
XL 213	134	-	180	95	179	93	134
PVC power cable 4.0mm² stranded copper							
XL 201	77	-	129	68	77	-	-
XL 202	77	-	129	68	96	-	-
XL 203	96	-	129	68	96	-	-
XL 211	77	-	129	68	128	67	77
XL 212	77	-	129	68	128	67	96
XL 213	96	-	129	68	128	67	96
Data cable: Ø5.5mm UTP & STP							
XL 201	53	-	90	47	53	-	-
XL 202	53	-	90	47	67	-	-
XL 203	67	-	90	47	67	-	-
XL 211	53	-	90	47	89	47	53
XL 212	53	-	90	47	89	47	67
XL 213	67	-	90	47	89	47	67
Data cable: Ø6.0mm UTP & STP							
XL 201	45	-	76	40	45	-	-
XL 202	45	-	76	40	56	-	-
XL 203	56	-	76	40	56	-	-
XL 211	45	-	76	40	75	39	45
XL 212	45	-	76	40	75	39	56
XL 213	56	-	76	40	75	39	56
Data cable: Ø6.5mm UTP & STP							
XL 201	39	-	67	35	39	-	-
XL 202	39	-	67	35	49	-	-
XL 203	49	-	67	35	49	-	-
XL 211	39	-	67	35	66	34	39
XL 212	39	-	67	35	66	34	49
XL 213	49	-	67	35	66	34	49
Data cable: Ø7.0mm UTP & STP							
XL 201	33	-	56	29	33	-	-
XL 202	33	-	56	29	41	-	-
XL 203	41	-	56	29	41	-	-
XL 211	33	-	56	29	55	29	33
XL 212	33	-	56	29	55	29	41
XL 213	41	-	56	29	55	29	41
Data cable: Ø8.4mm UTP & STP							
XL 201	23	-	39	20	23	-	-
XL 202	23	-	39	20	29	-	-
XL 203	29	-	39	20	29	-	-
XL 211	23	-	39	20	38	20	23
XL 212	23	-	39	20	38	20	29
XL 213	29	-	39	20	38	20	29

Mini trunking

Material

PVC-U is flame retardant and self-extinguishing. It provides a 100% recyclable material with good sustainability.

Installation

Positioning

As feeder trunking.

Expansion/contraction

PVC-U expands and contracts at a uniform rate of approx 5.25mm in a 3 metre length for a temperature change of 25°C. Therefore, a 3mm gap between each length of trunking base is recommended. Fittings allow for thermal expansion of the covers.

Fitting

Mini trunking

- Secure trunking base at least every 375mm by drilling 6mm holes.
- Fasten using roundhead screws.

Self-fixing mini trunking

- Remove protective film exposing 100-150mm of adhesive foam.
- Line up accurately and press firmly into position.
- Repeat until base is installed.
- For long term performance we recommend additional securing with screws and washers.

Note: the bond created by the tape can be very strong. Maximum adhesion occurs after 24 hours. Ensure surface is dust-free, dry, clean and flat. Uneven surface contact will reduce bonding performance. Installation in cold conditions below +5°C may affect adhesion.

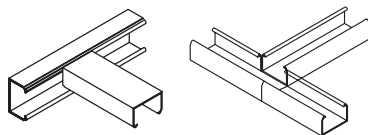
Mini and Mini SF trunking

- Avoid over-tightening to permit thermal movement.
- The use of plastic caps over screw heads is recommended to protect installed cables.
- To cut the trunking, use a fine-toothed panel or power jig-saw.
- External profile fittings overlap joints by up to 10mm to cover cutting inaccuracies.
- A variable angle jig-saw or chop saw is recommended for cutting 45° mitres.
- End caps are secured using adhesive solvent MSC.

Joints and bends

- All fittings incorporate clip-on design.
- 3mm gap between trunking base and bend or flat angle is recommended.

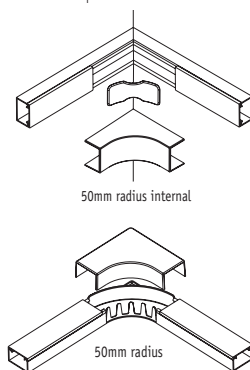
- For internal bends and flat angles, bases should be mitred 45°.
- For external bends, bases should be cut square to the corner.



- For tees, bases should be cut square and butt up to each other.
- External clip on fittings overlap trunking base by up to 10mm to cover cutting inaccuracies.
- Secure end caps using solvent adhesive MSC3.

Bend radius control – MMT4 only

- For internal bends, base should be mitred at 45°
- For external bends, base should be cut square with the corner and the radius control fitted.
- For flat angles and tees, allowance should be made when cutting base, for moulded components.



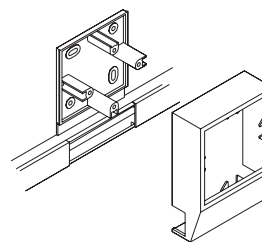
Accessory boxes

- Select appropriate surface box.
- Remove required knockout.
- Clean burrs from around aperture.
- Snap mini adaptor into position on box and place in position.
- Ensure trunking seats securely into adaptor.
- Secure box using diagonally opposite fixing holes.

Shrouded entry boxes

- For use with MMT2 or MMT3 only.
- Fit back plate in position, secure using diagonally opposite fixing holes.
- Run mini base up to back plate (for terminal accessory) or continue through.
- Remove required knockout from outer cover to fit mini trunking and fit over base plate. Install wiring leaving sufficient to wire accessory.
- Complete assembly is finally secured together when the wired accessory is screwed to accessory front plate.

- Fit mini trunking cover to base, ensuring cover extends into knockout.



Covers

Covers are designed to limit unauthorised removal and to remain in position during normal conditions irrespective of impact and minor undulations of the mounting surface.

Covers – fitting

Covers are clipped into place from front.

Covers – removal

To remove a cover, first detach a coupler or internal/external bend to gain access. The cover can then be gently eased off the base.

Cable capacities

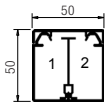
- All calculations allow for a 45% space factor.
- Divide cable factor (1st table) into capacity (2nd table) to ascertain number of cables.

As there can be differences between data cable sizes, Marshall-Tufflex recommend that cable dimensions are confirmed with the manufacturing company.

Conductor type	Size	Cable factor
Stranded PVC power	1.5mm ²	8.0
Stranded PVC power	2.5mm ²	11.9
Stranded PVC power	4.0mm ²	16.6
*Data cable	Ø5.5mm	23.8
*Data cable	Ø6.0mm	28.3
*Data cable	Ø6.5mm	33.2
*Data cable	Ø7.0mm	38.5
*Data cable	Ø8.4mm	55.4

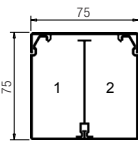
Mini trunking	Size mm	45% capacity
MMT100	10 x 8	18.5mm ²
MMT0	16 x 10	42mm ²
MMT1	16 x 16	77.2mm ²
MMT2	25 x 16	119.7mm ²
MMT3	38 x 16	193mm ²
MMT4	38 x 25	342mm ²
MMT5	50 x 25	449mm ²
MMT6	38 x 38	501mm ²
MMT7	75 x 16	397mm ²

Maxi and Sceptre trunking



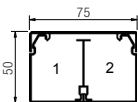
Maxi MTRS50

Total = 1979mm² total area
 Total = 890mm² 45% space factor
 1 & 2 = 911mm² total area
 1 & 2 = 410mm² 45% space factor



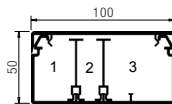
Maxi MTRS75

Total = 4709mm² total area
 Total = 2119mm² 45% space factor
 1 & 2 = 2196mm² total area
 1 & 2 = 988mm² 45% space factor



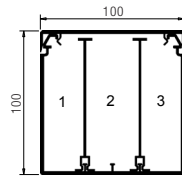
Maxi MTRS75/50

Total = 3032mm² total area
 Total = 1365mm² 45% space factor
 1 & 2 = 1347mm² total area
 1 & 2 = 606mm² 45% space factor



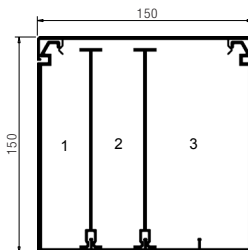
Maxi MTRS100/50

Total = 4040mm² total area
 Total = 1818mm² 45% space factor
 1 = 1056mm² total area
 1 = 475mm² 45% space factor
 2 = 660mm² total area
 2 = 297mm² 45% space factor
 3 = 1829mm² total area
 3 = 823mm² 45% space factor



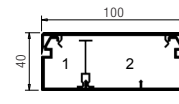
Maxi MTRS100

Total = 8733mm² total area
 Total = 3930mm² 45% space factor
 1 = 2375mm² total area
 1 = 1069mm² 45% space factor
 2 = 1464mm² total area
 2 = 659mm² 45% space factor
 3 = 4075mm² total area
 3 = 1834mm² 45% space factor



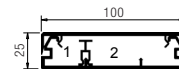
Maxi MTRS150

Total = 20193mm² total area
 Total = 9087mm² 45% space factor
 1 = 4406mm² total area
 1 = 1983mm² 45% space factor
 2 = 4728mm² total area
 2 = 2128mm² 45% space factor
 3 = 9482mm² total area
 3 = 4267mm² 45% space factor



Sceptre DTR1

Total = 3168mm² total area
 Total = 1426mm² 45% space factor
 1 = 816mm² total area
 1 = 367mm² 45% space factor
 2 = 2002mm² total area
 2 = 901mm² 45% space factor



Sceptre DTR2

Total = 1731mm² total area
 Total = 779mm² 45% space factor
 1 = 435mm² total area
 1 = 196mm² 45% space factor
 2 = 1197mm² total area
 2 = 538mm² 45% space factor

Conductor type	Size	Cable factor
Stranded PVC power	1.5mm ²	8.0
Stranded PVC power	2.5mm ²	11.9
Stranded PVC power	4.0mm ²	16.6
*Data cable	Ø5.5mm	23.8
*Data cable	Ø6.0mm	28.3
*Data cable	Ø6.5mm	33.2
*Data cable	Ø7.0mm	38.5
*Data cable	Ø8.4mm	55.4

For Data cable information, please see page 246

To determine cable capacity, select the size of the cable required and its corresponding cable factor from the table. Divide the compartment area figure (with or without 45% space factor) with the cable factor figure to achieve cable capacity.

Note: When 30mm deep accessory boxes are installed in MTRS100, MTRS100/50 and DTR1, reduce the area by 2600²mm.

Maxi and Sceptre trunking – continued

Material

PVC-U is flame retardant and self-extinguishing. It provides a 100% recyclable material with good sustainability.

Installation

Positioning

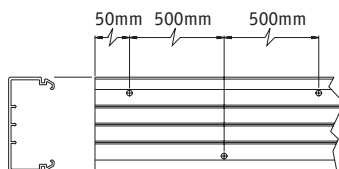
Feeder or distribution trunking.

Expansion/contraction

PVC-U expands and contracts at a uniform rate of approx 5.25mm in a 3 metre length for a temperature change of 25°C. Therefore, a 3mm gap between each length of trunking base is recommended. Fittings allow for thermal expansion of the covers.

Fitting

- Secure trunking base in one plane only every 500mm by drilling alternate 6mm holes.
- Use roundhead screws.
- Avoid over-tightening to permit thermal movement.
- The use of plastic caps over screw heads is recommended to protect installed cables.
- To provide cable segregation, dividing fillets are snapped on to internal ribs in base.
- To cut the trunking, use a fine-toothed panel or power jig-saw.
- External profile fittings overlap joints by up to 10mm to cover cutting inaccuracies.
- A variable angle jig-saw or chop saw is recommended for cutting 45° mitres.
- Maxi only:** trunking lengths are connected using internal couplers as follows:
 - Cement one end of the internal coupler to one base using adhesive solvent MSC. Leave other end of coupler free in adjoining base to facilitate thermal movement.

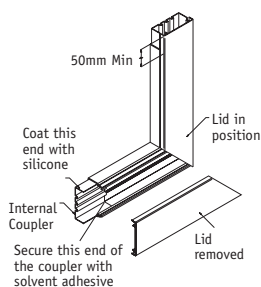


Single lengths

Where it is required to fit a single length of trunking (under 3 metres) between two inside walls and no accessory box is fitted, it is advisable to install a coupler in the centre of the run to facilitate the removal of the cover.

Joints and bends

- Clip-on fittings and 2-part moulded flat angle: base must be mitred at 45° to ensure total enclosure of trunking, including any internal fitted segregator.
- Fabricated fittings: a 3mm gap between trunking base and bend or flat angle is recommended.
- External moulded fittings overlap the joints by up to 10mm to cover cutting inaccuracies.
- Maxi fabricated fittings are supplied with internal couplers (see Fittings)
- Secure end caps using solvent adhesive MSC3.



