Product & Solutions Guide

The Power in Cable Protection





www.atkore.com/flexicon

Building better together.





Allied Tube & Conduit ^ AFC Cable Systems ^ Heritage Plastics ^ Unistrut ^ United Poly Systems ^ FRE Composites ^ Cope ^ Calbrite

Unistrut Construction ^ Calbond ^ Kaf-Tech ^ Columbia-MBF ^ Eastern Wire + Conduit ^ ACS/Uni-Fab ^ Four Star Industries ^ Marco

Power-Strut ^ Calconduit ^ Razor Ribbon ^ Calpipe Security ^ Queen City Plastics ^ Sasco Strut ^ Vergokan ^ Flexicon ^ Cii ^ US Tray



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Intro

We are focussed on bringing Customers the latest solutions and technologies for Cable Protection. We design, develop and manufacture our products from our Headquarters in Birmingham, UK therefore you can be assured of our quality and engineering excellence.

At the forefront of material technologies and industrial design, our Engineering and Manufacturing teams deliver reliable solutions that work for the long term.

"We drive innovation, developing tomorrow's solution for today."



Our design, testing and prototyping facility enables us to understand, interpret and respond to Customer requirements quickly and easily. We use the latest design software & technology and can create models and 3D prototypes to establish technical solutions. We continue to invest in developing our range.

With onsite manufacturing, we can adapt and respond to meet our Customer demands and requirements.

Our range of non-metallic and metallic products help to protect cables from end to end, in many diverse markets, from Construction, Transportation, Utilities, Machinery & Automation and Hazardous Areas to name but a few.





Global Presence

With a Global reach, we work closely with our Customers to become part of the Supply Chain. We understand the importance of working with suppliers who offer support, expertise and guidance.

Our products have been installed in all 7 continents, and we currently distribute through approved partners to over 60 different Countries.



International & National Conduit Standards

- BS EN IEC 61386-1 Conduit Systems, generally accepted worldwide other than North America
- BS EN IEC 61386-23 Flexible Conduit Systems
- BS EN IEC 61386-22 Pliable Conduit Systems
- AS/NZS 2053, Australia and New Zealand but based on IEC 61386
- UL 1660, Non-metallic UL listed conduit for North America

- UL 360, Metallic UL listed conduit for North America
- UL 514B, UL listed conduit fittings for North America
- UL 1696, Non-metallic UL recognised conduit systems for North America







Why use flexible conduit?

What would happen if your Cabling failed? In today's modern world there is an underlying trend towards more intelligent and automated systems driven by safety, efficiency and functionality. Flexible Conduit is the ideal solution to protect People and Personnel, Property and Processes.

Understanding all the hazards?

Risks and hazards to cabling can vary significantly based on application, operating environments and conditions, hence one system does not necessarily suit all.

We understand the performance properties of our products & solutions and can minimise your risk. We offer application guidance and expert advice whatever your challenges.

Incorrect Specification could lead to critical failures for your Cabling and Installation.



Don't take chances when it comes to your Cable Protection...



"whatever your application, we've got it covered..."



Potential Hazards to consider

When it comes to protecting Safety and Performance Critical Cabling, we have listed some of the potential hazards which could compromise your systems integrity.



Ingress Protection

 Penetration of solid objects, dust, liquid or steam



Chemical resistance

 Reaction to different compounds or substances



Impact

 Sharp or blunt forces which could cause damage



Micro-organisms & Bacteria

 Danger from build up of bacteria, viruses and fungus



Crush / Compression

Forces applied to cause deformation



Static charge

 Build up on objects that cannot conduct a current



Temperature

 Intensity of heat present high or low. Rapid changes of temperature



Explosive Gases / Dust

Substance that can be made to explode



Fire

Destructive burning



Condensation

 Water which collects as droplets on a cold surface



Corrosion

 Damage caused to materials based on chemical reaction



Grazing animals / Vermin or pests

Livestock

· Sharpening of teeth, searching for food



Lightning Strike

Damaged caused by natural electrical discharge



Theft & Vandalism

 Stealing, unauthorised removal or deliberate damage



EMC

• Electromagnetic Compatibility



Fatigue Life

 Weakness caused by repeated variations of stress or continuous and repeated movement



Abrasion

 Process of scraping or wearing something away



Vibration and Shock

Shaking or sudden movement



Tensile Strength

 Resistance to conduit being pulled from the fitting



UV

Resistance to Ultra Violet Radiation



Benefits of using flexible conduit...

Providing an inherent mechanical barrier for cabling, Flexible Conduit offers more than just protection for Cables and Installations. It allows users and specifiers to do things differently, challenging traditional installation practices and offers unrivalled product performance.

Flexible Conduit vs Rigid Conduit



- No bending / corner accessories required
- Simple Cutting plus no thread cutting required
- Suitable for Static and / or Dynamic Applications
- Improved strength to weight ratio
- · Long Coiled Products as opposed to Straight lengths - easy to handle
- · No specialist tools required
- Easy routing of product around obstructions
- · Can be composite, metal or plastic material
- · Can be retrofitted
- · Can configure pre made assemblies / harnesses

Flexible Conduit vs Cable Glands

- · Can group multiple cables in one system meaning less terminations
- · Reduced physical glanding space required for termination of cables
- · Reduced risk of system failure due to fewer points of entry
- · Can replace faulty cables without replacing entire System
- Can upgrade and add circuits with ease
- · Fitting does not have to compress the cable to ensure • No need for specialist cables sealing
- · Can be retrofitted with ease
- · Suitable for use with multiple cable types
- Quicker to install
- · Conduit fittings offering strain relief available



Flexible Conduit vs Armoured Cables



- · Simple Cutting easier assembly
- · Can combine multiple cable types in one system using off the shelf products
- Can make quick changes / upgrades to circuits within . Can be retrofitted existing system
- · Easy routing of cables with different bend radius
- Can replace faulty cables without replacing entire system
- · Suitable for Static and / or **Dynamic Applications**
- · Swivel thread fittings available to ease Installation
- Mechanical protection provided by the Conduit no need for specialist cables
- · Easier termination of glands

Flexible Conduit vs Trunking

- · Coiled Products as opposed to lengths
- · Easy routing of product
- · Higher IP ratings
- · Can be retrofitted

- No requirement for corners
- Simple Cutting
- Simple termination
- · Suitable for Static and / or **Dynamic Applications**





Realise the Benefits of using Flexible Conduit...

- Simplicity
- Speed of Installation
- Lifetime Solution
- System Integrity





Simplicity

- No need for Specialist Cables
- Standard & Single Core Cables can be grouped and protected in one system
- Less Product Inventory in the Supply Chain



Speed of Installation

- Combining cables mean less cable entry points /terminations
- Ease of fixing with various securing options
- No special tools required



Lifetime Solution

- Can easily add circuits throughout the life of the installation
- Easily accommodate changes as the installation needs change
- Off the shelf products



System Integrity

- Properties of the conduit can be matched to the potential hazards of the installation
- · Reliable solution for protection of critical cabling





Cable Protection Specialists

We are focused on bringing Customers the latest solutions and technologies to solve their Cable Protection requirements.

Our knowledge, skills and expertise allows us to offer the ultimate solutions for technically demanding applications. We have been protecting performance and safety critical power and data cabling installations for many years.

With a dedicated design team, we are at the forefront of material technologies and industrial design to deliver solutions that work not only for today but also for the long term. Our Engineers use their extensive knowledge to drive innovation and develop the future today. We participate and are involved in both the IEC (worldwide) and CENELEC (European) committees that prepare conduit standards.

We understand the importance of material properties and how they affect performance and suitability. We have developed specialist conduits, using the latest material technologies, to ensure compliance with the latest international fire performance standards - EN 45545 and NFPA 130.

We can offer guidance and reassurance when it comes to products performance. We know how our products will react to various hazards and technically demanding environments, supported by years of experience.

Other product testing



• Vibration and Shock Testing to EN



· Direct lightning strike of conduit and fixed fittings



• UV testing to UL 1660, 1,000 hour xenon arc





 Low temperature impact testing



• 1,000 hours salt spray testing for corrosion



• EMC screening performance



 Fire performance testing including flammability, smoke, toxicity, halogen content and fire load - see Page 148



Anti-static testing



• Electrical insulation testing to EN 61386 and ASTM D 495 and 3638



 Food contact testing to FU 10/2011





Quality Assurance, Testing & Manufacturing

We take testing seriously. Don't just take our word for it.

We have invested and committed to extensive independent testing for our Products, and Quality Audits for our Manufacturing Processes, to give you the confidence that our solutions do what we say they do.



Our list of certifications and quality approvals include:



















We continuously test our products and are also independently audited to ensure our Product quality is as you would expect from a leading British Manufacturer. We understand the importance and potential consequences of product failure therefore to ensure suitability we test our products to the extremes.







Flexicon Ultra underwent more than 3,000 man hours of Ingress Protection testing during its development to ensure & validate product performance with all of our range of Nylon Non-Metallic Conduits in both fine pitch and coarse pitch derivatives. To demonstrate the Ingress Protection Performance to IP68 we tested our Flexicon Ultra products to a depth of 1metre for a period of 72hours. This is far beyond the requirement of BS EN IEC 60529, but potentially not beyond the requirements of certain applications (such as flooding). We also tested our Product to 2Bar (equivalent to 20m depth) for a period of 1 hour.

We work closely to support Customer specific testing to demonstrate Product Performance and suitability. We have previously demonstrated fatigue life tests representing a service life of 35 years with a minimum 1 million cycles with no point of failure.

Our in house laboratory allows us to continue to develop solutions and understand material and product capabilities. We continuously test and simulate product performance properties helping us to develop Customer Solutions which go above and beyond.



UV Test Chamber



What's New - Connectabox™

Flexicon's Connectabox™ is a unique, weatherproof connection box that provides a faster and simpler way to protect the interconnection of circuits and all types of cabling (power and data) without the need for additional seals or gels.

The IP66, IP67, IP68 and IP69 approved connection box is manufactured using modified Nylon PA6. It offers a truly weatherproof solutions that is lightweight, corrosion and UV resistant. This presents a practical solution for external applications or environments which are exposed to harsh external conditions or where routine maintenance may be more difficult. Maximum wiring space is achieved due to fast fit connectors, that simply twist and lock into place, without the need for threads or locknuts to secure.

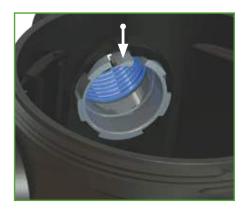
Compatible with Flexible conduit, Cable glands or Rigid conduits to offer maximum flexibility for interconnection.



NEW

Benefits include;

- IP66, IP67, IP68 (2 bar for 2hrs) and IP69 performance
- UV Resistant suitable for outdoor use
- 4x fast fit connection points entry points with flexible conduit
- Corrosion resistant suitable for wet environments
- Anti-tamper and vibration performance
- Connect multiple Outlets / Ways configure depending on requirements
- Can be drilled to accept cable glands and rigid conduit
- Low Fire Hazard EN45545-2 HL3 to R22 and R23



Quick release system for reconfiguring outlets - Push down to release fitting



Anti vibration lever



Maximum internal wiring space - no protruding threads or locknuts



Blank off unused outlets



What's New?

Innovation is at the centre of everything we do. This Product Guide features no less than 9 new Conduit Systems.

Highlighted below are a selection of new products featured in the 14th Edition.

FPIHRL - Non Metallic Conduit

This new range of corrugated conduits features enhanced fire performance properties to EN 45545 HL3 R23 for exterior vehicle applications, combined with excellent dynamic performance offering fatigue life and flexibility for the Rail Industry.



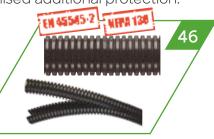
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Abrasion Rings

Designed to provide additional protection and prolong the life of non-metallic conduit systems which could be subject to extreme abrasion or potential damage from continuous rubbing. The abrasion rings can be fixed anywhere along the length of the conduit and are fixed in position to maintain localised additional protection.

Divisible Conduits - FPRDS and FPPDS

New ranges of divisible conduits in different materials for Rail and General purpose applications. Ideal for retrofit cable protection where the need to protect cables or repair cabling has been identified.



71

FPA80 - Large Diameter Fitting

Suitable for use with any of Flexicon's 80mm non-metallic conduit systems, this fitting offers a simple easy to use one piece push fit connection with the conduit. Offering all the benefits of the trusted FPA range of fittings, with 360° teeth to provide all round protection and high tensile strength which is particularly important with larger conduit systems which may contain more and heavier cabling.

UL Listed Hygienic Conduits

81 & 109

This range of Hygienic Flexible Conduits are UL listed (UL 360) and NSF 169 component for splash zones in food production areas. Available from 3/8" up to 2" for use in Food and Beverage and other Hygienic applications where UL approvals are required.



7 Hygienic Elbows

This new range of Hygienic Flexible Conduit elbow glands, available in Metric and NPSM threads, offer space saving opportunities and reduces potential stress on bending connected conduits. Manufactured from SS 316L material, the glands offer a smooth, easy to clean surface, designed for use with our Hygienic range of Conduits systems for Food & Beverage, Machinery & OEM's Healthcare and Pharmaceutical applications.



Construction

The Construction sector relies on safe and effective Cable Protection to ensure the safety of People and Property. Electrical faults or failures can have disastrous consequences and can jeopardise necessary critical services.

Whether it is a Datacentre, Hospital, Financial Institution, Airport, Hotel or Warehouse the continuous and safe availability of services is paramount.

The nature of construction and building sites often means that last minute changes are a necessity. No matter how detailed or comprehensive the plan, changes in response to unforeseen circumstances or environments is common.

Routing cables through flexible conduit can help to protect and reduce the mechanical stress on cables, ensuring that cable bend radius' are not exceeded.



Off site or modular construction is constantly developing due to the necessity to reduce build time and improve repeatability. Flexible Conduit can play an important role in the protection of wiring runs and pre-terminated connections to deliver a plug and play solution.

Flexible conduit can be either surface mounted or hidden within the fabric of the building. This can be under floors, above ceilings, down walls or inside concrete pours.

Sometimes conduits are part of the aesthetic design, with services visible as part of the look of the building.





Typical Hazards & Product Considerations











- · Fire Performance
- Temperature





Aesthetics

Example applications

- Lighting
- CCTV
- IT / Data
- HVAC
- Building Controls
- BEMS / BMS
- Emergency Lighting

- Alarm Systems
- Access Controls
- Fire Safety, detection and protection
- Plant Room Equipment
- Switch Gear
- Distribution Boards

- Temporary Site Power
- Lightning protection
- Escalators and Lifts
- Refrigeration
- Data Centres

Typical Products



• FU - Galvanised Steel



FPAS - PA6 Corrugated



• FSU - PVC Coated **Galvanised Steel**



• FPP - Polypropylene



· LFHU - LFH Coated Galvanised Steel



· LTPUL - PVC Coated Liquid Tight UL

Product installation examples:



Commercial Offices -Underfloor wiring to **Distribution Boxes**



Plant rooms or connection of services



• FU/LFHU -Public or municipal buildings - Emergency Lighting / CCTV where fire safety is paramount



 Liquid tight and Nylon systems for Data Centres



 Polypropylene -Acid resistant suitable to be buried in Concrete



Automation & Manufacturing

Manufacturing and Automation is constantly evolving, with the rapid emergence of new technologies to achieve greater safety, efficiency and functionality.

Whether it is performing operations such as processing, assembly, inspection or materials handling, or in some cases a combination of all of these, Manufacturing Automation relies on effective Cable Protection.

Operating environments can vary significantly, however the fundamental requirement for continuous operation still exists. Engineers are constantly challenged to innovate, looking for improvements to deliver more for less.

"Manufacturing Automation relies on effective Cable Protection"



Typical hazards & product considerations



· Mechanical Strength





Flexibility & Fatigue Life



₩ • Temperature



• Ingress Protection





· Abrasion Resistance



· Hazardous Gases / Dust



· Chemical resistance







Example applications

- Control & Instrumentation Systems Detection / Measurement
- · Printing, Marking & Engraving
- Materials Handling Equipment Palletizers / Conveyers / Mixing & Dosing
- Packaging Accumulators / Baggers / Carton Machines
- Logistics Handling / Lifting / Conveying
- Fabrication Equipment Bending / Presses / Welding / Forming
- Metal Cutting Equipment Drilling / Grinding / Lathes / Milling / Rotary Transfer
- Refrigeration Storage / Temperature Controlled Environments
- Pumps / Drives / Motors
- Plant Room Equipment Electrical and Mechanical Services
- Robotics
- Plastics Processing



· FPA / FPAU -Range of Non-metallic fittings



Conduit Systems

Typical Products



• FPI - PA12 Corrugated



• FPAS - PA6 Corrugated



· SSU - Stainless Steel



• FSU - PVC Coated Galvanised Steel



• FPASC - PA6 Corrugated UL



· LTP - PVC Coated Liquid Tight



· LTPPU - Polyurethane Coated Liquid Tight



· LTPUL - PVC Coated Liquid Tight UL

Product installation examples:



Production Line -Robotic arm



· SSU -Foundry -Lighting & ventilation



· FSU -Flectrical Power -Distribution boards



FPAS -Machines -**Control Wiring**



· LTPUL -**Electrical Connection** - Mains Power to machinery



Utilities

Whether this is the Water Industry or the latest in Telecommunications technology, public service Utilities are essential for a nation's economy and wellbeing.

Continuity of supply is critical for the Utilities sector. With considerable levels of investment, maximising asset lifetimes can help to achieve efficiencies and reliable operations.

Projects need to offer safety and security. Whether it is a Water Treatment Plant or a Telecommunications mast, the loss of power or data can have a significant impact on the provision of services. With the risk of significant fines Operating Companies need to ensure provision of Utilities and Services which are typically 24 hours a day, 7 days a week processes.

"Whether state owned or privatised, the Utilities and Services offered need to be continuous and safe"



Typical hazards & product considerations



Mechanical Strength

· Fatigue Life

· UV resistance



Abrasion Resistance
 → ★
 Temperature



· Chemical resistance



· Corrosion Resistance











Hazardous Gases /







Example applications

- Control & Instrumentation Systems –
 Detection / Measurement
- MCC (Motor Control Centres)
- Pumps / Drives / Motors
- Plant Room Equipment
- Lighting

- Alarms
- CCTV and Security
- Access Control
- UPS systems
- Base stations & Masts
- Antenna







· FSS - Stainless Steel Corrugated



· FPAS - PA6 Corrugated



· SSU - Stainless Steel



· LTP - PVC Coated Liquid Tight



 FSU - PVC Coated Galvanised Steel



 LTPUL - PVC Coated Liquid Tight UL

Product installation examples:



FSU -Water Treatment Plant - External lighting



FPAS Telecommunication
 Towers - Machines Control Wiring



LTP –
 Sewage Treatment
 Works – Pumping
 Equipment



• FPIH -Primary Treatment Tanks



• LTPUL – Electrical Connection – Mains Power to machinery



Renewables - Solar / Wind / **Hydro / Energy from Waste**

Renewable Energy is a critical aspect of reducing global carbon emissions and offers an infinite source of power. This sector relies on new technologies to improve efficiency and maximise return on investment.

In the global drive to reduce the impact of greenhouse gas emissions, renewable energy is playing an increasingly important role.

Whether this is Onshore Wind, Offshore Wind, Solar PV or Biomass all categories rely on cabling and subsequently cable protection for efficient and safe operation. High cost of major mechanical repair, combined with long service life expectations and the remoteness of equipment pose significant challenges when specifying Cable Protection.



Typical hazards & product considerations





₩ • Temperature



Corrosion



Explosive Gases



Abrasion



→ Impact



✓ Ingress Protection



🐋 • Animal attack 🌎 🙌 • Sand Storms







Lightning Strikes







Solar Range - UV Performance for 20 years:

Flexicon's Solar Offer is a premium range of products designed for use for Cable Protection for Solar PV installations.

Flexicon warrants that the Flexible Conduit will not suffer from significant mechanical deterioration from ultra violet exposure for a period of up to 20 years from the purchase date of the product*.

* Contact Flexicon for further details - Terms and Conditions apply.

Example applications

- Solar PV Farms
 - Security and Perimeter Control
 - CCTV
- DC Combiner boxes
- Inverters
- Substation
- Weather Station
- Hydro Electric

Wind Turbine:

- Nacelle
- Tower & Lighting
- Electric Pitch System
- Control System
- Condition monitoring systems
- Cooling and Heating
- Biomass

Typical Products



 FPADS - Dual slit conduit suitable for retrofit



FPAS - PA6 Corrugated



· SSU - Stainless Steel



 LTBRDP Conduit -Galvanised Steel Core with Braid Layer and PVC Coating



 LTPSS - PVC Coated Liquid Tight with Stainless Steel inner core



 EXD - Flameproof Barrier Gland



 FUSSB - Galvanised Steel Core with Stainless Steel Overbraid



 Polyamide systems and FPAU Ultra™ Fittings



 Lightning Swivel Fitting – High continuity fitting specifically developed for Wind Turbines







Rail - Rolling Stock and Infrastructure

Passenger safety and operational integrity are vital characteristics of a modern rail network.







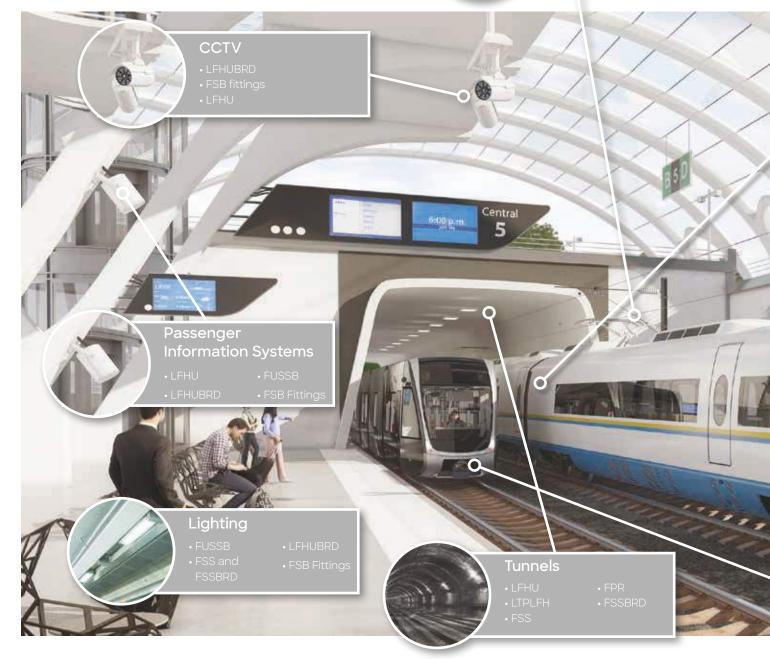






Flexicon offer a range of products for this technically demanding sector. IP ratings, tensile strength characteristics, weight, corrosion resistance, fire performance properties and operating temperature ranges are all factors to consider.

















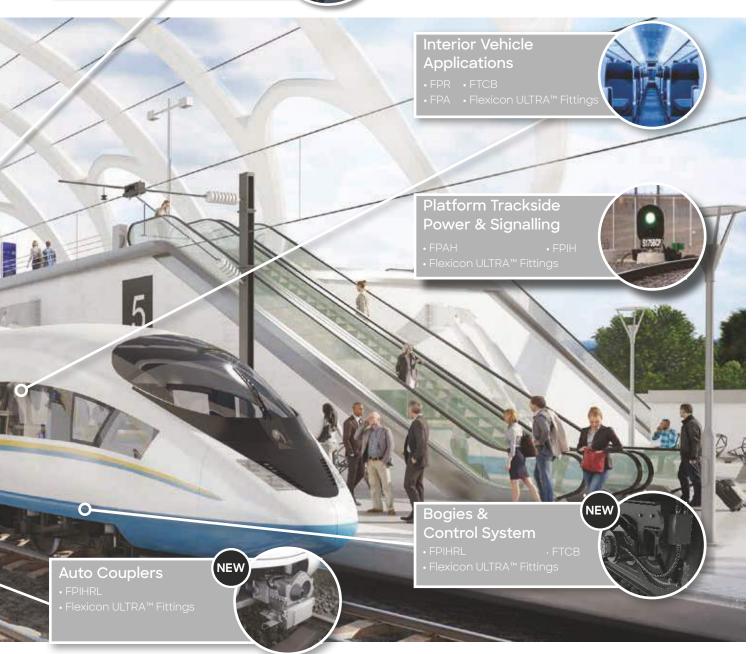




- Inter Vehicle Jumper **Applications**



- High performance products offering superior tensile and impact / compression strength
- · Designed to meet the strictest standards - EMC testing /vibration
- Wide product range to meet all applications
- Independently tested to the relevant standards
- Vibration proof
- Anti-tamper







Rail - Rolling Stock and Infrastructure

Passenger safety and operational integrity are vital characteristics of a modern rail network.

We know and appreciate the various challenges involved in achieving compliance to the latest industry legislation, managing and controlling risk, making procurement more efficient whilst striving for continuous improvement across the entire railway system.

"Flexicon have a proven track record in protecting Safety & Performance Critical Cabling"



Typical hazards & product considerations



• Fire Performance





• Ingress Protection



UV Resistance



Vibration & Shock
Resistance



• Strength to

Weight ratio Weight ratio



Chemical resistance

Abrasion Resistance



₩ • Temperature



Flexibility



EMC

• Fatigue Life





Example applications

Infrastructure

- Ticketing and Passenger Access
- · Station Car Parks
- · CCTV / Passenger Information Systems
- · Lifts & Escalators
- · Lighting
- · Platform Edge Screens
- · Rail Crossings
- · Trackside Points Machines
- · Trackside Signalling
- · Trackside Power
- Tunnels
- · Depot (Berthing and Maintenance)

Rolling Stock

- · High Speed
- · Intercity / Urban & Regional Trains
- · Metro
- · Trams & Trolleybuses
- · Monorail
- Locomotives
- · Propulsion & Control Systems
- Bogies
- · HVAC
- · Couplers
- · Pantograph
- · Brake Systems
- · Door Modules
- · ETCS



· FPAU -Range of Non-metallic fittings





 F-Clamps and Fixing Accessories

Typical Products



· FPR - PA6 Corrugated



· FPIHRL - PA12 Corrugated



 FPRSS - Stainless Steel Overbraid PA6 Corrugated



 LTPPU - Polyurethane Coated Liquid Tight



· LFHU - LFH Coated Galvanised Steel



 FSS - Stainless Steel Corrugated



 LFHUBRD - LFH Coated Galvanised Steel with SS Overbraid

· LTPLFH - LFH Coated

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· LTPLFH - LFH Coated Liquid Tight

Product installation examples:



LFHUBRD –
 Passenger
 Information System



LFHU Public Address Voice
 Alarms for staff
 safety - Rail Depot



 LFHU -CCTV & Security



 FPIHRL -Control wiring on top of carriage



• FPIHRL -Intercar Jumpers



Hazardous Area Applications

System integrity and safety are critical for these technically demanding environments.

Using flexible conduit allows multiple cables to share the same space and hence reduce the number of entry points required into the control box and termination area.



Simplified Termination



· Reduce installation times



· Cable is mechanically protected



· No need for specialist cables



Can provide EMC screening



Flameproof integrity



🚱 · Future proofing - easier to upgrade























Combining our flexible conduit system with our Flameproof EXD glands, Contractors and Operators can ensure they mechanically protect their cabling installation without compromising on safety to protect people and assets.

Our standard products facilitate tailored solutions, off the shelf, thus minimising any lead times. Flexible conduit from Flexicon can help to:

- Enhance Safety and System Integrity
- Extend service life
- Offer Corrosion Resistance (harshest environments)
- Minimise downtime
- Reduce installation time
- Reduce cost and weight







Local Support & Guidance

- Product applications and suitability
- Experts on hand on how to protect vulnerable cables in safety and performance critical installations
- Product support offered to;
- End Users
- Consultants
- Operators
- OEM's

- EPC's

Presence of Gases & Vapours

- Upstream, Midstream and Downstream
- Refineries
- Chemical plants
- Loading and unloading areas in terminals
- Storage areas for tanks

Markets and Applications

Skids

Motors

Control Boxes

- Lighting
- MCC (Motor Control Centres)
- CCTV



Scan here to learn more about our EXD Barrier Glands

Presence of Dust

- Mills
- Silos
- Combustion Plants
- Dust extraction
- Polymer Production
- Paint Shops
- Control & Instrumentation
- Detection & Measurement







Hazardous Area Products

Flexicon have a wide range of cable protection solutions for use in Hazardous locations.

Routing of cables, both power and / or data, in hazardous areas, can be a complex task requiring detailed planning.

Our range offers a choice of seventeen different conduits, depending on the operating environment and technical challenges faced, suitable for use with our Ex d, Ex e and Ex t fittings.

Manufactured in Birmingham, UK, our comprehensive range of Ex d (flameproof), Ex e (Increased safety) and Ext (Dust Ignition Protection) fittings and accessories offer customers choice when it comes to specifying hazardous area approved equipment.

Our products are manufactured to the latest ATEX, IEC Ex, UL and CU-TR directives and standards.



Typical hazards & considerations



· Ingress protection



Chemical resistance Temperature





• Hazardous Gases / Dust 🖟 • Low Fire Hazard 💢 👉 • Static charge







•••• Mechanical strength



Corrosion resistance



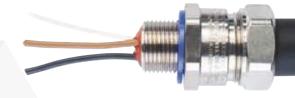


· Abrasion Resistance UV Resistance









UL Listed (file no. E247502) page 100

UL Listed for use in USA and Canada, UL file No. E247502 (ordinary locations).

Suitable for use in hazardous locations as per NEC: Article 501 (B)(2), Class I Div 2. Article 502 (A)(2) & (B)(2) Class II Div 1&2. Article 503 (A)(3) & (B)(3) Class III Div 1&2.

LTP-CUL Fittings









EXE - Increased safety & Dust Ignition proof page 104

Offering Ex e (Increased Safety) and Ex t (Dust Ignition Proof) protection.

Suitable for use in Zone 1, Zone 2, Zone 21 and Zone 22 Hazardous Areas when used with Flexicon's Liquid Tight Conduit Range.

LTP-EXE Fittings













EXD - Flameproof Barrier Glands page 102

Offering Ex d (Flameproof), Ex e (Increased Safety) and Ex t (Dust Ignition Proof) protection. Suitable for use in Zone 1, Zone 2, Zone 20, Zone 21 and Zone 22 Hazardous Areas. This gland can be used with any of Flexicon's Liquid Tight Conduit Range.



Scan here to learn more about our EXD Barrier Glands

LTP-EXD Fittings





Hygienic Range

Production processes or environments which are subject to wash-down or hygienic requirements need to consider cable management carefully. Given the increase in automation, cable protection becomes even more important to protect power and data cabling.

Cleaning regimes are an important and essential process to ensure the safety and quality of a Company's Output and Goods. Whilst machinery or plant is being cleaned or maintained, production or service output is zero therefore this time should be as effective as possible, without compromising safety and quality.

"Flexicon can offer Hygienic Cable Protection solutions that save time and money"





Flexicon can offer Cable Protection products which enable efficient cleaning whilst providing system integrity for Hygienic Environments.





Our products protect against the build up of microbes and bacteria and also ensure that cleaning processes do not damage or compromise equipment operation.

Applications including Food & Beverage, Machinery & OEM's, Healthcare and Pharmaceutical Industries all rely on the benefits of effective Cable Protection.





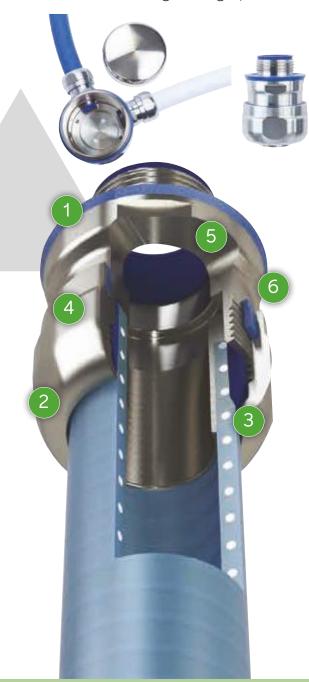


Flexicon can offer connection solutions for your critical power and data cables in Hygienic environments.

Our new range of Stainless Steel Round Boxes have been designed using SS Grade 316L and feature a range of connection options.

Our Hygienic fittings are available as a short thread version, to ensure a secure connection whilst maximising wiring space within the Box.





Features & Benefits

1) Hygienic design

In accordance with EN1672-2 & EN ISO 14159

(2) Smooth finish

Eliminate build up of bacteria & micro-organisms

(3) High IP rating

IP66, IP67, IP68 (2 Bar) & IP69

(4) Corrosion resistance

Material type (SS316L)

5) High chemical & thermal resistance

Resistant to chemicals & cleaning agents

6 Fewer components

Ease of assembly and integrated barrier seal to prevent contamination.



Hygienic Cable Protection Solutions



Flexicon are the leading solutions provider to protect your critical power and data cables in Hygienic environments from damage caused by mechanical, electrical or environmental influences.

Flexible conduit is ideal for the Cable Protection, Management and routing of Power and / or data cables.



Simplicity

No need for specialist cables.

Standard and single core cables can be grouped and protected in one system. Mechanical protection is provided by the conduit system.

Fewer components mean less product inventory throughout the supply chain.



Fixing

Multiple circuits can be fixed and secured in one system. This makes cleaning easy with one smooth outer cover. A range of fixing and mounting solutions are available to secure the Conduit in place throughout its lifetime.



Space Saving

Grouping standard cables into one system means less glanding space / area required to terminate.

Cost savings can be achieved by using smaller enclosures, less components and reducing installation time required to terminate.



Reduced Maintenance

Existing circuits can be replaced or added with ease using a conduit system, throughout the life of the installation.

Less cable entry points means less opportunity for Ingress Protection failure during washdown or cleaning schedules.



Speed of Installation

Grouping cables using flexible conduit means fewer cable entry points to the enclosure / equipment therefore less installation time. Flexible Conduit offers the ability to route around equipment and plant without the need for specialist bending equipment.







Cable Protection for Hygienic Applications

Typical hazards & product considerations



∴ Chemicals



Ingress Protection



👝 · Corrosion - Chemicals and Wash down



Steam jets



· Build up of Microbes and Bacteria



Contamination



₩ • Temperature





Abrasion



· Continuous & Repeated Movement



Explosive Gases



 LTP-C-FG Fitting 12mm to 63mm

· C-FG 90 Fitting 12mm to 63mm

· LPC-C-FG Fitting

81



• Round Box (SS316L)

Example applications

- Processes and production plants in the food & pharmaceutical industry
- Dairy Industry
- Breweries and Beverage Industry
- Bakery
- Meat & Poultry
- Seafood

- Confectionary
- Frozen
- Fresh and Chilled Foods
- Pharmaceutical Industry
- Cosmetic Industry
- Medical Technologies
- Clean Service applications

Typical Products



· LPC-FG -





· AFC - LFMC



· LPC-FG -



· LTBRDP-FG -

· AFC - LFNC





· LPC-FG -



· LTBRDP-FG -



· LTP-FG -



· LTPSS-FG -

Product installation examples:



· In line detection



LPC Blue conduit with SS FG fitting



Mixing Machines



 Extend or adapt circuits and wiring



· Automation and **Processing Machinery**



North American Approvals

UL Listed and UL Recognised Products

Flexicon have developed a range of products and solutions for installations which require either UL "Listing" or "Recognition" approvals. In North America, and sometimes the rest of the World, compliance with UL (Underwriters Laboratories) is a fundamental requirement.



UL standards are exacting and rigorous, with full transparency listed through the UL website.

UL Representatives audit factories on a regular basis and any Manufacturers making claims regarding a product being "Listed" or "Recognised" can be verified by visiting the UL website.

Other standards include NFPA 70, also called the National Electrical Code, are the wiring rules for general wiring, and NFPA 79 is the Electrical Standard for Industrial Machinery.





UL Recognised



UL Recognised approval is applicable to a component or raw material that is to be incorporated into a piece of finished equipment that will itself be UL Listed.

UL Listed Products



UL Listed approval is applicable to a finished product that will be used in its own right.

Flexicon can offer both Non-metallic and metallic solutions where UL Listed is a requirement.





Flexicon have the following conduit fittings ranges UL Listed to UL514B.



LTP-CUL

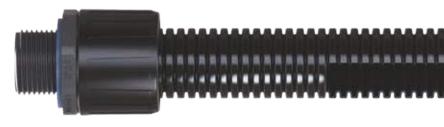


EDAY.



Ultra™





c(UL)us UL 1660 Liquid-Tight, Flexible Non-metallic Conduit



UL 1660 is the Non-metallic flexible conduit standard. Corrugated conduit (known as type C), is normally made from nylon (polyamide) and as the fittings for this type of conduit are not compression fittings, the conduit and fittings need to be supplied as a system.

Flexicon has FPAS21C to FPAS67C, PA6 corrugated conduits UL listed to UL1660.

For more details see File No.E246572 - UL Listing for Flexicon FPASC.

The UL mark is cULus, showing approval for use in both USA and Canada.

This Conduit is designed for use with UL Listed range of FPAX and FPAU Ultra™ IP68 fittings from 21mm to 67mm with NPT and Metric threads.

For more details see File No. E247502 - UL Listing for Flexicon Fittings.

Atkore can also offer AFC UL-FG LFNC-B to UL 1660 standard, UL File E123464.



$_{ t US}$ UL 360 Liquid-Tight, Flexible Steel Conduit

This is the standard for galvanised steel, PVC sheathed, flexible steel conduit. This standard specifies the conduit dimensions, with tolerances and for sizes up to 40mm it requires a copper bonding wire to be incorporated into the wall of the conduit.

Conduit fittings are specified under UL 514B, and are normally of a compression type that can cope with a wide tolerance range.

Flexicon's LTPUL conduit is UL listed to UL 360 for America and CSA approved for Canada.



Flexicon's LTP-CUL liquid tight fittings are UL listed to UL 514B, UL file No. E247502 (ordinary locations)

UL Listed for use in USA and Canada, UL file No. E247502 (ordinary locations).

Suitable for use in hazardous locations as per NEC: Article 501 (B)(2), Class I Div 2. Article 502 (A)(2) & (B)(2) Class II Div 1&2. Article 503 (A)(3) & (B)(3) Class III Div 1&2.

Atkore can offer a number of conduits with UL listing, notably AFC UL-FG LFMC to UL 360 standard, UL File E26540.



UL 1696 Non-metallic Protection Tubing

UL 1696 is the newest UL standard for conduit and is a system standard incorporating conduits and fittings.

Approval to UL 1696 gives a UL recognised system that may be incorporated into equipment that may itself end up being UL listed. Typically this standard covers corrugated polyamide and spirally reinforced PVC. This standard is harmonised between USA and

Canada so UL can also certify that products are suitable for use in Canada.

Flexicon has most of its nylon, PA6 and PA12 corrugated conduits, FPAS, FPAL, FPAH, FPR, FPI and FPIH, together with its FPA (IP66), FPAX (IP68) and FLK (IP66) fittings UL recognised to this standard, including use in Canada, UL file number E229161.