Accessories

- Sceptre DTR1, Maxi MTRS100/50 and MTRS100:** accessory boxes and plates can be used.
- Remove appropriate knockout and clip box into base.
- Sceptre DTR2:** only accessory plates can be used.
- When boxes or plates are installed consecutively, fit a 25mm cover spacer (MTRS100LID25WH) between the accessories to conceal space between the boxes.

Covers

Covers are designed to limit unauthorised removal and to remain in position during normal conditions irrespective of impact and minor undulations of the mounting surface.

Covers – fitting

Covers are clipped into place from front. If accessory boxes are installed, the cover is butt-joined to the edge of the box. Cut edges of the cover are concealed by the accessory. For external fitting couplers, the following gaps should be left between the two cover ends to permit the fitting to clip to base:

DTR2	20mm
MTRS50	20mm
MTRS75	20mm
MTRS75/50	20mm
MTRS100/50	20mm
MTRS100	30mm

DTR1: DTR1 couplers are held in place by the two covers. To install, slide coupler up against first installed cover. Fit adjoining cover and slide up to coupler, ensuring the coupler moulding extends over the two covers.

Covers removal

To remove a cover, first detach a coupler or internal/external bend to gain access. The main cover can then be gently eased off the base.

Maxi and Sceptre trunking – continued

Maxi trunking Cable capacity chart	Total	Compartment 1	Compartment 2	Compartment 3
		With box	No box	With box
PVC power cable 1.5mm² stranded copper				
MTRS50	111	51	51	-
MTRS75	265	124	124	-
MTRS75/50	171	76	76	-
MTRS100/50	227	59	37	103
MTRS100	491	134	82	229
MTRS150	1136	248	266	533
PVC power cable 2.5mm² stranded copper				
MTRS50	75	34	34	-
MTRS75	178	83	83	-
MTRS75/50	115	51	51	-
MTRS100/50	153	40	25	69
MTRS100	330	90	55	154
MTRS150	764	167	179	359
PVC power cable 4.0mm² stranded copper				
MTRS50	54	25	25	-
MTRS75	128	60	60	-
MTRS75/50	82	37	37	-
MTRS100/50	110	29	18	50
MTRS100	237	64	40	110
MTRS150	547	119	128	257
Data cable: Ø5.5mm				
MTRS50	37	17	17	-
MTRS75	89	42	42	-
MTRS75/50	57	25	25	-
MTRS100/50	76	20	12	35
MTRS100	165	45	28	77
MTRS150	382	83	89	179
Data cable: Ø6.0mm				
MTRS50	31	14	14	-
MTRS75	75	35	35	-
MTRS75/50	48	21	21	-
MTRS100/50	64	17	10	29
MTRS100	139	38	23	65
MTRS150	321	70	75	151
Data cable: Ø6.5mm				
MTRS50	28	13	13	-
MTRS75	66	31	31	-
MTRS75/50	42	19	19	-
MTRS100/50	56	15	9	26
MTRS100	122	33	20	57
MTRS150	282	62	66	133
Data cable: Ø7.0mm				
MTRS50	23	11	11	-
MTRS75	55	26	26	-
MTRS75/50	35	16	16	-
MTRS100/50	47	12	8	21
MTRS100	102	28	17	48
MTRS150	236	51	55	111
Data cable: Ø8.4mm				
MTRS50	16	7	7	-
MTRS75	38	18	18	-
MTRS75/50	25	11	11	-
MTRS100/50	33	9	5	15
MTRS100	71	19	12	33
MTRS150	164	36	38	77

Cable capacities

- All calculations allow for a 45% space factor.

As there can be differences between data cable sizes, Marshall-Tufflex recommend that cable dimensions are confirmed with the manufacturing company.

Sceptre trunking Cable capacity chart	Total	Compartment 1	Compartment 2
		No box	No box
PVC power cable 1.5mm² stranded copper			
DTR1	178	46	113
DTR2	97	24	67
PVC power cable 2.5mm² stranded copper			
DTR1	120	31	76
DTR2	65	16	45
PVC power cable 4.0mm² stranded copper			
DTR1	86	22	54
DTR2	47	12	32
Data cable: Ø5.5mm			
DTR1	60	15	38
DTR2	33	8	23
Data cable: Ø6.0mm			
DTR1	50	13	32
DTR2	28	7	19
Data cable: Ø6.5mm			
DTR1	44	11	28
DTR2	24	6	17
Data cable: Ø7.0mm			
DTR1	37	10	23
DTR2	20	5	14
Data cable: Ø8.4mm			
DTR1	26	7	16
DTR2	14	4	10

Cornice trunking

Material

PVC-U is flame retardant and self-extinguishing. It provides a 100% recyclable material with good sustainability.

Installation

Positioning

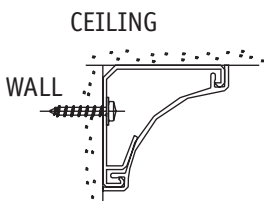
For surface wiring around ceilings.

Expansion/contraction

PVC-U expands and contracts at a uniform rate of approx 5.25mm in a 3 metre length for a temperature change of 25°C. Therefore, a 3mm gap between each length of trunking base is recommended. Fittings allow for thermal expansion of the covers.

Fitting

- Secure trunking base in one plane every 500mm by drilling 6mm holes in the wall side of the trunking and use round head screws and washers.
- Avoid over-tightening to permit thermal movement.
- The use of plastic caps over screw heads is recommended to protect installed cables.
- To cut the trunking, use a fine-toothed panel or power jig-saw.
- External profile fittings overlap joints by up to 10mm to cover cutting inaccuracies.
- A variable angle jig-saw or chop saw is recommended for cutting 45° mitres.



Covers – fitting

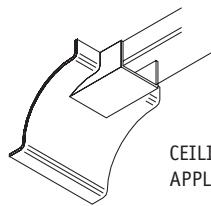
Covers are clipped into place from front. For external moulded fittings, a gap of 25mm is left between the two cover ends to permit the fitting to clip to base.

Covers – removal

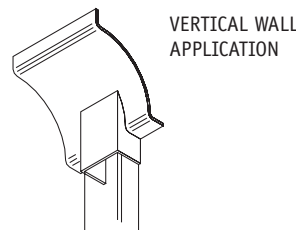
To remove a cover, first remove a fitting to gain access. Insert blade of terminal screwdriver between captive legs of cover and base and gently ease off.

Accessories

Accessories are serviced through a spur using a mini trunking adaptor and mini trunking across the ceiling to a pendant drop or down the wall to an appropriate accessory box.

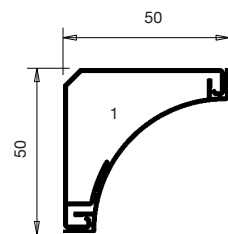


CEILING APPLICATION



VERTICAL WALL APPLICATION

Dimensions



1 = 837mm² total area
1 = 376mm² 45% space factor

Joints and bends

- Base joints should have a 3mm gap to allow for expansion.
- Base must be mitred 45° to ensure total closure of trunking.
- End caps with clips ensure security of trunking.

Covers

Covers are designed to limit unauthorised removal and to remain in position during normal conditions irrespective of impact and minor undulations of the mounting surface.

Cable capacities

- All calculations allow for a 45% space factor.

As there can be differences between data cable sizes, Marshall-Tufflex recommend that cable dimensions are confirmed with the manufacturing company.

Cable capacity chart	Cable factor	Compartment 1
PVC power cable 1.5mm ² stranded copper	8.0	47
PVC power cable 2.5mm ² stranded copper	11.9	31
PVC power cable 4.0mm ² stranded copper	16.6	22
Data cable: Ø5.5mm	23.8	15
Data cable: Ø6.0mm	28.3	13
Data cable: Ø6.5mm	33.2	11
Data cable: Ø7.0mm	38.5	9
Data cable: Ø8.4mm	55.4	6

Sovereign Plus trunking

Material

PVC-U is flame retardant and self-extinguishing. It provides a 100% recyclable material with good sustainability.

Installation

Positioning

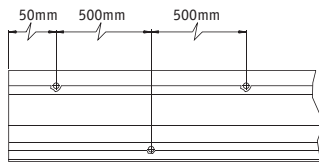
Suitable for skirting and architrave installation. When used as a skirting system, sufficient clearance should be allowed between the floor covering and the profile fittings that clip over the cover i.e. 5mm + floor covering is recommended.

Expansion/contraction

PVC-U expands and contracts at a uniform rate of approx 5.25mm in a 3 metre length for a temperature change of 25°C. Therefore, a 3mm gap between each length of trunking base is recommended. Fittings allow for thermal expansion of the covers.

Fitting

- Secure base every 500mm by drilling alternate 6mm in the two outer slots provided.
- Secure using No 8 round head screws and washers.
- Avoid over-tightening to permit thermal movement. Internal couplers on base units not required.
- To cut the trunking, use a fine-toothed panel or power jig-saw.
- External profile fittings overlap joints by up to 10mm to cover cutting inaccuracies.
- A variable angle jig-saw or chop saw is recommended for cutting 45° mitres.
- For segregation, use the cable retainers to retain cables in correct compartments.



Single lengths

Where it is required to fit a single length of trunking (under 3 metres) between two inside walls and no accessory box is fitted, it is advisable to install a coupler in the centre of the run to facilitate the removal of the cover.

Joints and bends

- Base joints should have a 3mm gap to allow for expansion.
- Mitre bases for internal bends, external bends and flat angles at 45° to ensure total enclosure of trunking.

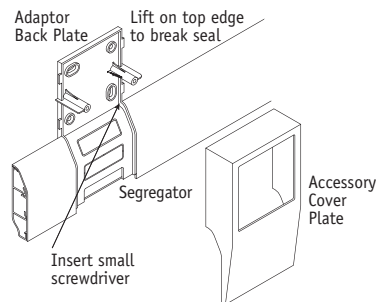
- External moulded fittings overlap the joints by up to 10mm to cover cutting inaccuracies.
- Trunking cover holds external moulded fittings in place when they are clipped on to base.

Bend radius control

Not available.

Accessory boxes

- Mounted on to trunking body with accessory external to the trunking.
- Remove required knockout in back segregator plate that aligns with trunking cable compartment.
- Clip to trunking base and secure to wall surface using 2 diagonally opposite fixing holes.
- Feed cables through knockout.
- After trunking cover has been fitted to base, clip front cover plate to back plate.
- Complete assembly is finally secured together when the wired accessory is screwed to accessory front plate.



Covers

Covers are designed to limit unauthorised removal and to remain in position during normal conditions irrespective of impact and minor undulations of the mounting surface.

Covers – fitting

Covers are clipped into place from front. If accessory boxes are installed, covers are butt-joined to the edge of the box assembly. Cut edges of the cover are concealed by the accessory. For fittings, a gap of 4mm is left between the two cover ends to permit the fitting to clip to base.

Covers – removal

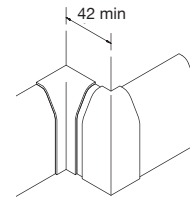
To remove a cover, isolate circuit and detach an accessory and front mounting component. Insert blade of screwdriver between captive legs of cover and gently peel off.

Screening

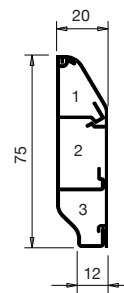
Not available.

Offset dimensions

The minimum set that can be accommodated in the same plane (from internal to external bend), is shown below:



Dimensions



Sovereign Plus skirting

- 1 = 238mm² total area
- 1 = 107mm² 45% space factor
- 2 = 416mm² total area
- 2 = 187mm² 45% space factor
- 3 = 261mm² total area
- 3 = 117mm² 45% space factor

Cable capacities

- All calculations allow for a 45% space factor.

As there can be differences between data cable sizes, Marshall-Tufflex recommend that cable dimensions are confirmed with the manufacturing company.

Cable capacity chart	Compartment 1	Compartment 2	Compartment 3
	No box	No box	No box

PVC power cable 1.5mm² stranded copper

Sovereign Plus skirting	13	23	15
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PVC power cable 2.5mm² stranded copper

Sovereign Plus skirting	9	16	10
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PVC power cable 4.0mm² stranded copper

Sovereign Plus skirting	6	11	7
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Data cable: Ø5.5mm

Sovereign Plus skirting	5	8	5
-------------------------	---	---	---

Data cable: Ø6.0mm

Sovereign Plus skirting	4	7	4
-------------------------	---	---	---

Data cable: Ø6.5mm

Sovereign Plus skirting	3	6	4
-------------------------	---	---	---

Data cable: Ø7.0mm

Sovereign Plus skirting	3	5	3
-------------------------	---	---	---

Data cable: Ø8.4mm

Sovereign Plus skirting	2	3	2
-------------------------	---	---	---

Bench trunking

Material

PVC-U is flame retardant and self-extinguishing. It provides a 100% recyclable material with good sustainability.

Installation

Positioning

If used as a skirting system, a clearance of 5mm is recommended above the floor covering to allow the profile fittings to clip over the cover.

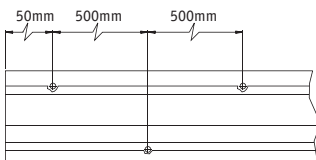
Bench and desk installations: a single run can be fitted to rear of furniture or, if run down centre line, two units can be joined back to back presenting accessories on both sides.

Expansion/contraction

PVC-U expands and contracts at a uniform rate of approx 5.25mm in a 3 metre length for a temperature change of 25°C. Therefore, a 3mm gap between each length of trunking base is recommended. Fittings allow for thermal expansion of the covers.

Fitting

- Secure trunking base in one plane only every 500mm by drilling alternative 6mm holes either side of divider nib.
- Avoid over-tightening to permit thermal movement.
- The use of plastic caps over screw heads is recommended to protect installed cables.
- To provide cable segregation, dividing fillets are snapped on to internal nibs in base.
- To cut the trunking, use a fine-toothed panel or power jig-saw.
- External profile fittings overlap joints by up to 10mm to cover cutting inaccuracies.
- Accepts Marshall-Tufflex and standard UK wiring and data accessories.



Single lengths

Where it is required to fit a single length of trunking (under 3 metres) between two inside walls and no accessory box is fitted, it is advisable to install a coupler in the centre of the run to facilitate the removal of the cover.

Joints and bends

- Base joints should have a 3mm gap to allow for expansion.
- Internal and external bends are prefabricated.
- External moulded fittings overlap the joints to cover cutting inaccuracies.
- Couplers are required to align and join bend assemblies to trunking.
- Secure end caps using solvent adhesive MSC3.

Accessory boxes

- Remove the appropriate knock out that aligns with segregated compartment containing supply cable and clip the box into the trunking base.
- When boxes are installed consecutively, a 14mm wide spacer (ES1) is required to cover the space between the boxes.
- Part M box assemblies with contrasting coloured faceplates are available to meet the requirements of DDA regulations for Visual Impairment.

Covers

Covers are designed to limit unauthorised removal and to remain in position during normal conditions irrespective of impact and minor undulations of the mounting surface.

Covers – fitting

Covers are clipped into place from front. If accessory boxes are installed, the cover is butt-joined to the edge of the box. Cut edges of the cover are concealed by the accessory.

For couplers, a gap of 25mm is left between the two cover ends to permit the fitting to clip to base.

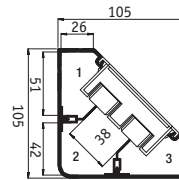
Covers – removal

To remove a cover, first detach a coupler to gain access. The cover can then be gently eased off the base.

Antimicrobial

For technical details of antimicrobial Bio Bench trunking, please refer to Laboratory and Healthcare section.

Dimensions



Bench trunking – with box

- 1 = 1285mm² total area
- 1 = 578mm² 45% space factor
- 2 = 2128mm² total area
- 2 = 957mm² 45% space factor
- 3 = 1285mm² total area
- 3 = 578mm² 45% space factor

Bench trunking – no box

- 1 = 1782mm² total area
- 1 = 802mm² 45% space factor
- 2 = 3282mm² total area
- 2 = 1477mm² 45% space factor
- 3 = 1782mm² total area
- 3 = 802mm² 45% space factor

Cable capacities

- All calculations allow for a 45% space factor.

As there can be differences between data cable sizes, Marshall-Tufflex recommend that cable dimensions are confirmed with the manufacturing company.

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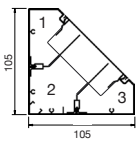
Product Information

Cable capacity chart	Compartment 1		Compartment 2		Compartment 3	
	No box	With box	No box	With box	No box	With box
PVC power cable 1.5mm ² stranded copper	100	72	185	120	100	72
PVC power cable 2.5mm ² stranded copper	67	49	124	80	67	49
PVC power cable 4.0mm ² stranded copper	48	35	89	58	48	35
Data cable: Ø5.5mm	34	24	62	40	34	24
Data cable: Ø6.0mm	28	20	52	34	28	20
*Data cable: Ø6.5mm	25	18	46	30	25	18
*Data cable: Ø7.0mm	21	15	38	25	21	15
*Data cable: Ø8.4mm	14	10	27	17	14	10

*Only for straight runs. If bends are required please contact the Technical Team on +44 (0)1424 856688.

Aluminium trunking capacity guide

Trunking sizes up to 150mm



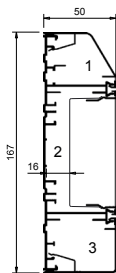
Bench trunking – no box

- 1 & 3 = 1842mm² total area
- 1 & 3 = 829mm² 45% space factor
- 2 = 3342mm² total area
- 2 = 1504mm² 45% space factor

With box in comp 2

- 2 = 2188mm² total area
- 2 = 984mm² 45% space factor

Trunking sizes from 150mm to 200mm



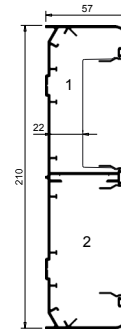
Sterling Profile 3002 – no box

- 1 = 1060mm² total area
- 1 = 477mm² 45% space factor
- 2 = 3802mm² total area
- 2 = 1711mm² 45% space factor
- 3 = 1400mm² total area
- 3 = 630mm² 45% space factor

With box in comp 2

- 2 = 1535mm² total area
- 2 = 691mm² 45% space factor

Trunking sizes over 200mm

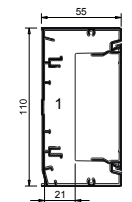


Twin Plus – no box

- 1 & 2 = 5000mm² total area
- 1 & 2 = 2250mm² 45% space factor

With box in comps 1 or 2

- 1 & 2 = 2733mm² total area
- 1 & 2 = 1230mm² 45% space factor

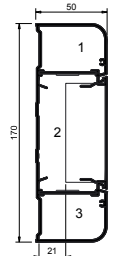


Elegance 110 aluminium – no box

- 1 = 5254mm² total area
- 1 = 2364mm² 45% space factor

With box in comp 1

- 1 = 2987mm² total area
- 1 = 1344mm² 45% space factor

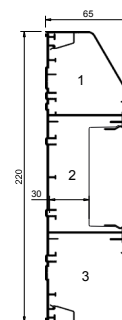


Elegance 170 aluminium – no box

- 1 = 1764mm² total area
- 1 = 794mm² 45% space factor
- 2 = 4508mm² Total Area
- 2 = 2029mm² 45% space factor

With box in comp 2

- 2 = 1748mm² total area
- 2 = 787mm² 45% space factor

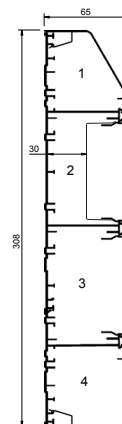


XL 302 – no box

- 1 = 2680mm² total area
- 1 = 1206mm² 45% space factor
- 2 = 4639mm² total area
- 2 = 2088mm² 45% space factor
- 3 = 3490mm² total area
- 3 = 1570mm² 45% space factor

With box in comp 2

- 2 = 1123mm² total area
- 2 = 505mm² 45% space factor



XL 312 – no box

- 1 = 2824mm² total area
- 1 = 1271mm² 45% space factor
- 2 = 4771mm² total area
- 2 = 2147mm² 45% space factor
- 3 = 4732mm² total area
- 3 = 2130mm² 45% space factor
- 4 = 3531mm² total area
- 4 = 1589mm² 45% space factor

With box in comps 2 or 3

- 2 = 2511mm² total area
- 2 = 1130mm² 45% space factor
- 3 = 2466mm² total area
- 3 = 1109mm² 45% space factor

Conductor type	Size	Cable factor
Stranded PVC power	1.5mm ²	8.0
Stranded PVC power	2.5mm ²	11.9
Stranded PVC power	4.0mm ²	16.6
*Data cable	Ø5.5mm	23.8
*Data cable	Ø6.0mm	28.3
*Data cable	Ø6.5mm	33.2
*Data cable	Ø7.0mm	38.5
*Data cable	Ø8.4mm	55.4

To determine cable capacity, select the size of the cable required and its corresponding cable factor from the table. Divide the compartment area figure (with or without 45% space factor) with the cable factor figure to achieve cable capacity.

Calculations

Please note that all the above calculations are based on a box depth of 30mm

For Data cable information, please see page 246

Bench trunking aluminium

Material

Aluminium trunking is manufactured from high precision extruded aluminium with a powder coat finish.

White RAL 9016

Silver Grey RAL 9006

Accessory boxes are supplied in PVC-U or polycarbonate both of which are 100% recyclable.

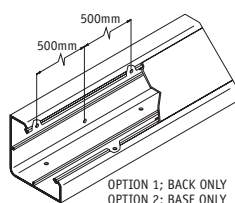
Installation

Positioning

Bench and desk installations: a single run can be fitted to rear of furniture or, if run down centre line, two units can be joined back to back presenting accessories on both sides.

Fitting

- Secure trunking base in one plane only every 500mm by drilling alternative Ø6mm holes either side of divider nib.
- Secure using No 8 round head screws and washers. Avoid over-tightening to permit thermal movement.
- The use of plastic caps over screw heads is recommended to protect installed cables.
- To cut the trunking, use a fine tooth blade (32/36tpi) or, preferably, a circular saw with a 350mm fine tungsten blade (90/108tpi). This will produce an edge requiring minimal de-burring.
- Consecutive lengths of base are aligned and butt jointed together.



Earthing

- Base, covers and metallic fittings to be cleaned of protective and powder coatings and earth bonded.
- Incoming earth connection is made using LTB1 bonding assembly installed in the earth channel of the base.
- Bonding base to base: in final ring or radial 32Amp circuits, bonding strap LBS1 can be used. Bonding cover to base use LBS2

Joints and bends

- Base joints should be butt jointed together.
- Internal and external bends are prefabricated in aluminium, aligned and butt jointed together so cutting of base and covers has to be very accurate to produce a good finish.

Bend radius control

Contact the Technical Team on +44 (0)1424 856688

Accessory boxes

- Remove the appropriate box knockout that align with segregated compartment containing supply cable and clip the box into the trunking base.
- When boxes are installed consecutively, a 14mm wide spacer (ES1) is required to cover the space between the boxes.
- Part M box assemblies with contrasting coloured faceplates are available to meet the requirements of DDA regulations for Visual Impairment.

Covers

Covers are designed to limit unauthorised removal and to remain in position during normal conditions irrespective of impact and minor undulations of the mounting surface.

Covers – fitting

Covers are clipped into place from front. If accessory boxes are installed, the LTL1 cover is butt-jointed to the edge of the box (ESSB1/2 only). Cut edges of the cover are concealed by the accessory. Adjoining covers are butt-jointed.

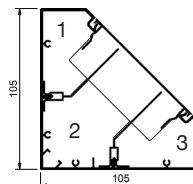
Covers – removal

To remove a cover, first detach an accessory to gain access. The main cover can then be gently eased off the base.

Screening

Aluminium containment protects internal circuits from external electromagnetic interference. For internal segregation and screening, use a screened dividing fillet.

Dimensions



Bench trunking – with box

- 1 = 1345mm² total area
- 1 = 605mm² 45% space factor
- 2 = 2188mm² total area
- 2 = 984mm² 45% space factor
- 3 = 1345mm² total area
- 3 = 605mm² 45% space factor

Bench trunking – No box

- 1 = 1842mm² total area
- 1 = 828mm² 45% space factor
- 2 = 3342mm² total area
- 2 = 1504mm² 45% space factor
- 3 = 1842mm² total area
- 3 = 828mm² 45% space factor

Cable capacities

- All calculations allow for a 45% space factor.

As there can be differences between data cable sizes, Marshall-Tufflex recommend that cable dimensions are confirmed with the manufacturing company.

Cable capacity chart	Compartment 1		Compartment 2		Compartment 3	
	No box	With box	No box	With box	No box	With box
PVC power cable 1.5mm ² stranded copper	104	76	188	123	104	76
PVC power cable 2.5mm ² stranded copper	70	51	126	83	70	51
PVC power cable 4.0mm ² stranded copper	50	36	91	59	50	36
Data cable: Ø5.5mm	35	25	63	41	35	25
Data cable: Ø6.0mm	29	21	53	35	29	21
Data cable: Ø6.5mm	26	19	47	31	26	19
Data cable: Ø7.0mm	22	16	39	26	22	16
Data cable: Ø8.4mm	15	11	27	18	15	11

Only for straight runs. If bends are required please contact the Technical Team on +44 (0)1424 856688.

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Product Information

Elegance Aluminium

Material

Aluminium trunking is manufactured from high precision extruded aluminium with a powder coat finish.

White RAL 9016

Silver Grey RAL 9006

Accessory boxes are supplied in PVC-U or polycarbonate both of which are 100% recyclable.