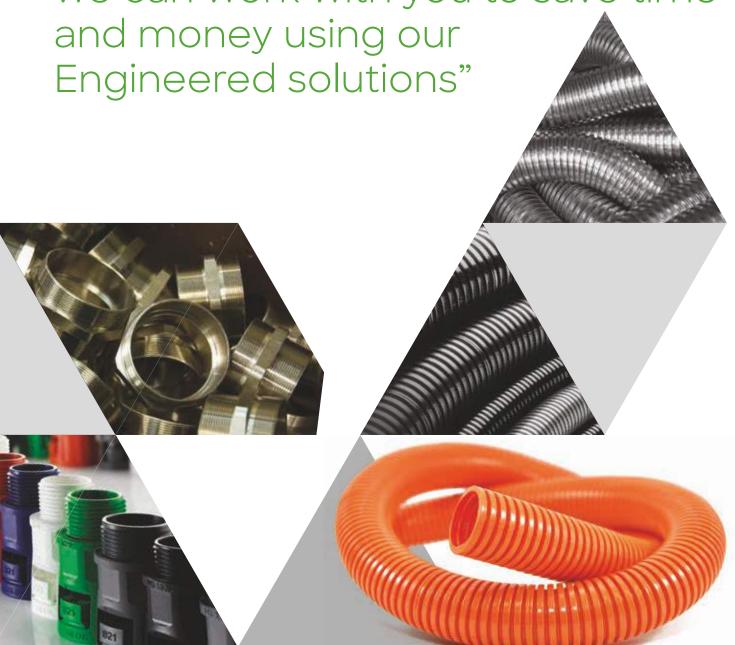


Tailored Solutions

Flexicon can offer true engineering support when it comes to your Cable Protection requirements. When you talk to us, you know you are talking to the people that design, engineer and manufacture the products you are buying.

We are the experts when it comes to understanding product capabilities and can engineer solutions to help you save time and money when it comes to your protection requirements.

"one size does not necessarily fit all, we can work with you to save time





Whatever your application, we've got it covered...

Working closely with our customers, we understand their protection challenges and have provided numerous customised solutions. Some examples of specials and tailored solutions are listed below:



- Long lengths Typically when 50m is not long enough we have provided extended lengths such as in special containers and cages up to 1,700m.
- Short lengths 10m is our smallest standard coil length but we can offer shorter lengths if necessary.
- Pre cut lengths Pre-cut to defined dimensions we can offer conduit pre-cut to your requirements ready to use saving you time.



Assemblies

· Ideal for use for wiring harnesses or for OEM's who are integrating products into their finished equipment. Consisting of pre-cut lengths of conduit, with fittings pre-terminated ready for assembly and wiring. Ideal for use in modular and prefabrication applications to simplify installation.



- · We offer a range of different Polymer formulations to change the performance characteristics and properties of our Flexible Conduits. This could be to modify any of the following:
 - Colours
 - UV resistance
 - Flame retardancy
 - Fire performance properties
 - Anti-static



Bespoke thread sizes

· We can offer various thread sizes and types. Our Non metallic fittings utilise barb design allowing us to create a variety of thread sizes across our FPA. FPAX and FPAU conduit fittings with metallic threads. Our manufacturing capability enables us to create various thread types, lengths, size and form.



- We can offer various termination options to interface with our Conduits. We have developed time and labour saving solutions to interface with equipment such as:
 - Push Fit termination no thread
 - Pulling eye assist with product handling
- Integrated Cable Strain Relief



Metal finishes

 We can offer different material finishes for metal systems. Often the self colour of Galvanised Steel, Stainless Steel or Aluminium does not match the required aesthetics. We can chemically blacken Stainless Steel conduits and fittings so they are not visible. We can also offer anodising of aluminium components to suit required aesthetics.

All the above options are considered as specials and may be subject to agreed Minimum Order Quantities and Leadtimes.





Non-metallic conduit & fittings

Advances in material technologies and manufacturing techniques have created solutions that offer combinations of properties previously not associated with non metallic systems. We work with a range of non metallic material types, from Polyamide (PA6, PA12, PA66), Polypropylene (PP) and PVC and can offer over 27 systems in a range of sizes from 7mm to 106mm.

Flexicon can offer both corrugated conduits and smooth bore spiral helically reinforced conduits, offering you the choice depending on your application.



Key Features

- Wide range of sizes
- Light Weight
- High Strength to Weight ratio
- Easy to cut
- · High Fatigue life
- Superior IP ratings up to IP69
- Low Corrosion
- Highly Flexible

Key Features

- Suitable for a wide range of applications
- Easy to work with for ease of installation
- Reduced installation times
- Reduced whole life costs
- Reduced risk of water or dust ingress
- Suitable for retrofit applications
- Suitable for diverse environments
- Movement without any impact on performance



















BS EN IEC 61386







Non-metallic conduit selection quide

| | | | se | lec | tio | n g | uid | e | NEW | | | NEW | NEW_ | |
|--|---|-------------------------------|-------------------------------|----------------------------|-------------------------------|-------------------------|-------------------------|--------------------------|-------------------------|---|---|--------------------------|--------------------------|---|
| | Conduit System | FPAS | FPAL | БРАН | FPASC | FPR | FPI | FPIH | FPIHRL | FPP | FPADS | FPRDS | FPPDS | |
| | IP40 | | | | | | | | | | | | | |
| IP Rating | IP54 IP65 IP66 IP67 IP68 IP69 | • | • | • | • | • | • | • | • | • | | | | |
| | gth (kg / 100mm) g) for 21/20mm size nm) for 21/20mm size | 75 40 45 black, grey | 60 30 40 black, grey | 120 70 55 black | 75 40 45 black, grey | 75 40 45 black | 45 30 35 black | 60 50 45 black | 60 35 55 black | 35 25 40 black, grey, white | 60 15 120 black, blue, orange, white | 60 15 120 black | 60 15 120 black | |
| High Fatigue Life | Max Min | 120°C -40°C | 120°C -40°C | 120°C -40°C | 120°C -40°C | 120°C -40°C | 110°C -50°C | 110°C -50°C | 110°C -50°C | 90°C -20°C | 120°C -40°C | 120°C -40°C | 90°C -20°C | |
| Category | Flexible Pliable | • | • | • | • | • | • | • | • | • | • | • | • | |
| Low Fire Hazard | ** Extra * Standard Halogen Free Self Extinguishing | TTMEAND LOW FIRE HAZARD | • | STANDARD LOW FIRE HAZARD * | UW FIRE HAZARD | LOW FIRE HAZARD | LOW FIRE HAZARD | STANDAND LOW FIRE HAZARD | LOW FIRE HAZARD | • | STANDARD LOW FIRE HAZARD | OXTRA LOW FIRE HAZARD ** | • | |
| Fire Tests | EN 45545-2 NFPA-130 | | | | | • | l | | | | | • | | I |
| Abrasion Resistance Resistance to solver UV Resistance | | • | • | • | • | • | • | • | • | | • | • | • | |
| Approvals | UL Recognised UL Listed Lloyds London Underground Network Rail Food Contact | • | • | • | • | • | • | • | • | | • | • | | |
| ROHS REACH Page Number | | 44 | 44 | 44 | 44 | 45 | 45 | 45 | 45 | 45 | 46 | 46 | 46 | |
| The state of the s | | | | | | | | | | | | | | |



124 Accessories



128 Contractor packs



130 Chemical resistance



Non-metallic conduit selection guide

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|-----------------------|-------------|-------|--|-------|-------|------------|-------|-------|----------|--------|-------|-------|----------------------|-----------|
| FPL | FPY | FPYS | FPYL | FPYLS | FPCB | FPCG | FPCGN | FPCBU | LPC | LPCO | LPCBU | LPCGN | LPC-FG | AFC UL-FG |
| | | | | | | | | | | | | | | |
| | | | | | • | • | • | • | | | | | | |
| • | | | | | | | | | • | • | • | • | • | • |
| • | • | | • | | | | | | • | • | • | • | • | • |
| | | | | | | | | | • | • | • | • | • | • |
| | | | | | | | | | • | • | • | • | • | • |
| 150 | 60 | N/A | 45 | N/A | 60 | 60 | 60 | 60 | 120 | 120 | 120 | 120 | 120 | 120 |
| 30 | 25 | N/A | 15 | N/A | 25 | 25 | 25 | 25 | 70 | 45 | 60 | 60 | 60 | 60 |
| 30 | 40 | 40 | 40 | 40 | 35 | 35 | 35 | 35 | 70 | 70 | 70 | 70 | 70 | 70 |
| black, grey, white | black, grey | black | black | black | black | light grey | green | blue | grey | orange | blue | green | white, blue, grey | white |
| | • | | | | | | | | | | | | | |
| 70°C | 120°C | 120°C | 120°C | 120°C | 70°C | 70°C | 70°C | 90°C | 70°C | 70°C | 90°C | 70°C | 90°C | 80°C |
| -5°C | -40°C | -40°C | -40°C | -40°C | -5°C | -20°C | -20°C | -20°C | -5°C | -20°C | -20°C | -20°C | -20°C | -20°C |
| • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
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| • | • | • | • | • | • | • | • | • | • | • | • | • | • | |
| • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| 66 | 68 | 68 | 68 | 68 | 74 | 74 | 74 | 74 | 76 | 76 | 76 | 76 | 76 | 76 |
| | | | | | | | | | | | | . • | . • | |





136 Technical guidance



144 Low fire hazard



Non-metallic fittings selection guide











Non-Metallic Conduit & Fittings

Non-metallic systems are typically lighter, easier to work with and more cost effective to install. With advances in material technologies non-metallic systems can provide an alternative solution where typically only metal systems had been considered previously.

FPAS



Construction: Standard weight, flame retardant nvlon (PA6) corrugated flexible conduit

Colour: Black or Grey (RAL 7031). Orange available on request.

Typical Applications: All types of machinery, public buildings.

- · Highly flexible and high fatigue life
- High impact strength and recovers if crushed
- Temperature range -40°C to +120°C (-20°C to +100°C for moving applications)
- Lloyd's Register Type Approval
- UL recognised
- · Low Fire Hazard (LFH), see page 144
- UL 94 V2 flame retardancy
- Halogen, sulphur and phosphorus free
- UV resistant (black)
- · Abrasion resistant
- · Highly resistant to solvents and oils
- Slit version also available FPAS-S please contact us

FPAL



Construction: Light weight nylon (PA6) corrugated flexible conduit. Colour: Black or Grey (RAL 7031).

Typical Applications: Machines where lower mechanical protection is required and

- · Highly flexible and high fatigue life
- · High impact strength and recovers if crushed
- Temperature range -40°C to +120°C (-20°C to +100°C for moving applications)
- UL recognised
- Highly resistant to solvents and oils
- · Self extinguishing
- · Halogen, sulphur and phosphorus free

FPAH



Construction: Heavy weight, flame retardant, nylon (PA6) corrugated flexible conduit.

Colour: Black.

Typical Applications: All types of machinery and public buildings where high mechanical strength required.

- · High mechanical strength
- · High impact resistance
- Temperature range -40°C to +120°C
- UL recognised
- · Low Fire Hazard (LFH), see page 144
- UL 94 V2 flame retardancy
- Halogen, sulphur and phosphorus free
- UV resistant
- Abrasion resistant
- Highly resistant to solvents

FPASC



Construction: Standard weight flame retardant nvlon (PA6) corrugated flexible conduit

Colour: Black or Grey (RAL 7031).

Typical Applications: All types of machinery, public buildings where UL listed is a requirement.

- Highly flexible and high fatigue life
- · High impact strength and recovers if crushed
- Temperature range -40°C to +120°C (-20°C to +100°C for moving applications)
- UL listed
- Lloyd's Register Type Approval
- · Low Fire Hazard (LFH), see page 144
- UL 94 V2 flame retardancy
- · Halogen, sulphur and
- phosphorus free UV resistant (black)
- Abrasion resistant
- · Highly resistant to solvents

| european (NW) siz | nominal size (mm) | pitch |
|-------------------|-------------------|-------|
| 7 | 10 | F |
| 8 | 11 | F |
| 10 | 13 | F |
| 12 | 16 | F |
| 14 | 18 | F |
| | 20 | C |
| 17 | 21 | F |
| | 21 | C |
| | 25 | C |
| 23 | 28 | F |
| 23 | 28 | C |
| 29 | 34 | C |
| 36 | 42 | C |
| 48 | 54 | C |
| 56 | 67 | C |
| 80 | 70 | C |
| 106 | 95 | С |

| | FPAS | partnumber | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) | FPAL | partnumber | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) | FPAH | partnumber | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) | FPASC | partnumber | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) |
|---|-------|------------|-----------------|------------------|-----------------|--------------------------------|--------|------------|-----------------|------------------|-----------------|--------------------------------|--------|------------|-----------------|------------------|-----------------|--------------------------------|--------|------------|-----------------|------------------|-----------------|--------------------------------|
| F | PAS10 | | 50 | 10.0 | 6.3 | 15 | FPAL10 | | 50 | 10.0 | 6.5 | 15 | | ' | | | | | | | | | | |
| F | PAS11 | | 50 | 11.5 | 8.2 | 20 | FPAL11 | | 50 | 11.5 | 8.4 | 20 | | | | | | | | | | | | |
| F | PAS13 | | 25, 50 | 13.0 | 9.8 | 25 | FPAL13 | | 50 | 13.0 | 10.0 | 25 | FPAH13 | 3 | 50 | 13.0 | 9.0 | 35 | | | | | | |
| F | PAS16 | | 25, 50 | 15.8 | 11.8 | 35 | FPAL16 | | 50 | 15.8 | 12.0 | 35 | FPAH16 | 6 | 50 | 15.8 | 11.5 | 45 | | | | | | |
| F | PAS18 | | 50 | 18.5 | 14.2 | 40 | FPAL18 | | 50 | 18.5 | 14.2 | 35 | | | | | | | | | | | | |
| F | PAS20 | | 25, 50 | 20.0 | 14.8 | 45 | FPAL20 | | 50 | 20.0 | 15.0 | 40 | | | | | | | | | | | | |
| F | PAS21 | | 25, 50 | 21.2 | 16.7 | 45 | FPAL21 | | 50 | 21.2 | 16.9 | 40 | FPAH2 | 1 | 50 | 21.2 | 15.5 | 55 | FPAS21 | C | 50 | 21.2 | 16.0 | 45 |
| F | PAS25 | | 25, 50 | 25.0 | 19.1 | 50 | FPAL25 | | 50 | 25.0 | 19.3 | 45 | | | 00 | 21.2 | 10.0 | 00 | 117.02 | | 00 | 21.2 | 10.0 | 10 |
| | PAS28 | | 25, 50 | 28.5 | 22.8 | 50 | FPAL28 | | 50 | 28.5 | 23.0 | 45 | | | | | | | | | | | | |
| | | | | | | | | | | | | | FPAH28 | В | 50 | 28.5 | 21.3 | 60 | FPAS28 | C | 50 | 28.5 | 21.7 | 50 |
| F | PAS34 | | 25, 50 | 34.5 | 28.1 | 60 | FPAL34 | | 50 | 34.5 | 28.3 | 55 | FPAH34 | 4 | 25 | 34.5 | 27.6 | 70 | FPAS34 | C | 50 | 34.5 | 28.1 | 60 |
| F | PAS42 | | 10, 25 | 42.5 | 35.5 | 70 | FPAL42 | | 25 | 42.5 | 35.7 | 65 | FPAH42 | 2 | 25 | 42.5 | 34.6 | 80 | FPAS42 | C. | 25 | 42.5 | 35.5 | 70 |
| F | PAS54 | | 10, 25 | 54.5 | 47.2 | 80 | FPAL54 | | 25 | 54.5 | 47.4 | 80 | FPAH54 | 4 | 25 | 54.5 | 46.0 | 90 | FPAS54 | C | 25 | 54.5 | 47.2 | 80 |
| F | PAS67 | | 10 | 67.2 | 56.3 | 130 | FPAL67 | | 10 | 67.2 | 56.5 | 110 | FPAH67 | 7 | 10 | 67.2 | 56.3 | 130 | FPAS67 | C | 10 | 67.2 | 56.3 | 130 |
| L | DFPAS | 80 | 10 | 80.0 | 67.0 | 150 | LDFPAL | .80 | 10 | 80.0 | 67.0 | 160 | | | | | | | | | | | | |
| L | DFPAS | 106* | 10 | 106.0 | 91.8 | 210 | LDFPAL | .106* | 10 | 106.0 | 91.5 | 210 | | | | | | | | | | | | |

For larger diameter conduit see page 70

Ordering Notes

- Specify Black or Grey (B = Black, G = Grey) and reel length eg: FPAS21B-50M for a Black 50m reel
- · Some reel lengths are MTO in grey
- See cutting tool page 127
- * Indicates parts made to order on request and may be subject to MOQ and lead time
- · Available on request:
- longer lengths and bulk packaging
- cut lengths and assemblies
- other colours
- full copies of independent test results confirming LFH properties
- fine pitch 34mm sizes
- Contractor Packs available see page 128 & 129
- For LFH performance see page 144



We have a range of products that can offer properties dependent on your requirement for impact resistance, flexibility, fatigue life, operating temperature and fire performance to name but a few.



Construction: Standard weight nylon (highly flame retardant PA6) corrugated flexible conduit.

Colour: Black

Typical Applications: Railways, underground and

public buildings. · Highly flexible and high

- fatigue life High impact strength and recovers if crushed
- · Temperature range -40°C to +120°C (-20°C to +100°C for
- moving applications) UL recognised
- · Lloyd's Register Type Approval
- Extra Low Fire Hazard (LFH)
- · Compliant to LUI Std S1085
- UL 94 V0 flame retardancy
- · Halogen, sulphur and phosphorus free
- UV resistant
- Abrasion resistant
- · Highly resistant to solvents and oils
- EN 45545 HL3 Interior R22 and exterior R23



Construction: Standard weight nylon (PA12) corrugated flexible conduit.

Colour: Black.

Typical Applications: obots and continual flexing.

- · Highly flexible
- · Exceptional fatique life
- · High impact resistance even at very low temperatures
- UV resistant
- Displays self recovery if crushed
- Temperature range -50°C to +110°C
- UL recognised
- · Highly resistant to solvents and oils
- Self extinguishing
- · Halogen, sulphur and phosphorus free



Construction: Heavy weight nylon (PA12) corrugated flexible conduit.

Colour: Black.

Typical Applications: Robots and continual flexing where higher mechanical strength required.

- Highly flexible and high fatigue life
- · High mechanical strength
- · High impact resistance even at very low temperatures
- UV resistant
- Displays self recovery if crushed
- Temperature range -50°C to +110°C
- UL recognised
- · Highly resistant to solvents and oils
- Self extinguishing
- · Halogen, sulphur and phosphorus free

Construction: Heavy weight nylon (PA12) corrugated flexible conduit.

Colour: Black.

DI 45545-2

PIHRL

Typical Applications: Where dynamic continual movement or flexing is required, with a higher mechanical strength even at very low temperatures such as on Bogies or Intercar Jumper assemblies. Rolling Stock applications requiring a superior level of fire performance.

- Highly flexible and high fatigue life
- · High mechanical strength
- · High impact resistance even at very low temperatures
- UV resistant
- Displays self recovery if crushed
- Temperature range -50°C to +110°C
- Highly resistant to solvents and oils
- Self extinguishing
- Extra Low Fire Hazard (LFH)
- · Halogen, sulphur and phosphorus free

EN 45545 HL3 Exterior R23

=PP

Construction: Standard weight polypropylene. flexible conduit

Colour: Black, Grey (RAL 7031) or White (see page 71)

Typical Applications:

Buildings, particularly where buried in concrete or plaster.

- Acid resistant
- Temperature range -20°C to +90°C
- Self extinguishing
- · Slit version also available

Other options available Also available as Divisible see FPPDS

| FPR | partnumber | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) | ΙĐ | partnumber | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) | FPIH | partnumber | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) | FPIHRL | part number | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) | FPP | part number reel length (m) | onteide dia (mm) | inside dia (mm) | min inside bend radius (mm) | pitch | nominal size (mm) | european (NW) sizes |
|-------|------------|-----------------|------------------|-----------------|--------------------------------|-------|------------|-----------------|------------------|-----------------|--------------------------------|--------|------------|-----------------|------------------|-----------------|--------------------------------|--------|-------------|-----------------|------------------|-----------------|--------------------------------|---------|--------------------------------|------------------|-----------------|--------------------------------|-------|-------------------|---------------------|
| FPR10 | | 50 | 10.0 | 6.3 | 15 | | | | | | | | | | | | | | | | | | | FPP10 | 50 | 10 | .0 6.3 | 15 | F | 10 | 7 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | F | 11 | 8 |
| FPR13 | | 50 | 13.0 | 9.8 | 25 | FPI13 | | 50 | 13.0 | 9.8 | 25 | FPIH1: | 3 | 50 | 13.0 | 9.0 | 25 | FPIHE | RL13 | 50 | 13.0 | 9.0 | 25 | FPP13 | 50 | 13 | .0 9.8 | 25 | F | 13 | 10 |
| FPR16 | | 50 | 15.8 | 11.8 | 35 | FPI16 | | 50 | 15.8 | 11.8 | 30 | FPIH1 | 3 | 50 | 15.8 | 11.5 | 35 | FPIHE | RL16 | 50 | 15.8 | 11.5 | 35 | FPP16 | 50 | 15 | .8 11.8 | 35 | F | 16 | 12 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | F | 18 | 14 |
| FPR20 | | 50 | 20.0 | 14.8 | 45 | | | | | | | | | | | | | | | | | | | FPP20 | 50 | 20 | .0 14.8 | 40 | C | 20 | |
| FPR21 | | 50 | 21.2 | 16.7 | 45 | FPI21 | | 50 | 21.2 | 16.7 | 35 | | | | | | | | | | | | | FPP21 | 50 | 21 | .2 16.7 | 40 | F | 21 | 17 |
| | | | | | | | | | | | | FPIH2 | 1 | 50 | 21.2 | 15.0 | 45 | FPIHE | RL21 | 50 | 21.2 | 15.0 | 45 | | | | | | C | 21 | |
| FPR25 | | 50 | 25.0 | 19.1 | 50 | | | | | | | | | | | | | | | | | | | FPP25 | 50 | 25 | .0 19.1 | 50 | C | 25 | |
| | | | | | | | | | | | | | | | | | | | | | | | | FPP28 | 50 | 28 | .5 22.8 | 55 | F | 28 | 23 |
| FPR28 | | 50 | 28.5 | 21.7 | 50 | FPI28 | | 50 | 28.5 | 21.7 | 45 | FPIH2 | 3 | 50 | 28.5 | 21.3 | 50 | FPIHE | RL28 | 50 | 28.5 | 21.3 | 50 | | | | | | C | 28 | 23 |
| FPR34 | | 50 | 34.5 | 28.1 | 60 | FPI34 | | 25 | 34.5 | 28.1 | 55 | FPIH3 | 1 | 25 | 34.5 | 27.6 | 60 | FPIHE | RL34 | 25 | 34.5 | 27.6 | 60 | FPP34 | 25, 5 | 0 34 | .5 28.1 | 65 | C | 34 | 29 |
| FPR42 | | 25 | 42.5 | 35.5 | 70 | FPI42 | | 25 | 42.5 | 35.5 | 60 | FPIH4 | 2 | 25 | 42.5 | 34.6 | 70 | FPIHE | RL42 | 25 | 42.5 | 34.6 | 70 | FPP42 | 25 | 42 | .5 35.5 | 80 | C | 42 | 36 |
| FPR54 | | 25 | 54.5 | 47.2 | 80 | FPI54 | | 25 | 54.5 | 47.2 | 70 | FPIH5 | 1 | 25 | 54.5 | 46.0 | 80 | FPIHE | RL54 | 25 | 54.5 | 46.0 | 80 | FPP54 | 25 | 54 | .5 47.2 | 100 | C | 54 | 48 |
| FPR67 | | 10 | 67.2 | 56.3 | 130 | FPI67 | | 10 | 67.2 | 56.3 | 120 | FPIH6 | 7 | 10 | 67.2 | 56.0 | 130 | FPIHE | RL67 | 10 | 67.2 | 56.0 | 130 | FPP67 | 10 | 67 | .2 56.3 | 150 | C | 67 | 56 |
| LDFPR | 80 | 10 | 0.08 | 67.0 | 160 | | | | | | | LDFPII | 180 | 10 | 0.08 | 66.5 | 170 | LDFPI | HRL80 | 10 | 80.0 | 66.5 | 170 | LDFPP8 | 8 0 10 | 80 | .0 67.0 | 300 | C | 70 | 80 |
| LDFPR | 106* | 10 | 106.0 | 91.5 | 210 | | | | | | | LDFPIH | 106* | 10 | 106.0 | 91.0 | 250 | LDFPIH | RL106* | 10 | 106.0 | 91.0 | 250 | LDFPP10 | 06* 10 | 106 | 3.0 91.5 | 400 | С | 95 | 106 |

For larger diameter conduit see page 70

Standards











BS EN IEC 61386









^{*} Note: Refer to conduit properties for applicable standards





FPADS

Construction: Double slit nylon (PA6) corrugated conduit.

Colour: Black. Other colours available* Orange, White, Blue and Grey.

Typical Applications: Retrofit and cable assemblies with pre

- assemblies with pre terminated plugs.

 • Made from 2 interlocking slit
- corrugated conduits

 Temperature range
 -40°C to +120°C
- Cables can be inserted laterally
- Provides abrasion resistance and routing of cables for static applications
- · Self extinguishing
- Halogen, sulphur and phosphorus free
- UV resistant
- Other colours available* in 21mm and 28mm Grey, Blue, Orange and White

NEW COW FIRE HAZARD

Construction: Double slit nylon (highly flame retardant PA6) corrugated conduit.

Colour: Black.

Typical Applications: Retrofit and cable assemblies where Low Fire Hazard performance is required, i.e. Rail Industry.

- Made from 2 interlocking slit corrugated conduits
- Temperature range -40°C to +120°C
- Cables can be inserted laterally
- Provides abrasion resistance and routing of cables for static applications
- Self extinguishing
- Halogen, sulphur and phosphorus free
- Extra Low Fire Hazard (LFH)
- Compliant to LUL Std S1085
- UL 94 V0 flame retardancy
 EN 45545 HL3 Interior R22 and exterior R23
- NFPA 130
- Highly resistant to solvents and oils
- UV resistant

FPPDS

Construction: Double slit polypropylene corrugated conduit.

Colour: Black.

Typical Applications: Retrofit and cable assemblies where basic mechanical cable protection is required.

- Made from 2 interlocking slit corrugated conduits
- Temperature range -20°C to +90°C
- Cables can be inserted laterally
- Provides abrasion resistance and routing of cables for static applications
- Self extinguishing
- Acid resistant
- Also available as a handy Contractor pack
 see page 128

FCL FCLAMP

Nylon corrugated conduit clip with integral lid

Nylon PA66 conduit clip with integral lid for increased security. Incorporates internal ribs to prevent corrugated conduit from pulling through, 20 kg with FPAS21.

Non-metallic,

heavy duty conduit clamp Nylon PA66,

Nylon PA66, conduit fixing clamp for corrugated conduit. Suitable for use with with fine or coarse pitch conduits. Can be used with a range of accessories including cover plates and weld plates (available separately - see page 72).

AB RINGS

Abrasion Rings Provides additional mechanical protection from localised abrasion for corrugated conduits. Can be fixed anywhere along the conduit and internal ribs maintain desired location. Nvlon PA66 construction and supplied as two half shells which interlock and secured using stainless steel self- tapping







screws.

| FPADS | part number reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) | FPRDS | partnumber | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) | FPPDS | partnumber | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) | Conduit Clip | FCLAMP | Abrasion Rings | pitch | nominal size (mm) | european (NW) sizes |
|--------|--------------------------------|------------------|-----------------|--------------------------------|-------|-------------|-----------------|------------------|-----------------|--------------------------------|-------|---------------|-----------------|------------------|-----------------|--------------------------------|--------------|--------------|----------------|-------|-------------------|---------------------|
| | | | | | | | | | | | | | | | | | FCL10 | | | F | 10 | 7 |
| FPADS1 | 11* 50 | 11.5 | 6.2 | 70 | FPRE |)S11 | 50 | 11.5 | 6.2 | 70 | FPPD | \$11 | 50 | 11.5 | 6.2 | 70 | | | | F | 11 | 8 |
| FPADS | 13 50 | 13.0 | 7.9 | 75 | FPRI | DS13 | 50 | 13.0 | 7.9 | 75 | FPPD |)S13 | 50 | 13.0 | 7.9 | 75 | FCL13 | | | F | 13 | 10 |
| FPADS | 16 50 | 15.8 | 10.3 | 100 | FPRE | DS16 | 50 | 15.8 | 10.3 | 100 | FPPD |)S16 | 50 | 15.8 | 10.3 | 100 | FCL16 | FCLAMP- 3-16 | AR16B | F | 16 | 12 |
| | | | | | | | | | | | | | | | | | FCL18 | | | F | 18 | 14 |
| | | | | | | | | | | | | | | | | | FCL20 | | | C | 20 | |
| FPADS: | 21 50 | 21.2 | 13.9 | 120 | FPRI | DS21 | 50 | 21.2 | 13.9 | 120 | FPPD |) S 21 | 50 | 21.2 | 13.9 | 120 | FCL21 | FCLAMP- 3-21 | AR21B | F | 21 | 17 |
| | | | | | | | | | | | | | | | | | FCL21 | FCLAMP- 3-21 | | C | 21 | |
| | | | | | | | | | | | | | | | | | FCL25 | | | C | 25 | |
| | | | | | | | | | | | | | | | | | FCL28 | FCLAMP- 4-28 | AR28B | F | 28 | 23 |
| FPADS: | 28 50 | 28.5 | 20.5 | 170 | FPRE |)S28 | 50 | 28.5 | 20.5 | 170 | FPPD |)S28 | 50 | 28.5 | 20.5 | 170 | FCL28 | FCLAMP- 4-28 | | C | 28 | 23 |
| FPADS | 34 25 | 34.5 | 26.6 | 180 | FPRI | DS34 | 25 | 34.5 | 26.6 | 180 | FPPD | S 34 | 25 | 34.5 | 26.6 | 180 | FCL34 | FCLAMP- 5-34 | AR34B | C | 34 | 29 |
| FPADS4 | 42 25 | 42.5 | 32.0 | 200 | FPRI | DS42 | 25 | 42.5 | 32.0 | 200 | FPPD |)S42 | 25 | 42.5 | 32.0 | 200 | FCL42 | FCLAMP- 6-42 | AR42B | C | 42 | 36 |
| FPADS: | 54 25 | 54.5 | 43.0 | 240 | FPRI | DS54 | 25 | 54.5 | 43.0 | 240 | FPPD |)S54 | 25 | 54.5 | 43.0 | 240 | FCL54 | FCLAMP- 7-54 | AR54B | C | 54 | 48 |
| | | | | | | | | | | | | | | | | | FCL67 | FCLAMP- 7-67 | | C | 67 | 56 |
| | | | | | | | | | | | | | | | | | | FCLAMP- 8-80 | | C | 70 | 80 |
| | | | | | | | | | | | | | | | | | | | | C | 95 | 106 |

For larger diameter conduit see page 70

F = fine pitch C = coarse pitch

Ordering Notes

- Specify colour (B = Black, G = Grey) and reel length eq: FPP16B-50M for a Black 50m reel
- Some lengths are MTO in Grey
- FPPH available on request
- * Indicates parts made to order on request and maybe subject to MOQ and lead time.
- · Available on request:
- longer lengths and bulk packaging
- cut lengths and assemblies
- additional sizesother colours
- Hinged fitting available for 21mm double slit conduit FDF21-M20B



Non-Metallic Conduit & Fittings

To make your selection from our wide range of flexible conduits easier, we have devised a table (see below) which offers a one page summary to help you when you come to select your fittings.

We have a wide selection of fittings that can be used with the conduits listed below.

Simply use the pull out page as a guide to see which fittings from the FPA, FPAU and Flexilok you can use with your chosen conduit.



Using this fold out page will illustrate the wide range of nonmetallic corrugated conduits we offer. There are ten different nonmetallic conduit families listed in this spread and these are detailed across Pages 44 - 46.

Ordering Notes

Once you have chosen your conduit from our wide range of products listed on Pages 44, 45 and 46, simply use this fold out page as a guide to see which fittings correspond with your selected conduit.

The fold out conduit summary chart below lines up with the respective susequent fittings pages to allow you to still see your selected conduit, whilst selecting your fittings.

| european (NW) sizes | | nominal size (mm) | | | | | | | | | NEW | | | NEW | NEW |
|---------------------|-------|-------------------|-------|-----------------------|-----------------------|-------------|-------------|---------------------|-------------|-----------------------|---------------------------|---------------------|-------------|-------------|-------------|
| ropea | pitch | mina | OD mm | FPAS | FPAL | FPAH | FPASC | FPR | FPI | FPIH | FPIHRL | FPP | FPADS | FPRDS | FPPDS |
| en | рi | В | 0 | part number | part number | part number | part number | part number | part number | part number | part number | part number | part number | part number | part number |
| 7 | F | 10 | 10.0 | FPAS10 | FPAL10 | | | FPR10 | | | | FPP10 | | | |
| 7 | F | 10 | | | | | | | | | | | | | |
| 8 | F | 11 | 11.5 | FPAS11 | FPAL11 | | | | | | | | FPADS11 | FPRDS11 | FPPDS11 |
| 10 | F | 13 | 13.0 | FPAS13 | FPAL13 | FPAH13 | | FPR13 | FPI13 | FPIH13 | FPIHRL13 | FPP13 | FPADS13 | FPRDS13 | FPPDS13 |
| 10 | F | 13 | | | | | | | | | | | | | |
| 10 | F | 13 | | | | | | | | | | | | | |
| 12 | F | 16 | 15.8 | FPAS16 | FPAL16 | FPAH16 | | FPR16 | FPI16 | FPIH16 | FPIHRL16 | FPP16 | FPADS16 | FPRDS16 | FPPDS16 |
| 12 | F | 16 | | | | | | | | | | | | | |
| 12 12 | F | 16 | | | | | | | | | | | | | |
| 14 | F | 16 18 | 18.5 | FPAS18 | FPAL18 | | | | | | | | | | |
| 14 | F | 18 | 10.5 | ITAGIO | ITALIO | | | | | | | | | | |
| | C | 20 | 20.0 | FPAS20 | | | | FPR20 | | | | FPP20 | | FPRDS20 | FPPDS20 |
| 17 | F | 21 | 21.2 | FPAS21 | FPAL21 | | | FPR21 | FPI21 | | | FPP21 | | FPRDS21 | FPPDS21 |
| 17 | С | 21 | | | | FPAH21 | FPAS21C | | | FPIH21 | FPIHRL21 | | FPADS21 | | |
| 17 | C | 21 | | | | | | | | | | | | | |
| | C | 25 | 25.0 | FPAS25 | FPAL25 | | | FPR25 | | | | FPP25 | | FPRDS25 | FPPDS25 |
| 23 | F | 28 | 28.5 | FPAS28 | FPAL28 | | | | | | | FPP28 | | | FPPDS28 |
| 23 | C | 28 | | | | FPAH28 | FPAS28C | FPR28 | FPI28 | FPIH28 | FPIHRL28 | | FPADS28 | FPRDS28 | |
| 29 | C | 34 | 34.5 | FPAS34 | FPAL34 | FPAH34 | FPAS34C | FPR34 | FPI34 | FPIH34 | FPIHRL34 | FPP34 | FPADS34 | FPRDS34 | FPPDS34 |
| 29 | | 34 | | | | | | | | | | | | | |
| 36 | С | 42 | 42.5 | FPAS42 | FPAL42 | FPAH42 | FPAS42C | FPR42 | FPI42 | FPIH42 | FPIHRL42 | FPP42 | FPADS42 | FPRDS42 | FPPDS42 |
| 36 | C | 42 | | | | | | | | | | | | | |
| 48 | C | 54 | 54.5 | FPAS54 | FPAL54 | FPAH54 | FPAS54C | FPR54 | FPI54 | FPIH54 | FPIHRL54 | FPP54 | FPADS54 | FPRDS54 | FPPDS54 |
| 48 | C | 54 | C7.0 | FDACC7 | EDAL CZ | FDALLCZ. | FDACC70 | EDD67 | EDICZ. | EDILICZ. | EDILIDI 67 | FDDC7 | | | |
| 56 | C | 67 | 67.0 | FPAS67 | FPAL67 | FPAH67 | FPAS67C | FPR67 | FPI67 | FPIH67 | FPIHRL67 | FPP67 | | | |
| 70 95 | C | 106 | 80.0 | LDFPAS80 LDFPAS106 | LDFPAL80 LDFPAL106 | | | LDFPR80 LDFPR106 | | LDFPIH80 LDFPIH106 | LDFPIHRL80 LDFPIHRL106 | LDFPP80 LDFPP106 | | | |
| 95 | U | 100 | 100.0 | LDLLA9 100 | LDFFAL 106 | | | LDFPK 106 | | FDLLIU 100 | LDFFIRKL 100 | FDLLL 100 | | | |

Standards











IEC EN 61386













Flexilok® system





Construction: Nylon (PA66) moulded fitting.

- · One piece fast fit
- Slim design
- IP rating: IP66
- · Anti-vibration and tamper resistant
- Pull off strength with:

(FLK21 - FPAS21 25kg) (FLK21 - FPAL21 20kg)

- · Can be removed using a screwdriver
- Suitable for fine and coarse pitch conduits
- Temperature range -40°C to +120°C
- · Metric threads supplied complete with locknuts
- Low Fire Hazard (LFH), see page 145
- · Halogen, sulphur and phosphorus free
- Available in Black, Grey (RAL 7031) and white, see page 67
- 42mm and 54mm feature 4 teeth for added strength
- Thread face sealing washers may be required to maintain IP rating at the connection to other equipment, see page 124

Fittings

FLK

Straight external thread

Nylon, one piece, slim, fast fit, external threaded fitting suitable for knockouts or threaded entries.

Push in

FLK

Simple, one piece, push in fitting suitable for knockouts with no need for locknuts. Ideal for use when enclosure access is restricted.

FLK-FLK

Coupler

One piece, slim, fast fit coupler for joining 2 conduits together

FLK90 90° Elbow external thread

One piece, slim, fast fit, external threaded 90 degree elbow fitting suitable for knockouts.



Ext Metric



Ext PG





Ext NPT



FLK34-PL32





Coupler

FLK34-FLK34



| t Metric | Ext PG |
|----------|--------|
|----------|--------|

| enro | nom | 0D 1 |
|------|-----|------|
| 7 | 10 | 10.0 |
| 7 | 10 | |
| 8 | 11 | 11.5 |
| 10 | 13 | 13.0 |
| 10 | 13 | |
| 10 | 13 | |
| 12 | 16 | 15.8 |
| 12 | 16 | |
| 12 | 16 | |
| 12 | 16 | |
| 14 | 18 | 18.5 |
| 14 | 18 | |
| | 20 | 20.0 |
| 17 | 21 | 21.2 |
| 17 | 21 | |
| 17 | 21 | |
| | 25 | 25.0 |
| 23 | 28 | 28.5 |
| 23 | 28 | |
| 29 | 34 | 34.5 |
| 29 | 34 | |
| 36 | 42 | 42.5 |
| 36 | 42 | |
| 48 | 54 | 54.5 |
| 48 | 54 | |
| 56 | 67 | 67.0 |
| 80 | 70 | |
| 106 | 95 | |

| FLK10-M12 | FLK10-PG7 | | | | | |
|------------------------|--------------------------|-----------|------------|-------------|------------------------------|---------------|
| FLK13-M16 | FLK13-PG9 | | | | | |
| FLK16-M16 FLK16-M20 | FLK16-PG11 FLK16-PG13 | FLK16-038 | FLK16-PL20 | FLK16-FLK16 | FLK16-M16-90 FLK16-M20-90 | FLK16-PG11-90 |
| | | | | | | |
| FLK20-M20 | | | FLK20-PL20 | FLK20-FLK20 | FLK20-M20-90 | |
| FLK21-M20 | FLK21-PG16 | FLK21-050 | FLK21-PL20 | FLK21-FLK21 | FLK21-M20-90 | FLK21-PG16-90 |
| FLK25-M25 | | | FLK25-PL25 | FLK25-FLK25 | FLK25-M25-90 | |
| FLK28-M25 | FLK28-PG21 | FLK28-075 | FLK28-PL25 | FLK28-FLK28 | FLK28-M25-90 | FLK28-PG21-90 |

Ordering Notes

FLK34-M32 FLK34-PG29 FLK34-100

FLK42-125

FLK42-M40 FLK42-PG36

FLK54-M50 FLK54-PG48

FLK42-M50

FLK54-M63

- Specify Black or Grey (B=Black, G=Grey) eg. FLK20-M20B
- · For white version see page 67
- · Grey and White options may be subject to MOQ and lead time
- Details for removal tools can be found on

Also Available

- · Push in fitting removal tool see accessories page 127
- · Brass threaded versions
- Two teeth version of 42mm and 54mm available on request

Removal Tool



FLK34-M32-90

FLK42-M40-90

FLK54-M50-90

FLK34-PG29-90

NOTE: 42mm and 54mm require a removal tool to aid removal if necessary see page 127.