Installation

Positioning

Elegance can be installed at dado level or as a bench-mounted installation.

Fitting

- Secure trunking base every 750mm.
- Secure using No.8 round head screws and washers using the grooves in the outer (110) or inner (170) compartments of the base to facilitate drilling Ø6mm holes.
- Avoid over-tightening to permit thermal movement.
- The use of plastic caps over screw heads is recommended to protect installed cables.
- To cut the trunking, use a fine tooth blade (32/36tpi) or, preferably, a circular saw with a 350mm diameter fine tungsten blade (90/108tpi). This will produce an edge requiring minimal de-burring.
- Consecutive lengths of base are aligned and butt jointed together.

Earthing

- Base, covers and metallic fittings to be cleaned of protective powder coatings for earth bonding.
- Elegance 110: Incoming earth connection is made using LBT1 bonding assembly installed in the earth channel of the base.
- Elegance 170: Incoming earth connection is made using LBT3 bonding kit, with edge clip attached to the earth rib in the base and faston connector crimped to incoming earth cable.
- Bonding base to base: in final ring or radial 32Amp circuits, bonding strap LBS1 can be used.
- Bonding end caps to base: use bonding strap LBS5.
- Bonding base to cover, use LBS2.

Joints and bends

- Straight lengths should be butt jointed together with the aid of LDP1 coupler pin if required.
- Internal bends, external bends, flat angles and tees are prefabricated in aluminium and butt jointed together so cutting of base and covers has to be very accurate to produce a good finish.

Accessory boxes

- Remove appropriate knockout and clip box into trunking base.
- For boxes in same compartment as supply, remove appropriate knockout and clip box into trunking base.
- When boxes are installed consecutively, a 14mm wide length of cover is required to cover the space between the boxes.
- Part M box assemblies with contrasting coloured faceplates are available to meet the requirements of DDA regulations for Visual Impairment.

Covers

Covers are designed to limit unauthorised removal and to remain in position during normal conditions irrespective of impact and minor undulations of the mounting surface.

Covers – fitting

Covers are clipped into place from front. If accessory boxes are installed, the LTL1/LP1010 cover is butt-joined to the edge of the box (ESSB1/2 only). Cut edges of the cover are concealed by the accessory.

Covers – removal

To remove a cover, first detach an accessory to gain access. The main cover can then be gently eased off the base.

Screening

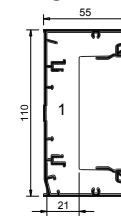
Aluminium containment will protect all internal circuits from external electromagnetic interference. For internal segregation metallic dividing fillets are available.

Offset dimensions

The minimum set that can be accommodated in the same plane (from internal to external bend), is 145mm.

Dimensions

Elegance 110

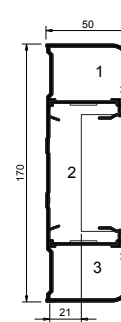


1 = 5254mm² total area
1 = 2364mm² 45% space factor

With box in comp 1

1 = 2987mm² total area
1 = 1344mm² 45% space factor

Elegance 170



A = 1764mm² total area
A = 794mm² 45% space factor

Without Accessory

B = 4508mm² total area
B = 2029mm² 45% space factor

With Accessory

B = 1748mm² total area
B = 787mm² 45% space factor

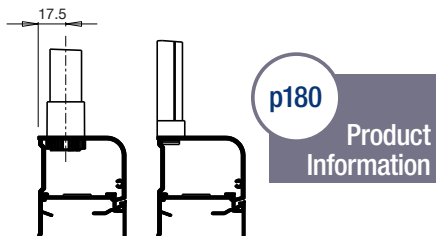
Cable capacities

- All calculations allow for a 45% space factor.

As there can be differences between data cable sizes, Marshall-Tufflex recommend that cable dimensions are confirmed with the manufacturing company.

Fixing to Conduit and Mini Trunking

Elegance 170 can be used in conjunction with Conduit and Mini trunking systems as detailed in the diagrams below:



Cable capacity chart Total cables = Volume/cable factor	Elegance 110		Elegance 170		
	Compartment 1		Compartment 1	Compartment 2	
	No box	With box	No box	With box	With box
PVC power cable 1.5mm ² stranded copper	296	168	99	254	98
PVC power cable 2.5mm ² stranded copper	199	113	67	170	66
PVC power cable 4.0mm ² stranded copper	142	81	48	122	47
Data cable: Ø5.5mm	99	56	33	85	33
Data cable: Ø6.0mm	84	47	28	72	28
Data cable: Ø6.5mm	73	42	25	63	24
Data cable: Ø7.0mm	61	35	21	53	20
Data cable: Ø8.4mm	43	24	14	37	14

Sterling Profile aluminium

Material

Aluminium trunking is manufactured from high precision extruded aluminium with a powder coat finish.

White RAL 9016

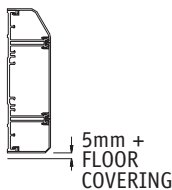
Silver Grey RAL 9006

Accessory boxes are supplied in PVC-U or polycarbonate both of which are 100% recyclable.

Installation

Positioning

Suitable for dado and skirting installation. When used as a skirting system, sufficient clearance should be allowed between the floor covering and the profile fittings that clip over the cover i.e. 5mm + floor covering is recommended.

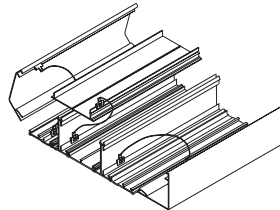


Fitting

- Secure trunking base every 750mm.
- Secure using No 8 round head screws and washers using the grooves in the outer compartments of the base to facilitate drilling Ø6mm holes.
- Avoid over-tightening to permit thermal movement.
- The use of plastic caps over screw heads is recommended to protect installed cables.
- To cut the trunking, use a fine tooth blade (32/36tpi) or, preferably, a circular saw with a 350mm diameter fine tungsten blade (90/108tpi). This will produce an edge requiring minimal de-burring.
- Consecutive lengths of base are aligned and butt jointed together.

Earthing

- Clean protective coating from base, covers and metallic fittings and then earth bond.
- Incoming earth connection is made using LTB1 bonding assembly installed in the earth channel of the base.
- Bonding base to base: in final ring or radial 32Amp circuits, bonding strap LBS1 can be used.
- Bonding covers and end caps to base: use bonding strap LBS2.



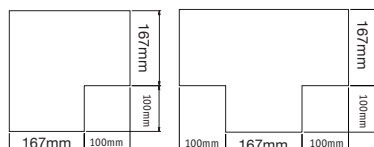
Single lengths

Where it is required to fit a single length of trunking (under 3 metres) between two inside walls and no accessory box is fitted, it is advisable to install a coupler in the centre of the run to facilitate the removal of the cover.

Joints and bends

- Moulded from colour matching polycarbonate.
- Internal and external bends must be mitred at 45° to ensure total enclosure and segregation of trunking compartments, including any internal fitted segregator.
- Straight lengths should be butt jointed together.
- Flat angles and tees are prefabricated in aluminium.
- Cutting of base and covers is not critical as external moulded clip-on fittings cover the joint and overlap covers by 10mm each side to cover minor inaccuracies.

Template dimensions for Flat angle and Tee

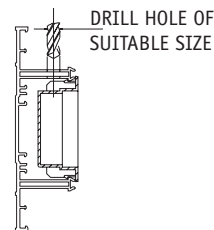


Bend radius control

Contact the Technical Team on +44 (0)1424 856688

Accessory boxes

- For mounting an accessory box in the alternative compartment to supply, drill the main web adjacent to the box position.
- Remove the appropriate knock out and clip the box into the trunking base.
- For boxes in the same compartment as the supply, remove the appropriate box knock-outs and clip the box into trunking base.
- When boxes are installed consecutively, a 14mm wide spacer (ES1) is required to cover the space between the boxes.
- Part M box assemblies with contrasting coloured faceplates are available to meet the requirements of DDA regulations for Visual Impairment.



Covers

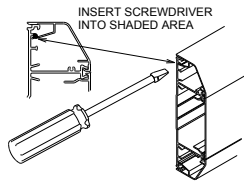
Covers are designed to limit unauthorised removal and to remain in position during normal conditions irrespective of impact and minor undulations of the mounting surface.

Covers – fitting

Covers are clipped into place from front. If accessory boxes are installed, the LTL1 cover is butt-joined to the edge of the box. Cut edges of the cover are subsequently concealed by the accessory. For fittings, a gap of 25mm is left between the two cover ends to permit the fitting to clip to base.

Covers – removal

To remove a cover, first detach a coupler, internal or external bend component to gain access. The main cover can then be gently eased off the base. To remove the outer cover, firstly ease from the base by inserting the blade of a terminal screwdriver between the captive legs of the cover and the base and then ease away from the base.

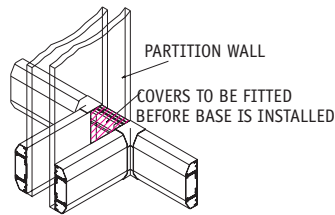


Screening

Aluminium containment will protect all internal circuits from external electromagnetic interference. For internal segregation and screening, use a screened dividing fillet.

Method of continuation through a partition wall

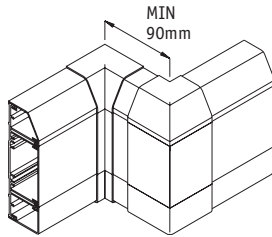
Continue the main lateral run of base through the partition wall. Fit short lengths of cover where the trunking passes through the partition. The partition wall trunking is then butted up to the main run and the joint covered by an internal bend fitting.



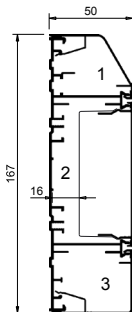
Sterling Profile aluminium – continued

Offset dimensions

The minimum set that can be accommodated in the same plane (from internal to external bend), is shown below.



Dimensions



Sterling Profile 3002 - no box

- 1 = 1060mm² total area
- 1 = 477mm² 45% space factor
- 2 = 3802mm² total area
- 2 = 1711mm² 45% space factor
- 3 = 1400mm² total area
- 3 = 630mm² 45% space factor

Sterling Profile 3002 - with box

- 2 = 1535mm² total area
- 2 = 691mm² 45% space factor

Cable capacities

- All calculations allow for a 45% space factor.

As there can be differences between data cable sizes, Marshall-Tufflex recommend that cable dimensions are confirmed with the manufacturing company.

Cable capacity chart	Compartment 1		Compartment 2		Compartment 3	
	No box	With box	No box	With box	No box	With box

PVC power cable 1.5mm² stranded copper

Sterling Profile 1	60	–	214	86	65	–
Sterling Profile 2	60	–	214	86	79	–
Sterling Profile 3	73	–	214	86	79	–

PVC power cable 2.5mm² stranded copper

Sterling Profile 1	40	–	144	58	44	–
Sterling Profile 2	40	–	144	58	53	–
Sterling Profile 3	49	–	144	58	53	–

PVC power cable 4.0mm² stranded copper

Sterling Profile 1	29	–	103	42	31	–
Sterling Profile 2	29	–	103	42	38	–
Sterling Profile 3	35	–	103	42	38	–

Data cable: Ø5.5mm

Sterling Profile 1	20	–	72	29	22	–
Sterling Profile 2	20	–	72	29	26	–
Sterling Profile 3	25	–	72	29	26	–

Data cable: Ø6.0mm

Sterling Profile 1	17	–	60	24	18	–
Sterling Profile 2	17	–	60	24	22	–
Sterling Profile 3	21	–	60	24	22	–

Data cable: Ø6.5mm

Sterling Profile 1	15	–	53	21	16	–
Sterling Profile 2	15	–	53	21	20	–
Sterling Profile 3	18	–	53	21	20	–

Data cable: Ø7.0mm

Sterling Profile 1	12	–	44	18	14	–
Sterling Profile 2	12	–	44	18	16	–
Sterling Profile 3	15	–	44	18	16	–

Data cable: Ø8.4mm

Sterling Profile 1	9	–	31	12	9	–
Sterling Profile 2	9	–	31	12	11	–
Sterling Profile 3	11	–	31	12	11	–

Twin Plus aluminium

Material

Aluminium trunking is manufactured from high precision extruded aluminium with a powder coat finish.
White RAL 9016
Silver Grey RAL 9006

Accessory boxes are supplied in PVC-U or polycarbonate both of which are 100% recyclable.

Installation

Positioning

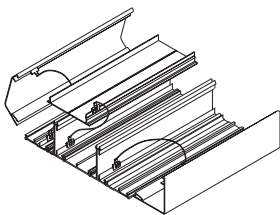
Suitable for dado and skirting installation. When used as a skirting system, sufficient clearance should be allowed between the floor covering and the profile fittings that clip over the cover i.e. 5mm + floor covering is recommended.

Fitting

- Secure trunking base every 750mm.
- Secure using No 8 round head screws and washers using the grooves in the outer compartments of the base to facilitate drilling Ø6mm holes.
- Avoid over-tightening to permit thermal movement.
- The use of plastic caps over screw heads is recommended to protect installed cables.
- To cut the trunking, use a fine tooth blade (32/36tpi) or, preferably, a circular saw with a 350mm fine tungsten blade (90/108tpi). This will produce an edge requiring minimal de-burring.
- Consecutive lengths of base are aligned and butt jointed together.

Earthing

- Clean protective coating from base, covers and metallic fittings and then earth bond.
- Incoming earth connection is made using LTB1 bonding assembly installed in the earth channel of the base.
- Bonding base to base: in final ring or radial 32Amp circuits, bonding strap LBS1 can be used.
- Bonding covers and end caps to base: use bonding strap LBS2.

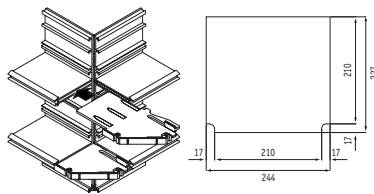


Single lengths

Where it is required to fit a single length of trunking (under 3 metres) between two inside walls and no accessory box is fitted, it is advisable to install a coupler in the centre of the run to facilitate the removal of the cover.

Joints and bends

- Moulded from colour-matching polycarbonate. External bends: base should be cut square at the corner and the internal seggregator inserted into the web of each base.
- Internal bends: base must be mitred 45° to ensure total enclosure of trunking, including any internal fitted seggregator.
- External moulded fittings overlap the joints by up to 10mm to cover cutting inaccuracies.



Bend radius control

The bend radius control fittings for Twin Plus provide a bend radius of 50mm

Accessory boxes

- If the accessory box is to be mounted in the alternative compartment to the supply, drill the main web adjacent to the box position.
- Remove the appropriate knock out and clip the box into the trunking base.
- For boxes in the same compartment as the supply, remove the appropriate box knock-outs and clip the box into trunking base.
- When boxes are installed consecutively, a 14mm wide spacer (ES1) is required to cover the space between the boxes.
- Part M box assemblies with contrasting coloured faceplates are available to meet the requirements of DDA regulations for Visual Impairment.

Covers

The covers have been designed to remain in position irrespective of impact during normal conditions, minor undulations of the mounting surface, and to limit unauthorised removal.

Covers – fitting

Covers are clipped into place from the front. If accessory boxes are installed, the covers are butt-jointed to the edge of the

box. For the fitting of couplers to conceal the cover joint, a gap of 25mm is left between the two cover ends.

Covers – removal

To remove a cover, first detach a coupler, internal or external bend component to gain access. Both covers can then be gently eased off the base.

Screening

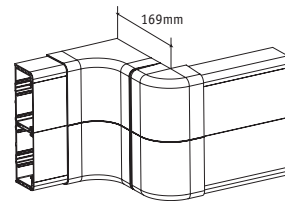
Aluminium containment will protect all internal circuits from external electromagnetic interference. For internal segregation and screening, use a screened dividing fillet.

Method of continuation through a partition wall

Continue the main lateral run of base through the partition wall with short lengths of cover fitted where the trunking passes through the partition. The partition wall trunking is then butted up to the main run and the joint covered by an internal bend.

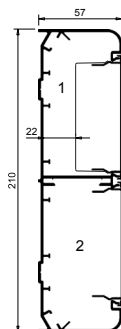
Offset dimensions

The minimum set that can be accommodated in the same plane (from internal to external bend), is shown below.



Twin Plus aluminium – continued

Dimensions



Twin Plus trunking – with accessory box

- 1 = 2733mm² total area
- 1 = 1230mm² 45% space factor
- 2 = 2833mm² total area
- 2 = 1275mm² 45% space factor

Twin Plus trunking – no box

- 1 = 5000mm² total area
- 1 = 2250mm² 45% space factor
- 2 = 5100mm² total area
- 2 = 2295mm² 45% space factor

Cable capacities

- All calculations allow for a 45% space factor.

As there can be differences between data cable sizes, Marshall-Tufflex recommend that cable dimensions are confirmed with the manufacturing company.

Cable capacity chart	Compartment 1		Compartment 2	
	No box	With box	No box	With box
PVC power cable 1.5mm ² stranded copper	281	154	287	159
PVC power cable 2.5mm ² stranded copper	189	103	193	107
PVC power cable 4.0mm ² stranded copper	136	74	138	77
Data cable: Ø5.5mm	95	52	96	54
Data cable: Ø6.0mm	80	43	81	45
Data cable: Ø6.5mm	70	38	71	40
Data cable: Ø7.0mm	58	32	60	33
Data cable: Ø8.4mm	41	22	41	23

XL trunking aluminium

Material

Aluminium trunking is manufactured from high precision extruded aluminium with a powder coat finish.

Accessory boxes are supplied in PVC-U or polycarbonate both of which are 100% recyclable.

Installation

Positioning

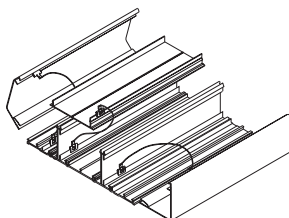
For dado and skirting installation. When used as a skirting system, sufficient clearance should be allowed between the floor covering and the profile fittings that clip over the cover i.e. 5mm + floor covering is recommended.

Fitting

- Secure trunking base every 750mm.
- Secure using No 8 round head screws and washers using the grooves in the outer compartments of the base to facilitate drilling 6mm holes.
- Avoid over-tightening to permit thermal movement.
- The use of plastic caps over screw heads is recommended to protect installed cables.
- To cut the trunking, use a fine tooth blade (32/36tpi) or, preferably, a circular saw with a 350mm diameter fine tungsten blade (90/108tpi). This will produce an edge requiring minimal de-burring.
- Consecutive lengths of base are aligned and butt jointed together.

Earthing

- Clean protective coating from base, covers and metallic fittings and then earth bond.
- Incoming earth connection is made using LTB1 bonding assembly installed in the earth channel of the base.
- Bonding base to base: in final ring or radial 32Amp circuits, bonding strap LBS1 can be used.
- Bonding covers and end caps to base: use bonding strap LBS2.

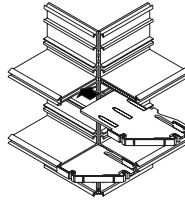


Single lengths

Where it is required to fit a single length of trunking (under 3 metres) between two inside walls and no accessory box is fitted, it is advisable to install a coupler in the centre of the run to facilitate the removal of the cover.

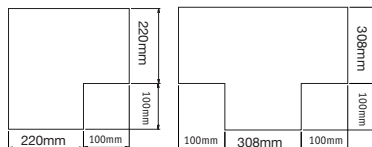
Joints and bends

- Moulded from colour-matching polycarbonate.
- External bends: base should be cut square at the corner and the internal segregator inserted into the web of each base.



- Internal bends: base must be mitred 45° to ensure total enclosure of trunking, including any internal fitted segregator.
- Flat angles, tees and crossovers are prefabricated aluminium.
- External moulded fittings overlap the joints by up to 10mm to cover cutting inaccuracies.

Template dimensions for Flat angle and Tee

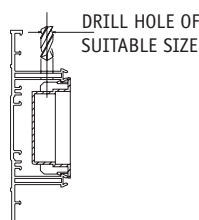


Bend radius control

For data bend radius control fittings for XL, please contact the Technical Team on +44 (0)1424 856688.

Accessory boxes

- If accessory box in main compartment is supplied from an outer compartment, drill the main web adjacent to the box position.
- Remove the appropriate knock out and clip the box into the trunking base.
- For boxes in the same compartment as the supply, remove the appropriate box knock-outs and clip the box into trunking base.
- When boxes are installed consecutively, a 14mm minimum space is required to cover the space between the boxes (use PVC-U ES1WH or use section of aluminium cover)
- Part M box assemblies with contrasting coloured faceplates are available to meet the requirements of DDA regulations for Visual Impairment.



Covers

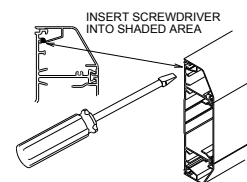
The covers have been designed to remain in position irrespective of impact during normal conditions, minor undulations of the mounting surface, and to limit unauthorised removal.

Covers – fitting

Covers are clipped into place from the front. If accessory boxes are installed, the LTL1 covers are butt-jointed to the edge of the box (ESSB1 and 2 only) and the cut edges of lids are subsequently concealed by the accessory. For fittings, a gap of 30mm is left between the two cover ends to permit the fitting to clip to the base.

Covers – removal

To remove a cover, first detach a coupler, internal or external bend component to gain access. The main cover can then be gently eased off the base. To remove the outer cover, firstly ease from the base by inserting the blade of a terminal screwdriver between the captive legs of the cover and the base and then peel off.

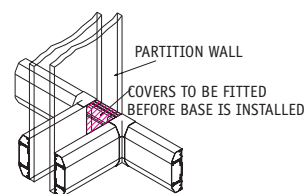


Screening

Aluminium containment will protect all internal circuits from external electromagnetic interference. For internal segregation and screening, use a screened dividing fillet.

Method of continuation through a partition wall

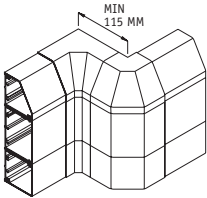
Continue the main lateral run of base through the partition wall with short lengths of cover fitted where the trunking passes through the partition. The partition wall trunking is then butted up to the main run and the joint covered by an Internal bend. (as shown below)



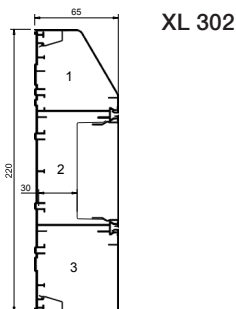
XL trunking aluminium – continued

Offset dimensions

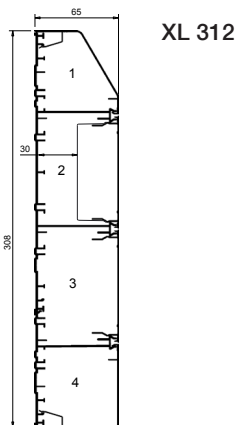
The minimum set that can be accommodated in the same plane (from internal to external bend), is shown below.



Dimensions



XL 302



XL 312

XL 302 – no box

- 1 = 2680mm² total area
- 1 = 1206mm² 45% space factor
- 2 = 4639mm² total area
- 2 = 2087mm² 45% space factor
- 3 = 3490mm² total area
- 3 = 1570mm² 45% space factor

XL 302 – with box

- 2 = 1123mm² total area
- 2 = 505mm² 45% space factor

XL 312 – no box

- 1 = 2680mm² total area
- 1 = 1206mm² 45% space factor
- 2 = 4639mm² total area
- 2 = 2087mm² 45% space factor
- 3 = 4570mm² total area
- 3 = 2056mm² 45% space factor
- 4 = 3490mm² total area
- 4 = 1570mm² 45% space factor

XL 312 – with box

- 2 = 2323mm² total area
- 2 = 1045mm² 45% space factor
- 3 = 2254mm² total area
- 3 = 1014mm² 45% space factor

Cable capacities

- All calculations allow for a 45% space factor.

As there can be differences between data cable sizes, Marshall-Tufflex recommend that cable dimensions are confirmed with the manufacturing company.