- One piece fast fit
- Slim design
- IP rating: IP66
- Anti-vibration and tamper resistant
- Pull off strength with:

(FLK21 - FPAS21 25kg)

(FLK21 - FPAL21 20kg)

(FLK20-PP - FPP20 13kg)

- Can be removed using a screwdriver
- Suitable for fine and coarse pitch conduits
- Temperature range -40°C to +120°C
- Metric threads supplied complete with locknuts
- · Halogen, sulphur and phosphorus free
- Available in Black, Grey (RAL 7031) and white, see page 67
- Polypropylene version suitable for acid environments
- Thread face sealing washers may be required to maintain IP rating at the connection to other equipment, see page 124

FLK45 FLK-PP EC REC 45° Elbow external thread Straight external thread End cap Rubber end cap One piece, slim, fast fit, external Polypropylene, one piece, slim, Nylon PA66 end cap to snap over Thermoplastic elastomer cap used nylon PA66 end cap to snap ove end of conduit and provide a smooth entry bush to prevent snagging and sharp edges, and provide a neat finish when no fast fit, external threaded fitting suitable for knockouts or threaded to seal end of conduit. Can be cut to size depending on size of cable. Can be additionally secured using threaded 45 degree elbow fitting suitable for knockouts. cable tie (not supplied). connectors are used.

| | | | | | No. | nominal size (mm) | | european (NW) sizes |
|--------------|-----------------|---------|----------------|---------------------------|-----------------|-------------------|-------|----------------------|
| Ext Metric | Ext Metric (PP) | End Cap | part number | to fit conduit size | outlet ID mm | nomina | OD mm | europea |
| | | | REC10 | 10 | 0-7 | 10 10 | 10.0 | 7 |
| | | | REC10 | 11 | 0-7 | 11 | 11.5 | 8 |
| | | | REC13 | 13 | 0-7 | 13 13 13 | 13.0 | 10 10 10 |
| FLK16-M20-45 | FLK16-M16-PP | EC16B | REC16 | 16 | 0-11 | 16 16 16 | 15.8 | 12 12 12 12 |
| | | | | | | 18 | 18.5 | 14 |
| | | | | | | 18 | | 14 |
| FLK20-M20-45 | FLK20-M20-PP | | | | | 20 | 20.0 | |
| FLK21-M20-45 | | EC21B | REC21 | 21 | 0-15 | | 21.2 | 17 |
| | | EC21B | REC21 | 21 | 0-15 | 21 21 | | 17 17 |
| FLK25-M25-45 | FLK25-M25-PP | | | | | 25 | 25.0 | |
| FLK28-M25-45 | | EC28B | REC28 | 28 | 0-21 | 28 | 28.5 | 23 |
| | | EC28B | REC28 | 28 | 0-21 | 28 | | 23 |
| FLK34-M32-45 | FLK34-M32-PP | EC34B | REC34 | 34 | 0-25 | 34 34 | 34.5 | 29 29 |
| FLK42-M40-45 | | EC42B | REC42 | 42 | 0-34 | 42 42 | 42.5 | 36 36 |
| FLK54-M50-45 | | EC54B | REC54 | 54 | 0-46 | 54 54 | 54.5 | 48 48 |
| | | | REC67 | 67 | 0-52 | 67 | 67.0 | 56 |
| | | | REC80 | 80 | 0-62 | 70 | | 80 |
| | | | | | | 95 | | 106 |











european (NW) sizes nominal size (mm)

7 10 10.0

7 10

8 11 11.5

10 13 13.0

10 13

10 13

12 16 15.8

12 16

12 16

12 16

14 18 14 18 20 20.0

17 21 21.2

17 21

17 21

23 28

23 28 34.5

29 34

29 34

36 42

36 42 48 54 54.5

48 54

56 67 67.0

70 80 95 106 9

18.5

25.0

42.5

FPA28-M25

FPA28-M32

FPA34-M32

FPA34-M40

FPA42-M40

FPA42-M50

FPA54-M50

FPA54-M63

FPA67-M63

FPA80-M85

25 28.5

FPA system





Nylon & Brass threaded

Construction: Nylon (PA66) moulded

Construction: Nylon (PA66) moulded fitting with nickel plated brass swivel thread.

Colour: Black or Grev.

Fittings FPA FPA90 **FPA** Straight UNEF 90° Elbow external thread Straight external thread Flange swivel internal thread One piece, fast fit, external One piece, fast fit One piece, fast fit, external threaded 90 fitting with nylon swivel flange with threaded fitting. Suitable for degree elbow fitting. Suitable One piece, fast fit fitting with nickel plated brass swivel UNEF internal thread for attachment to knockouts or threaded entries. for knockouts. 'O' ring. circular connectors. 90 Degree 90 Degree 90 Degree Ext Metric Ext PG Ext NPT Ext UNEF Thread Flange Metric NPT PG FPA10-M12 FPA10-PG7 FPA10-M12-90 FPA10-PG7-90 FPA10-M16 FPA10-PG9 FPA11-M12 FPA11-PG7 FPA11-M12-90 FPA13-M12 FPA13-M16-90 FPA13-PG7 FPA13-BU063 (5/8") FPA13-PG9-90 FPA13-M16 FPA13-BU075 FPA13-PG9 (3/4") FPA13-M20 FPA13-PG11 FPA13-BU088 (7/₈") FPA16-M16 FPA16-PG9 FPA16-038 FPA16-BU075 (3/4") FPA16-FL FPA16-M16-90 FPA16-PG9-90 FPA16-050-90 FPA16-M20 FPA16-PG11 FPA16-050 FPA16-BU088 (⁷/₈") FPA16-M20-90 FPA16-PG11-90 FPA16-PG13 FPA16-BU100 (1") FPA16-PG13-90 FPA16-PG16 FPA16-BU119 (13/16") FPA18-M20 FPA18-PG13 FPA18-M20-90 FPA20-M20 FPA20-M20-90 FPA21-M20 FPA21-PG13 FPA21-050 FPA21-BU100 FPA21-FL FPA21-M20-90 FPA21-PG16-90 FPA21-050-90 (1") FPA21-M25 FPA21-PG16 FPA21-BU119 (13/16") FPA21-BU125 (11/4") FPA25-M25 FPA25-M25-90

(1%")

(17/16")

(17/16")

(13/4")

(2")

(21/4")

(2")

(21/4")

Ordering Notes

FPA28-PG21

FPA28-PG29

FPA34-PG29

FPA42-PG36

FPA54-PG42

FPA54-PG48

FPA67-PG48

• Specify Black or Grey (B = Black, G = Grey) eg. FPA16-M16B

FPA28-075

FPΔ34-100

FPA42-125

FPA42-150

FPA54-150

FPA54-200

FPA67-200

FPA28-BU138

FPA28-BU144

FPA34-BU144

FPA34-BU175

FPA42-BU200

FPA42-BU225

FPA54-BU200

FPA54-BU225

- · Grey option may be subject to MOQ and lead time
- The IP rating onto a UNEF threaded connector may be dependent on the design of the connector
- · Available on request:

FPA28-FL

FPA34-FL

FPA42-FL

FPA28-M25-90

FPA34-M32-90

FPA42-M40-90

FPA42-M50-90

FPA54-M50-90

FPA54-M63-90

FPA67-M63-90

FPA28-PG21-90

FPΔ34-PG29-90

FPA42-PG36-90

FPA54-PG48-90

FPA67-PG48-90

FPA28-075-90

FPΔ34-100-90

FPA42-125-90

FPA42-150-90

FPA54-150-90

FPA54-200-90

FPA67-200-90

- additional sizes, alternative threads
- additional UNEF threads and combinations



- 1 part fast fit
- IP rating: IP66
- · Vibration & shock tested to EN61373 Cat 2
- Tamper resistant
- · Can be removed using a screwdriver
- Both 90° & 45° elbows incorporate swept bore to facilitate cable installation & protect cables when installed
- · All round teeth give high pull off strength 70kg with FPAH21
- · Suitable for fine and coarse pitch conduits
- Temperature range -50°C to +135°C
- · Low Fire Hazard (LFH), see page 144
- · Halogen, sulphur and phosphorus free
- · Available in Black or Grey (RAL 7031)
- EN 45545 HL3 and NFPA 130 compliant
- · Nylon metric threads supplied with glass reinforced nvlon locknut
- · Thread face sealing washers may be required to maintain IP rating at the connection to other equipment, see page 124

FPA90 FPA45 FPA45 FPA90 90° Elbow UNEF swivel 45° Elbow UNEF swivel Flange 45° Elbow external thread internal thread internal thread One piece, fast fit 90 degree One piece, fast fit, external elbow fitting with nylon swivel flange with 'O' ring face seal. threaded 45 degree elbow fitting. Suitable for knockouts. One piece, fast fit, 90 degree One piece, fast fit, 45 degree elbow fitting with nickel plated brass swivel UNEF internal elbow fitting with nickel plated brass swivel UNEF internal thread for attachment to circular connectors. thread for attachment to circular connectors. size nominal 45 Degree 45 Degree 45 Degree 90 Degree Flange 90 Degree UNEF Metric PG NPT 45 Degree UNEF Thread 10 10.0 10 11 11.5 FPA13-BU063-90 (5%") 13 13.0 13 FPA13-BU075-90 (3/4") FPA13-BU088-90 (7/8") 13 FPA16-BU075-90 (3/4") FPA16-FL-90 FPA16-M20-45 FPA16-PG13-45 FPA16-050-45 FPA16-BU075-45 (3/4") 16 15.8 FPA16-BU088-90 (7/8") FPA16-BU088-45 16 (7/8") FPA16-BU100-90 (1") FPA16-BU100-45 16 (1") FPA16-BU119-90 (13/16") FPA16-BU119-45 (13/16") 16 18 18.5 18 20 20.0 FPA21-BU100-90 FPA21-FL-90 FPA21-M20-45 FPA21-PG13-45 FPA21-050-45 FPA21-BU100-45 (1") 21 21.2 (1") FPA21-BU119-90 (13/16") FPA21-PG16-45 FPA21-BU119-45 (13/16") 21 FPA21-BU125-90 FPA21-BU125-45 (11/4") (11/4") 21

FPA28-PG21-45

FPΔ34-PG29-45

FPA42-PG36-45

FPA28-075-45

FPΔ34-100-45

FPA42-150-45

FPA54-150-45

FPA28-M25-45

FPΔ34-M32-45

FPA42-M50-45

FPA54-M50-45

Standards

FPA28-BU138-90

FPA28-BU144-90

FPΔ34-RU144-90

FPA34-RU175-90

FPA42-BU200-90

FPA42-BU225-90

FPA54-BU200-90

FPA54-BU225-90

















FPA28-FL-90

FPΔ34-FI-90

FPA42-FL-90

FPA54-FL-90*





FPA28-BU138-45

FPA28-BU144-45

FPΔ34-RU144-45

FPA34-RU175-45

FPA42-BU200-45

FPA42-BU225-45

FPA54-BU200-45

FPA54-BU225-45

(1%")

(17/16")

(17/16")

(13/4")

(2")

(21/4")

(2")

(21/4")

european (NW) sizes

7

7

8

10

10

10

12

12

12

12

14

14

17

17

17

23

23

29

36

48

70

25 25.0

28

28

34 34.5 29

34

42 42.5 36

42

54 54.5 48

54

67 67.0 56

80

(1%")

(17/16")

(17/16")

(13/4")

(2")

(21/4")

(2")

(21/4")

28.5

шш

00





european (NW) sizes

15.8

28.5

34.5

54.5

67.0

42.5

FPA system





Nylon & Brass threaded

Construction: Nylon (PA66) moulded

Construction: Nylon (PA66) moulded fitting with nickel plated

brass swivel thread. Colour: Black or Grey.

| | | 00.00.00 | c. c.ej. | |
|-------------------|-------|--|--|---|
| | | Fittings | | |
| | | FPA45 | FPA-FPA | FPA-MPC |
| | | Flange One piece, fast fit 45 degree elbow fitting with nylon swivel flange with 'O' ring face seal. | Coupler One piece, fast fit, coupler to join corrugated conduits. Also available in FPAX and FPAU versions. | Coupler One piece, fast fit, coupler to join corrugated conduit to rigid conduit. |
| | | IP66 | IP66 | IP66 |
| (mm) | | | | |
| nominal size (mm) | OD mm | 45 Degree Flange | Coupler | Rigid Conduit Coupler |
| 10 10 | 10.0 | | | |
| 11 | 11.5 | | | |
| 13 | 13.0 | | | |
| 13 | | | | |
| 13 16 | 15.8 | FPA16-FL-45 | FPA16-FPA16 | FPA16-MPC16 |
| 16 | 13.0 | T FA IU-1 L-4J | Traio-traio | TFA TO-MIFO TO |
| 16 | | | | |
| 16 | | | | |
| 18 | 18.5 | | | |
| 18 | 20.0 | | EDAGO EDAGO | |
| 20 21 | 20.0 | FPA21-FL-45 | FPA20-FPA20 FPA21-FPA21 | FPA21-MPC20 |
| 21 | 21.2 | 117m115 70 | 11761 | |
| 25 | 25.0 | | FPA25-FPA25 | |
| | | | | |

Ordering Notes

* Indicates parts made to order on request

FPA28-FL-45

FPA34-FL-45

FPA42-FL-45

FPA54-FL-45

- NPB = Nickel Plated Brass
- Grey option may be subject to MOQ and lead time
- Available on request:
- for brass locknuts and sealing washers see accessories, page 124

FPA28-FPA28

FPA34-FPA34

FPA42-FPA42

FPA54-FPA54

- EMC braid clamp version see page 121



FPA28-MPC25

FPA34-MPC32

FPA42-MPC40



- 1 part fast fit
- IP rating: IP66
- · Vibration & shock tested to EN61373 Cat 2
- Tamper resistant
- · Can be removed using a screwdriver
- Both 90° & 45° elbows incorporate swept bore to facilitate cable installation & protect cables when installed
- All round teeth give high pull off strength 70kg with FPAH21
- Suitable for fine and coarse pitch conduits
- Temperature range -50°C to +135°C
- · Low Fire Hazard (LFH), see page 144
- Halogen, sulphur and phosphorus free
- · Available in Black or Grey (RAL 7031)
- EN 45545 HL3 and NFPA 130 compliant

• Thread face sealing washers may be required to maintain IP rating at the connection to other equipment, see page 124

FPA

Straight swivel brass external thread One piece, fast fit, swivel, nickel plated brass external threaded fitting. Suitable for knockouts or threaded entries.





NPB Ext PG

FPA16-BPG9

FPA16-BPG11



Straight swivel brass internal thread

One piece, fast fit, swivel, nickel plated brass internal threaded fitting.









NPB Int Metric

FPA13-BFM16

FPA16-BFM16

FPA16-BFM20

FPA21-BFM20

FPA28-BFM25

FPA34-BFM32

FPA42-BFM40

FPA54-BFM50



90° Elbow swivel brass external thread

One piece, fast fit, swivel, 90 degree elbow,

FPA90



| NPB Ext Metric | NPB Ext PG |
|--------------------------------|----------------------------------|
| FPA13-BM16-90 | FPA13-BPG9-90 |
| FPA16-BM16-90 FPA16-BM20-90 | FPA16-BPG9-90 FPA16-BPG11-90 |
| | |
| FPA21-BM20-90 | FPA21-BPG13-90 FPA21-BPG16-90 |
| FPA28-BM25-90 | FPA28-BPG21-90 |
| FPA34-BM32-90 | FPA34-BPG29-90 |
| FPA42-BM40-90 FPA42-BM50-90 | FPA42-BPG36-90 |
| FPA54-BM50-90 FPA54-BM63-90 | FPA54-BPG48-90* |
| | |

| FPA13-BM16 | FPA13-BPG9 |
|------------|------------|
| | |

NPB Ext Metric

FPA16-BM16

FPA16-BM20

| FPA21-BM20 | FPA21-BPG13 |
|------------|-------------|
| | FPA21-BPG16 |
| | |

| FPA28-BM25 | FPA28-BPG21 |
|------------|-------------|
| FPA34-BM32 | FPA34-BPG29 |
| FPA42-BM40 | FPA42-BPG36 |

| Sta | nda | rds |
|-----|------|-------|
| Jta | IIGG | II UJ |

FPA42-BM50

FPA54-BM50

FPA54-BM63

FPA67-BM63





FPA54-BPG48*















european (NW) sizes

7

10

10

12 12

12

14

17

17

23

29

36

48

70

nominal size (mm)

10 10.0 7

10

11 11.5 8

13 13.0 10

13

13

16 15.8 12

16

16 16

18 18.5 14

18

20 20.0

21 21.2 17

21

21

25 25.0

28 28.5 23

28

34 34.5 29

34

42 42.5 36

42

54 54.5 48

54

67 67.0 56

80

00





FPA system





Brass threaded

Construction: Nylon (PA66) moulded fitting with nickel

plated brass swivel thread.

Colour: Black or Grey.

Fittings

| | | | 3 | | | |
|----------------------|----------------------------|--------------|---|---|--|---|
| | | | FPA90 | FPA45 | | |
| | | | 90° Elbow swivel brass internal thread One piece, fast fit, swivel, 90 degree elbow, nickel plated brass internal threaded fitting. | 45° Elbow swivel bra: One piece, fast fit, swive nickel plated brass exte Suitable for knockouts of | el, 45 degree elbow, rnal threaded fitting. | 45° Elbow swivel brass internal thread One piece, fast fit, swivel, 45 degree elbow, nickel plated brass internal threaded fitting. |
| european (NW) sizes | nominal size (mm) |) mm | IP66 | IP66 | | IP66 |
| 7 | 10 10 | 10.0 | NPB Int Metric | NPB Ext Metric | NPB Ext PG | NPB Int Metric |
| 8 | 11 | 11.5 | | | | |
| 10 10 10 | 13 13 13 | 13.0 | FPA13-BFM16-90 | | | |
| 12 12 12 12 | 16 16 16 16 | 15.8 | FPA16-BFM16-90 FPA16-BFM20-90 | FPA16-BM16-45 FPA16-BM20-45 | FPA16-BPG13-45 FPA16-BPG16-45 | FPA16-BFM20-45 |
| 14 14 | 18 18 | 18.5 | | | | |
| 17 17 17 | 20 21 21 21 21 | 20.0 21.2 | FPA21-BFM20-90 | FPA21-BM20-45 | FPA21-BPG13-45 FPA21-BPG16-45 | FPA21-BFM20-45 |
| 23 23 | 28 28 | 25.0 28.5 | FPA28-BFM25-90 | FPA28-BM25-45 | FPA28-BPG21-45 | FPA28-BFM25-45 |
| 29 29 | 34 34 | 34.5 | FPA34-BFM32-90 | FPA34-BM32-45 | FPA34-BPG29-45 | FPA34-BFM32-45 |
| 36 36 | 42 42 | 42.5 | FPA42-BFM50-90 | FPA42-BM40-45 FPA42-BM50-45 | FPA42-BPG36-45 | FPA42-BFM50-45 |
| 48 48 | 54 54 | 54.5 | FPA54-BFM50-90 | FPA54-BM50-45 FPA54-BM63-45 | FPA54-BPG48-45* | FPA54-BFM50-45 |
| 56 | 67 | 67.0 | | | | |
| 70 | 80 | | | | | |
| 95 | 106 | | | | | |

Ordering Notes

- * Indicates parts made to order on request
- NPB = Nickel Plated Brass
- Grey option may be subject to MOQ and lead time

· Available on request:

- for brass locknuts and sealing washers see accessories, page 124
- EMC braid clamp version, see page 121







- 1 part fast fit
- IP rating: of conduit & fitting: IP66 of cable gland: IP68 (10 bar)+IP69
- Vibration & shock tested to EN61373 Cat 2
- Tamper resistant
- · Can be removed using a screwdriver
- All round teeth give high pull off strength 70kg with FPAH21
- Both 90° and 45° elbows incorporate swept bore to facilitate cable installation and protect cables when installed
- · Suitable for fine and coarse pitch conduits
- Temperature range: conduit fitting: -50°C to +135°C cable gland: -40°C to +100°C static -20°C to +100°C dynamic
- Low Fire Hazard (LFH), see page 144
- · Halogen, sulphur and phosphorus free
- · Refer to accessories for clamping range page 129
- · Thread face sealing washers may be required to maintain IP rating at the connection to other equipment, see page 124

FPA90 FPA45 **FPA** With integral cable gland With integral cable gland With integral cable gland One piece, fast fit, swivel, nickel plated brass One piece, fast fit, swivel, 90 degree elbow, One piece, fast fit, swivel, 45 degree elbow, nickel plated brass external threaded cable gland fitting. Suitable for knockouts or threaded entries. nickel plated brass external threaded cable gland fitting. Suitable for knockouts or threaded entries. external threaded cable gland fitting. Suitable for knockouts or threaded entries. nominal size (mm) OD mm NPB Metric NPB Metric NPB Metric 10 10.0 10 11 11.5 FPA13-BM16-CG FPA13-BM16-CG-90 13 13.0 13 13 FPA16-BM16-CG FPA16-BM16-CG-90 FPA16-BM20-CG-45 16 15.8 FPA16-BM20-CG FPA16-BM20-CG-90 16 16 16 18 18.5 18 20 20.0 FPA21-BM20-CG FPA21-BM20-CG-90 FPA21-BM20-CG-45 21 21.2 21 21 25.0 25 FPA28-BM25-CG FPA28-BM25-CG-90 FPA28-BM25-CG-45 28 28.5 28 FPA34-RM32-CG FPA34-BM32-CG-90 FPA34-BM32-CG-45 34 34.5

Standards













FPA42-BM40-CG

FPA54-BM50-CG







FPA42-BM40-CG-90

FPA54-BM50-CG-90



FPA42-BM40-CG-45

FPA54-BM50-CG-45



european (NW) sizes

7

7 8

10

10

10

12

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12 12

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36

48

70

34

42 42.5 36

42

54 54.5 48

54

67 67.0 56

80





ULTRA™ system











Construction: Nylon (PA66) moulded fittings featuring Integrated Sealing Technology Construction: Nylon (PA66) moulded fittings featuring Integrated Sealing Technology with nickel plated brass swivel threads

Colour: 2 Tone Colour - Black and Grey.

Fittings ULTRA™ system straight

FPAU

FPAU





Straight external thread

One piece fast fit, external threaded fitting with integrated conduit seal. Suitable for knockouts or threaded entries.





Straight UNEF swivel internal thread

One piece fast fit fitting with nickel plated brass swivel UNEF internal thread for attachment to circular connectors with integrated conduit seal.







FPAU

Straight swivel brass external threac

One piece fast fit, swivel, nickel plated brass external threaded fitting with integrated conduit seal. Suitable for knockouts or threaded entries.







| IP69 |
|------|
|------|

| european (NW) sizes | nominal size (mm) | 0D mm |
|---------------------|-------------------|-------|
| 7 | 10 | 10.0 |
| 7 | 10 | |
| 8 | 11 | 11.5 |
| 10 | 13 | 13.0 |
| 10 | 13 | |
| 10 | 13 | |
| 12 | 16 | 15.8 |
| 12 | 16 | |
| 12 | 16 | |
| 12 | 16 | |
| 14 | 18 | 18.5 |
| 14 | 18 | |
| | 20 | 20.0 |
| 17 | 21 | 21.2 |
| 17 | 21 | |
| 17 | 21 | |
| | 25 | 25.0 |
| 23 | 28 | 28.5 |

23 28

48 54 56

70 80 95 106

42 42.5 42 36 48

| nominal size (mm) | m. | | | | | | | | |
|-------------------|-------|------------|-------------|-------------|---------------|----------|----------------|----------------|--------------|
| nom | OD mm | Ext Metric | Ext PG | Ext NPT | Int UNEF | Thread | NPB Ext Metric | NPB Ext PG | NPB Ext NPT |
| 10 | | | | | | | | | |
| 11 | | | | | | | | | |
| 13 | | FPAU13-M16 | FPAU13-PG9 | | | | FPAU13-BM16 | FPAU13-BPG9 | |
| 13 | | | | | | | | | |
| 13 | | FPAU16-M16 | FPAU16-PG9 | FPAU16-038 | FPAU16-BU075 | (¾") | FPAU16-BM16 | FPAU16-BPG9 | FPAU16-B038* |
| 16 | | FPAU16-M20 | FPAU16-PG11 | FPAU16-050 | FPAU16-BU088 | (%") | FPAU16-BM20 | FPAU16-BPG11 | FPAU16-B050* |
| 16 | | | FPAU16-PG13 | | FPAU16-BU100 | (1") | | | 1171010 2000 |
| 16 | | | FPAU16-PG16 | | FPAU16-BU119 | (13/16") | | | |
| 18 | 18.5 | | | | | | | | |
| 18 | | | | | | | | | |
| 20 | 20.0 | | | | | | | | |
| 21 | | | FPAU21-PG13 | FPAU21-050 | FPAU21-BU100 | (1") | FPAU21-BM20 | FPAU21-BPG13 | FPAU21-B050* |
| 21 | | FPAU21-M25 | FPAU21-PG16 | | FPAU21-BU119 | (1¾16") | | FPAU21-BPG16 | |
| 21 | | | | | FPAU21-BU125 | (11/4") | | | |
| 25 | | | FPAU28-PG21 | FPAU28-075 | FPAU28-BU138 | (1%") | FPAU28-BM25 | FPAU28-BPG21 | FPAU28-B075* |
| 28 | | FPAU28-M25 | FPAU28-PG21 | FPAU20-0/5 | FPAU20-DU 130 | (178) | FPAU20-DIVI25 | FPAUZO-DPGZ I | FPAU20-DU/3 |
| 34 | | | FPAU34-PG29 | FPAU34-100 | FPAU34-BU144 | (1½6") | FPAU34-BM32 | FPAU34-BPG29 | FPAU34-B100* |
| 34 | | FPAU34-M40 | 117,0011020 | 1171001 100 | 117.00120111 | (1710) | 11710012 | 117.001 21 020 | 117.001 2100 |
| 42 | | | FPAU42-PG36 | FPAU42-125 | FPAU42-BU200 | (2") | FPAU42-BM40 | FPAU42-BPG36 | FPAU42-B125* |
| 42 | | FPAU42-M50 | | FPAU42-150 | FPAU42-BU225 | (21/4") | FPAU42-BM50 | | FPAU42-B150* |
| 54 | 54.5 | FPAU54-M50 | FPAU54-PG42 | FPAU54-150 | FPAU54-BU200 | (2") | FPAU54-BM50 | | FPAU54-B150* |
| 54 | ļ. | FPAU54-M63 | FPAU54-PG48 | FPAU54-200 | FPAU54-BU225 | (21/4") | FPAU54-BM63 | FPAU54-BPG48* | FPAU54-B200* |
| 67 | 67.0 | FPAX67-M63 | | FPAX67-200 | | | | | |
| | | | | | | | | | |

Ordering Notes

- * Indicates parts made to order on request
- NPB = Nickel Plated Brass
- · Available on request:
- other threads
- for brass locknuts and sealing washers see accessories, page 124
- EMC braid clamp version see page 121

Fine Pitch



Coarse Pitch





- Fast fit True one piece component
- IP rating: for conduit & fitting

IP66 + IP67 + IP68 (2 bar 1hr) + IP68 (72hrs @ 1m) + IP69

- PA66 Nylon moulded fitting
- Nylon threads supplied complete with glass reinforced nylon locknut
- Metallic threads made from Nickel Plated Brass
- · Face seal details:
- Metric Nylon threads supplied with retained Polyester Elastomer Washer

One piece fast fit, swivel, nickel plated brass

internal threaded fitting with integrated

- NPT and Metric Brass threads supplied with retained Fibre Washer
- PG Brass threads supplied with Fibre Washer - UNEF, Flange and Cable Glands supplied with O-ring
- Vibration and shock tested to EN61373 Cat 2
- Tamper resistant
- Both 90° and 45° elbows incorporate swept bore to facilitate cable installation and protect cables when installed
- · Can be removed using a screwdriver
- · All round teeth give high pull off strength 70kg with FPAH21
- Suitable for fine and coarse pitch conduits
- Temperature range

conduit fitting: -50°C to +135°C

- Low Fire Hazard (LFH) see page 144
- · Halogen, sulphur and phosphorus free
- UV resistant
- · Swivel threads allow assembly without twisting of cables
- EN 45545 HL3 and NFPA 130 compliant

FPAU

conduit seal.





FPAU

One piece fast fit fitting with nylon swivel flange with integrated conduit seal and with 'O' ring face seal.









FPAU - FPAU



One piece fast fit coupler to join corrugted conduits.















Flange

FPAU21-FL



FPAU21-FPAU21

| FI | ΡΔΙ | 113 | -RFI | M16 |
|----|-----|-----|------|------------|

| FPAU16-BFM16 |
|--------------|
| FPAU16-BFM20 |
| |
| |

| FPAU21-BFM20 | |
|--------------|--|
| | |



FPAU54-BFM50

FPAU28-BFM25

Standards & Approvals











FPAU16-FL FPAU16-FPAU16

FPAU28-FL FPAU28-FPAU28

FPAU34-FL **ΕΡΔΙΙ34-ΕΡΔΙΙ34** FPAU42-FL

Technical Drawing









european (NW) sizes

7

10

10

12

12

12

14

17

17

23

29

36

48

48

70

95

nominal size (mm)

10 10.0 7

10

11 11.5 8

13 13.0 10

13

13

16 15.8 12

16

16

16

18 18.5 14

18

20 20.0

21 21.2 17

21

21

25 25.0

28 28.5 23

28

34 34.5 29

34

42 42.5 36

42

54

54

67 67.0 56

80

106

OD mm





ULTRA™ system









Construction: Nylon (PA66) moulded fittings featuring Integrated Sealing Technology Construction: Nylon (PA66) moulded fittings featuring Integrated Sealing Technology with nickel plated brass swivel threads

Colour: 2 Tone Colour - Black and Grey.

Fittings ULTRA™ system 90° and 45°

FPAU 90

90° External thread

FPAU 90

FPAU 90

FPAU 90



thread One piece fast fit, external One piece fast fit, swivel, 90 degree elbow, threaded 90 degree elbow fitting with integrated conduit seal. Suitable for knockouts. One piece fast fit, 90 degree nickel plated brass external threaded fitting with integrated conduit seal, Suitable for knockouts or threaded entries

elbow fitting with nickel plated brass swivel UNEF internal thread for attachment to circular connectors with integrated conduit seal.

90° UNEF Swivel internal

FPAU13-BM16-90

FPAU16-BM16-90

FPAU16-BM20-90

FPAU21-BM20-90

90° Swivel brass external thread

90° Swivel brass internal thread

One piece fast fit, swivel, 90 degree elbow, nickel plated brass internal threaded fitting with integrated conduit seal.









NPB Int Metric

| european (NW) sizes | nominal size (mm) | 0D mm | Ext Metric | Ext NPT |
|---------------------|-------------------|-------|---------------|----------------|
| 7 | 10 | 10.0 | | |
| 7 | 10 | | | |
| 8 | 11 | 11.5 | | |
| 10 | 13 | 13.0 | FPAU13-M16-90 | |
| 10 | 13 | | | |
| 10 | 13 | | | |
| 12 | 16 | 15.8 | FPAU16-M16-90 | FPAU16-050-90B |
| 12 | 16 | | FPAU16-M20-90 | |

FPAU21-M20-90

FPAU28-M25-90

FPAU34-M32-90

FPAU42-M40-90



FPAU16-BU075-90

FPAU16-BU088-90

FPAU16-BU100-90

FPAU16-BU119-90

FPAU21-BU100-90

FPAU21-BU119-90

FPAU21-BU125-90

Int UNEF

(3/4")

(7%")

(1")

(13/16")

(13/16")

(11/4")

NPB Ext Metric NPB Ext PG NPB Ext NPT

FPAU16-BPG9-90

FPAU16-BPG11-90

FPAU21-BPG16-90



FPAU16-B050-90*



FPAU16-BFM20-90

| FPAU21-BFM20-90 | |
|-----------------|--|
| | |

| | 11 A021 D0 120 00 | (174) | | | | |
|----------------|-------------------|----------|----------------|-----------------|-----------------|-----------------|
| | | | | | | |
| FPAU28-075-90B | FPAU28-BU138-90 | (1%") | FPAU28-BM25-90 | FPAU28-BPG21-90 | FPAU28-B075-90* | FPAU28-BFM25-90 |
| | FPAU28-BU144-90 | (17/16") | | | | |
| FPAU34-100-90B | FPAU34-BU144-90 | (17/16") | FPAU34-BM32-90 | FPAU34-BPG29-90 | FPAU34-B100-90* | FPAU34-BFM32-90 |
| | FPAU34-BU175-90 | (13/4") | | | | |
| FPAU42-125-90B | FPAU42-BU200-90 | (2") | FPAU42-BM40-90 | FPAU42-BPG36-90 | FPAU42-B125-90* | FPAU42-BFM50-90 |

FPAU42-M50-90 FPAU42-BU225-90 (21/4") FPAU42-BM50-90 FPAU42-B150-90* FPAU42-150-90B FPAU54-M50-90 FPAU54-150-90B FPAU54-BU200-90 (2") FPAU54-BM50-90 FPAU54-BPG48-90* FPAU54-B150-90* FPAU54-BFM50-90 FPAU54-M63-90 FPAU54-200-90B FPAU54-BU225-90 FPAU54-BM63-90 FPAU54-B200-90* (21/4")

Ordering Notes

* Indicates parts made to order on request

FPAU21-050-90B

- NPB = Nickel Plated Brass
- · Available on request:
- other threads
- for brass locknuts and sealing washers see accessories, page 124
- EMC braid clamp version see page 121

How to identify a Flexicon ULTRA™ fitting

FPAU21-BPG13-90 FPAU21-B050-90*



- 2 Tone colour Capnut different to Body
- IP69 and Ultra logo marked on product
- · Blue insert seal with visible ribs within capnut
- Retained Face Sealing Washer



12 16

12 16

14 18 18.5

14 18 20.0 20 17 21 21.2

17 21

17 21

23 28 28.5

23 28 29 34 34.5

29 34

36 42 42.5

36 42

48 54 54.5

48 54

56 67 67.0

70 80 95 106

25.0 25



- Fast fit True one piece component
- IP rating: for conduit & fitting

IP66 + IP67 + IP68 (2 bar 1hr) + IP68 (72hrs @ 1m) + IP69

- PA66 Nylon moulded fitting
- Metallic threads made from Nickel Plated Brass
- · Nylon threads supplied complete with glass reinforced nylon locknut
- Face seal details:
- Metric Nylon threads supplied with retained Polyester Elastomer Washer
- NPT and Metric Brass threads supplied with retained Fibre Washer
- PG Brass threads supplied with Fibre Washer
- UNEF, Flange and Cable Glands supplied with
- Vibration and shock tested to EN61373 Cat 2
- Tamper resistantBoth 90° and 45° elbows incorporate swept bore to facilitate cable installation and protect cables when installed
- Can be removed using a screwdriver
- · All round teeth give high pull off strength 70kg with FPAH21
- · Suitable for fine and coarse pitch conduits

Temperature range:

conduit fitting: -50°C to +135°C

- · Low Fire Hazard (LFH)
- see page 144 · Halogen, sulphur and phosphorus free
- UV resistant
- Swivel threads allow assembly without twisting of cables
- EN 45545 HL3 and NFPA130 compliant

FPAU 90



FPAU 45





(NW) sizes

european 00

10.0 7 7

20.0 21.2 17 17 17

90° Flange

One piece fast fit 90 degree elbow fitting with nylon swivel flange with integrated conduit seal and 'O' ring face seal.













Flange

45° Flange One piece fast fit, 45 degree elbow fitting with nylon swivel flange with integrated conduit seal and with 'O' ring face seal.











Flange



45° UNEF Swivel internal thread

One piece fast fit, 45 degree elbow fitting with nickel plated brass swivel UNEF internal thread for attachment to circular connectors with integrated conduit seal.













Int UNEF

| | nominal size | OD mm |
|-------------------|--------------|-------|
| | 10 | 10.0 |
| | 10 | |
| | 11 | 11.5 |
| | 13 | 13.0 |
| | 13 | |
| | 13 | |
| ") | 16 | 15.8 |
| ") | 16 | |
| ") | 16 | |
| 6") | 16 | |
| | 18 | 18.5 |
| | 18 | |
| | 20 | 20.0 |
| ") | 21 | 21.2 |
| 6") | 21 | |
| (¹¹) | 21 | |
| | 25 | 25.0 |
| (a'') | 28 | 28.5 |
| 6") | 28 | |
| 6") | 34 | 34.5 |
| 4") | 34 | |
| ") | 42 | 42.5 |
| (¹¹) | 42 | |
| ") | 54 | 54.5 |
| (¹¹) | 54 | |
| | 67 | 67.0 |
| | 80 | |
| | 106 | |
| | | |

| FPAU16-FL-90 | FPAU16-FL-45 | FPAU16-BU075-45 | (3/4") |
|--------------|--------------|-----------------|----------|
| | | FPAU16-BU088-45 | (7/8") |
| | | FPAU16-BU100-45 | (1") |
| | | FPAU16-BU119-45 | (1¾6") |
| | | | |
| | | | |
| FPAU21-FL-90 | FPAU21-FL-45 | FPAU21-BU100-45 | (1") |
| | | FPAU21-BU119-45 | (13/16") |
| | | FPAU21-BU125-45 | (11/4") |
| | | | |
| FPAU28-FL-90 | FPAU28-FL-45 | FPAU28-BU138-45 | (1%") |
| | | FPAU28-BU144-45 | (17/16") |
| FPAU34-FL-90 | FPAU34-FL-45 | FPAU34-BU144-45 | (17/16") |
| | | FPAU34-BU175-45 | (13/4") |
| FPAU42-FL-90 | FPAU42-FL-45 | FPAU42-BU200-45 | (2") |
| | | FPAU42-BU225-45 | (2¼") |
| FPAU54-FL-90 | FPAU54-FL-45 | FPAU54-BU200-45 | (2") |
| | | FPAU54-BU225-45 | (21/4") |
| | | | |

Standards & Approvals















Benefits of Barb Construction

- · Inherent swivel feature allowing easy connection to another thread for termination, eliminating any dynamic stress on the system
- · Reduces wear between the retaining teeth and the conduit, which can often lead to failure

















ULTRA™ system







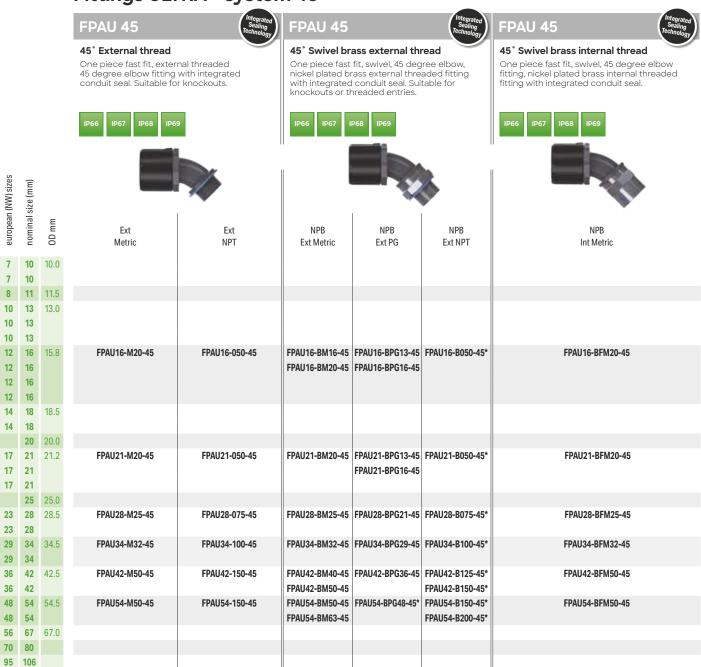




Construction: Nylon (PA66) moulded fittings featuring Integrated Sealing Technology
Construction: Nylon (PA66) moulded fittings featuring Integrated Sealing Technology
with nickel plated brass swivel threads

Colour: 2 Tone Colour - Black and Grey.