Cable capacity chart	Compartment 1		Compartment 2		Compartment 3		Compartment 4
	No box	With box	No box	With box	No box	With box	No box
PVC power cable 1.5mm² stranded copper							
XL 301	151	–	261	63	156	–	–
XL 302	151	–	261	63	196	–	–
XL 303	191	–	261	63	196	–	–
XL 311	151	–	261	131	257	127	156
XL 312	151	–	261	131	257	127	196
XL 313	191	–	261	131	257	127	196
PVC power cable 2.5mm² stranded copper							
XL 301	101	–	175	42	105	–	–
XL 302	101	–	175	42	132	–	–
XL 303	128	–	175	42	132	–	–
XL 311	101	–	175	88	173	85	105
XL 312	101	–	175	88	173	85	132
XL 313	128	–	175	88	173	85	132
PVC power cable 4.0mm² stranded copper							
XL 301	73	–	126	30	75	–	–
XL 302	73	–	126	30	95	–	–
XL 303	92	–	126	30	95	–	–
XL 331	73	–	126	63	124	61	75
XL 312	73	–	126	63	124	61	95
XL 313	92	–	126	63	124	61	95
Data cable: Ø5.5mm							
XL 301	51	–	88	21	53	–	–
XL 302	51	–	88	21	66	–	–
XL 303	64	–	88	21	66	–	–
XL 311	51	–	88	44	86	43	53
XL 312	51	–	88	44	86	43	66
XL 313	64	–	88	44	86	43	66
Data cable: Ø6.0mm							
XL 301	43	–	74	18	44	–	–
XL 302	43	–	74	18	55	–	–
XL 303	54	–	74	18	55	–	–
XL 331	43	–	74	37	73	36	44
XL 312	43	–	74	37	73	36	55
XL 313	54	–	74	37	73	36	55
Data cable: Ø6.5mm							
XL 301	37	–	65	16	39	–	–
XL 302	37	–	65	16	49	–	–
XL 303	47	–	65	16	49	–	–
XL 311	37	–	65	32	64	32	39
XL 312	37	–	65	32	64	32	49
XL 313	47	–	65	32	64	32	49
Data cable: Ø7.0mm							
XL 301	31	–	54	13	32	–	–
XL 302	31	–	54	13	41	–	–
XL 303	40	–	54	13	41	–	–
XL 311	31	–	54	27	53	26	32
XL 312	31	–	54	27	53	26	41
XL 313	40	–	54	27	53	26	41
Data cable: Ø8.4mm							
XL 301	22	–	38	9	23	–	–
XL 302	22	–	38	9	28	–	–
XL 303	28	–	38	9	28	–	–
XL 311	22	–	38	19	37	18	23
XL 312	22	–	38	19	37	18	28
XL 313	28	–	38	19	37	18	28

Steel trunking Series 130 and Series 170

Material

Steel trunking is manufactured from pre-galvanised steel with a powder coat finish to RAL 9010.

Installation

Positioning

- System 130: suitable for dado installation.
- System 170: suitable for dado and skirting installation.

When used as a skirting system, sufficient clearance should be allowed between the floor covering and the profile fittings that clip over the cover i.e. 5mm + floor covering is recommended.

Fitting

- Secure trunking base every 750mm.
- Secure using No 8 round head screws and washers using the grooves in the outer compartments of the base to facilitate drilling 6mm holes.
- Avoid over-tightening to permit thermal movement.
- The use of plastic caps over screw heads is recommended to protect installed cables.
- To cut the trunking, use a fine tooth blade (32/36tpi) or, preferably, a circular saw with a 350mm fine tungsten blade (90/108tpi). This will produce an edge requiring minimal de-burring.
- Consecutive lengths of base are aligned and butt jointed together using the coupling/bonding set.

Earthing

- Trunking base, main fittings and accessories are fitted with earth connections.
- Bonding base to fittings: use coupling/bonding set or wire between fitted earth connections.
- Bonding base to cover: covers have pressed out side grippers which automatically establish earth contact when pressed into trunking base.
- Bonding base to end caps: use bonding strap LBS3.

Single lengths

Where it is required to fit a single length of trunking (under 3 metres) between two inside walls and no accessory box is fitted, it is advisable to install a coupler in the centre of the run to facilitate the removal of the cover.

Joints and bends

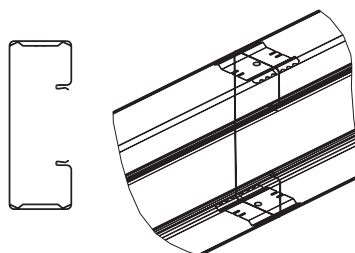
- Base joints should be aligned and butt jointed together.
- Internal and external bends, flat angles and tees are prefabricated in steel, aligned and butt jointed to the base using coupling bonding sets.
- Clip-on external tolerance sleeve overlaps the joints to cover minor inaccuracies.

Screening

Steel containment protects internal circuits from external electromagnetic interference. For internal segregation and screening, use the steel dividing fillet 351189.

Internal coupling/bonding set

- Comprises of two identical parts.
- Insert both parts into end of one length of trunking. Slide next section of base onto couplers and fix into position.



Accessory boxes

Standard depth 40mm

Remove the appropriate box knockout and clip each side of the box into the trunking base.

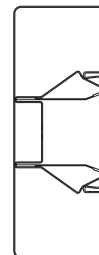
When boxes are installed consecutively, use cover spacer WG01085 between adjacent boxes.

Dividing fillet

Dividing fillet 351189 is supplied in 1 metre lengths. It is held in place through using the universal multi-purpose clip. A minimum of 3 clips are required to hold 2 lengths of the dividing fillet in place.

The trunking can be divided into up to 3 compartments using the dividing fillet.

Please refer to element 3 of the diagram on page 204.



Covers

Covers are designed to limit unauthorised removal and to remain in position during normal conditions irrespective of impact and minor undulations of the mounting surface.

Covers – fitting

Covers are clipped into place from front. If accessory boxes are installed, covers are butt-joined to the edge of the box (RSSB10WH end RSSB20WH). Cover lengths are determined so that ends are covered by a fitting or accessory. External bends and flat angles should be fitted with the correct bend/flat angle cover.

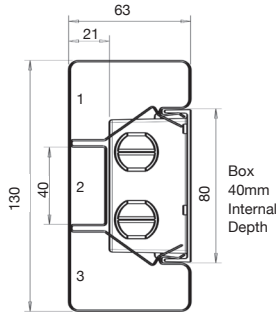
Covers – removal

To remove a cover, first detach an external joint cover or accessory to gain access. The main cover can then be gently eased off the base.

Steel trunking Series 130 and Series 170 – continued

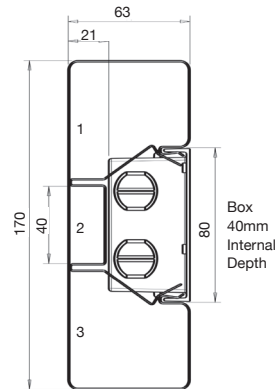
Dimensions

**System 130 trunking
130 x 63mm**



Compartments 1 & 3 = 1585mm² (each) total area
 Compartments 1 & 3 = 760mm² (each) 45% space factor
 Compartment 2 = 713mm² total area (with box)
 Compartment 2 = 342mm² 45% space factor (with box)

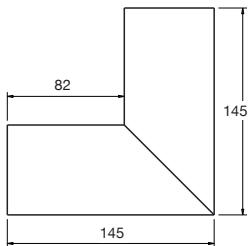
**System 170 trunking
170 x 63mm**



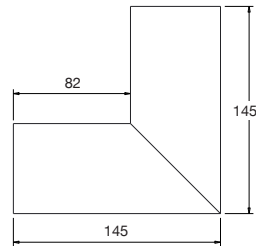
Compartments 1 & 3 = 2812mm² (each) total area
 Compartments 1 & 3 = 1265mm² (each) 45% space factor
 Compartment 2 = 760mm² total area (with box)
 Compartment 2 = 342mm² 45% space factor (with box)

Template dimensions for angles, tees and bends

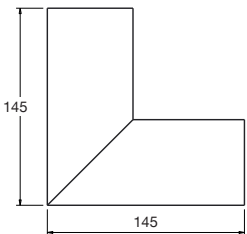
System 130 external bend



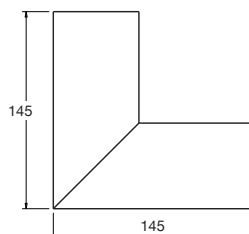
System 170 external bend



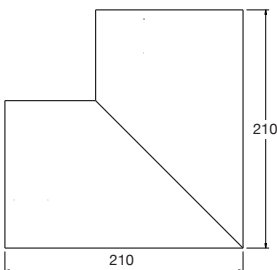
System 130 internal bend



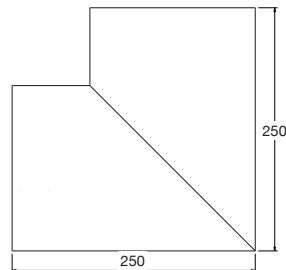
System 170 internal bend



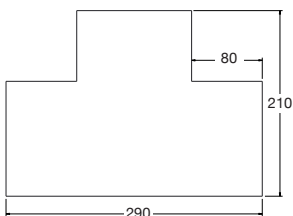
System 130 flat angle



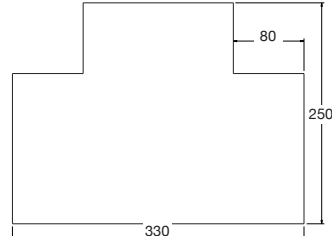
System 170 flat angle



System 130 flat tee



System 170 flat tee



TECHNICAL INFORMATION



Cable capacities

- All calculations allow for a 45% space factor.

As there can be differences between data cable sizes, Marshall-Tufflex recommend that cable dimensions are confirmed with the manufacturing company.

Cable capacity chart	Compartment 1 Systems 130 & 170		Compartment 2 Systems 130 & 170		Compartment 3 Systems 130 & 170	
	No box	With box	No box	With box	No box	With box
PVC power cable 1.5mm² stranded copper						
System 130	89	–	–	40	89	–
System 170	158	–	–	43	158	–

PVC power cable 2.5mm² stranded copper						
System 130	60	–	–	27	60	–
System 170	106	–	–	29	106	–

PVC power cable 4.0mm² stranded copper						
System 130	43	–	–	19	43	–
System 170	76	–	–	21	76	–

Data cable: Ø5.5mm						
System 130	30	–	–	13	30	–
System 170	53	–	–	14	53	–

Data cable: Ø6.0mm						
System 130	25	–	–	11	25	–
System 170	45	–	–	12	45	–

Data cable: Ø6.5mm						
System 130	22	–	–	10	22	–
System 170	39	–	–	11	39	–

Data cable: Ø7.0mm						
System 130	19	–	–	8	19	–
System 170	33	–	–	9	33	–

Data cable: Ø8.4mm						
System 130	13	–	–	6	13	–
System 170	23	–	–	6	23	–

Conductor type	Size	Cable factor
Stranded PVC power	1.5mm ²	8.0
Stranded PVC power	2.5mm ²	11.9
Stranded PVC power	4.0mm ²	16.6
*Data cable	Ø5.5mm	23.8
*Data cable	Ø6.0mm	28.3
*Data cable	Ø6.5mm	33.2
*Data cable	Ø7.0mm	38.5
*Data cable	Ø8.4mm	55.4

To determine cable capacity, select the size of the cable required and its corresponding cable factor from the table. Divide the compartment area figure (with or without 45% space factor) with the cable factor figure to achieve cable capacity.

For Data cable information, please see page 246

PVC-U Conduit

Material

PVC-U is flame retardant and self-extinguishing. It provides a 100% recyclable material with good sustainability.

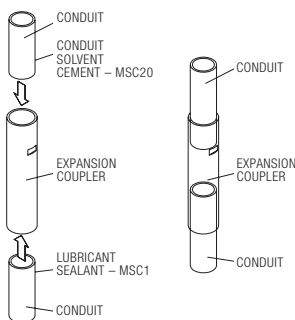
Installation

Fitting

- Secure horizontal runs of conduit at a maximum distance of 0.9m.
- Secure vertical runs of conduit at a maximum of 1.2m.
- In areas of high ambient temperature or where rapid changes in temperature are likely, these distances should be reduced.
- Where there are fittings or directional changes, the conduit should be secured approximately 150mm either side to maintain support.
- Avoid over-tightening to permit thermal movement.

Joints and couplers

- To accommodate thermal movement on surface installations, it is recommended that expansion couplers be used at a maximum distance of 6m intervals.
- In areas of high ambient temperature or where rapid changes in temperature are likely, this distance should be reduced.
- To install an expansion coupler, coat the inside of the short side with solvent cement (MSC) and push firmly over the conduit down to the stop point.
- Slide the next length of conduit into the long side of the coupler until mid-way to the stop point. **DO NOT GLUE INTO PLACE.** This will permit expansion or contraction of the conduit, providing it is free to move in the saddles.



Bends

Care should be taken not to make too tight a bend and attention is drawn to BS 7671:2001 (Wiring Regulations) 522-08-03. The radius of every bend in a wiring system shall be such that conductors and cables shall not suffer damage.

Cold bending 20-25mm conduit

Cold bending may be carried out on all conduit sizes up to 25mm in diameter using the correct size and gauge of bending spring.

- Heavy gauge spring is colour-banded green at the tip.
- Light gauge spring is colour-banded white at the tip. Springs are not interchangeable.
- Make sure springs are not damaged in any way as this can fracture or kink the conduit making removal of the spring difficult.
- In cold weather, warm the conduit by rubbing with a rag before bending.

To bend the conduit:

- Insert the spring to the desired position, grip the conduit on either side of bend and bring slowly together to form the bend.
- Cold bending of 20mm and 25mm conduit should be done with correct / undamaged spring inserted and bent over knee to initiate bend. Spring should remain inserted until the desired angle is achieved. (Under no circumstance should bends be increased or decreased without correct spring inserted)

Failure to follow above procedure could increase possibility of product failure

- Make the bend more acute than necessary to allow for PVC-U to 'recover' after bending.
- To remove the spring, twist anti-clockwise (to reduce its diameter) whilst turning the conduit clockwise and gently pulling the conduit and the spring apart.
- If spring fails to release, do not pull too hard or damage to the spring may occur.
- Repeat the removal procedure until they come apart.
- The conduit should then be fastened into position to prevent further 'recovery' of the bend.

Hot bending

Hot bending should be carried out on all conduit sizes over 25mm in diameter using the correct size and gauge of bending spring.

To bend the conduit:

- Insert the spring to the desired position as described in 'cold bending', gently heating conduit with a hot air torch, hot water or by other suitable means.
- Avoid direct application of flame to the conduit. When the conduit is in a pliable state, slowly bend around a suitable former, holding in position for about 1 minute until set.

- Remove the spring, twist anti-clockwise (to reduce its diameter) whilst turning the conduit clockwise and gently pulling the conduit and the spring apart.
- If the conduit is bent too fast or, in the case of light gauge conduit, across the knee, there is a risk of damage to conduit and spring. Once the bend has been made, it should not be forced backwards but allowed to 'recover' naturally.

Earthing

The properties of PVC-U make it an all insulated system and the use of a separate earth cable is essential.

Joint sealant

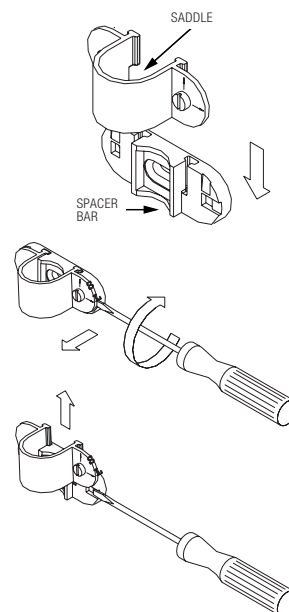
- Solvent cement MSC is a slow acting solvent cement especially formulated for watertight conduit fittings.

In accordance with COSHH Regulations, details of our solvents are entered in The National Poison Centre computer records. Health & Safety data sheets are available from our Technical Team or on the technical page of the Marshall-Tufflex website: www.marshall-tufflex.com

Spacer bar snap saddle

- Slide saddle into groove until it locks into the spacer bar.
- To dismantle, insert 4mm blade screwdriver into slot on side. Twist screwdriver to release the saddle in the spacer bar groove.

If conduit is installed in a corner, ensure that the spacer bar snap saddle is fitted with release mechanism facing away from corner.



MT Supertube

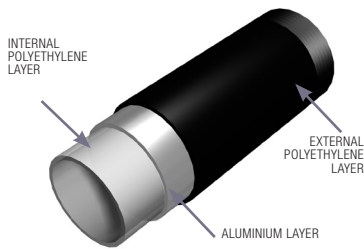
General information

MT Supertube provides LSOH polyethylene-coated aluminium cable protection for installation where halogen free products are a requirement.

Material

Conduit: A seamless aluminium tube sandwiched between two layers of extruded LSOH polyethylene.

Fittings: LSOH polycarbonate or cast metal with paint finish. (black or white).

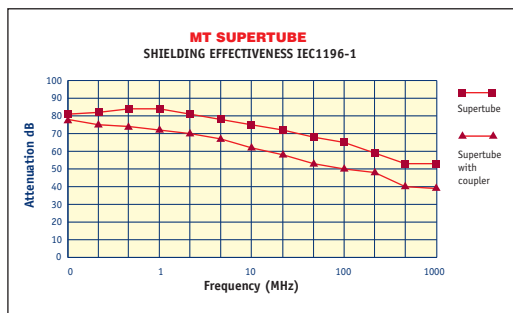


Shielding effectiveness

Shielding effectiveness (attenuation in dB) measures the ratio between the external environment field strength and the field strength after passing through any material. This is recorded in a logarithmic scale.

Shielding effectiveness	
Attenuation in dB	Field strength reduction
6	2
20	10
40	100
60	1000
80	10000

MT Supertube multi layer conduit systems absorbs and reflect emitted radiation from sources of interference, where an attenuation of 80dB would reduce the resultant field within MT Supertube by a factor of 10,000. (See tables.)



The graphs above show that the shielding effectiveness of MT Supertube is highly effective throughout the entire frequency range and will provide protection from interference for data, telecoms and signal cables.

Mechanical		MT Supertube & MT Supertube FR	MT Supertube & MT Supertube FR
Tube reference		22010/22003	22505/22503
Outside diameter	(mm) OD	20	25
Internal diameter	(mm) ID	15.5	20
Wall thickness	(mm) W	2.25	2.5
Minimum bend radius	(8 x dia)	160	200
Weight per metre	(g)	145	184
Lengths	(m)	100/3	50/3
Suspension distance (maximum)	Horizontal (mm)	1000	
	Vertical (mm)	1200	

Mechanical	MT Supertube	MT Supertube FR
Electrical breakdown resistance	20,000 V	20,000 V
Temperature range °C	-45 +120	-45 +289
Thermal expansion coefficient	2.0 x 10-6mm/m/K	2.0 x 10-6mm/m/K
Thermal conductivity	0.45 W (mK)	0.45 W (mK)
Earth bonding/continuity test results	<0.05 Ω	<0.05 Ω
Standards	EN 61386-21	EN 61386-21
	IEC 601196-1	IEC 601196-1

WARNING NAIL PENETRATION: MT Supertube FR Plus complies with requirements for BS 7671, BS 8436 and BS EN 61386. Screening to ENIEC 1196-1.

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Product Information

Installation

Conduit



MT Supertube can be shaped and slow bends formed by hand but care needs to be taken to avoid kinking.

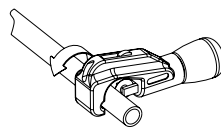


For tighter radius bends use compact hand bender or inspection elbows and bends.

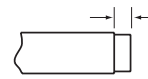
Fittings

1. For EMC screening system

- Cut the tube squarely to the required length (Tool No. 20001).
- Remove 12-16mm of insulation, taking care not to cut the aluminium layer (Tool No. 20002).
- Push conduit firmly into fitting and secure using screw located in spout.
- Fasten tube with a saddle within 150mm of spout.

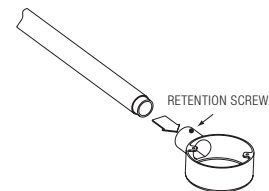


STRIPPING TOOL 12 - 16mm



2. For halogen free system

- Cut the tube squarely to the required length. (Tool no. 20001.)
- Apply sealant (20006) to the end of the tube.
- Push the tube firmly into the fitting spout.
- Fasten tube with a saddle within 150mm of spout.



MT Supertube FR Plus performance

Fire Performance

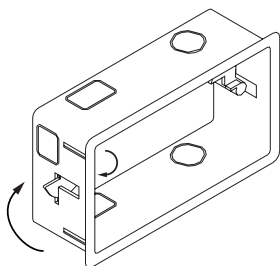
Oxygen Index	BS EN ISO 4589-2	46.5%		
Flammability Temperature (Temperature Index)	BS EN ISO 4589-3	289°C		
Elemental composition	Lassaigue Sodium	Nitrogen	Negative	
		Fusion	Chloride	Negative
			Bromide	Negative
			Fluoride	Negative
			Sulphur	Negative
Smoke Density	Low Smoke			

Conduit Performance (BS EN 50086.1.2)

Cold temperature impact test	Heavy gauge performance
Compression	Low compression
Resistance to flame propagation	Pass

Accessory boxes and enclosures

Square and rectangular dry lining accessory boxes



Installation

Fitting

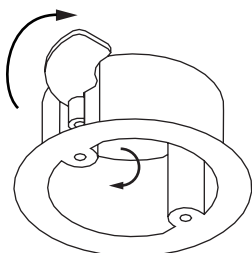
- Choose correct box for application and board depth and cut relevant size aperture in board for box (see table).
- Board should have sufficient strength to support the accessory.
- Remove knockout(s) and pass cables into box. Insert box into aperture and swivel out lugs using internal fins (if fitted) to hold box in position.
- Terminate accessory and, using accessory fixing screws, draw in the lugs, clamping box securely to the board.
- For easy identification the lugs are colour-coded to denote board thickness on standard boxes:

Lug Colour	Adjustment
Grey	1 – 9mm
White	6 – 14mm
Green	18 – 25mm
Black	9 – 26mm

Cut out dimensions

Box type	Cut out size
1 gang	73 x 73mm
2 gang	135 x 73mm
Dual gang	157 x 73mm

Circular dry lining accessory boxes



- Choose correct box for application and board depth and cut relevant size aperture in board for box (see table).
- Board should have sufficient strength to support the accessory.
- Remove knockout(s) and pass cables into box. Insert box into aperture and swivel out lugs using internal fins, if fitted, to hold box in position.
- Terminate accessory and, using accessory fixing screws, draw in the lugs, clamping box securely to the board.

Lug Colour	Type
White	Single entry box
Red	Dual entry box

Note: Ceiling mounted circular boxes can support 3kg centrally at 60°C maximum subject to ceiling construction.

- For easy identification the lugs are colour-coded to denote type of box:

	Dual entry
Board thickness	9-32mm
Entry	Ø20mm x2 off KO
Aperture size	Ø70.0mm
Internal depth	34mm
Fixing centres	M4.0 x 50.8mm M3.5 x 60.3mm

Moulded enclosures Adaptable boxes

Adaptable boxes as supplied, have a degree of IP66 protection. Any openings that are drilled or cut the box body and are not sealed with appropriate IP66 components or a failure to use the silicon rubber seal fitted, will negate the IP66 rating.

Power, voice and data accessories

General

MT32 13Amp pre-wired sockets, Marshall-Tufflex BS 1363 power assemblies and voice and data boxes for Marshall-Tufflex PVC-U and aluminium trunking systems (except Sovereign Plus and steel systems) Trunking accessory mounting boxes.

Installation

MT32 pre-wired socket range

Fitting

- Plug in incoming pre-wired lead (from previous socket or distribution board) to appropriate connector mounted in socket assembly box.
- Connect selected pre-wired lead to outgoing connector mounted on opposite side of socket assembly box.
- Clip complete assembly into trunking compartment.
- When trunking cover is fitted, it should be slid between back box frame and the loosened accessory face plate.
- Front plate is then fully tightened down to clamp accessory in place.
- For pre-made close coupled assemblies, use lid spacer (ES1WH) between boxes.

MT32 system with non-Marshall-Tufflex socket assemblies

Fitting

- For non-Marshall-Tufflex accessories, use pre-assembled outlet box unit.
- Connect cable tails to accessory in accordance with wiring regulations and fit accessory to back box.
- Connect pre-wired incoming and outgoing leads and fit to trunking (as above).
- For close coupled assemblies, use lid spacer (ES1WH) between boxes.

Marshall-Tufflex BS 1363 power assemblies (sockets, switches, spur units)

Fitting

- Remove front cover from assembly.
 - Front fix accessories: remove the two securing screws
 - Flush finish accessories: unclip from back box.
- Remove appropriate knockout/s for wiring.
- Wire according to wiring regulations.
- Re-assemble accessory and re-fit face plate.
- Clip complete assembly into trunking compartment.
- For close coupled assemblies, use lid spacer (ES1WH) between boxes.

Voice and data outlet modules (punched 6c 22 x 37mm apertures to accept appropriate voice or data outlets)

Fitting

- Remove front cover from assembly.
 - Front fix accessories: remove the two securing screws.
 - Flush finish accessories: unclip from back box.
- Fit appropriate voice or data outlets.
- Wire according to manufacturer's instructions.
- Re-fit face plate.
- Clip complete assembly into trunking compartment.
- For close coupled assemblies, use lid spacer (ES1WH) between boxes.

Trunking accessory boxes for mounting standard BS 1363 wiring accessories and Data plates

Standard boxes

- 1 gang fixing centres: 60.3mm
- 2 gang fixing centres: 120.6mm
- Depth: 30mm

Fitting

- Remove appropriate knockouts.
- Feed cables through knockout.
- Wire to accessory in accordance to wiring regulations and manufacturer's instructions.
- Screw accessory to box.
- Clip complete assembly into trunking compartment.

Adjustable boxes – two part

- 1 gang fixing centres: 60.3mm
- 2 gang fixing centres: 120.6mm
- Depth: 32 - 50mm

Fitting

- Remove appropriate knockouts.
- Feed cables through knockout.
- Wire to accessory in accordance to wiring regulations and manufacturer's instructions.
- Screw accessory to box front frame.
- Press (ratchet) both components together until required final box depth is reached.
- Clip complete assembly into trunking compartment.

Screening

- Boxes available with copper spray screening to protect data outlets from electromagnetic interference.

Part M boxes and box assemblies

- Comply with the requirements of Part M (DDA)
- Odyssey coloured boxes (DD1510 and DD1520) with coloured flanges to contrast with trunking cover colour.
- ESPM box assemblies with contrasting coloured flush accessory box frames. For colour varieties please view the perimeter trunking pages.