Fittings ULTRA™ system 45°



Ordering Notes

- Indicates parts made to order on request
- NPB = Nickel Plated Brass
- · Available on request:
- other threads
- for brass locknuts and sealing washers see accessories, page 124
- EMC braid clamp version see page 121

Technical Drawing







nominal size (mm)

10 10.0 7

10 11 11.5 8

13 13.0 10

13

13

16 15.8 12

16

16

16

18 18.5 14

18

20 20.0

21

21

21

25 25.0

28 28.5 23

28

34

34

42 42.5 36

42

54 54.5

54

67 67.0 56

80

106

OD mm

10

10

12

12

12

14

17 21.2

17

17

23

29 34.5

29

36 48

48

70

95

Properties

- Fast fit True one piece component
- IP rating: for conduit & fitting IP66 + IP67 + IP68 (2 bar 1hr) + IP68 (72hrs @ 1m) + IP69 for cable gland - IP68 (2 bar 1hr)
- Nylon threads supplied complete with glass reinforced nylon locknut
- · PA66 Nylon moulded fitting
- · Metallic threads made from Nickel Plated Brass
- · Face seal details:
- Metric Nylon threads supplied with retained Polyester Elastomer Washer
- NPT and Metric Brass threads supplied with retained Fibre Washer
- PG Brass threads supplied with Fibre Washer UNEF, Flange and Cable Glands supplied with O-ring
- Vibration and shock tested to EN61373 Cat 2
- Tamper resistant
- Both 90° and 45° elbows incorporate swept bore to facilitate cable installation and protect cables when installed

One piece fast fit, swivel, 90 degree

elbow, nickel plated brass externa threaded cable gland fitting with integrated conduit seal. Suitable for knockouts or threaded entries.

· Can be removed using a screwdriver

90°ELBOW

Cable gland

- All round teeth give high pull off strength 70kg with FPAH21
- Suitable for fine and coarse pitch conduits
- Temperature range:
- conduit fitting: $-50\,^{\circ}\text{C}$ to $+135\,^{\circ}\text{C}$ Low Fire Hazard (LFH) see page 144
- · Halogen, sulphur and phosphorus free
- UV resistant

45°ELBOW

Cable gland

· Swivel threads allow assembly without twisting of cables

One piece fast fit, swivel, 45 degree elbow,

nickel plated brass external threaded cable gland fitting with integrated conduit seal. Suitable for knockouts or threaded entries.

- EN 45545 HL3 and NFPA130 compliant
- · Refer to tables below for clamping range (Cable Range)

ULTRA™ system R Type Cable Strain Relief

STRAIGHT

With integral cable gland

One piece fast fit, swivel, nickel plated brass external threaded cable gland fitting with integrated conduit seal. Suitable for knockouts or threaded entries.













| | -8 | -86 | -15 | - |
|---|-----|-----|-----|---|
| _ | - 8 | | -8 | |
| | - 8 | | шP | i |
| | | - | - | |

| | | | | 48 | | | |
|-------------------|-------------|-------------------|-------------|----------------------|-------------|----------------------|----------------|
| | Cable | | Cable | 353 | | | and the second |
| NPB | Range | NPB | Range | NPB | Cable Range | NPB | Cable Range |
| metric | (mm) | metric | (mm) | metric | (mm) | metric | (mm) |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| FPAU13-BM16-CG-R1 | 4.0 - 6.5 | | | FPAU13-BM16-CG-R1-90 | 4.0 - 6.5 | | |
| FPAU13-BM16-CG-R2 | 5.0 - 8.0 | | | FPAU13-BM16-CG-R2-90 | 5.0 - 8.0 | | |
| FPAU13-BM16-CG-R3 | 6.5 - 9.5 | | | FPAU13-BM16-CG-R3-90 | 6.5 - 9.5 | | |
| FPAU16-BM16-CG-R1 | 4.0 - 6.5 | FPAU16-BM20-CG-R1 | 4.0 - 6.5 | FPAU16-BM16-CG-R1-90 | 4.0 - 6.5 | FPAU16-BM20-CG-R1-45 | 4.0 - 6.5 |
| FPAU16-BM16-CG-R2 | 5.0 - 8.0 | FPAU16-BM20-CG-R2 | 5.0 - 8.0 | FPAU16-BM16-CG-R2-90 | 5.0 - 8.0 | FPAU16-BM20-CG-R2-45 | 5.0 - 8.0 |
| FPAU16-BM16-CG-R3 | 6.5 - 9.5 | FPAU16-BM20-CG-R3 | 6.5 - 9.5 | FPAU16-BM16-CG-R3-90 | 6.5 - 9.5 | FPAU16-BM20-CG-R3-45 | 6.5 - 9.5 |
| | | FPAU16-BM20-CG-R4 | 7.0 - 10.5 | | | FPAU16-BM20-CG-R4-45 | 7.0 - 10.5 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| FPAU21-BM20-CG-R1 | 4.0 - 6.5 | FPAU21-BM20-CG-R4 | 7.0 - 10.5 | FPAU21-BM20-CG-R1-90 | 4.0 - 6.5 | FPAU21-BM20-CG-R1-45 | 4.0 - 6.5 |
| FPAU21-BM20-CG-R2 | 5.0 - 8.0 | FPAU21-BM25-CG-R1 | 9.0 - 13.0 | FPAU21-BM20-CG-R2-90 | 5.0 - 8.0 | FPAU21-BM20-CG-R2-45 | 5.0 - 8.0 |
| FPAU21-BM20-CG-R3 | 6.5 - 9.5 | FPAU21-BM25-CG-R2 | 11.0 - 15.5 | FPAU21-BM20-CG-R3-90 | 6.5 - 9.5 | FPAU21-BM20-CG-R3-45 | 6.5 - 9.5 |
| | | | | | | | |
| FPAU28-BM25-CG-R1 | 9.0 - 13.0 | FPAU28-BM32-CG-R1 | 14.0 - 18.0 | FPAU28-BM25-CG-R1-90 | 9.0 - 13.0 | FPAU28-BM25-CG-R1-45 | 9.0 - 13.0 |
| FPAU28-BM25-CG-R2 | 11.0 - 15.5 | FPAU28-BM32-CG-R2 | 17.0 - 20.5 | FPAU28-BM25-CG-R2-90 | 11.0 - 15.5 | FPAU28-BM25-CG-R2-45 | 11.0 - 15.5 |
| FPAU34-BM32-CG-R1 | 14.0 - 18.0 | | | FPAU34-BM32-CG-R1-90 | 14.0 - 18.0 | FPAU34-BM32-CG-R1-45 | 14.0 - 18.0 |
| FPAU34-BM32-CG-R2 | 17.0 - 20.5 | | | FPAU34-BM32-CG-R2-90 | 17.0 - 20.5 | FPAU34-BM32-CG-R2-45 | 17.0 - 20.5 |
| FPAU42-BM40-CG-R1 | 17.0 - 20.5 | FPAU42-BM50-CG-R1 | 27.0 - 32.0 | FPAU42-BM40-CG-R1-90 | 17.0 - 20.5 | FPAU42-BM40-CG-R1-45 | 17.0 - 20.5 |
| FPAU42-BM40-CG-R2 | 20.0 - 25.0 | FPAU42-BM50-CG-R2 | 29.0 - 34.0 | FPAU42-BM40-CG-R2-90 | 20.0 - 25.0 | FPAU42-BM40-CG-R2-45 | 20.0 - 25.0 |
| FPAU54-BM50-CG-R1 | 32.0 - 36.0 | FPAU54-BM63-CG-R1 | 36.0 - 40.0 | FPAU54-BM50-CG-R1-90 | 32.0 - 36.0 | FPAU54-BM50-CG-R1-45 | 32.0 - 36.0 |
| FPAU54-BM50-CG-R2 | 36.0 - 40.0 | FPAU54-BM63-CG-R2 | 39.0 - 44.0 | FPAU54-BM50-CG-R2-90 | 36.0 - 40.0 | FPAU54-BM50-CG-R2-45 | 36.0 - 40.0 |
| | | | | | | | |
| | | | | | | | |

Standards























How to identify a Flexicon ULTRA™ fitting



- · 2 Tone colour Capnut different to Body
- IP69 and Ultra logo marked on product
- · Blue insert seal with visible ribs within capnut
- Retained Face Sealing Washer



FPA & FPAX











T Pieces and Dividers

Construction: Nylon (PA66) moulded fitting. FPA colour black or grey as standard. FPAX incorporate internal elastomeric seal(s).

Fittings

| FPA | FPA | Reducer/Stop Plug |
|--|--|---|
| T piece with inspection lid Fast fit T piece with inspection lid. | Reducing divider Fast fit reducing divider | Fitting to reduce or blank off any outlets. |
| IP66 | IP66 | IP66 |



Ordering Notes

- * Indicates parts made to order on request and may be subject to MOQ and lead time
- Available on request:other colours
- Grey option may be subject to MOQ and lead time

How to read the fittings code

FPAX21-R28

Conduit Size — T-piece or Reducer Size —







- Fast fit
- IP rating: FPA: IP66

FPAX: IP66 + IP67 + IP68 (2 bar 1hr) FPAX Divider: IP66 + IP67 + IP68

(2 bar 1hr) +IP69

· Maintains all the benefits of FPA and FPAX fittings

- Vibration and shock tested to EN61373 Cat 2
- Tamper resistant
- All round teeth give high pull off strength
- Low Fire Hazard (LFH), see page 144
- Halogen, sulphur & phosphorous free
- · Inspection lid facilitates pull through of cables easing installation on the T-piece
- Rounded internal corners protect cable insulation during installation and use
- Incorporates mounting lugs to aid secure fixing
- EN 45545 HL3 and NFPA130 compliant

| | | | | FPAX | FPAX | Reducer/Stop Plug | |
|---|---------------------|-----------------|-----------------------------|---|---|---|------------|
| | | | | T piece with inspection lid | Divider | Fitting to reduce or blank off any outlets. | |
| | | | | Fast fit T piece with inspection lid and additional seals for enhanced IP rating. | Fast fit reducing divider with additional seals for enhanced IP ratings | | - J. J. J. |
| | | | | IP66 IP67 IP68 | IP66 IP67 IP68 IP69 | IP66 IP67 IP68 | |
| | | | | | | | |
| | | | ivider | | | R | |
| : | european (NW) sizes | Conduit In (mm) | Conduit Out x 2 for divider | | | SP | |
| | 12 | 16 | 13 | FPAX16T | FPAX16-13-13 | FPAX13-R16 SP-R16 | |
| | 17 | 21 | 16 | FPAX21T | FPAX21-16-16 | FPAX16-R21 FPAX13-R21 SP-R21 | |
| | 23 | 28 | 21 | FPAX28T | FPAX28-21-21 | FPAX21-R28 | |
| | | | | | | FPAX16-R28 FPAX13-R28 SP-R28 | |
| | 29 | 34 | 28 | FPAX34T | FPAX34-28-28 | FPAX28-R34 FPAX21-R34 FPAX16-R34 | |
| | | | | | | SP-R34 | |
| | 36 | 42 | | FPAX42T | FPAX42-34-34 | FPAX34-R42 FPAX28-R42 FPAX21-R42 | 44 |
| | 48 | 54 | 42 | | FPAX54-42-42 | 11 872 17842 | |

Standards























Connectabox™ Features



Scan here to learn more about our





Lid Lanyard - Keeps lid and base together



Anti vibration lever



Identification label slot

4 Large Secure Mounting Feet

Anti Vibration Lever

Unique - Ultra Flexible Conduit Fitting



Push & Twist quick fit fittings



Order configuration

To configure your requirements simply order from the table below. Fitting part numbers are listed, along with accessories to be used in the box CNB110. Kits are available consisting of standard components, shown by quantity in the table.



| | | | | | What | s Included | |
|---|---------------------|-------|------------|---------------|--------------|-------------|-------------|
| | | | Part No. | CNB110 | CNB110-KIT2 | CNB110-KIT3 | CNB110-KIT4 |
| | Box & Lid | | CNB110 | 1 | 1 | 1 | 1 |
| • | | 16mm | FPAU16-CNB | | | | |
| | Filtings | 21mm | FPAU21-CNB | | | 2 | 3 |
| | Fittings | 28mm | FPAU28-CNB | | 2 | 1 | |
| | | 34mm | FPAU34-CNB | | | | 1 |
| | Blanking Plug* | | CNB-BP | 4 | 2 | 1 | 0 |
| - | Lanyard & Screw | | CNB-LAN | 1 | 1 | 1 | 1 |
| | Accessories | | | Part No. | | | Qty |
| | | 16mm | | FPAU16-CNB | | | 1 |
| | Fittings | 21mm | | FPAU21-CNB | | | 1 |
| | | 28mm | | | FPAU28-CNB | | 1 |
| | | 34mm | | | FPAU34-CNB | | 1 |
| | | | 2-7mm | | CNB-CG-2/7 | | |
| | Cable Gland | 4.5-1 | 0mm | CNB-CG-4-5/10 | | | 1 |
| 0 | Cable Glaffu | 6-13 | mm | CNB-CG-6/13 | | | 1 |
| | | 9-17 | 'mm | | CNB-CG-9/17 | | 1 |
| | Thread Insert | M2 | 20 | | CNB-BFM20 | | 1 |
| | Blanking Plug* | | | | CNB-BP | | 10 |
| 4 | DIN Rail Insert Pla | te | | | CNB-INSERT | | 1 |
| | Fibre Insert Plate | | | | CNB-INSERT-F | | 1 |
| | Extended Lid | | | CNB-EL | | | 1 |

 $^{^*\}mbox{All}$ part numbers are for qty of 1 except CNB-BP which are supplied in a pack of 10.



FPL system

IP40



Construction: UPVC corrugated pliable conduit

Conduit

FPL

Construction: Standard weight, upvc, corrugated pliable conduit.

Colour Black, Grey (RAL 7045) or White. (see page 71 in certain sizes.)

Typical Applications: Static connections in buildings.

- High compression strength
- Bends to a small radius
- IP rating:

IP40 with MP and T fittings IP66 with FLK fittings IP67 with MPS fittings

- Temperature range -5°C to +70°C
- Self extinguishing
- UV resistant (black)
- · Tensile strength:

FLK20 25kg MP20 20kg MPS20 15ka

Fittings

FLK90 FLK **MPS** 90° Elbow external thread Straight external Straight external Straight external thread One piece, slim, fast fit, nylon thread thread external threaded 90 degree elbow fitting suitable for Straight nylon Straight nylon One piece, slim, fast compression fitting external thread compression fitting with seal external fit, nylon externa threaded fitting knockouts. thread including locknut. suitable for including locknut. knockouts or threaded entries.



| Julius Julius | | | All Same |
|------------------------------|------------------------------|------------------------------|------------------------------|
| | T | MPs | hown |
| metric thread part number | metric thread part number | metric thread part number | metric thread part number |
| FLK16-M16 FLK16-M20 | FLK16-M16-90 FLK16-M20-90 | MP-16-M16 MP-16-M20 | MPS-16-M16 MPS-16-M20 |
| FLK 16-M20 FLK20-M20 | FLK16-M20-90 FLK20-M20-90 | MP-16-M20 MP-20-M20 | MPS-16-M20 MPS-20-M20 |
| FLK25-M25 | FLK25-M25-90 | MP-25-M25 | MPS-25-M25 |
| FLK32-M32* | FLK32-M32-90* | | |

Ordering Notes

reel length (m)

100

50, 100

50

25

• Specify Black or Grey (B = Black, G = Grey)

outside dia (mm)

16.0

20.0

25.0

32.0

- FPL can be used with FPA fittings
- Grey or White options may be subject to MOQ and lead time

· Available on request:

- longer lengths and bulk packaging
- cut lengths and assemblies, additional sizes
- alternative threads, other colours
- heavy duty version
- Thread face sealing washers may be required to maintain
- IP rating at the connection to other equipment, see page 124
- * Indicates parts made to order

Don't Forget



Standards

BS EN IEC 61386







(mm)

nominal size

16

16 20

25

32

FPL

FPL16

FPL20

FPL25

FPL32



White Products

Construction: Polypropylene or upvc conduit system with nylon straight, 90° elbow, coupler and conduit clips options.

Conduit

Fittings

FPP For details see page 45 For details see page 66

| FLK |
|--|
| Straight externa thread |
| One piece, slim, fa fit, external threaded fitting suitable for knockouts or |
| threaded entries. |

90° Elbow external thread One piece, slim, fast

FLK-90

fit, external threaded 90 degree elbow fitting suitable for knockouts

Coupler One piece, fast fit, slim coupler to join corrugated conduits.

FLK-FLK

FCL

Nylon corrugated conduit clip with integral lid

Nylon PA66 conduit clip with integral lid for increased security. Incorporates internal ribs to prevent conduit from pulling through.

FCL-P Nylon plain conduit clip with integral

Nylon PA66 conduit clip with integral lid for increased security and plain internal diameter for use with rigid conduit or smoothbore flexible conduit.













| OD mm | FPP | 50m coil | 댼 | 50m & 100m coil |
|-------|---------|----------|---------|-----------------|
| 20.0 | FPP20W- | -50M | FPL20W- | 100M |
| 25.0 | FPP25W- | -50M | FPL25W- | 50M |
| 34.5 | FPP34W- | -50M | FLK34-N | 132W |

Ext Metric FLK20-M20W

FLK32-M32W*

Ext Metric FLK20-M20-90W FLK25-M25W FLK25-M25-90W

FLK20-FLK20W FLK25-FLK25W

FCL20W FCL25W FCL20W-P FCL25W-P

C - Contractor pack

FPL-CP20W FPL-CP25W

M20 thread M25 thread



- · 10m of FPL white conduit
- · 10 x Flexilok® fittings
- · 10 x Locknuts

LPC

Smooth bore, smooth cover, helically formed pvc, flexible conduit with spiral upvc reinforcement and flexible pvc jacket.







Available in 20mm and 25mm sizes. Use with FCL-P clips to secure.

See page 76 for more details

MPC

Straight nylon compression fitting with external thread





2 part compression fitting with internal spigot and all round teeth to grip conduit.

See page 77 for

Standards













FPY, FPYS, FPYL, FPYLS system

Corrugated flexible conduit

Properties

- Highly flexible and high fatigue life
- · High impact strength and recovers if crushed
- Temperature range -40°C to +120°C
- · Highly resistant to solvents and oils
- · Self extinguishing (FPY and FPYS)
- · Halogen, sulphur and phosphorus free

Conduit



Construction: Nylon (PA6) corrugated flexible conduit.

Colour: black

Typical Applications: Automotive

FPYS

Construction: Slit nylon (PA6) corrugated flexible conduit.

Colour: black

Typical Applications: Automotive looms, harnesses and retrofit.

FPYL

Construction: Nylon (PA6) corrugated flexible conduit.

Colour: black

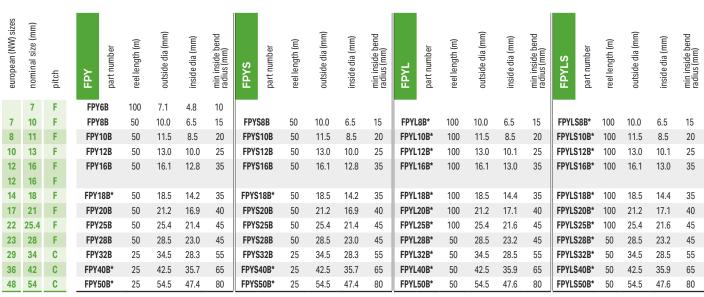
Typical Applications: Lightweight automotive.

FPYLS

Construction: Slit, light weight nylon (PA6) corrugated flexible conduit.

Colour: black

Typical Applications: Lightweight automotive looms, harnesses and retrofit.



F = fine pitch C = coarse pitch

Ordering Notes

- Metric threads supplied complete with locknuts
- · Available on request:
- reduced outlet T pieces
- other coloursPG threads

* FPYL & FPYLS are made to order on request and maybe subject to MOQ and lead times.











MP, MP90 & T system

Construction: Nylon compression fittings.

Colour: Black.

MP fitting with nylon retaining clip provides a pull off strength of 20kg with FPY20 and 15kg with FPYL20 and IP40.

MPS fitting with a neoprene sealing ring provides a pull off strength of 15kg with FPY20 and 10kg with FPYL20 and IP67.

Fittings

| MP | MPS | MP90 | MPS90 | T | TS |
|--|---|---|--|-------------------------------|--|
| Straight external thread | Straight external thread | 90° Elbow external thread | 90° Elbow external thread | T Piece fitting T piece nylon | T Piece fitting with seals |
| Straight nylon compression fitting external thread including locknut. | Straight nylon compression fitting, with seal, external thread including locknut. | 90° elbow nylon compression fitting external thread including locknut. | 90° elbow nylon compression fitting, with seal, external thread including locknut. | compression fitting. | T piece nylon compression fitting, with seals. |
| IP40 | IP67 | IP40 | IP67 | IP40 | IP67 |







| Ext Metric | Ext Metric | Ext Metric | Ext Metric | T Piece | T Piece | european (NW) sizes | nominal size (mm) | шш до 10.0 |
|------------|------------|-------------|--------------|-----------|------------|---------------------|-------------------|---------------|
| | | | | | | 8 | 11 | 11.5 |
| MP-12-M16 | MPS-12-M16 | | | T12X12X12 | TS12X12X12 | 10 | 13 | 13.0 |
| MP-16-M16 | MPS-16-M16 | MP90-16-M16 | MPS90-16-M16 | T16X16X16 | TS16X16X16 | 12 | 16 | 15.8 |
| MP-16-M20 | MPS-16-M20 | MP90-16-M20 | MPS90-16-M20 | | | 12 | 16 | |
| | | | | | | 14 | 18 | 18.5 |
| MP-20-M20 | MPS-20-M20 | MP90-20-M20 | MPS90-20-M20 | T20X20X20 | TS20X20X20 | 17 | 21 | 21.2 |
| MP-25-M25 | MPS-25-M25 | MP90-25-M25 | MPS90-25-M25 | T25X25X25 | TS25X25X25 | 22 | 25 | 25.4 |
| MP-28-M25 | MPS-28-M25 | MP90-28-M25 | MPS90-28-M25 | | | 23 | 28 | 28.5 |
| MP-32-M32 | MPS-32-M32 | MP90-32-M32 | MPS90-32-M32 | | | 29 | 34 | 34.5 |
| MP-40-M40 | | MP90-40-M40 | | | | 36 | 42 | 42.5 |
| MP-50-M50 | | | | | | 48 | 54 | 54.5 |

Thread face sealing washers may be required to maintain IP rating at the connection to other equipment, see page 124

Standards





BS EN IEC 61386











Large diameter systems

Nylon and Polypropylene (PP)

_DFPIH

Colour: Black

required.

strength

High impact

at very low

UV resistant

if crushed

Construction: Heavy

weight nylon (PA12)

Typical Applications:

Robots and continual flexing where higher

mechanical strength

Highly flexible and

high fatigue life

High mechanical

resistance even

Displays self recovery

· Temperature range

-50°C to +110°C

· Highly resistant to

solvents and oils

Self extinguishing

phosphorus free

see page 144

· Halogen, sulphur and

Low Fire Hazard (LFH),

Also available in extra

FPIHRL see page 45

low fire hazard version -

temperatures

corrugated flexible







Conduit

LDFPAI Construction: Light

weight nylon (PA6) corrugated flexible

Colour: Black or Grey

Typical Applications: Machines where lower mechanical protection

- is required and buildings. Highly flexible and
- high fatigue life · High impact strength and recovers if crushed
- · Temperature range -40°C to +120°C (-20°C to +100°C for moving applications)
- · Highly resistant to solvents and oils
- · Self extinguishing
- · Halogen, sulphur and phosphorus free

Construction: Standard weight, flame retardant nvlon (PA6) corrugated flexible conduit.

Colour: Black or Grey (RAL 7031). Orange available on request.*

Typical Applications: All types of machinery, public buildings.

- · Highly flexible and high fatigue life
- · High impact strength and recovers if crushed
- Temperature range -40°C to +120°C (-20°C to +100°C for moving applications)
- Lloyd's Register Type Approval
- · Low Fire Hazard (LFH), see page 144
- UL 94 V2 flame retardancy
- Halogen, sulphur and phosphorus free
- UV resistant (black)
- · Abrasion resistant
- · Highly resistant to solvents and oils

EM 65545 @ | HIPS 130



_DFPIHF Construction: Standard weight nylon (highly flame retardant PA6)

Colour: Black

conduit.

DFPR

Typical Applications: Railways, underground and public buildings.

corrugated flexible

- · Highly flexible and high fatigue life · High impact strength and recovers if
- crushed Temperature range -40°C to +120°C (-20°C to +100°C for
- moving applications) • Lloyd's Register Type
- · Extra Low Fire Hazard (LFH)
- Compliant to LUL Std S1085
- UL 94 VO flame retardancy
- · Halogen, sulphur and phosphorus free
- UV resistant
- Abrasion resistant
- · Highly resistant to solvents and oils

Construction: Heavy weight nylon (PA12) corrugated flexible

(m 65545 Q

Colour: Black

Typical Applications: Where dynamic

continual movement or flexing is required. with a higher mechanical strength even at very low temperatures such as on Bogies or Intercar Jumper assemblies. Rolling Stock applications requiring a superior level of fire performance.

- Highly flexible and high fatigue life
- · High mechanical strength
- High impact resistance even at very low temperatures
- UV resistant
- · Displays self recovery if crushed
- Temperature range -50°C to +110°C
- · Highly resistant to solvents and oils
- · Self extinguishing
- Extra Low Fire Hazard · Halogen, sulphur and
- phosphorus free • EN 45545 HL3 Exterior

Construction: Standard weight polypropylene, flexible conduit.

_DFPP

Colour: Black, Grey (RAI 7031) or White (see page 46)

Typical Applications: Buildings, particularly where buried in concrete or plaster

- Acid resistant
- Temperature range -20°C to +90°C
- · Self extinguishing

european (NW) sizes nominal size (mm)

outside dia (mm ree

inside dia (mm

min inside by adius (mm)

length (m) reel

outside dia (mm dia (

LDFPAL106* 10 106.0 91.8 210 LDFPAS106 10 106.0 91.5 210 LDFPIH106* 10 106.0 91.0 250

min inside bend radius (mm)

outside dia (mm length (m) part number reel

inside dia (mm

min inside benc radius (mm)

LDFPAL80 10 80.0 67.0 150 LDFPAS80 10 80.0 67.0 160 LDFPIH80 10 80.0 66.5 170

outside dia (mr length (m) part number ree LDFPR80

min inside bend radius (mm) dia (

inside

reel

outside dia (mm dia (

bend (mm) min inside b radius (mm)

outside dia (mm part number

min inside be radius (mm)

dia (

10 80.0 67.0 160 LDFPIHRL80 10 80.0 66.5 170 LDFPP80 10 80.0 67.0 300 LDFPR106* 10 106.0 91.5 210 | LDFPIHRL106* 10 106.0 91.0 250 | LDFPP106* 10 106.0 91.5 400

Refer to page 44 for other materials

Ordering Notes

- Specify black or grey (B = Black, G = Grey) eg: LDFPAS80B-10M for Black 10m reel
- · Grey option may be subject to MOQ and lead time

· Available on request:

- longer lengths and bulk packaging - cut lengths and assemblies
- alternative conduit material
- Contact Flexicon for more details
- FCC75 and FCC106 PVC lined plated steel P-clips
- · 80mm can be used with F-Clamps - see page 72
- * Indicates parts made to order on request and may be subject to MOQ and lead time

Standards

BS EN IEC 61386













- Suitable for use with Large Diameter conduits
- Material
- LDMP and LDMPS: nylon PA6
- FPA FCLAMP: nylon PA66
- REC: thermoplastic elastomer
- Temperature Range
 LDMP & LDMPS fittings: -40° to 120°
 FPA & FCLAMP: -50° to 135°
- REC: -50° to 120°

- UV resistant
- Fire Performance
 - LDMP and LDMPS:
 - Halogen, Sulphur & Phosphorous Free
 - Self extinguishing
 - RFC:
 - Halogen, Sulphur & Phosphorous Free
- FPA and FCLAMP:
- Extra Low Fire Hazard see page 144
- Halogen, Sulphur & Phosphorous Free
- Self extinguishing
- EN45545 HL3 and NFPA 130 compliant
- For installation instructions see page 136

Fittings

| FPA80 | LDMP | LDMPS | LDMP90 | LDMPS90 | FCLAMP | REC | FCC CLIPS |
|--|--|---|--|---|--|---|---|
| Straight external thread One piece, fast fit, external threaded fitting. Suitable for knockouts or threaded entries. | Straight flanged nylon clamp fitting Flanged body with 2 clamps. | Straight flanged nylon clamp fitting with seals Flanged body with 2 clamps and seals. | 90° Flanged nylon clamp fitting Flanged 90° body with 2 clamps. | 90° Flanged nylon clamp fitting with seals Flanged 90° body with 2 clamps and seals. | Non-metallic, heavy duty conduit clamp Nylon PA66, conduit fixing clamp for corrugated conduit. Suitable for use with with fine or coarse pitch conduits. Can be used with a range of accessories including cover plates and weld plates (available separately - see page 72). | Rubber end cap Thermoplastic elastomer cap used to seal end of conduit. Can be cut to size depending on size of cable. Can be additionally secured using cable tie (not supplied). | Plated steel P clip with pvc liner P clip to support and secure conduit. |



| termination | part number | termination | part number | termination | part number | termination | part number | termination | part number | part number | part number | part number | european (NW) sizes | nominal size (mm) |
|-------------|-------------|-------------|-------------|-------------|--------------|-------------|---------------|-------------|----------------|-------------|-------------|-------------|---------------------|-------------------|
| M85 | FPA80-M85B | FL | LDMP-80-FL | FL | LDMPS-80-FL | FL | LDMP90-80-FL | FL | LDMPS90-80-FL | FCLAMP-8-80 | REC80 | FCC75 | 70 | 80 |
| | | FL | LDMP-106-FL | FL | LDMPS-106-FL | FL | LDMP90-106-FL | FL | LDMPS90-106-FL | | | FCC106 | 95 | 106 |





Conduit Fixing range







Nylon corrugated conduit clip with integral lid

Nylon PA66 conduit clip with integral lid for increased security. Incorporates internal ribs to prevent corrugated conduit from pulling through, 20kg with FPAS21.

FCL (Corrugated)

| NW Size | Conduit Size (OD) mm | FCL clip for corrugated |
|---------|-------------------------|----------------------------|
| 7 | 10 | FCL10 |
| 10 | 13 | FCL13 |
| 12 | 16 | FCL16 |
| 14 | 18 | FCL18 |
| | 20 | FCL20 |
| 17 | 21 | FCL21 |
| | 25 | FCL25 |
| | 26 | |
| 23 | 28 | FCL28 |
| | 32 | FCL32 |
| 25 | 33 | |
| 36 | 34 | FCL34 |
| 48 | 42 | FCL42 |
| | 54 | FCL54 |

FCL-P (Smooth)

Non metallic conduit clip for smooth conduits with integral lid Nylon conduit fixing clip for smooth conduit. Available in Black or Grey (RAL 7001).

| NW Size | Conduit Size (OD) mm | FCL clip for plain conduit |
|---------|-------------------------|-------------------------------|
| 7 | 10 | |
| 10 | 13 | |
| 12 | 16 | FCL16-P |
| 14 | 18 | FCL18-P |
| | 20 | FCL20-P |
| 17 | 21 | FCL21-P |
| | 25 | FCL25-P |
| | 26 | FCL26-P |
| 23 | 28 | |
| | 32 | FCL32-P |
| 25 | 33 | FCL33-P |
| 36 | 34 | |
| 48 | 42 | |
| | 54 | |

Conduit Clamps

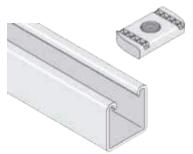
Non-metallic, heavy duty conduit clamp

Nylon PA66, conduit fixing clamp for corrugated conduit. Suitable for use with fine or coarse pitch conduits. Can be used with a range of accessories including cover plates and weld plates.



F-CLAMP and Accessories

| NW Size | Conduit Size (OD) mm | FCLAMP | FCLAMP Kit | Extended Weld Plate galvanised steel | Weld Plate galvanised steel | Cover Plate galvanised steel |
|---------|-------------------------|-------------|--------------|---|--------------------------------|---------------------------------|
| 12 | 16 | FCLAMP-3-16 | FCLAMP-KIT16 | FCLAMP-EWP3 | FCLAMP-WP3 | FCLAMP-CP3 |
| 17 | 21 | FCLAMP-3-21 | FCLAMP-KIT21 | FCLAMP-EWP3 | FCLAMP-WP3 | FCLAMP-CP3 |
| 23 | 28 | FCLAMP-4-28 | FCLAMP-KIT28 | FCLAMP-EWP4 | FCLAMP-WP4 | FCLAMP-CP4 |
| 29 | 34 | FCLAMP-5-34 | FCLAMP-KIT34 | FCLAMP-EWP5 | FCLAMP-WP5 | FCLAMP-CP5 |
| 36 | 42 | FCLAMP-6-42 | FCLAMP-KIT42 | FCLAMP-EWP6 | FCLAMP-WP6 | FCLAMP-CP6 |
| 48 | 54 | FCLAMP-7-54 | FCLAMP-KIT54 | FCLAMP-EWP7 | FCLAMP-WP7 | FCLAMP-CP7 |
| 56 | 67 | FCLAMP-7-67 | FCLAMP-KIT67 | FCLAMP-EWP7 | FCLAMP-WP7 | FCLAMP-CP7 |
| | 80 | FCLAMP-8-80 | FCLAMP-KIT80 | FCLAMP-EWP8 | FCLAMP-WP8 | FCLAMP-CP8 |





For a comprehensive range of **Channel and Channel Nuts refer** to Unistrut - www.atkore.com/unistrut



- Suitable for use with flexible, pliable and rigid conduits
- Clips and F-Clamps manufactured from nylon PA66
- Temperature Range -50° to 135°
- UV resistant
- Low Fire Hazard see page 144
- · Halogen, Sulphur & Phosphorous Free
- Self extinguishing
- For installation instructions see page 138
- EN45545 HL3 and NFPA 130 compliant

System Overview





FCL mounted on channel using FCL Mount kits. FCL Clips can be rotated to help route conduits

Configurations





FCL mounted on channel using FCL Mount kits. FCL Clips can be rotated to any angle to help route conduits



FCLAMP mounted on Weld Plate with Cover Plate



FCLAMP directly mounted on channel using Channel Nuts



FCLAMP mounted on Elongated Weld Plate with Cover Plate



FCLAMP directly mounted on channel using Channel Nuts and Cover Plate



FCLAMP Kit Complete



FCLAMP Kit mounted on channel with Conduit

| | Thread Length Requirements - Dimension Table | | | | | | | | | | | | | |
|-------------|--|-----|-----|-----|---|-----|---|---|-----|---|---|--|--|--|
| | | | | | | | | | | | | | | |
| FCLAMP | A | В | С | D | | | | | | | | | | |
| FCLAMP-3-16 | 29 | 36 | 39 | 42 | | | • | | - 1 | 1 | 1 | | | |
| FCLAMP-3-21 | 29 | 36 | 39 | 42 | | | | | | | | | | |
| FCLAMP-4-28 | 35 | 42 | 45 | 48 | ' | • | | | | | | | | |
| FCLAMP-5-34 | 49 | 56 | 59 | 62 | | | | | | | | | | |
| FCLAMP-6-42 | 58 | 65 | 68 | 71 | | | | | | | | | | |
| FCLAMP-7-54 | 85 | 92 | 97 | 102 | | | | | | | | | | |
| FCLAMP-7-67 | 85 | 92 | 97 | 102 | • | 1 1 | | ! | | 1 | | | | |
| FCLAMP-8-80 | 110 | 117 | 124 | 129 | | | | | | | ' | | | |

For Stacking Kit please contact Flexicon. Channel Nut galvanised steel for Unistrut type channel. Part number CN-UNI-M6-GS





FPCB system

Construction: Spiral reinforced PVC



FPCG, FPCGN & FPCBU system

Construction: Spiral reinforced PVC with special properties

Conduit

FPCB

Construction: Smooth bore, helically formed PVC, flexible conduit with spiral UPVC reinforcement and flexible PVC iacket.

Typical Applications: Routing of cables

c **FN**°us

Construction: Smooth bore, helically

UPVC reinforcement and flexible

formed PVC, flexible conduit with spiral

Typical Applications: As FPCB but where oil resistance is required 1.0.

c **FAL** us

Fittings

MPC

Straight nylon compression fitting external thread

2 part compression fitting with internal spigot and all round external teeth to grip conduit. Available in Black or Grey (RAL 7001).



c **SN** us

FPCG

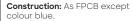
Construction: As FPCB except

Typical Applications: As FPCB.

FPCBU

FPCGN

PVC jacket.



Typical Applications: As FPCB but where high temperature is required. UL recognised.





FPCURB

Construction: As FPCB.