Adjustable accessory box depth by product range

	Maximum adjustment range	Page Reference
PowerPoles and PowerPosts		
Series 1 and 2	32 - 40mm	94
PVC-U Perimeter Trunking		
Mono 10	32 - 40mm	109
Compact 1	32 - 40mm	115
Compact 2	32 - 40mm	117
Compact 3	32 - 40mm	119
Mono Plus 20	32 - 40mm	111
Mono Plus 30	32 - 40mm	113
Twin165	32 - 47mm	149
Sterling Profile 1 - 3	32 - 45mm	122
Sterling Curve	32 - 40mm	128
Odyssey	32 - 40mm	106
Twin Plus	32 - 47mm	151
Sterling Profile 4 - 13*	32 - 45mm	134
XL Trunking 201 - 203	32 - 47mm	141
XL Trunking 211 - 213	32 - 47mm	145
PVC-U Trunking		
Bench Trunking	32 - 47mm	173
Aluminium Trunking		
Bench Trunking	32 - 47mm	199
Elegance 110	32 - 40mm	180
Elegance 170	32 - 40mm	182
Sterling Profile 3001 - 3003	32 - 40mm	184
Twin Plus	32 - 47mm	196
XL Trunking 301 - 303	32 - 47mm	188
XL Trunking 311 - 313	32 - 47mm	192

*Sterling Profile 4 - 13
The EAB1/2 can be adjusted to 45mm in the main compartment only. Where the EBE1 Base Extension is used the maximum adjustment achievable is 40mm

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Product Information

Callmaster fire and security systems

Material

PVC-U is flame retardant and self extinguishing. It provides a 100% recyclable material with good sustainability. It complies with the requirements of BS 4761 Parts 6 and 7 and BS 4678. The Callmaster system is designed to comply with BS 7671:2008.

Installation

- Select Terminal or through box to suit installation.
- If a terminal box is used, fit the blanking plate to unused entry.
- Depending upon circuit wiring, select MIC internal Pot retainer or cable Fibre clamp. Both components are suitable for single or twin cable runs.
- Insert one half of the retainer/clamp into the surface box (from the rear) and secure box to the wall.
- Lay in MIC or cable and secure in position with top half of retainer/clamp – fit Mini adaptor.
- Terminate wiring to accessory and fit to box.

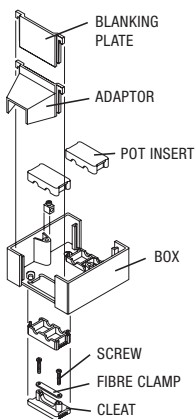
Boxes

Dimensional data for square boxes

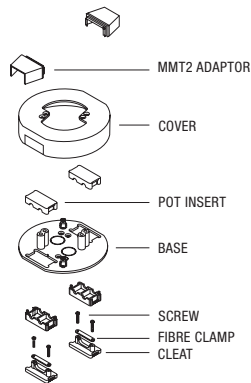
- Overall: 87 x 87mm
- Depth: 38mm external; 35mm internal
- Fixing centres: 60.3mm
- Pot size: Ø15mm

Dimensional data for circular boxes

- Overall diameter: 123mm excluding adaptors
- Depth: 28mm external; 24mm internal
- Dual fixing centre: 50.8 and 60.3mm
- Pot size: Ø15mm

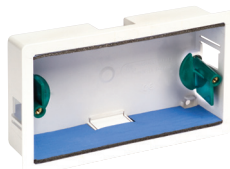


Mini trunking additional adaptors



Intumescent (fire barrier) pads

Marshall-Tufflex dry lining boxes are available with intumescent (fire barrier) pads to comply with the requirements of BS 7671:2008 IEE Wiring Regulations and Document B of the UK Building Regulations.



Firefly Fire Clips

Standards

Compliant with the general principles of BS 5839-1:2013 Section 26.2d when independently tested.

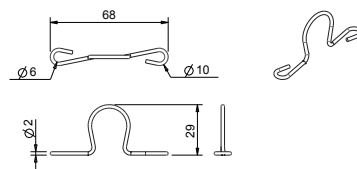
Installation

Vertical spacing – Use 400mm spacing
Horizontal spacing – Use 600mm spacing, except over doors and other openings which should be 300mm spacing.

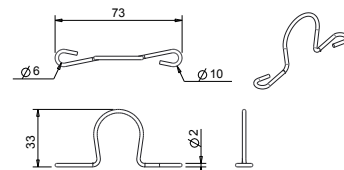
A qualified electrician must select the correct screw fixing for the substrate to comply with BS 7671 Amendment 3. These must be used with the correct drill size.

Dimensions

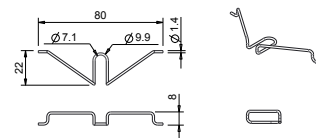
FCCR20



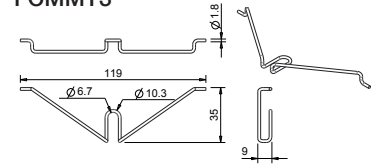
FCCR25



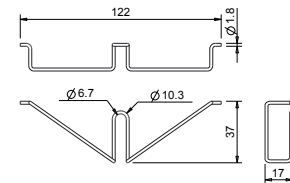
FCMMT2



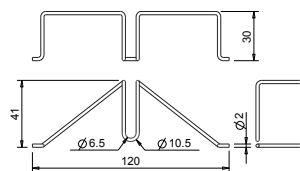
FCMMT3



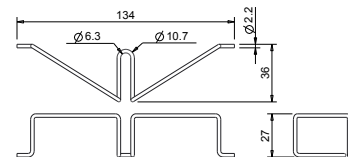
FCMMT4



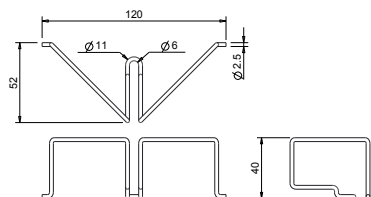
FCMMT5



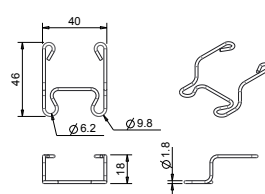
FCMMT6



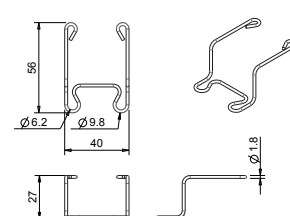
FCMTRS50



FCXMMT2



FCXMMT4



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Product Information

Bio trunking

General information

Certain microbial organisms are harmful to people and can proliferate, via surfaces, to spread infection and disease. We have a responsibility to control such organisms wherever possible, particularly in environments such as hospitals, care homes, medical units, surgeries, schools, sports and health centres.

Microbial organisms can also cause product deterioration, discolouration and bad odours and antimicrobial treatments help to prevent these effects.

Marshall-Tufflex antimicrobial Bio trunking incorporates silver ions with the PVC-U compound, providing integral antimicrobial protection that prevents 99.9% of harmful bacteria growth.

Material – PVC-U

PVC-U is flame retardant and self-extinguishing. It provides a 100% recyclable material with good sustainability. It complies with the requirements of BS 4761 Parts 6 and 7, BS 4678 and BS 7671:2008.

Material – silver ion additive

Silver ions have been proven to exert recognised bactericidal effect. When incorporated within materials such as PVC-U, silver is toxic to multiple components of bacterial cell metabolism, damaging the cell wall and membrane permeability.

Installation

For technical information on installation of all PVC-U Bio trunking systems, please refer to the relevant technical pages of PVC-U Perimeter trunking systems starting on page 269.

PVC Material Test Results

LABORATORY Anti-Microbial Test Division, Kyoto Biseibutsu Kenkyusyo, Yamashina-ku, Kyoto 607-8482, Japan
TEST ORGANISM MRSA (Methicillin Resistant Staphylococcus aureus) Escherichia coli
STANDARD ISO 22196 / JIS Z 2801:2000

Quantitative Assessment of Activity - MRSA (Methicillin Resistant Staphylococcus aureus)				
	Number of live organisms (Colony Forming Units)		% reduction of Colony Forming Units, expressed as comparison with control	
	0 hours	24 Hours		
Control - Untreated polyethylene film	110,000	96,000	–	–
PVC	110,000	<10	>99.98% Reduction	VERY GOOD

Quantitative Assessment of Activity - Escherichia coli				
	Number of live organisms (Colony Forming Units)		% reduction of Colony Forming Units, expressed as comparison with control	
	0 hours	24 Hours		
Control - Untreated polyethylene film	110,000	14,000,000	–	–
PVC	110,000	<10	>99.99992% Reduction	EXCELLENT

ABS Material Test Results

LABORATORY Thomson Research Associates Inc., Ontario, Canada
TEST ORGANISM Klebsiella pneumonia, Staphylococcus aureus
STANDARD ISO 22196 / JIS Z 2801:2000

Quantitative Assessment of Activity - K. pneumoniae				
Concentration of starting inoculum		1.92 x 10 ⁵		
Sample Description	No. Bacteria Recovered	Log Value	R=[log(B/C)]	% Reduction
Inoculum Control	8.39 x 10 ⁶	6.9	–	–
ABS	<2.00 x 10 ¹	<1.3	>5.6	>99.9%

Quantitative Assessment of Activity - S. aureus				
Concentration of starting inoculum		1.92 x 10 ⁵		
Sample Description	No. Bacteria Recovered	Log Value	R=[log(B/C)]	% Reduction
Inoculum Control	1.00 x 10 ⁶	6.0	–	–
ABS	1.04 x 10 ²	2.0	4.0	>99.9%

Aluminium systems

Material

Aluminium is a high quality material which is light to handle but with excellent mechanical strength and impact-resistance. Aluminium provides inherent LSOH properties and first class screening performance, especially in high frequencies.

XL Aluminium trunking

Installation

For all technical information on XL Aluminium trunking, please refer to pages 286 and 287 of the Aluminium perimeter trunking section. All information on those pages is relevant with the following additions:

Positioning

For dado installation only.

Gas outlets

Covers for gas mounting plates EEBH05 (1 gang), EEBH04 (2 gang) and EEBH03 (3 gang) are pre-punched to accept gas outlets and can be used with XL trunking.

Light fittings

Pre-cut covers to accept external lighting mountings are available on request. For more information please contact the Technical Team on +44 (0)1424 855688.

Please note: in the general installation instructions for XL Aluminium trunking, polycarbonate fittings are shown as an option but these would not generally be used within a healthcare environment.

PRODUCT INDEX AND GENERAL INFORMATION

Health and Safety at work

Health and Safety at work etc. Act 1974

- Section 6 of this act imposes on all manufacturers, designers, importers or suppliers of articles for use at work a duty to ensure, so far as is reasonably practicable, that the article is so designed and constructed that it will be safe and without risks to health at all times when it is being set, used, cleaned or maintained by a person at work. Part 1 of the Consumer Protection Act 1987 introduces strict liability for defects in products. In considering whether a product is defective, consideration has to be given to any instructions issued with the products. It is therefore essential that the purchasers ensure that any relevant information or advice relating to the use of the product is strictly complied with.
- Having regard to these provisions the following is given as a guide to the information which is readily available to you in order that the obligations of all concerned may be met as fully as is reasonably practicable. This information relates to those products detailed in our Catalogue(s) or associated literature.
- Information on the design, construction and installation of our products may be found in catalogues and product leaflets of this Company, or may be obtained by specific request to the Company.
- It is important that the products concerned should be installed, commissioned and maintained by, or under supervision of competent persons in accordance with:
 - BS7671 IEE Regulations for the Electrical Equipment of Buildings
 - Codes of Practice
 - Statutory requirements
 - Any instruction specifically advised by the Company The Purchaser must satisfy himself that he has complied with such requirements.

- In accordance with the provisions of the Act you are therefore requested to take such steps as are necessary to ensure that any appropriate information relevant to our products is made available by you to anyone concerned.

Low Voltage Directive

Marshall-Tufflex products that come within the scope of the Low Voltage Directive (LVD) will be CE Marked to confirm that they meet the necessary requirements of this directive.

Product colour

The colour of products shown in this catalogue are representative only.

Please note: due to different processes and materials utilised, it may not always be possible to obtain an exact colour match between the extruded and moulded product.

Unexposed parts

Unexposed parts may not always be supplied in the colours depicted in this catalogue. This will not detract in any way from the finished look of the product.

Conditions of Sale

All products are sold subject to C & C Marshall Limited Conditions of Sale (as amended from time to time), who are the principals of Marshall-Tufflex Ltd, their selling Agents, and to such other Conditions of Sale as are contained in our current price list. Copies of these Conditions of Sale are available on request.

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

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Perimeter and containment trunking by size

A quick reference guide to finding information on trunking, shown in size order from small to large.

PVC-U perimeter trunking systems - by size

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PVC-U trunking systems - by size

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