Typical Applications: As FPCB. UL recognised.

| nominal size (mm) | FPC | Black part number | Black (UL Recognised) | Grey (RAL 7001) | Green (RAL 6001) | Blue (RAL 5012) | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) |
|-------------------|------------------|-------------------|--------------------------|-----------------|------------------|-----------------|-----------------|------------------|-----------------|--------------------------------|
| 12 | FPC ⁻ | 12B | FPC12URB | FPC12G* | FPC12GN* | FPC12BU* | 30 | 14.5 | 10.0 | 25 |
| 16 | FPC ⁻ | FPC16B FPC16URB | | FPC16G* | FPC16GN* | FPC16BU* | 30 | 16.5 | 12.0 | 25 |
| 16 | | | | | | | | | | |
| 20 | FPC | 20B | FPC20URB | FPC20G* | FPC20GN* | FPC20BU* | 30 | 21.0 | 16.0 | 35 |
| 25 | FPC | 25B | FPC25URB | FPC25G* | FPC25GN* | FPC25BU* | 30 | 27.5 | 22.0 | 45 |
| 30 | FPC | 30B* | FPC30URB | FPC30G* | | | 30 | 30.5 | 25.0 | 55 |
| 32 | FPC | 32B | FPC32URB | FPC32G* | FPC32GN* | FPC32BU* | 10, 30 | 33.5 | 28.0 | 60 |
| 40 | FPC4 | 40B | FPC40URB | FPC40G* | FPC40GN* | FPC40BU* | 10, 30 | 41.0 | 35.0 | 80 |
| 50 | FPC! | 50B | FPC50URB | FPC50G* | FPC50GN* | FPC50BU* | 10, 30 | 46.4 | 40.0 | 105 |
| 63 | FPC | 3B | FPC63URB | FPC63G* | FPC63GN* | FPC63BU* | 10, 30 | 57.0 | 50.0 | 120 |

| metric thread part number | PG thread part number | NPT part number |
|------------------------------|--------------------------|--------------------|
| MPC-12-M16 | MPC-12-PG9 | |
| MPC-16-M16 | MPC-16-PG11 | |
| MPC-16-M20 | MPC-16-PG13 | MPC-16-050 |
| MPC-20-M20 | MPC-20-PG16 | MPC-20-050 |
| MPC-25-M25 | MPC-25-PG21 | MPC-25-075 |
| MPC-30-M32* | MPC-30-PG29* | |
| MPC-32-M32 | MPC-32-PG29 | MPC-32-100 |
| MPC-40-M40 | MPC-40-PG36 | MPC-40-125 |
| MPC-50-M50 | MPC-50-PG42 | MPC-50-150 |
| MPC-63-M63 | MPC-63-PG48 | MPC-63-200 |

Longer reel lengths available on request











Ordering Notes

- Add reel length eg: FPC20B-30M for 30M
- * Indicates parts made to order on request and may be subject to MOQ and lead time
- For UL recognised black conduit order FPCURB*
- · Available on request:
- additional sizes
- alternative threads
- other colours





- Highly flexible
- Accepts torsional movement
- Vibration and shock tested to EN61373 Cat 2
- IP rating: IP65
- Temperature range
- -5°C to +70°C (FPCB Black)
- -20°C to +70°C (FPCG Grey)

- -20°C to +70°C (FPCGN Green)
- -20°C to +90°C (FPCBU Blue)
- Metric threads supplied complete with locknuts
- FPCB (Black) is UV resistant
- · FPCGN (Green) is oil resistant
- FPCBU (Blue) is high temperature
- Self extinguishing
- FPCG, FPCGN, FPCBU and FPCURB are UL recognised to UL1696 for use in US and Canada
- Thread face sealing washers may be required to maintain IP rating at the connection to other equipment, see page 124

MPC90

90° Elbow nylon compression fitting external thread

2 part compression, 90 degree elbow fitting with internal spigot and all round external teeth to grip conduit. Available in Black or Grey (RAL 7001).



MPC45

45° Elbow nylon compression fitting external thread

2 part compression, 45 degree elbow fitting with internal spigot and all round external teeth to grip conduit. Available in Black or Grey (RAL 7001).







| metric thread part number | PG thread part number | NPT part number | metric thread part number | NPT part number |
|------------------------------------|--------------------------------|-----------------------|------------------------------------|-----------------------|
| | | | | |
| MPC90-16-M16 | MPC90-16-PG11 | | | |
| MPC90-16-M20 | MPC90-16-PG13 | MPC90-16-050 | MPC45-16-M20 | MPC45-16-050 |
| MPC90-20-M20 | MPC90-20-PG16 | MPC90-20-050 | MPC45-20-M20 | MPC45-20-050 |
| MPC90-25-M25 | MPC90-25-PG21 | MPC90-25-075 | MPC45-25-M25 | MPC45-25-075 |
| | | | | |
| MPC90-32-M32 | MPC90-32-PG29 | MPC90-32-100 | MPC45-32-M32 | MPC45-32-100 |
| MPC90-40-M40 | MPC90-40-PG36 | MPC90-40-125 | | |
| | | | | |
| | | | | |

(mm) 12 16 20 25



Standards







^{*} refer to conduit properties for applicable standards

Technical Drawing







LPC system

Construction: Smooth spiral reinforced pvc









Conduit

LPC

Construction: Smooth bore, smooth cover, helically formed pvc, flexible conduit with spiral upvc reinforcement and flexible pvc jacket.

Colour: Black or Grey

Typical Applications: Machines and applications requiring high levels of Ingress protection such as

Fittings

FCL-P

Non metallic conduit clip

Nylon conduit fixing clip for smooth conduit. Available in Black or Grey (RAL 7001).

LPCO

Construction: As LPC except colour Orange.

Typical Applications: As LPC but where high flexibility is required.

LPCGN

Construction: As LPC except colour Green.

Typical Applications: As LPC but where oil resistance is required.

LPCBU

Construction: As LPC except colour Blue.

Typical Applications: As LPC but where high temperature is required.



Also available in Hygenic version in White, Blue and Grey - see page 80



| nominal size (mm) | Thc | Black part number | reel length (m) | Grey (RAL 7001) | Orange (RAL 2008) | Green (RAL 6001) | Blue (RAL 5012) | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) |
|-------------------|--------|-------------------|-----------------|-----------------|-------------------|------------------|-----------------|-----------------|------------------|-----------------|--------------------------------|
| 12 | LPC12B | } | 30 | LPC12G* | LPC120* | LPC12GN* | LPC12BU* | 30 | 14.2 | 10.0 | 50 |
| 16 | LPC16B | 3 | 30 | LPC16G | LPC160 | LPC16GN* | LPC16BU* | 30 | 17.8 | 12.6 | 50 |
| 16 | | | | | | | | | | | |
| 20 | LPC20B | 3 | 10, 30 | LPC20G | LPC200 | LPC20GN* | LPC20BU* | 30 | 21.1 | 16.0 | 70 |
| 25 | LPC25B | 3 | 10, 30 | LPC25G | LPC250 | LPC25GN* | LPC25BU* | 30 | 26.4 | 21.0 | 90 |
| 32 | LPC32B | 3 | 10, 30 | LPC32G | LPC320 | LPC32GN* | LPC32BU* | 30 | 33.1 | 26.5 | 140 |
| 40 | LPC40B | 3 | 10, 30 | LPC40G* | LPC400* | LPC40GN* | LPC40BU* | 30 | 41.8 | 35.4 | 190 |
| 50 | LPC50B | 3 | 10, 30 | LPC50G* | LPC500* | LPC50GN* | LPC50BU* | 30 | 47.9 | 40.0 | 240 |
| 63 | LPC63B | 3 | 10, 30 | LPC63G* | LPC630* | LPC63GN* | LPC63BU* | 30 | 59.7 | 51.3 | 270 |

| metric thread part number |
|------------------------------|
| |
| FCL18-P |
| FCL21-P |
| FCL26-P |
| FCL33-P |
| |
| |
| |











Ordering Notes

- * Indicates parts made to order on request and may be subject to MOQ and lead time
- Available on request:
- additional sizesalternative threads

- other colours
- conduit couplers
- 45 degree brass elbow
- combined conduit fitting with cable gland, see page 120

Alternatives







- Smooth, wipe clean surface
- · Accepts some torsional movement
- IP rating:
- IP66, IP67 with MPC fittings
- IP66, IP67, IP68 (2 bar 1hr) + IP69 with metal C-type compression fittings
- Temperature range
- -5°C to +70°C (LPC and LPCG)

- -20°C to +70°C (LPCO and LPCGN)
- -20°C to +90°C (LPCBU)
- · LPCO (Orange) is highly flexible
- · LPCGN (Green) is oil resistant
- · LPCB (Black) is UV resistant
- · Self extinguishing
- Metric nylon fittings supplied complete with locknut
- · Vibration and shock tested to EN 61373 Cat 2
- · Thread face sealing washers may be required to maintain IP rating at the connection to other equipment, see page 124.

MPC

Straight nylon compression fitting external thread

2 part compression, 90 degree elbow fitting with internal spigot and all round external teeth to grip conduit. Available in Black or Grey (RAL 7001).







MPC90

90° Elbow nylon compression fitting external thread

2 part compression, 90 degree elbow fitting with internal spigot and all round external teeth to grip conduit. Available in Black or Grey (RAL 7001).







MPC45

45° Elbow nylon compression fitting external thread

2 part compression, 45 degree elbow fitting with internal spigot and all round external teeth to grip conduit. Available in Black or Grey (RAL 7001).













| | ı | 1 | | ı | 1 | | |
|------------------------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------|---------------------------------|------------------------------------|---------------------------------|
| metric thread part number | PG thread part number | NPT thread part number | metric thread part number | PG thread part number | NPT thread part number | metric thread part number | NPT thread part number |
| | | | | | | | |
| MPC-16-M16 | MPC-16-PG11 | | MPC90-16-M16 | MPC90-16-PG11 | | | |
| MPC-16-M20 | MPC-16-PG13 | MPC-16-050 | MPC90-16-M20 | MPC90-16-PG13 | MPC90-16-050 | MPC45-16-M20 | MPC45-16-050 |
| MPC-20-M20 | MPC-20-PG16 | MPC-20-050 | MPC90-20-M20 | MPC90-20-PG16 | MPC90-20-050 | MPC45-20-M20 | MPC45-20-050 |
| MPC-25-M25 | MPC-25-PG21 | MPC-25-075 | MPC90-25-M25 | MPC90-25-PG21 | MPC90-25-075 | MPC45-25-M25 | MPC45-25-075 |
| MPC-32-M32 | MPC-32-PG29 | MPC-32-100 | MPC90-32-M32 | MPC90-32-PG29 | MPC90-32-100 | MPC45-32-M32 | MPC45-32-100 |
| MPC-40-M40 | MPC-40-PG36 | MPC-40-125 | MPC90-40-M40 | MPC90-40-PG36 | MPC90-40-125 | | |
| MPC-50-M50 | MPC-50-PG42 | MPC-50-150 | | | | | |
| MPC-63-M63 | MPC-63-PG48 | MPC-63-200 | | | | | |

nominal size (mm) 12 16 16

20 25 32 40 50 63

Standards



RoHS



BS EN IEC 61386





















Metallic fittings for use with LPC conduits

Fittings

| С | C-S | C-90 |
|--|--|--|
| External metric thread nickel plated brass Multipart compression fitting including elastomeric seal. Can be used for knockout or threaded entries as fitting rotates until tightened. | Swivel external thread nickel plated brass Multipart compression fitting including elastomeric seal. The external thread swivels about the main body even after tightening. | 90° External thread nickel plated brass 90° multipart compression fitting including elastomeric seal. Can be used for knockouts. |
| | Suitable for knockout or threaded entries. | |
| IP66 IP67 IP68 IP69 | IP66 IP67 IP68 IP69 | IP66 IP67 IP68 IP69 |







| nominal size (mm) | LPC | for conduit see page 80 | metric thread part number | for PG thread size | for NPT thread size | thread | metric thread part number | metric thread part number |
|-------------------|-------|----------------------------|------------------------------------|--------------------------|---------------------------|---------|------------------------------|------------------------------|
| 12 | LPC12 | | LPC12-M16-C | LPC12-PG9-C | | | LPC12-M16-S | LPC12-M16-C90 |
| 16 | LPC16 | | LPC16-M16-C | LPC16-PG11-C | | | LPC16-M16-S | LPC16-M16-C90 |
| 16 | | | LPC16-M20-C | LPC16-PG13-C | LPC16-050-C | (1/2") | LPC16-M20-S | LPC16-M20-C90 |
| 20 | LPC20 | | LPC20-M20-C | LPC20-PG16-C | LPC20-050-C | (1/2") | LPC20-M20-S | LPC20-M20-C90 |
| 25 | LPC25 | | LPC25-M25-C | LPC25-PG21-C | LPC25-075-C | (3/4") | LPC25-M25-S | LPC25-M25-C90 |
| 32 | LPC32 | | LPC32-M32-C | LPC32-PG29-C | LPC32-100-C | (1") | LPC32-M32-S | LPC32-M32-C90 |
| 40 | LPC40 | | LPC40-M40-C | LPC40-PG36-C | LPC40-125-C | (11/4") | LPC40-M40-S | LPC40-M40-C90 |
| 50 | LPC50 | LPC50-M50-C | | LPC50-PG42-C LPC50- | | (11/2") | | LPC50-M50-C90 |
| 63 | LPC63 | | LPC63-M63-C | LPC63-PG48-C | LPC63-200-C | (2") | | LPC63-M63-C90 |

^{*} Please see conduit range information page 80

Ordering Notes

- * Indicates parts made to order on request and may be subject to MOQ and lead time
- · Available on request:
- additional sizes
- alternative threads
- alternative materials (eg. PU)
- other colours

- conduit couplers
 45 degree brass elbow
 combined conduit fitting with cable gland, see page 120

Alternatives



see page 78



- Smooth, wipe clean surface
- Accepts some torsional movement
- IP rating:
- IP66 and IP67 with MPC fittings
- IP66, IP67, IP68 (2 bar 1hr) + IP69 with metal C-type compression fittings
- Temperature range
- -5°C to +70°C (LPC and LPCG)
- -20°C to +70°C (LPCO and LPCGN)
- -20°C to +90°C (LPCBU)
- Thread face sealing washers may be required to maintain IP rating at the connection to other equipment, see page 124

| C-45 | CSS | C90-SS |
|---|---|---|
| 45° External thread nickel plated brass 45° multipart compression fitting including elastomeric seal. Can be used for knockouts. | External thread stainless steel Multipart compression fitting in Stainless Steel (Grade 316L) including elastomeric seal. Can be used for knockout or threaded entries as fitting rotates until tightened. | 90° External thread stainless steel 90° multipart compression fitting Stainless Steel (Grade 316L) including elastomeric seal. Can be used for knockouts. |
| IP66 IP67 IP68 IP69 | IP66 IP67 IP68 IP69 | IP66 IP67 IP68 IP69 |
| | | |







| metric thread part number | metric thread part number | metric thread part number |
|------------------------------|------------------------------|------------------------------|
| | | |
| | LPC16-M16-CSS | |
| LPC16-M20-C45 | LPC16-M20-CSS | LPC16-M20-CSS90 |
| LPC20-M20-C45 | LPC20-M20-CSS | LPC20-M20-CSS90 |
| LPC25-M25-C45 | LPC25-M25-CSS | LPC25-M25-CSS90 |
| LPC32-M32-C45 | LPC32-M32-CSS | LPC32-M32-CSS90 |
| LPC40-M40-C45 | LPC40-M40-CSS | |
| LPC50-M50-C45 | LPC50-M50-CSS | |
| LPC63-M63-C45 | | |

Standards







BS EN IEC 61386

Technical Drawing



nominal size (mm)



LPC-FG system



IP67

IP68







Hygienic Range

Conduit



I PC-WEG

Construction: Smooth bore, smooth cover, helically formed PVC, flexible conduit with spiral uPVC reinforcement and flexible PVC jacket.

Colour: White.

Typical Applications: Suitable for repeat contact with all food types, excluding fatty foods, at full temperature.

The flexible PVC is manufactured from FDA approved ingredients and has been independently tested to European Food regulation 10/2011.

Temp: -20°C to +90°C

LPC-BUFG

Construction: Smooth bore, smooth cover, helically formed PVC, flexible conduit with spiral upVC reinforcement and flexible PVC jacket.

Colour: Blue.

Typical Applications: Suitable for repeat contact with all food types, excluding fatty foods, at full temperature.

The flexible PVC is manufactured from FDA approved ingredients and has been independently tested to European Food regulation 10/2011.

Temp: -20°C to +90°C



Construction: Smooth bore, smooth cover, helically formed PVC, flexible conduit with spiral uPVC reinforcement and flexible PVC jacket.

Colour: Grey.

Typical Applications: Suitable for repeat contact with all food types, excluding fatty foods, at full temperature.

The flexible PVC is manufactured from FDA approved ingredients and has been independently tested to European Food regulation 10/2011.

Temp: -5°C to +70°C







AFC UL-FG

Construction: LFNC-B Smooth bore, smooth cover rugged nonmetallic PVC construction for Splash Zones. NSF® 169 Component for "splash zones" in food production areas and UL 1660, UL File E123464. PVC jacket inhibits bacteria growth and is non-conductive and non-corrosive.

Colour: White.

Typical Applications: Food equipment & other devices associated with food production requiring NSF 169 compliance components for Special Purpose Food Equipment and Devices, and UL certifications.

Temp: -20°C to +80°C

| nominal size (mm) | LPC-WFG | partnumber | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) | LPC-BUFG | partnumber | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) | LPC-GFG | partnumber | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) | AFC UL-FG | partnumber | reel length (m) | outside dia max (mm) | inside dia min (mm) | min inside bend radius (mm) |
|-------------------|---------|------------|-----------------|------------------|-----------------|--------------------------------|----------|------------|-----------------|------------------|-----------------|--------------------------------|---------|------------|-----------------|------------------|-----------------|--------------------------------|-----------|------------|-----------------|----------------------|---------------------|--------------------------------|
| 12 | LPCWF | G12 | 30 | 14.2 | 10.0 | 50 | LPCBUF | G12 | 30 | 14.2 | 10.0 | 50 | LPCGF | G12 | 30 | 14.2 | 10.0 | 50 | | | | | | |
| 16 | LPCWF | G16 | 30 | 17.8 | 12.6 | 50 | LPCBUF | G16 | 30 | 17.8 | 12.6 | 50 | LPCGF | G16 | 30 | 17.8 | 12.6 | 50 | NSZ1-30 | -00* | 30.5 | 18.0 | 12.3 | 50.8 |
| 16 | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | LPCWF | G20 | 10, 30 | 21.1 | 16.0 | 70 | LPCBUF | G20 | 10, 30 | 21.1 | 16.0 | 70 | LPCGF | G20 | 10, 30 | 21.1 | 16.0 | 70 | NSZ2-30 | -00* | 30.5 | 21.4 | 15.8 | 82.6 |
| 25 | LPCWF | G25 | 10, 30 | 26.4 | 21.0 | 90 | LPCBUF | G25 | 10, 30 | 26.4 | 21.0 | 90 | LPCGF | G25 | 10, 30 | 26.4 | 21.0 | 90 | NSZ3-30 | -00* | 30.5 | 27.0 | 20.8 | 108 |
| 32 | LPCWF | 332 | 10, 30 | 33.1 | 26.5 | 140 | LPCBUF | G32 | 10, 30 | 33.1 | 26.5 | 140 | LPCGF | G32 | 10, 30 | 33.1 | 26.5 | 140 | NSZ4-30 | -00* | 30.5 | 33.4 | 26.5 | 165 |
| 40 | LPCWF | G40 | 10, 30 | 41.8 | 35.4 | 190 | LPCBUF | G40 | 10, 30 | 41.8 | 35.4 | 190 | LPCGF | G40 | 10, 30 | 41.8 | 35.4 | 190 | NSZ5-24 | l-00* | 15.3 | 42.2 | 35.1 | 203 |
| 50 | LPCWF | G50 | 10, 30 | 47.9 | 40.0 | 240 | LPCBUF | G50 | 10, 30 | 47.9 | 40.0 | 240 | LPCGF | G50 | 10, 30 | 47.9 | 40.0 | 240 | NSZ6-24 | -00* | 15.3 | 48.3 | 40.0 | 229 |
| 63 | LPCWF | 363 | 10, 30 | 59.7 | 51.3 | 270 | LPCBUF | G63 | 10, 30 | 59.7 | 51.3 | 270 | LPCGF | G63 | 10, 30 | 59.7 | 51.3 | 270 | NSZ7-24 | -00* | 15.3 | 60.4 | 51.3 | 283 |

Ordering Notes

- * Indicates parts made to order on request and may be subject to MOQ and lead time
- Available on request:
- additional sizes
- alternative threads

Accessories



see page 122



- Smooth, wipe clean surface
- · Accepts some torsional movement
- IP rating:

IP66, IP67, IP68 (2 bar 1hr) + IP69

- Temperature range
- -20°C to +90°C

- · C-FG fitting designed in accordance with EN1672-2 and EN ISO 14159
- · C-FG fitting manufactured from stainless steel grade 316L
- · Compatible with Hygienic Round Box see page 122
- For UL listed fittings consult us

• I-PACK see page 128 - 3m of conduit, 2 fittings and 2 locknuts



Fittings

C-FG









90° Elbow **External thread**

Multipart compression fitting designed using principles given in EN1672-2 and EN ISO 14159 for use with LTP and LFMC conduits. Manufactured from 316L stainless steel, complete with polyester elastomer compression seals to prevent ingress of food or bacteria. Ideal for use where space is limited.

FCC-SS

Stainless steel (316L) P clips

P clip to support conduit.

LOCKNUTS

Stainless steel (316L) locknuts

Hexagonal locknut to secure fitting.





Ext Metric

LPC12-M16-C-FG

LPC16-M16-C-FG

LPC20-M20-C-FG

LPC25-M25-C-FG

LPC32-M32-C-FG

LPC40-M40-C-FG

LPC50-M50-C-FG

LPC63-M63-C-FG*







External thread stainless steel food grade

steel, complete with polyester elastomer compression seals to prevent ingress of food or bacteria. Can be used for knockout or threaded entries as fitting rotates until tightend.

ST fittings are designed for use with Round Boxes on page 122. They have a shorter thread to maximise space within the box or enclosure.

Multipart compression fitting designed using principles given in EN1672-2 and EN ISO 14159. Manufactured from 316L stainless





Ext Metric

LPC20-M20-C90-FG

LPC25-M25-C90-FG

LPC32-M32-C90-FG









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FCC12-SS

FCC16-SS FCC16-SS

FCC20-SS

FCC25-SS

FCC32-SS

FCC40-SS

FCC50-SS

FCC63-SS*



| - 134 | |
|------------------------------|--|
| metric thread part number | |
| SS-M16 | |

(mm)

| metric thread part number | nominal size |
|------------------------------|--------------|
| | 12 |
| SS-M16 | 16 |
| SS-M20 | 16 |
| SS-M20 | 20 |
| SS-M25 | 25 |
| SS-M32 | 32 |
| SS-M40 | 40 |
| SS-M50 | 50 |
| SS-M63* | 63 |

Other sizes coming soon

Standards





LPC20-050P-C-FG

LPC25-075P-C-FG

LPC32-100P-C-FG









EN ISO 14159





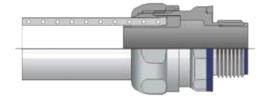
* refer to conduit properties for applicable standards

Technical Drawing

LPC20-050P-C90-FG

LPC25-075P-C90-FG

LPC32-100P-C90-FG









Metallic conduit & fittings

We work with a range of material types including Galvanised Steel and Stainless Steel, and have developed composite solutions to enhance performance properties to suit technically demanding applications. Our Metallic Offer features over 35 systems, in a range of sizes from 10mm to 75mm.

Flexicon manufacture a range of helically wound conduits, with and without coatings, liquid tight conduits, pliable galvanised steel corrugated conduits and annularly corrugated conduits. Metallic systems can also be combined with overbraids to create composite solutions when required.



Key Features

- High Compression Strength
- · High Pull Off Strength
- Wide Temperature Tolerances
- High Impact Strength
- EMC Screening Performance
- High IP Rating up to IP69
- Inherent Fire Performance Properties
- High Abrasion Resistance

Key Features

- Suitable for heavy duty applications
- Maintains integrity of the system in extreme applications
- Suitable for a diverse range of operating environments
- Can withstand impact forces such as falling objects
- Protection against electromagnetic interference
- Reduced risk of water or dust ingress



















BS EN IEC 61386













Metallic conduit selection guide

| | Conduit System | IJ | SSU | FSU | FNC | LFHU | FPU | LTP | LTPAS | LTPHC | СТРСЕН | LTPUL | LTPPU | LTPPUAS | LTPSS | LTBRDP | LTBRDLFH | |
|--|--|------------------|----------------------------|---------------------------|------------------|--------------------------|------------------|---------------------------|---------------------------|------------------|--------------------|------------------|------------------|------------------|------------------|---------------------|-----------------------------|--|
| | | | | | | | | | | | | # | | | | | | |
| IP Rating | IP40 IP54 IP65 IP66 IP67 | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | |
| Compression Streng Pull Off Strength (kg Min Bend Radius (mi |) for 20mm size | 350 120 45 | 400 170 45 | 350 120 45 | 350 120 45 | 350 120 45 | 350 120 45 | 400 130 65 | 400 130 65 | 400 130 65 | 400 130 100 | 500 160 90 | 400 130 65 | 400 130 65 | 400 130 65 | 400 130 65 | 400 130 130 | |
| Colours | | zinc | stain- less steel | black, grey, orange | black | black | black, blue | black, grey, orange | black, grey, orange | black | black | black | black, blue | black | black | black | black | |
| High Fatigue Life | | | | | | | | | | | | | • | • | | | | |
| Тетр | Max Min | 300°C -100°C | 600°C -100°C | 70°C -15°C | 120°C -40°C | 90°C -25°C | 100°C -40°C | 105°C -20°C | 105°C -20°C | 150°C -60°C | 90°C -25°C | 75°C -15°C | 100°C -40°C | 100°C -40°C | 105°C -20°C | 105°C -20°C | 90°C -25°C | |
| Category | Flexible Pliable | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | |
| Low Fire Hazard | *** Inherent ** Extra * Standard | NOW FIRE HAZARD | INDICATENT LOW FIRE HAZARD | | | OXTRA LOW FIRE HAZARD ** | | | | | LOW FIRE HAZARD | | | | | | LOW FIRE HAZARD | |
| | Halogen Free | • | • | | • | • | • | | | • | • | | • | | | | • | |
| Fire Tests | Self Extinguishing EN 45545-2 NFPA-130 | • | • | | | • | • | • | | • | • | | • | | • | • | • | |
| Abrasion Resistance | | | | | | | | | | | | | | | | | | |
| Resistance to solven | | | | | | | | | | • | | | | | • | | | |
| UV Resistance | | | | | | | | | • | | • | | • | | | • | | |
| EMC Performance | | | | | | | | | | | | | | | | CHEMICED EMC SCREEN | CINSUANCED EMC SCREEN | |
| Hazardous Locations | | | | | | | | • | • | • | • | • | • | • | • | • | • | |
| Anti-Static | | AS ANTESTATIK | AS ANTI-STATIC | | | | | | AS ANTE-STATIC | | | | | AS ANTESTATIC | | | | |
| Approvals | UL Listed Lloyds London Underground Food Contact | • | • | | | • | | • | | | • | • | | | | | • | |
| ROHS | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | |
| REACH | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | |
| Page Number | | 88 | 88 | 90 | 90 | 92 | 92 | 94 | 94 | 94 | 94 | 95 | 95 | 95 | 95 | 96 | 96 | |



124 Accessories



128 Contractor packs



132 Chemical resistance



Metallic conduit selection guide

| | | | 1 | NEW | | | | | | | | | | | | | | |
|---------------------|-----------|---------------|-----------|-----------|--------------------------------|------------------------|-----------------------------|--------------------------------|-------------------|---------------------------|-----------------------------|---|-------------------------------|---------------------------|-----------------------|--------------------------------|--------------------------------|--------------------------|
| LTPBRD | LTP-FG | LTBRDP-FG | LTPSS-FG | AFC UL-FG | 교 | FLP | LFHP | FB | FUSSB | FSB | LFHUBRD | FSS | FSSBRD | FPRSS | FPRTC | FPISS | FPIHSS | FPIHRLSS |
| | | | | | | | | | | | | 111111111111111111111111111111111111111 | | | | | | |
| • | • | • | • | • | | • | • | | | | | | | | | | | |
| • | • | • | • | • | | • | • | | | | | | | • | • | • | • | |
| • | • | • | • | • | | • | • | | | | | • | • | | | | | |
| • | • | • | • | • | | • | • | | | | | | | | | | | |
| 400 | 400 | 400 | 400 | 500 | 300 | 300 | 570 | 350 | 350 | 350 | 350 | 1000 | 1000 | 75 | 75 | 45 | 60 | 60 |
| 350 65 | 130 65 | 130 65 | 130 65 | 160 90 | 30 35 | 50, 100 35 | 50, 100 40 | 120 45 | 120 45 | 120, 300 45 | 120, 300 45 | 100 45 | 150 60 | 100 45 | 75 45 | 100 45 | 100 45 | 100 45 |
| stain- | white, | white, | 03 | 30 | 33 | 33 | 40 | 43 | stain- | 45 | stain- | stainless | stain- | stain- | 43 | stain- | stain- | stain- |
| less steel | blue | blue | blue | white | zinc | black | black | zinc | less steel | zinc | less steel | steel, black | less steel | less steel | tin | less steel | less steel | less steel |
| | | | | | | | | | | | | | | | | • | • | • |
| 150°C | 105°C | 105°C | 105°C | 80°C | 120°C | 70°C | 90°C | 300°C | 300°C | 70°C | 90°C | 850°C | 850°C | 120°C | 120°C | 110°C | 110°C | 110°C |
| -60°C | -20°C | -20°C | -20°C | -30°C | -40°C | -15°C | -25°C | -100°C | -100°C | -15°C | -25°C | -100°C | -100°C | -40°C | -40°C | -50°C | -50°C | -50°C |
| • | • | • | • | • | | | | • | • | • | • | | | | • | • | • | |
| | | | | | • | • | • | | | | | • | • | | | | | |
| | | | | | INHERENT LOW FIRE HAZARD | | CXTRA LOW FIRE HAZARD | INHERENT LOW FIRE HAZARD | LOW FIRE HAZARD | | CXTRA LOW FIRE HAZARD | INHERENT LOW FIRE HAZARD | NHERONT LOW FIRE HAZARD | CXTRA LOW FIRE HAZARD ** | CXTRA LOW FIRE HAZARD | STANDARD LOW FIRE HAZARD | STANDARD LOW FIRE HAZARD | CXTRA LOW FIRE HAZARD ** |
| • | | | | | | | | | | | | | | | | | • | |
| • | • | • | • | • | • | • | • | • | • | • | | • | • | • | | • | • | • |
| | | | | | • | | • | • | • | | • | • | • | • | • | | | • |
| | | | | | • | | • | • | • | | • | • | • | • | • | | | • |
| | | | | | | | | • | • | • | • | | • | • | • | • | • | • |
| • | | | | | | • | • | • | • | • | • | • | • | • | • | • | • | • |
| | | ENHANCED | | | SUPER | | | | | | | | | | | | | _ |
| STANDARD EMC SCREEN | | EMC SCREEN | | | SUPER EMC SCREEN | SUPER EMC SCREEN | SUPER EMC SCREEN | STANDARD EMC SCREEN | EMC SCREEN | STANDARD EMC SCREEN | STANDARD EMC SCREEN | STANDARD EMC SCREEN | STANDARD EMC SCREEN | STANDARD EMC SCREEN | EMC SCREEN | STANDARD EMC SCREEN | STANDARD EMC SCREEN | STANDARD EMC SCREEN |
| • | • | • | • | • | | | | | | | | • | • | | | | | |
| AS ANTI-STATIC | | | | | AS ANTI-STATIC | | | AS ANTI-STATIC | AS ANTI-STATIC | AS ANTESTATIC | AS ANTI-STATIC | AS ANTI-STATIC | AS ANTESTATIC | AS ANTH-STATE | AS ANTI-STATIC | AS ANTI-STATIC | AS ANTESTATIC | AS ANTESTATIC |
| | | | | • | | • | • | | | | | | | | | | | |
| | | | | | | | | • | • | | • | • | • | | | | | |
| | • | • | • | • | | | | | | | | | | | | | | |
| • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| • | • | | | | • | | | | • | • | • | • | • | • | • | • | • | • |
| 106 | 108 | 108 | 108 | 108 | 110 | 110 | 111 | 112 | 112 | 114 | 114 | 116 | 116 | 118 | 118 | 118 | 118 | 118 |



134 Thread data



135 Technical guidance





Metallic fittings selection guide

Multipart

NPB

























Liquid Tight

NPB (Nickel Plated Brass)























Stainless steel (316L)







101

Other

Hygienic



109





Round Boxes





Strain Relief Glands



Accessories

Insert

Cable Gland









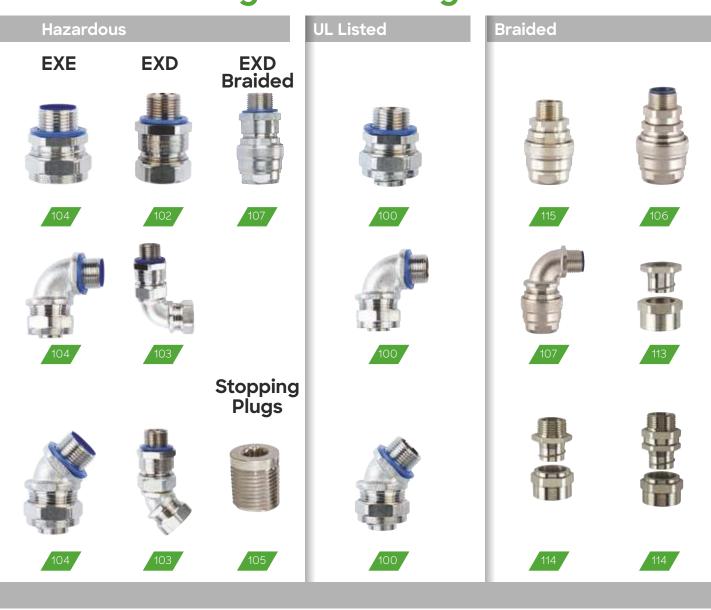


Locknuts





Metallic fittings selection guide



















110











Stopping Plugs



Couplers



Thread Converters







FU & SSU system







Galvanised steel and stainless steel

Conduit



Construction: Galvanised steel, helically wound, flexible conduit.

Typical Applications: Underfloor wiring in office blocks inherent low fire hazard applications typically interior applications due to IP40 rating.

Temp: -100°C to +300°C



INHERENT LOW FIRE HAZARD ***

SSU

Construction: Stainless steel (grade 316L), helically wound, flexible conduit.

Colour: Stainless steel, self colour.

Typical Applications: Instrumentation and security or where enhanced corrosion performance is required.

Temp: -100°C to +600°C



Fittings

М

Fixed external thread nickel plated brass

Two part fitting comprising shell and body with external thread. This fitting can be inserted into a knockout and secured with a locknut.

IP40

M-SS

Fixed external thread stainless steel

Two part fitting comprising shell and body with external thread. This fitting can be inserted into a knockout and secured with a locknut.

IP40

S

Swivel external thread nickel plated brass

Two part fitting comprising shell and body. The external thread swivels about the main body. Can be used with threaded entries, or knockout secured with a locknut.

IP40













| nominal size (mm) | FU | part number | reel length (m) | ssu | part number | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) |
|-------------------|-------|-------------|-----------------|--------------------|-------------|-----------------|------------------|-----------------|--------------------------------|
| 10 | FU10⁺ | | 25, 50 | SSU10 ⁴ | | 10, 25, 50 | 9.0 | 6.8 | 25 |
| 12 | FU12 | | 25, 50 | SSU12 | | 10, 25, 50 | 13.0 | 10.2 | 30^{\dagger} |
| 16 | FU16 | | 10, 25, 50 | SSU16 | | 10, 25, 50 | 16.0 | 13.0 | 40 |
| 16 | | | | | | | | | |
| 20 | FU20 | | 10, 25, 50 | SSU20 | | 10, 25 | 20.5 | 16.9 | 45 |
| 25 | FU25 | | 10, 25, 50 | SSU25 | | 10, 25 | 25.0 | 21.1 | 55 |
| 32 | FU32 | | 10, 25 | SSU32 | | 10, 25 | 32.0 | 28.1 | 60 |
| 40 | FU40 | | 10, 25 | SSU40 | | 10 | 42.5 | 37.6 | 80 |
| 50 | FU50 | | 10, 25 | SSU50 | | 10 | 53.0 | 48.4 | 90 |
| 63 | FU63 | | 10 | SSU63 | • | 10 | 62.5 | 57.5 | 115 |
| 75 | FU75 | | 10 | | | | 77.0 | 70.0 | 150 |

| metric thread part number | PG thread part number | metric thread part number | metric thread part number | PG thread part number |
|------------------------------------|--------------------------------|------------------------------|------------------------------------|--------------------------------|
| FU10-M12-M | FU10-PG7-M | SSU10-M12-M | FU10-M12-S | FU10-PG7-S |
| FU12-M16-M | FU12-PG9-M | SSU12-M16-M | FU12-M16-S | FU12-PG9-S |
| FU16-M16-M | FU16-PG11-M | SSU16-M16-M | FU16-M16-S | FU16-PG11-S |
| FU16-M20-M | | | FU16-M20-S | FU16-PG13-S |
| FU20-M20-M | FU20-PG16-M | SSU20-M20-M | FU20-M20-S | FU20-PG16-S |
| FU25-M25-M | FU25-PG21-M | SSU25-M25-M | FU25-M25-S | FU25-PG21-S |
| FU32-M32-M | FU32-PG29-M | SSU32-M32-M | FU32-M32-S | FU32-PG29-S |
| FU40-M40-M | FU40-PG36-M | SSU40-M40-M | FU40-M40-S | FU40-PG36-S |
| FU50-M50-M | FU50-PG48-M | SSU50-M50-M | FU50-M50-S | FU50-PG42-S |
| FU63-M63-M | | SSU63-M63-M* | FU63-M63-S | |
| FU75-M75-M | | | | |

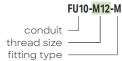
Ordering Notes

- Add reel length eg: FU20-25M for 25m reel
- Indicates parts made to order on request and may be subject to MOQ and lead time
- + Double interlock section
- † SSU12 Minimum bend radius is 50mm

Available on request:

- longer lengths and bulk packaging
- cut lengths and assemblies
- alternative threads

How to read the fittings code





- High mechanical strength
- Highly flexible
- Inherently Low Fire Hazard (LFH) see page 144
- Fully compliant to LUL Std S1085 (Cert No. 296)
- Temperature range
- -100°C to +300°C (FU)
- -100°C to +600°C (SSU + SS fittings)
- -100°C to +400°C (SSU + NPB fittings)

| S-SS | P | F | FCC | 90° Elbow | |
|---|--|---|---|--|--|
| Swivel external thread stainless steel | Plain hole connector nickel plated brass | Fixed internal thread nickel plated brass | Plated steel P clip with pvc liner and secure | Internal and external threaded nickel | |
| Two part fitting comprising shell and body. The external thread swivels about the main body. Can be used with threaded entries, or knockout secured with a locknut. | Two part fitting comprising shell and body without thread. The body is fitted through the opposite side of the entry to the conduit and acts as a locking device also providing a smooth entry bush. | Two part fitting comprising shell and body with internal thread which can be used to connect with an external thread. | stainless steel P clips P clip to support and secure conduit. | plated brass elbow 90° elbow which can be screwed onto external threaded fittings to create a 90° elbow termination. | |
| IP40 | IP40 | IP40 | | | |

















| metric thread part number | hole size (mm) | part number | metric thread part number | plated steel part number | stainless steel part number | part number | nominal size (mm) |
|------------------------------|-------------------|----------------|------------------------------|-----------------------------------|--------------------------------------|-------------|-------------------|
| SSU10-M12-S | | | | FCC10 | FCC10-SS* | BM90-PG7* | 10 |
| SSU12-M16-S | 12 | FU12-P | | FCC12 | FCC12-SS | BM90-16M | 11 |
| SSU16-M16-S | 16 | FU16-P | FU16-M16-F | FCC16 | FCC16-SS | BM90-16M | 13 |
| | | | FU16-M20-F | FCC16 | FCC16-SS | BM90-20M | 13 |
| SSU20-M20-S | 20 | FU20-P | FU20-M20-F | FCC20 | FCC20-SS | BM90-20M | 16 |
| SSU25-M25-S | 25 | FU25-P | FU25-M25-F | FCC25 | FCC25-SS | BM90-25M | 18 |
| SSU32-M32-S | 32 | FU32-P | FU32-M32-F | FCC32 | FCC32-SS | BM90-32M | 20 |
| | 40 | FU40-P | FU40-M40-F | FCC40 | FCC40-SS | BM90-40M | 21 |
| | 51 | FU50-P | FU50-M50-F | FCC50 | FCC50-SS | BM90-50M | 25 |
| | 61 | FU63-P | FU63-M63-F | FCC63 | FCC63-SS* | | 28 |
| | 75 | FU75-P | | FCC75 | | | 34 |

Standards



BS EN IEC 61386













Technical Drawing

Note: refer to conduit properties for applicable standards





FSU & FNU system







Galvanised steel PVC or nylon coated

Conduit

FSU

Construction: Galvanised steel, helically wound, flexible conduit with PVC coating.

Colour: Black and Grey. Orange available on request*.

Typical Applications: General factory wiring and connections to machines

Temp: -15°C to +70°C

FNU

Construction: Galvanised steel, helically wound, flexible conduit with elastomeric nylon coating.

Colour: Black.

Typical Applications: Demanding applications requiring higher temperatures or solvent and abrasion resistance.

Temp: -40°C to +120°C

Fittings

М

Fixed external thread nickel plated brass

Two part fitting comprising shell and body with external thread. This fitting can be inserted into a knockout and secured with a locknut.

S

Swivel external thread nickel plated brass

Two part fitting comprising shell and body. The external thread swivels about the main body. Can be used with threaded entries, or knockout secured with a locknut.

D

Plain hole connector nickel plated brass

Two part fitting comprising shell and body without thread. The body is fitted through the opposite side of the entry to the conduit and acts as a locking device also providing a smooth entry bush.

IP54













| nominal size (mm) | FSU | part number | reel length (m) | FNU | part number | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) |
|-------------------|-------|-------------|-----------------|-------|-------------|-----------------|------------------|-----------------|--------------------------------|
| 10 | FSU10 | B⁺ | 25, 50 | | | | 10.0 | 6.8 | 25 |
| 12 | FSU12 | В | 25, 50 | | | | 14.0 | 10.2 | 30 |
| 16 | FSU16 | В | 10, 25, 50 | FNU16 | B* | 25 | 17.0 | 13.0 | 40 |
| 16 | | | | | | | | | |
| 20 | FSU20 | В | 10, 25, 50 | FNU20 | B* | 25 | 21.5 | 16.9 | 45 |
| 25 | FSU25 | В | 10, 25, 50 | FNU25 | B* | 25 | 26.0 | 21.1 | 55 |
| 32 | FSU32 | В | 10, 25 | FNU32 | B* | 25 | 34.0 | 28.1 | 60 |
| 40 | FSU40 | В | 10, 25 | | | | 44.5 | 37.6 | 90 |
| 50 | FSU50 | В | 10, 25 | | | | 55.0 | 48.4 | 100 |
| 63 | FSU63 | В | 10 | | | | 64.5 | 57.5 | 115 |
| 75 | FSU75 | В | 10 | | | | 79.0 | 70.0 | 150 |
| | | | | | | | | | |

| metric thread part number | PG thread part number | metric thread part number | PG thread part number | hole size (mm) | part number |
|------------------------------------|--------------------------------|------------------------------------|--------------------------------|-------------------|----------------|
| FSU10-M12-M | FSU10-PG7-M | FSU10-M12-S | FSU10-PG7-S | 9 | FSU10-P |
| FSU12-M16-M | FSU12-PG9-M | FSU12-M16-S | FSU12-PG9-S | 12 | FSU12-P |
| FSU16-M16-M | FSU16-PG11-M | FSU16-M16-S | FSU16-PG11-S | 16 | FSU16-P |
| FSU16-M20-M | | FSU16-M20-S | FSU16-PG13-S | | |
| FSU20-M20-M | FSU20-PG16-M | FSU20-M20-S | FSU20-PG16-S | 20 | FSU20-P |
| FSU25-M25-M | FSU25-PG21-M | FSU25-M25-S | FSU25-PG21-S | 25 | FSU25-P |
| FSU32-M32-M | FSU32-PG29-M | FSU32-M32-S | FSU32-PG29-S | 32 | FSU32-P |
| FSU40-M40-M | FSU40-PG36-M | FSU40-M40-S | FSU40-PG36-S | 40 | FSU40-P |
| FSU50-M50-M | FSU50-PG48-M | FSU50-M50-S | FSU50-PG42-S | 51 | FSU50-P |
| FSU63-M63-M | | FSU63-M63-S | | 61 | FSU63-P |
| FSU75-M75-M | | | | 75 | FSU75-P |

Ordering Notes

- Add reel length eg: FSU20-25M for 25m reel
- \bullet FSU fittings used for FNU conduit
- * Indicates parts made to order on request and may be subject to MOQ and lead time
- + Double interlock section
- Grey and other colours may be subject to MOQ and lead times

· Available on request:

- longer lengths and bulk packaging
- cut lengths and assemblies
- other colours
- stainless steel fittings (grade 316L)
- alternative threads
- 45° elbows 16 to 32mm

How to read the fittings code

FU10-M12-M

conduit thread size fitting type





- High mechanical strength
- Highly flexible
- IP rating: IP54 with standard fittings, IP65 with type C compression fittings
- Temperature range
- -15°C to +70°C (FSU)
- -40°C to +120°C (FNU)

- FNU offers high abrasion resistance and solvent resistance
- Low Fire Hazard version available (see type LFHU on page 92)
- Nickel plated brass fittings
- Vibration and shock tested to EN 61373 Cat 2
- Thread face sealing washers may be required to maintain IP rating at the connection to other equipment, see page 124

| F | C | C-S | C90 | Coupler | E |
|--|--|--|---|---|--|
| Fixed internal thread nickel plated brass Two part fitting comprising shell and body with internal thread which can be used to couple two pieces of conduit together when used with a swivel fitting. | External thread nickel plated brass Multipart compression fitting including elastomeric seal. Can be used for knockouts or threaded entries as fitting rotates until tightened. | External thread nickel plated brass Multipart compression fitting including elastomeric seal. The external thread swivels about the main body even after tightening. | External thread elbow nickel plated brass Multipart 90° compression fitting including elastomeric seal. | Nickel plated brass Multipart compression coupler to connect two conduits together. | Insert nickel plated brass Single part, machined insert to cap end of conduit. |
| IP54 | IP65 | IP65 | IP65 | IP65 | |













| metric thread part number | metric thread part number | PG thread part number | NPT thread part number | metric thread part number | metric thread part number | part number | part number | nominal size (mm) |
|------------------------------|------------------------------------|--------------------------------|---------------------------------|------------------------------|------------------------------|-------------|-------------|-------------------|
| | | | | | | | FSU10-E | 10 |
| | FSU12-M16-C | FSU12-PG9-C | | FSU12-M16-C-S | FSU12-M16-C90 | | FSU12-E | 12 |
| FSU16-M16-F | FSU16-M16-C | FSU16-PG11-C | FSU16-050-C | FSU16-M16-C-S | FSU16-M16-C90 | FSU16-FSU16 | FSU16-E | 16 |
| FSU16-M20-F | FSU16-M20-C | FSU16-PG13-C | | FSU16-M20-C-S | FSU16-M20-C90 | | FSU16-E | 16 |
| FSU20-M20-F | FSU20-M20-C | FSU20-PG16-C | FSU20-050-C | FSU20-M20-C-S | FSU20-M20-C90 | FSU20-FSU20 | FSU20-E | 20 |
| FSU25-M25-F | FSU25-M25-C | FSU25-PG21-C | FSU25-075-C | FSU25-M25-C-S | FSU25-M25-C90 | FSU25-FSU25 | FSU25-E | 25 |
| FSU32-M32-F | FSU32-M32-C | FSU32-PG29-C | FSU32-100-C | FSU32-M32-C-S | FSU32-M32-C90 | FSU32-FSU32 | FSU32-E | 32 |
| FSU40-M40-F | FSU40-M40-C | | | | | | FSU40-E | 40 |
| FSU50-M50-F | FSU50-M50-C | | | | | | FSU50-E | 50 |
| FSU63-M63-F | | | | | | | FSU63-E | 63 |
| | | | | | | | FSU75-E | 75 |

Also available in a Contractor Pack - see page 128

Standards

BS EN IEC 61386









Technical Drawing









LFHU system

Galvanised steel LFH coated

Galvanised steel polyurethane coated

FPU system

Conduit LFHU

Construction: Galvanised steel, helically wound, flexible steel conduit with Low Fire Hazard (LFH) coating.

Colour: Black.

Typical Applications: Public and commercial buildings and tunnels where low fire hazard performance is a requirement

Temp: -25°C to +90°C



FPU



Construction: Galvanised steel, helically wound, flexible steel conduit with low temperature, high abrasion, high fatigue life halogen free polyurethane coating.

Colour: Black and Metallic Blue

Typical Applications: Where low temperature and mechanical strength are important.

Temp: -40°C to +100°C

Fittings

Fixed external thread nickel plated brass

Two part fitting comprising shell and body with external thread. This fitting can be inserted into a knockout and secured with a locknut.

Swivel external thread nickel plated brass

Two part fitting comprising shell and body. The external thread swivels about the main body. Can be used with threaded entries, or knockout secured with a locknut.

Plain hole connector nickel plated brass

Two part fitting comprising shell and body without thread. The body is fitted through the opposite side of the entry to the conduit and acts as a locking device also providing a smooth entry bush.













| LFHU | part number | reel length (m) | FPU | part number | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) |
|-------|-------------|-----------------|-------|-------------|-----------------|------------------|-----------------|--------------------------------|
| LFHU1 | 2B* | 25 | FPU12 | B* | 25 | 14.0 | 10.2 | 30 |
| LFHU1 | 6B | 25, 50 | FPU16 | В | 25 | 17.0 | 13.0 | 40 |
| LFHU2 | 0B | 10, 25, 50 | FPU20 | В | 25, 50 | 21.5 | 16.9 | 45 |
| LFHU2 | 5B | 10, 25, 50 | FPU25 | В | 25, 50 | 26.0 | 21.1 | 55 |
| LFHU3 | 2B | 10, 25 | FPU32 | В | 25 | 34.0 | 28.1 | 80 |
| LFHU4 | 0B | 10, 25 | FPU40 | B* | 10 | 44.5 | 37.6 | 90 |
| LFHU5 | 0B | 10, 25 | FPU50 | B* | 10 | 55.0 | 48.4 | 100 |
| LFHU6 | 3B | 10 | FPU63 | B* | 10 | 64.5 | 57.5 | 115 |
| LFHU7 | 5B | 10 | FPU75 | B* | 10 | 79.0 | 70.0 | 150 |
| | | | | | | | | |

| metric thread part number | PG thread part number | metric thread part number | PG thread part number | hole size (mm) | part number |
|------------------------------------|--------------------------------|------------------------------------|--------------------------------|-------------------|----------------|
| FSU12-M16-M | FSU12-PG9-M | FSU12-M16-S | FSU12-PG9-S | 12 | FSU12-P |
| FSU16-M16-M | FSU16-PG11-M | FSU16-M16-S | FSU16-PG11-S | 16 | FSU16-P |
| FSU16-M20-M | | FSU16-M20-S | FSU16-PG13-S | | |
| FSU20-M20-M | FSU20-PG16-M | FSU20-M20-S | FSU20-PG16-S | 20 | FSU20-P |
| FSU25-M25-M | FSU25-PG21-M | FSU25-M25-S | FSU25-PG21-S | 25 | FSU25-P |
| FSU32-M32-M | FSU32-PG29-M | FSU32-M32-S | FSU32-PG29-S | 32 | FSU32-P |
| FSU40-M40-M | FSU40-PG36-M | FSU40-M40-S | FSU40-PG36-S | 40 | FSU40-P |
| FSU50-M50-M | FSU50-PG48-M | FSU50-M50-S | FSU50-PG42-S | 51 | FSU50-P |
| FSU63-M63-M | | FSU63-M63-S | | 61 | FSU63-P |
| FSU75-M75-M | | | | 75 | FSU75-P |

Ordering Notes

- · Add reel length eg: LFHU20B-25M for 25m reel
- FSU fittings used on LFHU conduit
- For metallic blue change B to BU eg FPU20BU-25M
- * Indicates parts made to order on request and may be subject to MOQ and lead time
- · Metallic Blue may be subject to MOQ and lead times

· Available on request:

- longer lengths and bulk packaging
- cut lengths and assemblies additional sizes
- stainless steel fittings (grade 316L)
- alternative threads
- 45° C type elbows 16 to 32mm

How to read the fittings code

FU10-M12-M conduit thread size fitting type

Important Note

• For LFH performance see page 144

nominal size (mm)



- High mechanical strength
- Highly flexible
- IP rating: IP54 with standard fittings, IP65 with type C compression fittings
- Extra low Fire Hazard
- · UL94 V0, for LFH see page 148 (LFHU)
- High fatigue life and high abrasion resistant (FPU)
- Halogen, sulphur and phosphorus free
- · Compliant to LUL Std S1085 (LFHU) (Cert No. 297)
- EN45545-2 HL3 for LFHU
- Temperature range:
- -25°C to +90°C (LFHU)
- -40°C to +100°C (FPU)
- Nickel plated brass fittings

- Vibration and shock tested to EN61373 Cat 2
- Thread face sealing washers may be required to maintain IP rating at the connection to other equipment, see page 124

| F | С | C-S | C90 | Coupler | Е |
|---|---|--|--|---|---|
| Fixed internal thread nickel plated brass | External thread nickel plated brass Multipart compression fitting including elastomeric seal. Can be used for | External thread nickel plated brass | External thread elbow nickel plated brass | Nickel plated brass Multipart | Insert nickel plated brass Single part, |
| Two part fitting comprising shell and body with internal thread which can be | knockouts or threaded entries as fitting rotates until tightened. | Multipart compression fitting including elastomeric seal. | Multipart 90° compression fitting including elastomeric seal. | compression coupler to connect two conduits together. | machined insert to cap end of conduit. |
| used to couple two pieces of conduit together when used with a swivel fitting. | | The external thread swivels about the main body even after tightening. | | | |
| IP54 | IP65 | IP65 | IP65 | IP65 | |



| metric thread part number | metric thread part number | PG thread part number | NPT thread part number | metric thread part number | metric thread part number | part number | part number | nominal size (mm) |
|------------------------------|------------------------------------|--------------------------------|---------------------------------|------------------------------|------------------------------|-------------|-------------|-------------------|
| | FSU12-M16-C | FSU12-PG9-C | | FSU12-M16-C-S | FSU12-M16-C90 | | FSU12-E | 12 |
| FSU16-M16-F | FSU16-M16-C | FSU16-PG11-C | FSU16-050-C | FSU16-M16-C-S | FSU16-M16-C90 | FSU16-FSU16 | FSU16-E | 16 |
| FSU16-M20-F | FSU16-M20-C | FSU16-PG13-C | | FSU16-M20-C-S | FSU16-M20-C90 | | FSU16-E | 16 |
| FSU20-M20-F | FSU20-M20-C | FSU20-PG16-C | FSU20-050-C | FSU20-M20-C-S | FSU20-M20-C90 | FSU20-FSU20 | FSU20-E | 20 |
| FSU25-M25-F | FSU25-M25-C | FSU25-PG21-C | FSU25-075-C | FSU25-M25-C-S | FSU25-M25-C90 | FSU25-FSU25 | FSU25-E | 25 |
| FSU32-M32-F | FSU32-M32-C | FSU32-PG29-C | FSU32-100-C | FSU32-M32-C-S | FSU32-M32-C90 | FSU32-FSU32 | FSU32-E | 32 |
| FSU40-M40-F | FSU40-M40-C | | | | | | FSU40-E | 40 |
| FSU50-M50-F | FSU50-M50-C | | | | | | FSU50-E | 50 |
| FSU63-M63-F | | | | | | | FSU63-E | 63 |
| | | | | | | | FSU75-E | 75 |

Standards

















Technical Drawing





Liquid Tight Conduits range

Metallic Conduits



LTP



Construction: Galvanised steel, helically wound, flexible conduit with smooth oil resistant and high temperature PVC cover.

Colour: Black. Grey or Orange on request

Typical Applications: High mechanical strength combined with extremely high IP rating (IP68 and IP69) suitable for external applications where fire performance is not a consideration such as external car park barriers and systems.

Special Characteristics: Oil resistant and self extinguishing.

- · High mechanical strength
- IP rating: IP66 + IP67 + IP68 (5 bar 1hr) + IP69
- Smooth, wipe clean outer cover
- · Cover does not wrinkle when bent
- Temperature range -20°C to +105°C
- Good flexibility

Ш

- Lloyd's Register Type Approval
- Resistant to oils and greases
- Vibration and shock tested to EN61373 Cat 2
- Black, Grey and Orange are UV resistant and suitable for external use
- Also available as a Hygienic version with a coating manufactured from FDA approved ingredients - see page 108

LTPAS



Construction: Galvanised steel, helically wound, flexible conduit with smooth oil resistant and high temperature PVC cover.

Colour: Black. Grey on request Typical Applications: High mechanical strength combined with extremely high IP rating (IP68 and IP69) suitable for external applications where fire performance is not a consideration.

Special Characteristics: Oil resistant and self extinguishing. LTPAS As per LTP but with an anti-static performance coating.

- · High mechanical strength
- IP rating: IP66 + IP67 + IP68 (5 bar 1hr) + IP69
- Smooth, wipe clean outer cover
 Cover does not wrinkle
- when bent
- Temperature range -20°C to +105°C
- · Good flexibility
- UV resistant (black) and suitable for external use
- Anti-Static performance coating to EN60079-0
- Resistant to oils and greases
- Vibration and shock tested to EN61373 Cat 2

LTPHC



Colour: Black

Typical Applications: High mechanical strength combined with high and low temperature performance, combined with

performance, combined with extremely high IP rating (IP68 and IP69) suitable for external applications where fire performance is not a consideration.

Special Characteristics: Wide temperature range performance. Good flexibility at low and high temperatures.

- High mechanical strength
- IP rating: IP66 + IP67 + IP68 (5 bar 1hr) + IP69
- Temperature range -60°C to +150°C
- Good flexibility
- UV resistant (black) and suitable for external use
- Resistant to oils and greases
- Vibration and shock tested to EN61373 Cat 2

LOV



Construction: Galvanised steel, helically wound, flexible conduit with smooth oil resistant Low Fire Hazard (LFH) cover.

Colour: Black

LTPLFH

Typical Applications: High mechanical strength combined with extremely high IP rating (IP68 and IP69) suitable for internal and external applications where fire performance is a requirement. APR 2020.

Special Characteristics: As per LTP but where Extra Low Fire Hazard performance is required.

- · High mechanical strength
- IP rating: IP66 + IP67 + IP68 (5 bar 1hr) + IP69
- · Smooth, wipe clean outer cover
- Cover does not wrinkle when bent
- Temperature range-25°C to +90°C (LTPLFH)
- Good flexibility
- UV resistant (black) and suitable for external use
- Resistant to oils and greases
- Compliant to LUL Std S1085 (LTPLFH) Cert No. 2020
- EN 45545 to HL3
- Vibration and shock tested to EN61373 Cat 2

| nominal size (mm) | US trade size (") | outside dia (mm) | lja (| | part number reel length (m) | min inside bend radius (mm) | LTPAS | part number | reel length (m) | min inside bend radius (mm) | ГТРНС | part number | reel length (m) | min inside bend radius (mm) | LTPLFH | part number | reel length (m) | min inside bend radius (mm) |
|-------------------|-------------------|------------------|---------|----------|--------------------------------|--------------------------------|--------|-------------|-----------------|--------------------------------|-------|-------------|-----------------|--------------------------------|--------|-------------|-----------------|--------------------------------|
| 10 | 1/4 | 11.8 | 8 7.0 | LTP10B | ÷ 50 | 35 | | | | | | | | | | | | |
| 10 |) | | | | | | | | | | | | | | | | | |
| 12 | 5/16 | 14.: | 2 10. | LTP12B | 25, 50 | 40 | | | | | LTPHC | 12B⁺ | 25 | 40 | | | | |
| 16 | 3/8 | 17.8 | 8 12. | ETP16B | 10, 25, 50 | 45 | LTPAS | 16B* | 25 | 45 | LTPHC | 16B | 25 | 45 | LTPLFH | 116B | 25 | 60 |
| 16 | i | | | | | | | | | | | | | | | | | |
| 20 | 1/2 | 21. | 1 16. | 0 LTP20B | 10, 25, 50 | 65 | LTPAS | 20B* | 25 | 65 | LTPHC | 20B | 25 | 65 | LTPLFH | 120B | 25 | 100 |
| 25 | 3/4 | 26.4 | 4 21. | LTP25B | 10, 25, 50 | 100 | LTPAS | 25B* | 25 | 100 | LTPHC | 25B | 25 | 100 | LTPLFH | 125B | 25 | 130 |
| 32 | 1 | 33. | 1 26. | LTP32B | 10, 25, 50 | 135 | LTPAS | 32B* | 25 | 135 | LTPHC | 32B | 25 | 135 | LTPLFH | 132B | 10 | 180 |
| 40 | 11/4 | 41.8 | 8 35. | 4 LTP40B | 10, 25 | 175 | LTPAS4 | 40B* | 10 | 175 | LTPHC | 40B | 10 | 175 | | | | |
| 50 | 11/2 | 47. | 9 40. | 4 LTP50B | † 10, 25 | 230 | LTPAS | 50B** | 10 | 230 | LTPHC | 50B⁺ | 10 | 230 | | | | |
| 63 | 2 | 59. | 7 51. | ELTP63B | + 10, 25 | 280 | LTPAS | 63B** | 10 | 280 | LTPHC | 63B** | 10 | 280 | | | | |

Ordering Notes

- Add reel length eg: LTP20B-25M for a 25m reel
- For LTP specify colour (B = Black, G = Grey) Black and Grey. Orange available on request
- * Indicates parts made to order on request and may be subject to MOQ and lead time
- + Double interlock section
- # PG & NPT threads not supplied with insulated throats
- Available on request:
- longer lengths and bulk packaging
- cut lengths and assemblies
- other colours



Liquid Tight Conduits range



LTPUL

Construction: Galvanised steel, helically wound, flexible steel conduit including copper bonding strip (up to 40mm) with smooth PVC cover.

Colour: Black

Typical Applications: As for LTP but where UL listing or CSA approval is required.

Special Characteristics: UL listed and CSA approved.

- · High mechanical strenath
- IP rating: IP66 + IP67 + IP68 (5 bar 1hr) + IP69
- · Smooth, wipe clean outer cover
- · Cover does not wrinkle
- · Temperature range -15°C to +75°C (LTPUL)
- Good flexibility
- · UV resistant (Black) and suitable for external use
- · Resistant to oils and greases
- · For UL listed fittings see page 104
- · Vibration and shock tested to FN61373 Cat 2
- · Also available as Hygienic version see page 108

LTPPU

Construction: Galvanised steel, helically wound, flexible steel conduit with smooth halogen free polyurethane cover.

Colour: Black (B) and Blue (BU)(RAL 5012)

Typical Applications: High mechanical strength with low temperature and high abrasion resistance, combined with extremely high IP rating (IP68 and IP69) suitable for external applications where fire performance is not a requirement.

Special Characteristics:

Low temperature performance, high abrasion and high fatigue life.

- High mechanical strength
- Good flexibility
- IP rating: IP66 + IP67 + IP68 (5 bar 1hr) + IP69
- · Smooth, wipe clean outer cover
- Cover does not wrinkle when bent
- · Resistant to oils & greases
- · Temperature range: -40°C to +100°C
- UV resistant and suitable for external use
- · High abrasion, high fatigue life
- Vibration and shock tested to EN61373 Cat 2

LTPPUAS

Construction: Galvanised steel, helically wound, flexible steel conduit with smooth halogen free polyurethane cover.

Colour: Black (B) and Blue (BU) (RAL 5015)

Typical Applications: High mechanical strength with low temperature and high abrasion resistance, combined with extremely high IP rating (IP68 and IP69) suitable for external applications where fire performance is not a requirement.

Special Characteristics: Low temperature performance, high abrasion and high fatigue life.

LTPPUAS As per LTPPU but with an anti-static performance coating.

- · High mechanical strength
- Good flexibility
- IP rating: IP66 + IP67 + IP68 (5 bar 1hr) + IP69
- · Smooth, wipe clean outer cover
- · Cover does not wrinkle when bent
- · Resistant to oils & greases
- Temperature range: -40°C to +100°C
- UV resistant and suitable for external use
- Vibration and shock tested to FN61373 Cat 2
- Anti-Static performance coating to EN60079-0

LTPSS

Construction: Stainless steel (316L), helically wound, flexible conduit with oil resistant and high temperature pvc smooth cover.

Typical Applications: Machinery or outdoor applications where high corrosion resistance and liquid tight are a requirement.

Special Characteristics:

Enhanced corrosion resistance performance.

- High mechanical strength
- Good flexibility
- IP rating: IP66 + IP67 + IP68 (5 bar 1hr) + IP69
- · Smooth, wipe clean outer cover
- · Cover does not wrinkle when bent
- · Resistant to oils & greases
- Temperature range: -20°C to +105°C
- UV resistant and suitable for external use
- Vibration and shock tested to EN61373 Cat 2
- · Also available as a Hygienic version with a coating manufactured from FDA approved ingredients - see page 108

US trade size (") min inside bend radius (mm) min inside bend radius (mm) inside dia (mm) LTPUL LTPPU10* 25 35 1/4 10 10 LTPPU12* 25 40 5∕16 12 6701-30-BK 30.5 50 I TPPII16* 45 LTPPUAS16* 45 LTPSS16* 16 16 1/2 6702-30-BK 30.5 90 LTPPU20* 65 LTPPUAS20* 25 65 LTPSS20 25 65 20 25 6703-30-BK LTPPU25* LTPPUAS25* LTPSS25 25 110 100 25 100 25 100 30.5 25 6704-30-BK 30.5 140 LTPPU32* 25 135 LTPPUAS32* 25 135 LTPSS32 10 135 1 32 6705-24-BK 180 LTPPU40* 10 175 LTPPUAS40* 10 175 LTPSS40 10 180 11/4 40 15.2 230 LTPPU50*1 10 230 LTPPUAS50** 10 230 LTPSS50* 230 1½ 50 6706-24-BK* 15.2 10 6707-24-BK* LTPPU63** 10 LTPPUAS63** 10 10 63

Standards





Note: refer to conduit properties for applicable standards











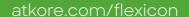


Technical Drawing



LTPPU, LTPPUAS





Liquid Tight Conduits range



LTBRDP

Construction: Galvanised steel, helically wound, flexible conduit with galvanised steel braid and oil resistant and high temperature pvc smooth cover.

Colour: Black

Typical Applications: Machinery or outdoor applications where high corrosion resistance and liquid tight are a requirement combined with EMC screening

Special Characteristics: Good flexibility and EMC screening.

- · High mechanical strength
- · Good flexibility
- IP rating: IP66 + IP67 + IP68 (5 bar 1hr) + IP69
- · Smooth, wipe clean outer cover
- · Cover does not wrinkle when bent
- · Resistant to oils & greases
- Temperature range: -20°C to +105°C
- UV resistant and suitable for external use
- · Vibration and shock tested to EN61373 Cat 2
- · Provides EMC screening
- · Also available as a Hygienic version with a coating manufactured from FDA approved ingredients - see

LTBRDL

Construction: Galvanised steel. helically wound, flexible conduitwith galvanised steel braid, with smooth oil resistant Low Fire Hazard (LFH) cover.

Colour: Black

Typical Applications: Installations where liquid tight is a requirement and where low fire hazard properties and EMC screening are required.

Special Characteristics: As per LTP but where Extra Low Fire Hazard performance is required.

- · High mechanical strength
- Good flexibility
- IP rating: IP66 + IP67 + IP68 (5 bar 1hr) + IP69
- · Smooth, wipe clean outer cover
- Cover does not wrinkle when bent
- Resistant to oils & greases
- · Temperature range: -20°C to +90°C
- UV resistant and suitable for external use
- · Vibration and shock tested to EN61373 Cat 2
- · Provides EMC screening
- Extra Low Fire Hazard UL94 VO (for LFH see page 144)
- Compliant to LUL Std S1085 (Cert No. 658)
- EN 45545 to HI 3

FCC

Plated steel P clip with PVC

P clip to support and secure conduit.

FCC-SS

Stainless steel (316L) P clips P clip to support

conduit.

Insert nickel plated brass

machined insert to cap end of







LTBRDP20B

LTBRDP25B

LTBRDP32B

LTBRDP40B

LTBRDP50B*

LTBRDP63B*

LTBRDLFH20B

LTBRDLFH25B

LTBRDLFH32B*

25

25

25

130

200

270

| plated steel part number | |
|-----------------------------|---|
| FCC10 | l |
| FCC12 | ı |
| FCC16 | l |
| FCC16 | |

FCC20

FCC25

FCC32

FCC40

FCC50

FCC63

| plated steel part number | |
|-----------------------------|--|
| FCC10 | |
| FCC12 | |
| FCC16 | |
| FCC16 | |

| part number | |
|-------------|--|
| FCC10-SS* | |
| FCC12-SS | |

FCC63-SS*

| <u>-</u> | _ | -= | | _ |
|-----------|---------|------|------|------|
| | LTP10-E | 7.0 | 11.8 | 1/4 |
| FCC10-SS* | LTP10-E | | | |
| FCC12-SS | LTP12-E | 10.0 | 14.2 | 5/16 |
| FCC16-SS | LTP16-E | 12.6 | 17.8 | 3/8 |
| FCC16-SS | LTP16-E | | | |
| FCC20-SS | LTP20-E | 16.0 | 21.1 | 1/2 |
| FCC25-SS | LTP25-E | 21.0 | 26.4 | 3/4 |
| FCC32-SS | LTP32-E | 26.5 | 33.1 | 1 |
| FCC40-SS | LTP40-E | 35.4 | 41.8 | 11/4 |
| FCC50-SS | LTP50-E | 40.4 | 47.9 | 1½ |

LTP63-E

utside dia (mm) nside dia (mm)

51.6 59.7

10 10 12

16

16

20

25

32

40

50

63

Technical Drawing

25

25

10



LTBRDP & LTBRDLFH

65

100

120

140

180



Metallic Conduit and Fittings

To make your selection from our wide range of flexible conduits easier, we have devised a table (see below) which offers a one page summary to help you when you come to select your fittings.

We have a wide selection of fittings that can be used with the conduits listed below.



Using this fold out page will illustrate the wide range of liquid tight metallic conduits we offer. There are ten different metallic conduit families listed in this spread and these are detailed across Pages 94 - 96.

Ordering Notes

Once you have chosen your conduit from our wide range of products listed on Pages 94, 95 and 96, simply use this fold out page as a guide to see which fittings correspond with your selected conduit.

The fold out conduit summary chart below lines up with the respective subsequent fittings pages to allow you to still see your selected conduit, whilst selecting your fittings.





Looking for Cable Protection for Hygienic Applications?

See pages 108 & 109 for futher details on our new Liquid Tight Hygienic Range.



| = | U | ∩ II | - ⊃ I | (C) | | | | | | | | | | |
|-----|-----|------|-------|------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 101 | = | 3 | no | ins | part number |
| 10 | 1/. | /4 | 11.8 | 7.0 | LTP10B | | | | | LTPPU10 | | | | |
| 10 | | | | | | | | | | | | | | |
| 12 | 5/1 | 16 | 14.2 | 10.0 | LTP12B | | LTPHC12B | | | LTPPU12 | | | | |
| 16 | 3/1 | /s | 17.8 | 12.6 | LTP16B | | LTPHC16B | LTPLFH16B | LTPUL16B | LTPPU16 | LTPPUAS16 | LTPSS16 | | |
| 16 | | | | | | LTPAS16B | | | | | | | | |
| 20 | 1/: | /2 | 21.1 | 16.0 | LTP20B | LTPAS20B | LTPHC20B | LTPLFH20B | LTPUL20B | LTPPU20 | LTPPUAS20 | LTPSS20 | LTBRDP20B | LTBRDLFH20B |
| 25 | 3/ | /4 | 26.4 | 21.0 | LTP25B | LTPAS25B | LTPHC25B | LTPLFH25B | LTPUL25B | LTPPU25 | LTPPUAS25 | LTPSS25 | LTBRDP25B | LTBRDLFH25B |
| 32 | 1 | 1 | 33.1 | 26.5 | LTP32B | LTPAS32B | LTPHC32B | LTPLFH32B | LTPUL32B | LTPPU32 | LTPPUAS32 | LTPSS32 | LTBRDP32B | LTBRDLFH32B |
| 40 | 11 | 1/4 | 41.8 | 35.4 | LTP40B | LTPAS40B | LTPHC40B | | LTPUL40B | LTPPU40 | LTPPUAS40 | LTPSS40 | LTBRDP40B | |
| 50 | 11 | 1/2 | 47.9 | 40.4 | LTP50B | LTPAS50B | LTPHC50B | | LTPUL50B | LTPPU50 | LTPPUAS50 | LTPSS50 | LTBRDP50B | |
| 63 | 2 | 2 | 59.7 | 51.6 | LTP63B | LTPAS63B | LTPHC63B | | LTPUL63B | LTPPU63 | LTPPUAS63 | LTPSS63 | LTBRDP63B | |

Standards & Approvals























Liquid Tight Conduit fittings

Nickel plated brass fittings







IP69

Fittings

| С | C-S | C-F | C-SF |
|---|--|--|--|
| External thread nickel plated brass Multipart compression fitting including elastomeric seal. Can be used for knockout or threaded entries as fitting rotates until tightened. | Swivel external thread nickel plated brass Compression fitting for knockout or threaded entries. Multipart compression fitting including elastomeric seal. The external thread swivels about the main body even after tightening. | Internal thread nickel plated brass Multi part compression fitting including elastomeric seal to connect with an external thread. | Swivel internal thread nickel plated brass Multi part compression fitting including elastomeric seal. Swivel internal thread makes it suitable for connection to male threads. Internal thread swivels about the main body even after tightening. |
| IP66 IP67 IP68 IP69 | IP66 IP67 IP68 IP69 | IP66 IP67 IP68 IP69 | IP66 IP67 IP68 IP69 |









| nominal size (mm) | : US trade size (") | metric thread part number | Zfor PG thread size | for NPT thread size | | metric thread part number | metric thread part number | metric thread part number |
|-------------------|---------------------|------------------------------|------------------------|------------------------|-------|------------------------------|------------------------------|------------------------------|
| 10 | 1/4 | LTP10-M12-C | PG7 | | | | | |
| 10 | | LTP10-M16-C | | | | | | |
| 12 | 5/16 | LTP12-M16-C | PG9 | | | LTP12-M16-S | | |
| 16 | 3/8 | LTP16-M16-C | PG11 | 050 (3/ | 's") | LTP16-M16-S | | |
| 16 | | LTP16-M20-C | PG13 | | | LTP16-M20-S | | LTP16-M20-SF |
| 20 | 1/2 | LTP20-M20-C | PG16 | 050 (1/ | ′2") | LTP20-M20-S | LTP20-M20-F | LTP20-M20-SF |
| 25 | 3/4 | LTP25-M25-C | PG21 | 075 (3/ | 4") | LTP25-M25-S | LTP25-M25-F | LTP25-M25-SF |
| 32 | 1 | LTP32-M32-C | PG29 | 100 (1 | ") | LTP32-M32-S | LTP32-M32-F | |
| 40 | 11/4 | LTP40-M40-C | PG36 | 125 (1 | 1/4") | LTP40-M40-S | LTP40-M40-F | |
| 50 | 1½ | LTP50-M50-C | PG42 | 150 (1 | 1/2") | LTP50-M50-S | LTP50-M50-F | |
| 63 | 2 | LTP63-M63-C | PG48 | 200 (2 | ") | | | |

[#] When ordering PG or NPT please see notes in properties.

Ordering Notes

- Add reel length eg: LTP20B-25M for a 25m reel
- For LTP specify colour (B = Black, G = Grey)
- * Indicates parts made to order on request and may be subject to MOQ and lead time
- + Double interlock section

· Available on request:

- longer lengths and bulk packaging
- cut lengths and assemblies
- C-S with PG threads
- other colours
- internal thread fittings

How to read the fittings code

Note: For PG or NPT thread types please insert thread size listed to obtain part number



LTP10-M12-C i.e LTP16-PG13-C or LTP16-050-C



- · High mechanical strength
- IP rating: IP66 + IP67 + IP68 (5 bar 1hr) + IP69
- Temperature range: -50°C to +135°C
- Oil resistant
- UV resistant
- Nickel Plated Brass Fittings
- Earthing ferrule is manufactured in machined Nickel Plated Brass to facilitate easy assembly and re-use
- · Stainless steel fittings also available see page 101
- Metric threads supplied with Insulated Throats
- PG and NPT threads supplied without Insulated Throats
- Swivel fittings allows the thread to swivel about the main body even after tightening
- For compatible conduits see page 94, 95 and 96
- Vibration and shock tested to EN61373 Cat 2
- · Conforms to EN 61386
- Interchangeable with all Liquidtight conduits made to American (UL360) sizes.
- For UL listed fittings see page 100
- Thread face sealing washers may be required to maintain IP rating at the connection to other equipment, see page 124

C90 C45 Coupler External thread External thread Nickel plated brass Fibre, retained face Insert nickel plated brass nickel plated brass nickel plated brass sealing washers Single part, machined insert to Multi part compression coupler including elastomeric seals to 90° multipart compression 45° multipart Retained sealing cap end of conduit. compression fitting including elastomeric washer to maintain IP rating of fitting to fitting including elastomeric seal. Can connect two conduits together. seal. Can be used for knockouts. be used for knockouts. adjacent equipment.











| metric thread part number | metric thread part number | part number | metric thread part number | part number | US trade size (") | nominal size (mm) |
|------------------------------|------------------------------|-------------|------------------------------|-------------|-------------------|-------------------|
| | | | | LTP10-E | 1/4 | 10 |
| | | | | LTP10-E | | 10 |
| LTP12-M16-C90 | | | | LTP12-E | 5/16 | 12 |
| LTP16-M16-C90 | | | | LTP16-E | 3/8 | 16 |
| LTP16-M20-C90 | LTP16-M20-C45 | LTP16-LTP16 | FW16 | LTP16-E | | 16 |
| LTP20-M20-C90 | LTP20-M20-C45 | LTP20-LTP20 | FW20 | LTP20-E | 1/2 | 20 |
| LTP25-M25-C90 | LTP25-M25-C45 | LTP25-LTP25 | FW25 | LTP25-E | 3/4 | 25 |
| LTP32-M32-C90 | LTP32-M32-C45 | LTP32-LTP32 | FW32 | LTP32-E | 1 | 32 |
| LTP40-M40-C90 | LTP40-M40-C45 | LTP40-LTP40 | FW40 | LTP40-E | 11/4 | 40 |
| LTP50-M50-C90 | LTP50-M50-C45 | | FW50 | LTP50-E | 1½ | 50 |
| LTP63-M63-C90 | LTP63-M63-C45 | | FW63 | LTP63-E | 2 | 63 |

Standards & Approvals

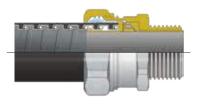
























Liquid Tight Conduit fittings













Fittings







C-UL

External thread nickel plated brass
Multipart compression fitting including nylon
compression seal. Can be used for knockout
or threaded entries as fitting rotates until
tightened. UL Listed to UL514B.

ID67 II

IP68

C-UL90

External thread nickel plated brass 90° multipart compression fitting including nylon compression seal. Can be used for knockouts. UL Listed to UL514B.

IP66

IP67

P68 II

C-UL45

External thread nickel plated brass 45° multipart compression fitting including nylon compression seal. Can be used for knockouts. UL Listed to UL514B.

IP66

67

68









| nominal size (mm) | US trade size (") | rric and peer | | metric thread part number | metric thread part number | |
|-------------------|-------------------|------------------|---------------|------------------------------|------------------------------|-----------------|
| 10 | 1/4 | | | | | |
| 10 | | | | | | |
| 12 | 5∕16 | | | | | |
| 16 | 3/8 | LTP16-M20-CUL | LTP16-050-CUL | (3/8") | LTP16-M20-CUL90 | LTP16-M20-CUL45 |
| 16 | | | | | | |
| 20 | 1/2 | LTP20-M20-CUL | LTP20-050-CUL | (1/2") | LTP20-M20-CUL90 | LTP20-M20-CUL45 |
| 25 | 3/4 | LTP25-M25-CUL | LTP25-075-CUL | (3/4") | LTP25-M25-CUL90 | LTP25-M25-CUL45 |
| 32 | 1 | LTP32-M32-CUL | LTP32-100-CUL | (1") | LTP32-M32-CUL90 | LTP32-M32-CUL45 |
| 40 | 11/4 | LTP40-M40-CUL | LTP40-125-CUL | (11/4") | LTP40-M40-CUL90 | LTP40-M40-CUL45 |
| 50 | 1½ | LTP50-M50-CUL | LTP50-150-CUL | (11/2") | LTP50-M50-CUL90 | LTP50-M50-CUL45 |
| 63 | 2 | LTP63-M63-CUL | LTP63-200-CUL | (2") | LTP63-M63-CUL90 | LTP63-M63-CUL45 |



How to read the fittings code

LTP20-M20-CUL

conduit thread size fitting type



- High mechanical strength
- IP rating: IP66 + IP67 + IP68 (5 bar 1hr) + IP69
- Temperature range: -50°C to +135°C
- Oil resistant
- UV resistant
- Earthing ferrule is manufactured in machined Nickel Plated Brass to facilitate easy assembly and re-use UL Listed fittings:
- Nickel Plated Brass Fittings

- C-UL fittings listed to UL514B
- UL Listed for use in USA and Canada, UL file No. E247502 (ordinary locations). Suitable for use in hazardous locations as per NEC: Article 501 (B)(2), Class I Div 2. Article 502 (A)(2) & (B)(2) Class II Div 1&2. Article 503 (A)(3) & (B)(3) Class III Div 1&2.
- · Supplied with face seal washer
- Metric Threads supplied with NPB locknut Stainless Steel fittings:
- Stainless steel fittings manufactured from SS316L - offer superior corrosion resistance
- Metric threads supplied with Insulated Throats
- · For compatible conduits see page 94, 95 and 96
- Vibration and shock tested to EN61373 Cat 2
- · Conforms to EN 61386
- · Interchangeable with all Liquidtight conduits made to American (UL360) sizes.

C90-SS C-SS Locknut-SS FCC-SS External thread External thread Stainless steel (316L) locknuts Stainless steel (316L) P clips stainless steel stainless steel (316L) Hexagonal locknut to secure fitting. 90° multipart compression fitting Multipart compression fitting P clip to support conduit. with Stainless Steel (316L) body and nut and nickel plated with Stainless Steel (316L) body and nut and nickel plated brass brass insert, including elastomeric seal. insert, including elastomeric seal. Can be used for knockouts. Can be used for knockout or threaded entries as fitting rotates until tightened.







Technical Drawing



| metric thread part number | metric thread part number | part number | part number | : US trade size (") | nominal size (mm) |
|------------------------------|------------------------------|-------------|-------------|---------------------|-------------------|
| | | | | 1/4 | 10 |
| | | | | | 10 |
| | | | | 5/16 | 12 |
| LTP16-M16-CSS | | SS-M16 | FCC16-SS | 3/8 | 16 |
| LTP16-M20-CSS | LTP16-M20-CSS90 | SS-M20 | FCC16-SS | | 16 |
| LTP20-M20-CSS | LTP20-M20-CSS90 | SS-M20 | FCC20-SS | 1/2 | 20 |
| LTP25-M25-CSS | LTP25-M25-CSS90 | SS-M25 | FCC25-SS | 3/4 | 25 |
| LTP32-M32-CSS | LTP32-M32-CSS90 | SS-M32 | FCC32-SS | 1 | 32 |
| LTP40-M40-CSS | | SS-M40 | FCC40-SS | 11/4 | 40 |
| LTP50-M50-CSS | | SS-M50 | FCC50-SS | 1½ | 50 |
| LTP63-M63-CSS* | | SS-M63* | FCC63-SS* | 2 | 63 |

Standards & Approvals



BS EN IEC 61386



















Hazardous area liquid tight conduit solutions

EXD Conduit Glands

Flameproof EXD barrier cable gland

Properties

- IP Rating: IP66 + IP67 + IP68 (5 bar 1hr) + IP69
- · Material: Nickel Plated Brass or Stainless Steel (316L)
- Suitable for threaded entries or knockouts
- Operating Temperature of gland -60°C to +85°C
- · High mechanical strength

- Can be used in Zone 1, Zone 2, Zone 20, Zone 21 and Zone 22 Hazardous areas
- ATEX and IECEx Ex d (Flameproof)
- ATEX and IECEx Ex e (Increased Safety)
- ATEX and IECEx Ex ta (Dust Ignition Protection) EAC Certified - refer to product datasheet

Glands Standards











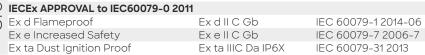




Hazardous Area Approvals

| | ATEX APPROVAL to EN60079-0 2012 | | | (£x) |
|-----|-----------------------------------|-----------|---------------------|----------|
| an | Ex d Flameproof | Ex d I Mb | EN 60079-12007 | |
| | Ex e Increased Safety | Ex e I Mb | EN 60079-7 2007 | |
| 9 | IECEx APPROVAL to IEC60079-0 2017 | | | IEC IECE |
| (1) | Ex d Flameproof | ExdIMb | IEC 60079-1 2014-06 | |
| | Ex e Increased Safety | Ex e I Mb | IEC 60079-7 2006-7 | |
| | | | | |
| | ATEX APPROVAL to EN60079-0 2012 | | | (£x) |

| | ATEX APPROVAL to EN600/9-0 2012 | | | - / |
|---------------|-----------------------------------|--------------------|---------------------|-----|
| | Ex d Flameproof | Ex d II C Gb | EN 60079-12007 | , |
| $\overline{}$ | Ex e Increased Safety | Ex e II C Gb | EN 60079-7 2007 | |
| 7 | Ex ta Dust Ignition Proof | Ex ta IIIC Da IP6X | IEC 60079-31 2009 | |
| Ó | IECEx APPROVAL to IEC60079-0 2011 | | | IEC |
| (1) | Ex d Flameproof | Ex d II C Gb | IEC 60079-1 2014-06 | |
| \circ | Ev a Ingrassed Cafaty | Fy all C Ch | IEC 60070 7 2006 7 | |



LTP - EXD

Construction: Nickel Plated Brass gland with a nylon and elastomeric seal and two part epoxy resin pack. Supplied in boxes of one, complete with instructions and gloves.

Typical Applications: Flameproof barrier gland offering a high specification, high quality solution for Ex d, Ex e and Ex

ta applications. IP rating: IP66 + IP67 + IP68 (5 bar 1hr) + IP69









LTP - EXD - SS

Construction: Stainless steel (grade 316L) gland with a nylon and elastomeric seal and two part epoxy resin pack. Supplied in boxes of one, complete with instructions and gloves.

Typical Applications: Flameproof barrier gland offering a high specification, high quality solution for Ex d, Ex e and Ex ta applications where additional corrosion resistance

IP rating: IP66 + IP67 + IP68 (5 bar 1hr) + IP69



| 6 | IP67 | IP68 | IP69 |
|---|------|------|------|

| To fit nominal size (mm) | metric thread part number | NPT thread part number | To fit nominal size (mm) | metric thread part number | NPT thread part number |
|--------------------------|---------------------------|------------------------|--------------------------|---------------------------|------------------------|
| 16 | LTP16-M20-EXD | LTP16-050-EXD | 16 | LTP16-M20-EXD-SS | LTP16-050-EXD-SS |
| 20 | LTP20-M20-EXD | LTP20-050-EXD | 20 | LTP20-M20-EXD-SS | LTP20-050-EXD-SS |
| 25 | LTP25-M25-EXD | LTP25-075-EXD | 25 | LTP25-M25-EXD-SS | LTP25-075-EXD-SS |
| 32 | LTP32-M32-EXD | LTP32-100-EXD | 32 | LTP32-M32-EXD-SS | LTP32-100-EXD-SS |
| 40 | LTP40-M40-EXD | LTP40-125-EXD | 40 | LTP40-M40-EXD-SS | LTP40-125-EXD-SS |
| 50 | LTP50-M50-EXD | LTP50-150-EXD | 50 | LTP50-M50-EXD-SS | LTP50-150-EXD-SS |
| 63 | LTP63-M63-EXD | LTP63-200-EXD | 63 | LTP63-M63-EXD-SS | LTP63-200-EXD-SS |

Used with the following conduits:- as featured on pages 94, 95 & 96



atkore.com/flexicon



- IP Rating: IP66 + IP67 + IP68 (5 bar 1hr)
- Material: Nickel Plated Brass
- Suitable for threaded entries
- Operating Temperature of gland -60°C to +85°C
- High mechanical strength
- Can be used in Zone 1, Zone 2, Zone 20, Zone 21 and Zone 22 Hazardous areas
- ATEX and IECEx Ex d (Flameproof)
- ATEX and IECEx Ex e (Increased Safety)
- ATEX and IECEx Ex ta (Dust Ignition Protection)

Hazardous Area Approvals





Ex d Flameproof Ex d II C Gb Ex e Increased Safety Ex e II C Gb Ex ta Dust Ignition Proof Ex ta IIIC Da IP6X



Scan and watch the LTP EXD animation now

LTP - EXD - 90

Construction: 90° elbow, Nickel Plated Brass gland with a nylon and elastomeric seal and two part epoxy resin pack. Supplied in boxes of one complete with instructions and gloves.

Typical Applications: Flameproof barrier gland ideal for use when there is restricted space to terminate into an enclosure / equipment.

IP rating: IP66 + IP67 + IP68 (5 bar 1hr)



| IP66 | IP67 | IP68 | |
|------|------|------|--|

| To fit nominal size (mm) | metric thread part number | NPT thread part number |
|--------------------------|---------------------------|------------------------|
| 16 | LTP16-M20-EXD-90 | LTP16-050-EXD-90 |
| 20 | LTP20-M20-EXD-90 | LTP20-050-EXD-90 |
| 25 | LTP25-M25-EXD-90 | LTP25-075-EXD-90 |
| 32 | LTP32-M32-EXD-90 | LTP32-100-EXD-90 |
| 40 | LTP40-M40-EXD-90 | LTP40-125-EXD-90 |
| 50 | LTP50-M50-EXD-90 | LTP50-150-EXD-90 |
| 63 | LTP63-M63-EXD-90 | LTP63-200-EXD-90 |

LTP - EXD - 45

Construction: 45° elbow, nickel plated brass gland with a nylon and elastomeric seal and two part epoxy resin pack. Supplied in boxes of one complete with instructions and gloves.

Typical Applications: Flameproof barrier gland ideal for use when there is restricted space to terminate into an enclosure / equipment. IP rating: IP66 + IP67 + IP68 (5 bar 1hr)



| 10 July 10 Jul | Negati . | L. |
|--|----------|----|
| No. | | S |

| To fi | t nominal size (mm) | metric thread part number | NPT thread part number |
|-------|---------------------|---------------------------|------------------------|
| 16 | | LTP16-M20-EXD-45 | LTP16-050-EXD-45 |
| 20 | | LTP20-M20-EXD-45 | LTP20-050-EXD-45 |
| 25 | | LTP25-M25-EXD-45 | LTP25-075-EXD-45 |
| 32 | | LTP32-M32-EXD-45 | LTP32-100-EXD-45 |
| 40 | | LTP40-M40-EXD-45 | LTP40-125-EXD-45 |
| 50 | | LTP50-M50-EXD-45 | LTP50-150-EXD-45 |
| 63 | | LTP63-M63-EXD-45 | LTP63-200-EXD-45 |

^{*} Indicates parts made to order on request and may be subjest to MOQ and lead time.



LTPSS



















Hazardous area liquid tight conduit solutions

EXE

Increased Safety and Dust Ignition Proof

Properties

- IP Rating: IP66 for Ex e and Ex t applications
- IP Rating: IP67 + IP68 (5 bar 1hr) + IP69 for industrial applications
- · Material: Nickel Plated Brass
- Suitable for knockouts or threaded entries
- Operating Temperature of fitting $-20\,^{\circ}$ C to $+85\,^{\circ}$ C for Ex e and Ex t applications
- High mechanical strength and electrical continuity
- Operating Temperature of fitting -50°C to +135°C for industrial applications
- Can be used in Zone 1, Zone 2, Zone 21 and Zone 22 Hazardous areas when used with Flexicon's Liquid Tight range of flexible conduits
- ATEX and IECEx Ex e (Increased Safety)
- ATEX and IECEx Ex t (Dust Ignition Protection)
- Vibration and shock resistant to EN61373 Cat 2

Hazardous Area Approvals

| | ATEX APPROVAL to EN60079-0 2009 | | | |
|-----|-----------------------------------|--------------------|-------------------|--|
| = | Ex e Increased Safety | Ex e II Gb | EN 60079-7 2007 | $\langle \mathcal{E}_{\mathbf{Y}} \rangle$ |
| 9 | Ex tb Dust Ignition Proof | Ex tb IIIC Da IP6X | EN 60079-31 2009 | |
| Ō | IECEx APPROVAL to IEC60079-0 2007 | • | | - |
| (1) | Ex e Increased Safety | Ex e II Gb | IEC 60079-7 2006 | IEC IECEX |
| | Ex tb Dust Ignition Proof | Ex tb IIIC Da IP6X | IEC 60079-31 2008 | |

Offering Ex e (Increased Safety) and Ex t (Dust Ignition Protection) performance with any Liquid Tight Conduits





or any of the LTP conduit types, see page 94

Standards













Technical Drawing



LTP - EXE



Flexicon

EXD Accessories Range

Properties

- IP Rating: IP66 for Ex e and Ex t applications
- IP Rating: IP67 + IP68 (5 bar 1hr) + IP69 for industrial applications
- Material: Nickel Plated Brass
- Suitable for knockouts or threaded entries
- Operating Temperature of fitting -20°C to +85°C for Ex e and Ex t applications
- · High mechanical strength and electrical continuity
- \bullet Operating Temperature of fitting –50 $^{\circ}\text{C}$ to +135 $^{\circ}\text{C}$ for industrial applications
- Can be used in Zone 1, Zone 2, Zone 21 and Zone 22 Hazardous areas when used with Flexicon's Liquid Tight range of flexible conduits
- ATEX and IECEx Ex e (Increased Safety)
- ATEX and IECEx Ex t (Dust Ignition Protection)
- · Vibration and shock resistant to EN61373 Cat 2



Accessories

Our range of thread converters and adaptors are designed for both Industrial and Hazardous Area applications with Ex "d", Ex "e" and Ex "ta" component approval.

Available with male to female connection threads these products can be used to increase, reduce or convert the thread type.

Thread convertor - converts a thread from one specification to another. i.e. Metric to NPT or Metric to PG.

Thread adaptors - reduces a male thread to a smaller female thread. i.e M20 to M16 or enlarges a male thread to a larger female thread. i.e. M16 up to M20.

| Technical Data | |
|---------------------|--|
| ATEX Directive Code | I M2/II 2 G D/II 1 D |
| ATEX & IECEx | zEx db I/IIC Mb/Gb; Ex eb I/IIC Mb Gb; |
| Protection concepts | Ex ta IIIC Da |
| Harmonized | EN/IEC 60079-0; EN/IEC 60079-1; |
| Standards | EN/IEC 60079-7; EN/IEC 60079-31 |

Note: Only one thread convertor or adaptor is allowed between the enclosure entry and the Flexicon gland or fitting

EXD Thread Converters and Adaptors

Our thread converters are Nickel Plated Brass as standard.

| Intornal | Motrio | +0 | External | Motrio |
|------------|--------|----|----------|--------|
| IIILEITIAI | Lienic | LU | Externar | Lienic |

| Male Thread - External | M16 | M20 | M25 | M32 | M40 | M50 |
|------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| M16 | | B-M16-M20-EXD | | | | |
| M20 | B-M20-M16-EXD | | B-M20-M25-EXD | | | |
| M25 | | B-M25-M20-EXD | | B-M25-M32-EXD | | |
| M32 | | | B-M32-M25-EXD | | B-M32-M40-EXD | |
| M40 | | | | B-M40-M32-EXD | | |
| M50 | | | | B-M50-M32-EXD | B-M50-M40-EXD | |
| M63 | | | | | B-M63-M40-EXD | B-M63-M50-EXD |

Female Thread - Internal

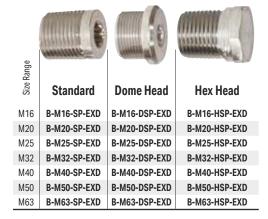
Internal Metric to External NPT Female Thread - Internal

| Male Thread - External | M20 | M25 | M32 |
|------------------------------|---------------|---------------|---------------|
| 1/2" | B-050-M20-EXD | | |
| 3/4" | B-075-M20-EXD | B-075-M25-EXD | |
| 1" | | | B-100-M32-EXD |

To obtain Adaptor & Reducer nominal dimensions, follow the steps below:- Step 1 - Select male thread by consulting the left hand column of the table. Step 2 - Select the female thread size by consulting column headings at the top of tables, and by cross referencing this with the selection in step 1. Please note that the data in the tables above includes Adaptors and Reducers that are certified for use in Hazardous Areas.

EXD Stopping Plugs

Our stopping plugs are Nickel Plated Brass as standard.



Tamperproof

The tamperproof stopping plugs can be installed or removed using an allen key. We offer standard stopping plugs or Dome Head type allen key stopping plugs.

| Technical Data - Dome Head and Tamperproof Stopping Plugs | | |
|--|---|--|
| ATEX Directive Code | I M2/II 2 G D/II 1 D | |
| ATEX & IECEx Protection concepts | Ex db I/IIC Mb/Gb; Ex eb I/IIC Mb Gb; Ex ta IIIC Da | |
| Harmonized Standards | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-7; EN/IEC 60079-31 | |

Hex Head

The Hex head stopping plugs can be installed or removed with a standard open ended or ring type spanner or wrench.

| Technical Data - Hexa | gon Head Stopping Plug |
|---------------------------------------|---|
| ATEX Directive Code | I M2/II 2GD |
| ATEX & IECEx Protection concepts | Ex e I Mb, Ex e IIC Gb; Ex tb IIIC Db |
| IEC Ex Code of Protection Category | Ex d I / Ex e I / Ex d IIC / Ex e II, Ex tD A21 IP6X |
| Harmonized Standards | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-7; EN/IEC 60079-31 |

Ex e and Ex t approvals



atkore.com/flexicon





LTPBRD system











Galvanised steel core, thermoplastic elastomer coated and stainless steel overbraid



Conduit



LTPBRD

Construction: Galvanised steel, helically wound, flexible conduit with thermoplastic elastomer cover (same as LTPHC) and stainless steel (grade 316) overbraid.

Typical Applications: Very arduous industrial environments such

- · High mechanical strength
- Good flexibility
- IP rating: IP66 + IP67 + IP68 (5 bar 1hr) + IP69
- Wide Temperature range -60°C to +150°C
- · High abrasion resistance
- Very high tensile strength
- · High corrosion performance
- Vibration and shock tested to EN61373 Cat 2
- Inherent Anti-Static performance properties
- EMC screening performance Standard

Fittings

External thread nickel plated brass

Multipart compression fitting including elastomeric seal. Can be used for knockout. Braid is locked between inner and outer compression nuts.

Swivel external thread nickel plated brass

Multipart compression fitting including elastomeric seal can be used for knockouts or threaded entries. Braid is locked between inner and outer compression nuts.





| nominal size (mm) | |
|-------------------|--|
| 16 | |
| 16 | |
| 20 | |
| 25 | |
| 32 | |
| 40 | |
| 50 | |

| LTPBRD | part number | reel length (m) | outside dia (mm) | inside dia (mm) | minimum inside bend radius (mm) |
|--------|-------------|-----------------|------------------|-----------------|------------------------------------|
| LTPBRI | 016 | 25 | 19.3 | 12.6 | 45 |
| LTPBRE | 020 | 25 | 22.6 | 16.0 | 65 |
| LTPBRI | 025 | 25 | 27.9 | 21.0 | 100 |
| LTPBRI | 032 | 25 | 34.6 | 26.5 | 135 |
| LTPBRI | 040 | 10 | 43.3 | 35.4 | 175 |
| LTPBRI | D50*+ | 10 | 49.3 | 40.4 | 230 |

| metric thread part number | metric thread part number |
|------------------------------|------------------------------|
| LTPB16-M16-C | LTPB16-M16-S |
| LTPB16-M20-C | LTPB16-M20-S |
| LTPB20-M20-C | LTPB20-M20-S |
| LTPB25-M25-C | LTPB25-M25-S |
| LTPB32-M32-C | LTPB32-M32-S |
| LTPB40-M40-C | LTPB40-M40-S |
| LTPB50-M50-C* | LTPB50-M50-S* |

Ordering Notes

- Add reel length eg: LTPBRD20B-25M for 25m reel
- Indicates parts made to order on request and may be subject to MOQ and lead time
- Double interlock section

· Available on request:

- longer lengths
- 45° available in sizes 16-50mm
- cut lengths and assemblies
- additional sizes
- full copies of independent test report confirming screening effectiveness

How to read the fittings code

LTPB20-M20-M conduit thread size fitting type

Standards











- High mechanical strength
- Good flexibility
- IP rating: IP66 + IP67 + IP68 (5 bar 1hr) +
- Temperature range -60°C to +150°C
- · High abrasion resistance
- · Very high tensile strength
- · Vibration and shock tested to EN61373 Cat 2
- Inherent Anti-Static performance properties

LTPB-EXD

• IP Rating: IP66 + IP67 + IP68 (5 bar 1hr) +

Material: Nickel Plated Brass Suitable for threaded entries Operating Temperature of gland -60°C to +85°C

- · Can be used with individual cores or oversheathed cable
- Thread face sealing washers may be required to maintain IP rating at the connection to other equipment, see page 124

C90

External threaded elbow nickel plated brass

Multipart compression fitting including elastomeric seal. Braid is locked between inner and outer compression nuts.









Nickel plated brass with a nylon and elastomeric seal and two part epoxy resin pack

Flameproof barrier gland for external braided conduit systems where high mechanical protection and / or EMC screening is required.













Fibre retained face sealing washers

Retained sealing washer to maintain IP rating of fitting to adjacent equipment.







Locknuts

Galvanised steel and nickel plated brass locknuts

Hexagonal locknut to secure fitting. EMC locknuts have raised corners to ensure good continuity.



Plated steel P clip with pvc liner, stainless steel P clips

P clip to support conduit.



LTPB50-M50-C90*





LTPB50-M50-EXD-90*





S-M50





B-M50

FCC50

FCC50-SS

50



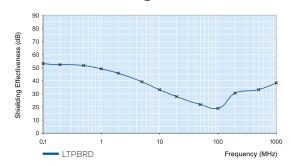


| | | | | | | | | _ | nominal size (mm) | |
|------------------------------|-------------------------------|---------------------------|------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|-----------------------------|--------------------------------|-------------------|--|
| metric thread part number | metric thread part nu mber | NPT thread part number | metric thread part number | metric thread steel part number | metric thread EMC part number | metric thread brass part number | plated steel part number | stainless steel part number | | |
| LTPB16-M16-C90 | | 22 | FW16 | S-M16 | | B-M16 | FCC16 | FCC16-SS | 16 | |
| LTPB16-M20-C90 | | | FW20 | | | | | | 16 | |
| LTPB20-M20-C90 | LTPB20-M20-EXD | LTPB20-M20-EXD-90 | FW20 | S-M20 | B-M20-EMC | B-M20 | FCC20 | FCC20-SS | 20 | |
| LTPB25-M25-C90 | LTPB25-M25-EXD | LTPB25-M25-EXD-90 | FW25 | S-M25 | B-M25-EMC | B-M25 | FCC25 | FCC25-SS | 25 | |
| LTPB32-M32-C90 | LTPB32-M32-EXD | LTPB32-M32-EXD-90 | FW32 | S-M32 | B-M32-EMC | B-M32 | FCC32 | FCC32-SS | 32 | |
| LTPB40-M40-C90 | LTPB40-M40-EXD | LTPB40-M40-EXD-90 | FW40 | S-M40 | B-M40-EMC | B-M40 | FCC40 | FCC40-SS | 40 | |

FW50

EMC Screening Performance

LTPB50-M50-EXD*







LTP-FG system LTBRDP-FG system LTPSS-FG system **AFC UL-FG LFMC system**









Conduit 🚛





Construction: Galvanised steel helically wound, flexible conduit with smooth White or Blue PVC cover.

Typical Applications: Suitable for repeat contact with all food types, excluding fatty foods, at full temperature.

The flexible PVC is manufactured from FDA approved ingredients and has been independently tested to European Food regulation 10/2011.

Temp: -20°C to +105°C













LTBRDP

Construction: Galvanised steel helically wound, flexible conduit with galvanised steel braid and a White or Blue PVC smooth cover.

Typical Applications: Suitable for applications where high corrosion resistance and liquid tight are a requirement combined with EMC screening.

The flexible PVC is manufactured from FDA approved ingredients and has been independently tested to European Food regulation 10/2011.

Temp: -20°C to +105°C







LTPSS-FG

Construction: Stainless steel (316L), helically wound, flexible PVC Blue smooth cover.

Typical Applications: Suitable for repeat contact with all food types, excluding fatty foods at full temperature.

The PVC is manufactured from FDA approved ingredients and has been independently tested to European Food regulation 10/2011.

Temp: -20°C to +105°C















Construction: Zinc coated galvanised low carbon steel strip with UL bonding strip upto 40mm with smooth PVC cover for Splash Zones. NSF® 169 Component for "splash zones" in food production areas and UL 360, UL File E26540. PVC jacket inhibits bacteria growth and offers ease of cleaning/sterilization using bleach with no degradation of jacket.

Typical Applications: Food equipment & other devices associated with food production requiring NSF 169 compliance components for Special Purpose Food Equipment and Devices, and UL certifications

Temp: -30°C to +80°C









| nominal size (mm) | US trade size (") | LTP-FG | part number reel length (m) | outside dia (mm) | inside dia (mm) | LTBRDP-FG | part number | reel length (m) | outside dia (mm) | inside dia (mm) | LTPSS-FG | part number | reel length (m) | outside dia (mm) | inside dia (mm) | AFC UL-FG LFMC | part number | reel length (m) | outside dia max (mm) | inside dia min (mm) | min inside bend radius (mm) |
|-------------------|-------------------|----------|--------------------------------|------------------|-----------------|-----------|-------------|-----------------|------------------|-----------------|----------|-------------|-----------------|------------------|-----------------|-------------------|-------------|-----------------|----------------------|---------------------|--------------------------------|
| 12 | 5/16 | LTPWFG12 | | | | | | | | | | | | | | | | | | | |
| 16 | 3/8 | LTPWFG16 | 25 | 17.8 | 12.6 | | | | | | LTPSSBUI | G16 | 25 | 17.8 | 12.6 | SZ01-30-0 | 00 | 30.5 | 18.1 | 12.8 | 51 |
| 16 | | | | | | | | | | | | | | | | | | | | | |
| 20 | 1/2 | LTPWFG20 | 10, 25 | 21.1 | 16.0 | LTBRDPWF | G20 | 10, 25 | 21.1 | 16.0 | LTPSSBUI | G20 | 25 | 21.1 | 16.0 | SZ02-30-0 | 00 | 30.5 | 21.4 | 16.3 | 83 |
| 25 | 3/4 | LTPWFG25 | 10, 25 | 26.4 | 21.0 | LTBRDPWF | G25 | 10, 25 | 26.4 | 21.0 | LTPSSBUI | G25 | 25 | 26.4 | 21.0 | SZ03-30-0 | 00 | 30.5 | 26.7 | 21.3 | 100 |
| 32 | 1 | LTPWFG32 | 10, 25 | 33.1 | 26.5 | LTBRDPWF | G32 | 10, 25 | 33.1 | 26.5 | LTPSSBUI | G32 | 10 | 33.1 | 26.5 | SZ04-30-0 | 00 | 30.5 | 33.4 | 27.0 | 165 |
| 40 | 11/4 | LTPWFG40 | 10 | 41.8 | 35.4 | LTBRDPWF | G40 | 10 | 41.8 | 35.4 | LTPSSBUI | G40 | 10 | 41.8 | 35.4 | SZ05-24-0 | 00 | 15.2 | 42.2 | 35.8 | 203 |
| 50 | 1½ | LTPWFG50 | + 10 | 47.9 | 40.4 | LTBRDPWF | G50+ | 10 | 47.9 | 40.4 | LTPSSBUF | G50+ | 10 | 47.9 | 40.4 | SZ06-24-0 | 00 | 15.2 | 48.3 | 40.6 | 229 |
| 63 | 2 | LTPWFG63 | + 10 | 59.7 | 51.6 | | | | | | | | | | | SZ07-24-0 | 00 | 15.2 | 60.4 | 51.9 | 282 |

Part number for White version

Part number for White version shown above

Ordering Notes

- For Blue cover substitute W for BU eg. LTPBUFG20 or LTPBRDPBUFG20 for 20mm size
- Add reel length eg: LTPWFG16-25M for 25m reel Indicates parts made to order on request and may be subject to MOQ and lead time
- + Double interlock section

· Available on request:

- longer lengths
- cut lengths and assemblies
- additional sizes

Standards











EU Regulation 10/2011

EN ISO 14159

EN 1672-2

BS EN IEC 61386

EN IEC 61373 Cat 2







Properties

- High mechanical strength
- · Good flexibility
- IP rating: IP66 + IP67 + IP68 (5 bar 1hr) + IP69
- Temperature range -60°C to +150°C
- High abrasion resistance
- · Very high tensile strength
- Vibration and shock tested to EN61373 Cat 2
- Inherent Anti-Static performance properties
- IP Rating: IP66 + IP67 + IP68 (5 bar 1hr) + IP69 Material: Nickel Plated Brass
- Suitable for threaded entries Operating Temperature of gland
- -60°C to +85°C

- Can be used with individual cores or oversheathed cable
- For UL listed fittings consult us

Fittings





C-FG

External thread stainless steel food grade

Multipart compression fitting designed using principles given in EN1672-2 and EN ISO 14159. Manufactured from 316L stainless steel, complete with polyester elastomer compression seals to prevent ingress of food or bacteria. Can be used for knockout or threaded entries as fitting rotates until tightend. ST fittings are designed for use with Round Boxes on page 126. They have a shorter thread to maximise space within the box or enclosure.

C-FG-90

90° elbow external thread

Multipart compression fitting designed using principles given in EN1672-2 and EN ISO 14159 for use with LTP and LFMC conduits. Manufactured from 316L stainless steel, complete with polyester elastomer compression seals to prevent ingress of food or bacteria. Ideal for use where space is limited.

FCC-SS

Stainless steel (316L) P clips

P clip to support conduit.

Locknuts

Stainless steel (316L) locknuts

Hexagonal locknut to secure fitting.











ST Fitting



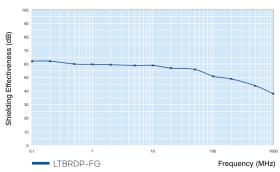




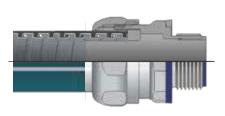
| part number | st fitting part number | NPSM thread part number | Metric thread version | NPSM thread version | part number | part number | US trade size (") | nominal size (mm) |
|-----------------|------------------------------|----------------------------------|-----------------------------|---------------------------|-------------|-------------|-------------------|-------------------|
| LTP12-M16-C-FG | | | | | | | 5∕16 | 12 |
| LTP16-M16-C-FG | | | | | FCC16-SS | SS-M16 | 3/8 | 16 |
| | | | | | FCC16-SS | SS-M20 | | 16 |
| LTP20-M20-C-FG | LTP20-M20ST-C-FG | LTP20-050P-C-FG | LTP20-M20-C90-FG | LTP20-050P-C-FG-90 | FCC20-SS | SS-M20 | 1/2 | 20 |
| LTP25-M25-C-FG | | LTP25-075P-C-FG | LTP25-M25-C90-FG | LTP25-075P-C-FG-90 | FCC25-SS | SS-M25 | 3/4 | 25 |
| LTP32-M32-C-FG | | LTP32-100P-C-FG | LTP32-M32-C90-FG | LTP32-100P-C-FG-90 | FCC32-SS | SS-M32 | 1 | 32 |
| LTP40-M40-C-FG | | LTP40-125P-C-FG | | | FCC40-SS | SS-M40 | 11/4 | 40 |
| LTP50-M50-C-FG | | LTP50-150P-C-FG | | | FCC50-SS | SS-M50 | 1½ | 50 |
| LTP63-M63-C-FG* | | LTP63-200P-C-FG | | | FCC63-SS* | SS-M63 | 2 | 63 |

Other sizes coming soon

EMC Screening Performance



Technical Drawing







FL system

Galvanised steel pliable

FLP system

Galvanised steel PVC coated, pliable













Conduit





Construction: Corrugated galvanised steel with kraft paper lining.

Colour: Zinc self colour.

Typical Applications: Any installation where there is no movement.

- High compression strength
- · Provides EMC screening
- IP rating: IP40
- Can be formed into shape requiring fewer clips
- Temperature range -40°C to +120°C
- · Nickel plated brass fittings
- Inherently low fire hazard

Fittings

C Type

External thread nickel plated brass

Multipart compression fitting including elastomeric compression seal. Can be used for knockout or threaded entries as fitting rotates until tightened. Provides EMC screening.

P40



Conduit

FLP



Colour: Black

Typical Applications: Any installation where there is no movement and a high IP rating is required.

- High compression strength
- Pull off strength: Type C 50kg (20mm)
- Provides EMC screening
- IP rating: IP66 + IP67 for Type C
- · Smooth, wipe clean outer cover
- · Does not wrinkle when bent
- Can be formed into shape requiring fewer clips
- Temperature range -15°C to +70°C
- · Lloyd's Register Type Approved

Fittings

C Type

External thread nickel plated brass

Multipart compression fitting including serrated elastomeric seal. Can be used for knockout or threaded entries as fitting rotates until tightened. Provides EMC screening once outer plastic sheath is trimmed from end of conduit.







nominal size (mm) outside dia (mm) nside dia (mm) reel length (m) 16 20 FL20 25 19.0 14.6 35 25 FL25 25.1 20.4 45 32 40 50

| metric thread part number | |
|------------------------------|--|
| FL20-M20-C | |
| FL25-M25-C | |
| | |
| | |
| | |

| FLP | part number | reel length (m) | min inside bend radius (mm) | outside dia (mm) | inside dia (mm) |
|-------|-------------|-----------------|--------------------------------|------------------|-----------------|
| FLP20 | В | 10,25,50 | 35 | 20.9 | 14.6 |
| FLP25 | В | 10,25,50 | 45 | 27.3 | 20.4 |
| FLP32 | В | 10,25 | 55 | 34.0 | 26.7 |
| | | | | | |
| | | | | | |

| metric thread part number |
|------------------------------|
| FLP20-M20-C |
| FLP25-M25-C |
| FLP32-M32-C |
| |
| |

Standards







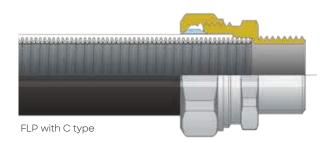
BS EN IEC 61386





Note: refer to conduit properties for applicable standards

Technical Drawing









Flexicon LFHP system



Galvanised steel extra LFH coated, pliable



Conduit



LFHP

Construction: Corrugated galvanised steel with kraft paper lining and smooth extra LFH outer cover.

Colour: Black

Typical Applications: Any installation where there is no movement and a high IP rating is required.

- Pull off strength: Type C-HS 100kg (20mm)
- Extra low fire hazard, oil resistant and UV resistant
- · Vibration and shock tested to EN61373 Cat 2
- High compression strength 570kg/100mm
- Provides EMC screening
- IP rating: IP66 + IP67
- Can be formed into shape requiring fewer clips
- Temperature range -25°C to +90°C
- · Smooth, wipe clean outer cover
- Does not wrinkle when bent
- · Lloyd's Register Type Approved
- Compliant to LUL Std S1085 (Cert No.297)
- NCAGE No. U5256
- EN 45545-2 to HL3

Fittings

C Type

External thread nickel plated brass

Multipart compression fitting including serrated elastomeric seal. Can be used for knockout or threaded entries as fitting rotates until tightened. Provides EMC screening once outer plastic sheath is trimmed from end of conduit.







| nominal size (mm) | LFHP | part number | reel length (m) | min inside bend radius (mm) | outside dia (mm) | inside dia (mm) |
|-------------------|-------|-------------|-----------------|--------------------------------|------------------|-----------------|
| 16 | | | | | | |
| 20 | LFHP2 | 0B | 25 | 40 | 20.9 | 14.6 |
| 25 | LFHP2 | 5B | 25 | 55 | 27.3 | 20.4 |
| 32 | LFHP3 | 2B | 25 | 65 | 34.0 | 26.7 |
| 40 | | | | | | |
| 50 | | | | | | |

| metric thread part number metric thread part number | |
|--|--|
| FLP20-M20-C | |
| FLP25-M25-C | |
| FLP32-M32-C | |
| | |
| | |

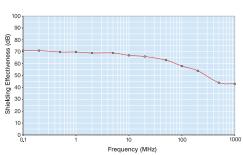
Ordering Notes

- · Add reel length eg: FLP20B-25M for 25m reel
- Available on request:
- longer lengths
- cut lengths and assemblies
- additional sizes
- full copies of independent test report confirming screening effectiveness

How to read the fittings code

FLP20-M20-C
conduit thread size fitting type

EMC Screening Performance







FB system







Galvanised steel core galvanised steel overbraid

FUSSB system





Galvanised steel core stainless steel overbraid

Conduit



Construction: Galvanised steel, helically wound conduit with galvanised steel overbraid.

Colour: Zinc, self colour.

Typical Applications: Industrial environments and

high temperatures.

Temp: -100°C to +300°C







FUSSB

Construction: Galvanised steel, helically wound, flexible conduit with stainless steel (316) overbraid.

Typical Applications: Underground stations where LFH properties and EMC screening are required.

Temp: -100°C to +300°C





Fittings

М

Fixed external thread nickel plated brass

Two part fitting comprising shell and body with external thread. This fitting can be inserted into a knockout and secured with a locknut.

IP40

S

Swivel external thread nickel plated brass

Two part fitting comprising shell and body. The external thread swivels about the main body. Can be used with threaded entries, or knockout secured with a locknut.

IP40







| nominal size (mm) | H | part number | FUSSB | part number | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) |
|-------------------|----------|-------------|--------|-------------|-----------------|------------------|-----------------|--------------------------------|
| 12 | FB12 | | FUSSB | 12* | 25 | 14.0 | 10.2 | 30 |
| 16 16 | FB16 | | FUSSB | 16* | 25 | 17.5 | 13.0 | 40 |
| 20 | FB20 | | FUSSB | 20 | 25 | 21.5 | 16.9 | 45 |
| 25 | FB25 | | FUSSB | 25 | 25 | 26.0 | 21.1 | 55 |
| 32 | FB32 | | FUSSB: | 32 | 25 | 34.0 | 28.1 | 70 |
| 40 | FB40 | | FUSSB | 10* | 10 | 43.5 | 37.6 | 80 |
| 50 | FB50 | | FUSSB! | 50* | 10 | 54.5 | 48.4 | 90 |
| | | | | | | | | |

| metric thread part number | PG thread part number | metric thread part number | PG thread part number |
|------------------------------------|--------------------------------|------------------------------------|--------------------------------|
| FB12-M16-M | FB12-PG9-M | FB12-M16-S | FB12-PG9-S |
| FB16-M16-M | FB16-PG11-M | FB16-M16-S | FB16-PG11-S |
| FB16-M20-M | | FB16-M20-S | |
| FB20-M20-M | FB20-PG16-M | FB20-M20-S | FB20-PG16-S |
| FB25-M25-M | FB25-PG21-M | FB25-M25-S | FB25-PG21-S |
| FB32-M32-M | FB32-PG29-M | FB32-M32-S | FB32-PG29-S |
| FB40-M40-M | FB40-PG36-M | FB40-M40-S | FB40-PG36-S |
| FB50-M50-M | FB50-PG48-M | FB50-M50-S | FB50-PG42-S |
| | | | |

Ordering Notes

- \cdot Add reel length eg: FB20-25M for 25m reel
- * Indicates parts made to order on request and may be subject to MOQ and lead time

Available on request:

- longer lengths, cut lengths and assemblies
- additional sizes, stainless steel overbraided
- PG threads, female threaded fittings
- full copies of independent test report confirming screening effectiveness

How to read the fittings code

FB20-M20-M
conduit thread size fitting type

Standards



BS EN IEC 61386







Properties

- High mechanical strength
- Highly flexible
- IP rating: IP40
- · High abrasion resistance
- Resists hot metal swarf and splashes
- Provides EMC screening

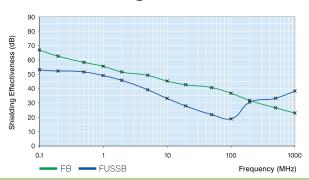
55dB@1MHz (FB) 49dB@1MHz (FUSSB)

- Temperature range -100°C to +300°C
- Inherently Low Fire Hazard (LFH) see page 144
- Fully compliant to LUL Std S1085. (Cert No. 296)
- Nickel plated brass fittings
- EN45545-2 to HL3 and NFPA 130 compliant

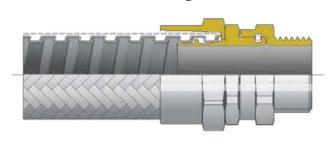
| P | 90° Elbow | Locknuts | FCC |
|---|---|--|---|
| Plain hole connector nickel plated brass Two part fitting comprising shell and body without thread. The body is fitted through the opposite side of the entry to the conduit and acts as a locking device also providing a smooth entry bush. | Internal and external threaded nickel plated brass elbow 90" elbow which can be screwed onto external threaded fittings. | Galvanised steel and nickel plated brass locknuts Hexagonal locknut to secure fitting. EMC locknuts have raised corners to ensure good continuity. | Plated steel P clip with pvc liner, stainless steel P clips P clip to support and secure conduit. |



EMC Screening Performance



Technical Drawing







FSB system







Galvanised steel core, pvc coated, galvanised steel overbraid

LFHUBRD system







Galvanised steel core, extra LFH coated, stainless steel overbraid

Conduit



FSB

Construction: Galvanised steel, helically wound, flexible conduit with pvc coating and galvanised steel overbraid.

Colour: Zinc, self colour.

Typical Applications: Industrial environments where higher abrasion resistance or screening are required.

Fittings



Fixed external thread nickel plated brass

Two part fitting comprising shell and body with external thread. This fitting can be inserted into a knockout and secured with a locknut.

Swivel external thread nickel plated brass

Two part fitting comprising shell and body. The external thread swivels about the main body. Can be used with threaded entries, or knockout secured with a locknut.





LFHUBRD

Construction: Galvanised steel, helically wound, flexible conduit with extra LFH coating and stainless steel (316) overbraid.

Typical Applications: Metro rail stations where LFH, EMC screening and anti-vandal properties are required. Compliant to LUL Std S1085 (Cert No.297).







| nominal size (mm) | FSB | part number | LFHUBRD | part number | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) |
|-------------------|-------|-------------|---------|-------------|-----------------|------------------|-----------------|--------------------------------|
| 12 | FSB12 | | | | 25 | 15.2 | 10.2 | 30 |
| 16 16 | FSB16 | | | | 25 | 18.2 | 13.0 | 40 |
| 20 | FSB20 | | LFHUB | RD20 | 25 | 22.7 | 16.9 | 45 |
| 25 | FSB25 | | LFHUB | RD25 | 25 | 27.2 | 21.1 | 55 |
| 32 | FSB32 | | LFHUB | RD32 | 25 | 35.2 | 28.1 | 70 |
| 40 | FSB40 | | LFHUB | RD40 | 10 | 45.7 | 37.6 | 80 |
| 50 | FSB50 | | | | 10 | 57.7 | 48.4 | 90 |

| metric thread part number | PG thread part number | metric thread part number | PG thread part number |
|------------------------------------|--------------------------------|------------------------------------|--------------------------------|
| FSB12-M16-M | FSB12-PG9-M | FSB12-M16-S | FSB12-PG9-S |
| FSB16-M16-M | FSB16-PG11-M | FSB16-M16-S | FSB16-PG11-S |
| FSB16-M20-M | | FSB16-M20-S | |
| FSB20-M20-M | FSB20-PG16-M | FSB20-M20-S | FSB20-PG16-S |
| FSB25-M25-M | FSB25-PG21-M | FSB25-M25-S | FSB25-PG21-S |
| FSB32-M32-M | FSB32-PG29-M | FSB32-M32-S | FSB32-PG29-S |
| FSB40-M40-M | FSB40-PG36-M | FSB40-M40-S | FSB40-PG36-S |
| FSB50-M50-M | FSB50-PG48-M | FSB50-M50-S | FSB50-PG42-S |

Ordering Notes

- · Add reel length eg: FSB20-25M for 25m reel
- · Available on request:
- longer lengths, cut lengths and assemblies
- additional sizes, stainless steel overbraided
- PG threads, female threaded fittings
- full copies of independent test report confirming screening effectiveness

How to read the fittings code

FSB20-M20-M

conduit thread size fitting type

Standards









BS EN IEC 61386





Note: refer to conduit properties for applicable standards



Properties

- High mechanical strength
- Tensile strength with standard fittings 120kg for 20mm size
- Tensile strength with C type fittings 300kg for 20mm size
- · Highly flexible
- IP rating: IP54 for standard fittings, IP65 for C type fittings
- · High abrasion resistance

- · Resists hot metal swarf and splashes
- · Provides EMC screening
- Temperature range
- -15°C to +70°C (FSB)
- -20°C to +90°C (LFHUBRD)
- · LFHUBRD is extra low fire hazard
- Compliant to LUL Std S1085 (LFHUBRD) (Cert No. 297)
- Nickel plated brass fittings

- Vibration and shock tested to EN61373 Cat 2
- LFHUBRD is EN45545-2 to HL3
- Thread face sealing washers may be required to maintain IP rating at the connection to other equipment, see page 124

P

Plain hole connector nickel plated brass

Two part fitting comprising shell and body without thread. The body is fitted through the opposite side of the entry to the conduit and acts as a locking device also providing a smooth entry bush.





Fixed external thread nickel plated brass

Multipart compression fitting including elastomeric seal. Can be used for knockouts. Braid is locked between inner and outer compression nuts.



CS

Swivel external thread nickel plated brass

Multipart compression fitting including elastomeric seal car be used for knockouts or threaded entries. Braid is locked between inner and outer compression nuts.

IP65

C90

External thread elbow nickel plated brass

Multipart 90° compression fitting including elastomeric seal. Braid is locked between inner and outer compression nuts.

IP65







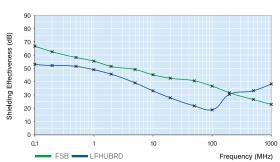




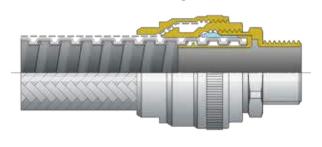
| 12 hole size (mm) | bart number | metric thread part number | PG thread part number | metric thread part number | metric thread part number |
|-------------------|-------------|------------------------------|--------------------------|------------------------------|------------------------------|
| 16 | FSB16-P | FSB16-M16-C | FSB16-PG11-C | FSB16-M16-C-S | FSB16-M16-C90 |
| | | FSB16-M20-C | FSB16-PG13-C | FSB16-M20-C-S | FSB16-M20-C90 |
| 20 | FSB20-P | FSB20-M20-C | FSB20-PG16-C | FSB20-M20-C-S | FSB20-M20-C90 |
| 25 | FSB25-P | FSB25-M25-C | FSB25-PG21-C | FSB25-M25-C-S | FSB25-M25-C90 |
| 32 | FSB32-P | FSB32-M32-C | FSB32-PG29-C | FSB32-M32-C-S | FSB32-M32-C90 |
| 40 | FSB40-P | | | | |
| 50 | FSB50-P | | | | |

40 50

EMC Screening Performance



Technical Drawing







FSS system

Stainless steel corrugated conduit







FSSBRD system







Stainless steel corrugated conduit with overbraid

Conduit

FSS

Construction: Stainless steel (316L) annularly corrugated conduit. Inherent Low Fire hazard performance with superior Ingress Protection (IP68) and excellent corrosion resistance.

Typical Applications: Metro rail stations

Colour: Self colour, also available in Black* version on request

- IP rating: IP67, IP68 (2 bar 1hr)
- Temperature range -100°C to +850°C
- · High Mechanical Strength
- Pull off strength: 100kg (20mm)
- High compression strength 1000kg/100mm
- · Inherent low fire hazard
- Compliant to LUL Std S1085 (Pending)
- EN 45545-2 to HL3 and NFPA 130 compliant
- Excellent Corrosion resistance
- Oil resistant
- UV resistant
- · Provides EMC screening
- · Offers Antistatic properties



FSSBRD

Construction: Stainless steel (316L) annually corrugated conduit with stainless steel (316L) overbraid.

Typical Applications: Inherent Low Fire hazard performance with superior Ingress Protection (IP68), excellent corrosion resistance and enhanced EMC performance together with abrasion resistance. Metro rail stations and tunnels

Colour: Self colour

- IP rating: IP67, IP68 (2 bar 1hr)
- Temperature range -100°C to +850°C
- · High Mechanical Strength
- · High Abrasion resistance
- Pull off strength: 150kg (20mm)
- High compression strength 1000kg/100mm
- Inherent low fire hazard
- · Compliant to LUL Std S1085 (Pending) • EN 45545-2 to HL3 and NFPA 130
- compliant
- Excellent Corrosion resistance
- · Oil resistant
- UV resistant
- Provides EMC screening Standard
- Offers Antistatic properties





Fittings

Fixed external thread nickel

Multipart compression fitting including conduit retention clip and polyester seal. Can be used with knockouts. For BRD version, Braid is locked between inner and outer compression nuts.

Colour: Self colour or also available in Black for ESS version

Swivel internal thread nickel plated brass

Multipart compression fitting including conduit retention clip and polyester seal. Swivel internal thread allows connection to external thread.

Colour: Self colour or also available in Black for FSS version.















nominal size (mm) 20 25 32 40

50

| FSS | part number | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) | FSSBRD | part number | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) |
|--------|-------------|-----------------|------------------|-----------------|--------------------------------|--------|-------------|-----------------|------------------|-----------------|--------------------------------|
| FSS20 | | 25 | 21.6 | 16.2 | 45 | FSSBRI | D20 | 25 | 21.6 | 16.2 | 60 |
| FSS25 | | 25 | 26.8 | 20.2 | 55 | FSSBRI | D25 | 25 | 28.3 | 20.2 | 70 |
| FSS32* | | 25 | 32.5 | 25.4 | 65 | FSSBRI | D32* | 25 | 33.8 | 25.4 | 80 |
| FSS40* | | 10 | 41.3 | 34.1 | 105 | FSSBRI | D40* | 10 | 43.0 | 34.1 | 120 |
| FSS50* | | 10 | 50.0 | 40.0 | 130 | FSSBR | D50* | 10 | 51.2 | 40.0 | 145 |

| for use with FSS | for use with FSSBRD | for use with FSS |
|---------------------|---------------------------|---------------------|
| FSS20-M20-C | FSSBRD20-M20-C | FSS20-FM20-S |
| FSS25-M25-C | FSSBRD25-M25-C | FSS25-FM25-S |
| FSS32-M32-C* | FSSBRD32-M32-C* | FSS32-FM32-S* |
| FSS40-M40-C* | FSSBRD40-M40-C* | FSS40-FM40-S* |
| FSS50-M50-C* | FSSBRD50-M50-C* | FSS50-FM50-S* |

Ordering Notes

* Indicates parts made to order on request and may be subject to MOQ and leadtime.

Standards







Properties

- IP rating: IP67, IP68 (2 bar 1hr)
- Temperature range -50°C to +135°C
- Inherently Low Fire Hazard
- Suitable for knockout or threaded entries
- Nickel Plated Brass Fittings
- · Conduit throat supplied with fitting to protect cables from cut end of conduit
- High mechanical strength
- Tensile strength with standard fittings 100kg for 20mm size
- Tensile strength with BRD C type fittings 150kg for 20mm size
- BRD type fittings: Braid is locked between inner and outer compression nuts
- · Also available in chemically blackened version for FSS
- Thread face sealing washers may be required to maintain IP rating at the connection to other equipment, see page 124

NEW

Swivel external thread nickel plated brass

Multipart compression fitting including conduit retention clip and polyester seal. Swivel external thread means it can be used for knockouts and / or threaded entries.

For BRD version, Braid is locked between inner and outer compression nuts.

Colour: Self colour or also available in Black for FSS version

C90

External thread nickel plated brass

90° multipart compression fitting including elastomeric seal. Can be used for knockouts

C45

External thread nickel plated brass

45° multipart compression fitting including elastomeric seal. Can be used for knockouts.

FSS - EXD

Nickel plated brass with a nylon and elastomeric seal and two part epoxy resin pack

Flameproof barrier gland for FSS systems where high mechanical protection and / or EMC screening is required.

FCC-SS CLIPS

Stainless steel (316L) P clips

P clip to support conduit.

































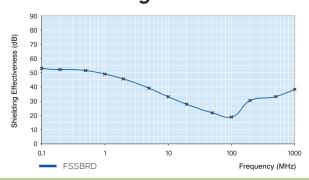




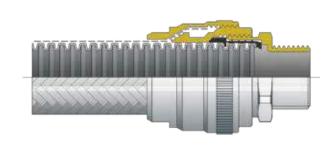


| for use with FSS | for use with FSSBRD | for use with FSS | for use with FSS | metric thread part nu mber | | nominal size (mm) |
|---------------------|---------------------------|---------------------|---------------------|-------------------------------|----------|-------------------|
| FSS20-M20-S | FSSBRD20-M20-S | FSS20-M20-C90 | FSS20-M20-C45 | FSS20-M20-EXD | FCC20-SS | 20 |
| FSS25-M25-S | FSSBRD25-M25-S | FSS25-M25-C90 | FSS25-M25-C45 | FSS25-M25-EXD | FCC25-SS | 25 |
| FSS32-M32-S* | FSSBRD32-M32-S* | FSS32-M32-C90* | FSS32-M32-C45* | FSS32-M32-EXD | FCC32-SS | 32 |
| FSS40-M40-S* | FSSBRD40-M40-S* | FSS40-M40-C90* | FSS40-M40-C45* | FSS40-M40-EXD | FCC40-SS | 40 |
| FSS50-M50-S* | FSSBRD50-M50-S* | FSS50-M50-C90* | FSS50-M50-C45* | FSS50-M50-EXD* | FCC50-SS | 50 |

EMC Screening Performance



Technical Drawing







FPRSS system





Corrugated nylon, (PA6) stainless steel overbraid

FPRTC system

Corrugated nylon, (PA6) tinned copper overbraid

FPISS, FPIHSS, FPIHRLSS system

Corrugated nylon, (PA12), stainless steel overbraid

Conduit



Construction: Standard weight, extra low fire hazard, corrugated nylon (PA6), with stainless steel (316L) overbraid.

Typical Applications:

Metro rail stations for anti-vandal.



FPISS





Construction: Standard weight, corrugated nylon (PA12), with stainless steel (316L) overbraid.

Typical Applications: Moving machinery where low temperatures, abrasion and impacts occur.



Construction: Standard weight, extra low fire hazard, corrugated nylon (PA6), with tinned copper overbraid.

Typical Applications: Inside railway carriages where screening is required.





Construction: Heavy weight, corrugated nylon (PA12), with stainless steel (316L) overbraid.

Typical Applications: Where low temperatures, abrasion, impact and regular movement occurs.

Fittings

Fixed external thread nickel plated brass

Multipart compression fitting including conduit retention clip and elastomeric seal. Can be used with knockouts. Braid is locked between inner and outer compression nuts



Swivel external thread nickel plated brass

Multipart compression fitting including conduit retention clip and elastomeric seal. Can be used for knockouts and threaded entries. Braid is locked between inner and outer compression nuts.









FPIHRLSS

nominal size (mm)

Construction: Heavy weight, extra low fire hazard, corrugated nylon (PA12), with stainless steel (316L) overbraid.



| low te | mpera | itures, a | brasic | n, impa | ct and | d regular | move | ement o |
|--------|------------|-----------|------------|---------|------------|-----------|------------|----------|
| FPRSS | partnumber | FPRTC | partnumber | FPISS | partnumber | FPIHSS | partnumber | FPIHRLSS |

| _ | _ | _ | _ | _ | _ |
|---------|--------|---------|-------|----------|-------|
| FPRSS16 | -50M | FPRTC16 | -50M* | FPISS16- | 50M* |
| FPRSS21 | -50M | FPRTC21 | -50M* | FPISS21- | 50M* |
| FPRSS28 | 3-50M | FPRTC28 | -50M* | FPISS28- | ·50M* |
| FPRSS34 | -50M | FPRTC34 | -50M* | FPISS34- | ·25M* |
| FPRSS42 | 2-25M* | FPRTC42 | -25M* | FPISS42- | ·25M* |
| FPRSS54 | -25M* | FPRTC54 | -25M* | FPISS54- | 25M* |

| FPRTC | partnumber | FPISS | partnumber | FPIHSS | partnumber | FPIHRLSS | partnumber | outside dia (mm) | min inside dia (m | min inside bend radius (mm) |
|--------|------------|----------|------------|----------|------------|----------|------------|------------------|-------------------|-----------------------------|
| PRTC16 | -50M* | FPISS16- | 50M* | FPIHSS16 | 6-50M | FPIHRLSS | 16-50M | 17.3 | 11.5 | 35 |
| PRTC21 | -50M* | FPISS21- | ·50M* | FPIHSS21 | I-50M | FPIHRLSS | 21-50M | 22.7 | 15.0 | 45 |
| PRTC28 | -50M* | FPISS28- | ·50M* | FPIHSS28 | 3-50M | FPIHRLSS | 28-50M | 30.0 | 21.3 | 50 |
| PRTC34 | -50M* | FPISS34- | 25M* | FPIHSS34 | 1-25M | FPIHRLSS | 34-25M | 36.0 | 27.6 | 60 |
| PRTC42 | -25M* | FPISS42- | 25M* | FPIHSS42 | 2-25M* | FPIHRLSS | 42-25M | 44.0 | 35.5 | 70 |
| PRTC54 | -25M* | FPISS54- | ·25M* | FPIHSS54 | 1-25M* | FPIHRLSS | 54-25M | 56.0 | 47.2 | 80 |
| | | | | | | | | | | |

| metric thread part number | metric thread part number | PG thread part number |
|------------------------------|------------------------------|--------------------------|
| BC16-M16-C | BC16-M16-S | BC16-PG11-S |
| BC21-M20-C | BC21-M20-S | BC21-PG16-S |
| BC28-M25-C | BC28-M25-S | BC28-PG21-S |
| BC34-M32-C | BC34-M32-S | BC34-PG29-S |
| BC42-M40-C | BC42-M40-S | |
| BC54-M50-C* | BC54-M50-S* | |

Ш

Ordering Notes

- * Indicates parts made to order on request and may be subject to MOQ and lead time
- Thread face sealing washers may be required to maintain IP rating at the connection to other equipment, see page 124

· Available on request:

- longer lengths
- cut lengths and assemblies
- additional sizes
- full copies of independent test report confirming screening effectiveness

How to read the fittings code

BC21-M20-C conduit thread size fitting type

Standards



BS EN IEC 61386





Note: refer to conduit properties for applicable standards



Properties

FPRSS & FPRTC

- Highly flexible and high fatigue life
 High impact strength
 Temperature range -40°C to +120°C
- Extra low fire hazard see page 144
 Provides EMC screening 49dB@1MHz (FPRSS) 67dB@1MHz (FPRTC)
- FPRSS provides high tensile strength and resistance to abrasion, corrosion and vandals
- Vibration and shock tested to EN61373 Cat 2
- · LUL Std S1085 Cert No. 298
- FPRSS & FPRTC EN 45545-2 to HL3 R22 and R23

FPISS, FPIHSS & FPIHRLSS

- Highly flexible Exceptional fatigue life
- Very high impact resistance even at low temperatures
- Temperature range -50°C to +110°C Low fire hazard
- Provides EMC screening 49dB@1MHz
- Provides high tensile strength and resistance to abrasion, corrosion and vandals
- Vibration and shock tested to EN61373 Cat 2
- FPIHRLSS EN 45545-2 to HL3 R23 Exterior

| C-90 | 90° Elbow | FW | Sealing Washers | Locknuts | FCC |
|--|---|---|---|---|---|
| External thread elbow nickel plated brass Multipart 90° compression fitting including conduit retention clip and elastomeric seal. Can be used with knockouts. Braid is locked between inner and outer compression nuts. | Internal and external threaded nickel plated brass elbow 90° elbow which can be screwed onto external threaded fittings. | Fibre retained face sealing washers Retained sealing washer to maintain IP rating of fitting to adjacent equipment. | Fibre face sealing washers Sealing washer to maintain IP rating of fitting to adjacent equipment. | Galvanised steel and nickel plated brass locknuts Hexagonal locknut to secure fitting. EMC locknuts have raised corners to ensure good continuity. | Plated steel P clip with pvc liner, stainless steel P clips P clip to support conduit. |













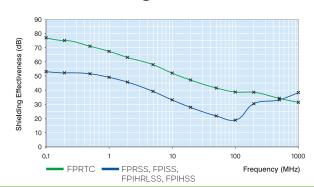




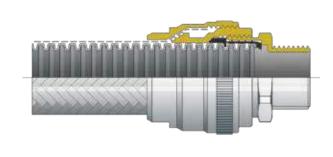


| metric thread part number | metric thread part number | metric thread part number | part number | metric thread steel part number | metric thread EMC part number | metric thread brass part number | plated steel part number | stainless steel part number | nominal size (mm) |
|------------------------------|------------------------------|------------------------------|-------------|---------------------------------------|-------------------------------------|---------------------------------------|-----------------------------|--------------------------------|-------------------|
| | BM90-16M | FW16 | FWPG11 | S-M16 | | B-M16 | FCC16 | FCC16-SS | 16 |
| BC21-M20-C90 | BM90-20M | FW20 | FWPG16 | S-M20 | B-M20-EMC | B-M20 | FCC20 | FCC20-SS | 20 |
| | BM90-25M | FW25 | FWPG21 | S-M25 | B-M25-EMC | B-M25 | FCC25 | FCC25-SS | 25 |
| | BM90-32M | FW32 | FWPG29 | S-M32 | B-M32-EMC | B-M32 | FCC32 | FCC32-SS | 32 |
| | BM90-40M | FW40 | | S-M40 | B-M40-EMC | B-M40 | FCC40 | FCC40-SS | 40 |
| | BM90-50M | FW50 | | S-M50 | | B-M50 | FCC50 | FCC50-SS | 50 |

EMC Screening Performance



Technical Drawing





Strain Relief Fittings

For applications that require the conduit system to provide strain relief and enhanced IP rating to the cables being mechanically protected eg. rail market or heavy machinery construction sector.

Properties

- Combined properties of conduit fitting and cable gland
- Cable strain relief Additional IP rating on cable inside conduit*
- Nickel plated brass fittings • Cable gland properties: ĬP68 (10 bar) + IP69

- Temperature range -40°C to +100°C for static applications -20°C to +100°C for dynamic applications
- EMC cable gland version on request

| Suitable for the following conduits | Conduit | Fitting | nominal size (mm) | Part Number | IP rating of conduit system | IP rating of cable gland | Clamping range of cable gland |
|--|--|---------|----------------------|--|---------------------------------|--------------------------|---|
| FU & SSU | | 1030 | 16 20 25 32 | FSU16-M16-CG FSU20-M20-CG FSU25-M25-CG FSU32-M32-CG | IP40 | IP68 (10 bar)+IP69 | 4.5-10mm 7-13mm 9-17mm 11-21mm |
| FSU, FNU, LFHU and FPU | | 1630 | 16 20 25 32 | FSU16-M16-CG FSU20-M20-CG FSU25-M25-CG FSU32-M32-CG | IP65 | IP68 (10 bar)+IP69 | 4.5-10mm 7-13mm 9-17mm 11-21mm |
| LTP, LTPHC, LTPUL, LTPAS, LTPSS, LTPLFH LTBRDP, LTBRDLFH, LTPPU and LTPPUAS | | 10.50 | 16 20 25 32 | LTP16-M16-CG LTP20-M20-CG LTP25-M25-CG LTP32-M32-CG | IP66+IP67+ IP68 (5 bar)+IP69 | IP68 (10 bar)+IP69 | 4.5-10mm 7-13mm 9-17mm 11-21mm |
| FB & FUSSB |) } } } } } } } } } } } } } } } } } } } | | 16 20 25 32 | FSB16-M16-CG FSB20-M20-CG FSB25-M25-CG FSB32-M32-CG | IP40 | IP68 (10 bar)+IP69 | 4.5-10mm 7-13mm 9-17mm 11-21mm |
| FSB & LFHUBRD | | Chep | 16 20 25 32 | FSB16-M16-CG FSB20-M20-CG FSB25-M25-CG FSB32-M32-CG | IP65 | IP68 (10 bar)+IP69 | 4.5-10mm 7-13mm 9-17mm 11-21mm |
| LTPBRD | | | 16 20 25 32 | LTPB16-M16-CG LTPB20-M20-CG LTPB25-M25-CG LTPB32-M32-CG | IP66+IP67+ IP68 (5 bar)+IP69 | IP68 (10 bar)+IP69 | 4.5-10mm 7-13mm 9-17mm 11-21mm |
| LPC, LPCG, LPCO, LPCBU | | 1636 | 16 20 25 32 | LPC16-M16-CG LPC20-M20-CG LPC25-M25-CG LPC32-M32-CG | IP66+IP67+ IP68 (5 bar)+IP69 | IP68 (10 bar)+IP69 | 4.5-10mm 7-13mm 9-17mm 11-21mm |

*IP rating up to IP68 (10 bar), IP69 dependent on cable used

Standards

BS EN IEC 61386















• Minimum optical cover 90% · Can offer mechanical support

· Can offer abrasion resistance

Properties

FTCB Braided sleeving

Atkore Flexicon

Tinned copper braid system for EMC

screening



Overbraid

FTCB

Construction: Tinned copper braided sleeving.

• EMC Screening 67dB @ 1Mhz for 20mm

Colour: Self colour

Typical Applications: Screening of cables from electromagnetic, electrostatic and RF interference. Can be sleeved over cables before they are drawn into conduits.

| FTCB part number | Reel length (m) | Nominal I/D(mm) | Usableø mm min | Usableø mm max | Cross sectional area -mm² |
|---------------------|-----------------|-----------------|-------------------|-------------------|------------------------------|
| FTCB3 | 100 | 3.0 | 2.0 | 3.5 | 1.06 |
| FTCB4 | 100 | 4.0 | 3.0 | 5.0 | 1.49 |
| FTCB5 | 100 | 5.0 | 4.0 | 6.0 | 1.91 |
| FTCB6 | 100 | 6.0 | 5.0 | 7.0 | 2.23 |
| FTCB10 | 50 | 10.0 | 7.0 | 12.0 | 4.43 |
| FTCB12 | 50 | 12.5 | 11.0 | 13.0 | 4.83 |
| FTCB15 | 50 | 15.0 | 13.0 | 18.0 | 8.29 |
| FTCB20 | 50 | 20.0 | 17.0 | 23.0 | 9.65 |
| FTCB25 | 50 | 25.0 | 22.0 | 28.0 | 12.54 |
| FTCB30 | 25 | 30.0 | 27.0 | 36.0 | 19.30 |
| FTCB35 | 25 | 35.0 | 30.0 | 50.0 | 19.30 |
| FTCB50 | 25 | 50.0 | 45.0 | 65.0 | 35.63 |

FPA

FPAU

Construction: Nylon PA66 & Nickel Plated Brass.

Colour: Black.

Typical Applications: Straight fitting with internal braid clamp assembly for use with braided sleeving inside corrugated conduit.

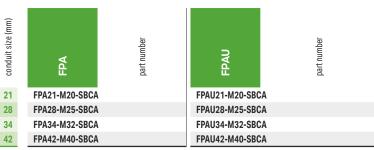
| IDEE | | |
|------|-----|---|
| IDEE | | |
| IDEE | | |
| | 16 | 3 |
| IPOU | 401 | |











Shielding Effectiveness (dB) 60 50 40 30 20 FTCE ency (MHz)



Note:

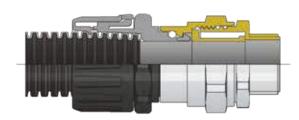
- · As the diameter increases towards the maximum expansion the sleeving decreases in length.
- · Normally supplied on disposable PVC former or can be supplied in flat form on a reel by request
- Temperature performance of sleeving: -50°C to +300°C



Ordering Notes

- · Available on request:
- 90° and 45° elbows
- PG threads

Technical Drawing







Metallic Round Connection boxes



Stainless steel and nickel plated brass

IP66

IP67

IP68

IP69

Connection Boxes

ROUND BOX - STAINLESS STEEL - HYGIENIC



Construction: Stainless Steel (Grade 316) Round box consisting of a base and lid. Designed using the principles of EN 1672-2 and EN ISO 14159 supplied with blue high visibility polyester elastomer lid and base seals. Available with either 2 or 4 holes, other versions available on request. 2 Fixing holes are provided, together with component Mounting holes to help with installation. Slots in the lid allow for secure tightening of the lid and aids opening for maintenance or upgrade. Design offers high Ingress Protection combined with high corrosion resistance.



Typical Applications: Ideal use as a Junction Box for the interconnection of circuits for Hygienic Applications. The lid and base construction provides access to cabling routed through connecting conduits. Fixing holes are provided in the base and pre drilled Mounting holes provide easy option to fix terminals or DIN rail within the box. Ideal for extending or modifying circuits whilst maintaining system integrity. When used with Flexicon Short Thread fittings the box provides a reliable interface with Flexible conduit whilst maximising the available wiring space within the box. Blanking Plugs can be used to seal off any unused ways. The Box offers the possibility to connect and interface with Cable Glands or different types of cabling installations.

4 Way Box shown 2 mounting holes on base M20 Thread Entries

2 Way 4 Way

| Part Number | Height (mm) | Diameter (mm) |
|--------------------|-------------|---------------|
| FB0X75X60-M20X2-SS | 65 | 75 |
| FB0X75X60-M20X4-SS | 65 | 75 |

ROUND BOX - NICKEL PLATED BRASS



Construction: Nickel Plated Brass Round box consisting of a base and lid. Supplied with blue high visibility polyester elastomer lid and base seals. Available with either 2 or 4 holes, other versions available on request. 2 Fixing holes are provided, together with component Mounting holes to help with installation. Slots in the lid allow for secure tightening of the lid and aids opening for maintenance or upgrade. Design offers high Ingress Protection.

Typical Applications: Ideal use as a Junction Box for the interconnection of circuits for general purpose Applications. The lid and base construction provides access to cabling routed through connecting conduits. Fixing holes are provided in the base and pre drilled Mounting holes provide easy option to fix terminals or DIN rail within the box. Ideal for extending or modifying circuits whilst maintaining system integrity. When used with Flexicon Short Thread fittings the box provides a reliable interface with Flexible conduit whilst maximising the available wiring space within the box. Blanking Plugs can be used to seal off any unused ways. The Box offers the possibility to connect and interface with Cable Glands or different types of cabling installations.

2 Way Box shown 2 mounting holes on base M20 Thread Entries

2 Way 4 Way

| Part Number | Height (mm) | Diameter (mm) |
|---------------------|-------------|---------------|
| FBOX75X60-M20X2-NPB | 65 | 75 |
| FBOX75X60-M20X4-NPB | 65 | 75 |

For non-metallic Round Connection boxes see page 64











Properties

- IP rating: IP66, IP67, IP68 (2 bar 1hr), IP69
 Temperature range -50°C to +135°C
 Hygienic Box designed using principles given in EN1672-2 and EN ISO 14159
- Blue high visibility polyester elastomer lid and base seals
- 3 Way, 2 Way 90° and 1 Way available on request
 Other diameters and heights available on request
- ST fittings are short threaded fittings designed for use with Round Box



Terminations









| (| Conduits |
|---|----------|
| | |
| | Fittings |
| | |
| | 10 |

| LPC-FG See page 80 | LTP-FG See page 108 | LTBRDP-FG See page 108 | LTPSS-FG See page 108 | |
|-----------------------|------------------------|---------------------------|--------------------------|------------------------------------|
| Part Number LPCWFG20 | Part Number LTPWFG20 | Part Number LTBRDPWFG20 | Part Number | -6 |
| LPGWFG20 | LIPWFG20 | LIBRDPWFG20 | | a 4 |
| LPCBUFG20 | LTPBUFG20 | LTBRDPBUFG20 | LTPSSBUFG20 | E 5**** |
| Part Number | Part Number | Part Number | Part Number | Blanking Plugs (SS) Part Number |
| | | | | |
| LPC20-M20ST-C-FG | LTP20-M20ST-C-FG | LTP20-M20ST-C-FG | LTP20-M20ST-C-FG | SP-M20-FG-SS |
| | | | | |
| See page 81 | See page 109 | See page 109 | See page 109 | |



| LPC Type See page 76 | | Liquid Tight See pages 94 | | | |
|--------------------------------|---------------|-------------------------------------|-------------------------|-------------------------------------|--------------|
| Part Number | | Part Number | | | |
| LPC20B | LTP20 | LTPLFH20 | LTBRDP20 | | |
| LPC20G | LTPAS20 | LTPPU20 | LTBRDLFH20 | | |
| LPC200 | LTPHC20 | LTPPUAS20 | | | |
| LPC20GN | LTPUL20 | LTPSS20 | | | |
| LPC20BU | | | | | |
| Part Number | Part Number | | Cable Gland Part Number | Blanking Plugs (NPB) Part Number | |
| LPC20-M20ST-C | LTP20-M20ST-C | | B-M20ST-CG | SP-M20-NPB | |
| See page 78 | | See page 98 | | See page 120 | See page 128 |

AAA

For non-metallic Round Connection Boxes see page 64

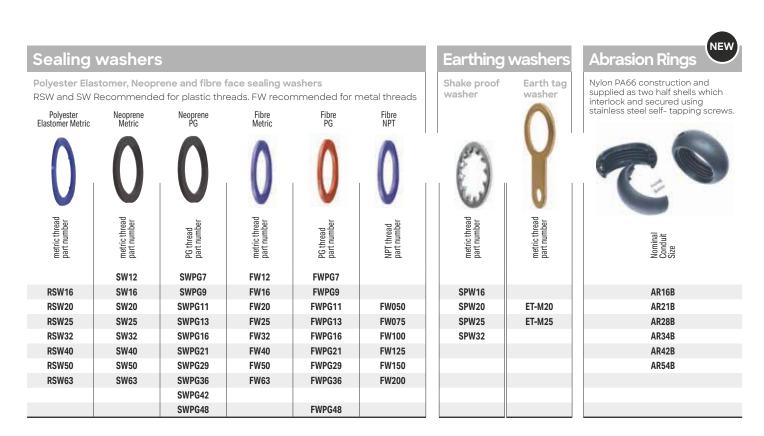




Accessories

NPT Locknuts **Metric Locknuts** PG Locknuts Stop plug Nylon PG (grey) Nickel plated brass, plated steel, stainless steel, Nickel plated Zinc or nylon (black) Nylon metric nylon black or grey brass. Zinc. black nylon black or grey stainless steel part number nickel plated brass part number plated number plated steel part number plated metric part number nickel p brass part nu oart n ylon part n ylon sart n zinc PG B-M12 LM12-N# B-PG7 PG7-N# SP-M12* SP-PG7* S-M16 SS-M16 SP-PG9 B-M16 LM16-N# B-PG9 PG9-N# SP-M16 B-M20-EMC SS-M20 LM20-N# B-M20 S-M20 B-PG11 PG11-N# Z-050 050-NB SP-M20 SP-PG11 B-M25-EMC LM25-N# S-M25 SS-M25 B-PG13 PG13-N# Z-075 075-NB SP-M25 SP-PG13 B-M25 B-M32-EMC I M32-N# R-M32 S-M32 SS-M32 B-PG16 PG16-N# 7-100 100-NR SP-M32 SP-PG16 B-M40-EMC LM40-N# SS-M40 R-PG21 7-125 SP-M40* SP-PG21 B-M40 S-M40 PG21-N# SS-M50 LM50-N# PG29-N# SP-PG29 B-M50 S-M50 B-PG29 Z-150 B-M63 SS-M63* LM63-N# B-PG36 PG36-N# Z-200 S-M63 B-M75 LM75-N B-PG42 PG42-N# LM85-N# B-PG48 PG48-N#

 $^{^{\}ast}$ Indicates parts made to order on request and may be subject to MOQ and lead time



[#]add B or G to specify colour. eg. LM20-NB for Black



Fixing clips

Plated steel with black pvc liner or stainless steel. LFH liner available on request



| to iii coilduit siz | partnumber |
|---------------------|------------|
| 0 | FCC10 |
| 2 | FCC12 |
| C | E0016 |

| to fit condu | partnumbe | partnumbe |
|--------------|-----------|-----------|
| 10 | FCC10 | FCC10-SS* |
| 12 | FCC12 | FCC12-SS |
| 16 | FCC16 | FCC16-SS |
| 20 | FCC20 | FCC20-SS |
| 25 | FCC25 | FCC25-SS |
| 32 | FCC32 | FCC32-SS |
| 40 | FCC40 | FCC40-SS |
| 50 | FCC50 | FCC50-SS |
| 63 | FCC63 | FCC63-SS* |
| 75 | FCC75 | |
| 80 | FCC80 | |
| 106 | FCC106 | |
| | | |

Conduit clip

Nylon conduit clip with integral lid black or grey

FCLAMP

Non-metallic, heavy duty conduit clamp Nylon PA66, Nylon conduit fixing clamp for corrugated conduit.

(For fixing rails & accessories see page 72)

EC

End cap

Nylon PA66 end cap to snap over end of conduit and provide a smooth entry bush to prevent snagging and sharp edges, and provide a neat finish when no connectors are used.

REC

Rubber end cap

Thermoplastic elastomer cap used to seal end of conduit. Can be cut to size depending on size of cable. Can be additionally secured using cable tie (not supplied).







| | | | GIAU. | | | | |
|---------------------------------|-----------------------------------|---------------------------------------|--------------|---------|----------------|------------------------|-----------------|
| to fit nominal conduit sizes | conduit clip for corrugated | conduit clip for plain or rigid | fclamp | deo pue | part number | to fit conduit size | outlet ID mm |
| 10 | FCL10 | | | | REC10 | 10 | 0-7 |
| 13 | FCL13 | | | | REC13 | 13 | 0-7 |
| 16 | FCL16 | FCL16B-P | FCLAMP- 3-16 | EC16B | REC16 | 16 | 0-11 |
| 18 | FCL18 | FCL18B-P | | | | | |
| 20 | FCL20 | FCL20B-P | | | | | |
| 21 | FCL21 | FCL21B-P | FCLAMP- 3-21 | EC21B | REC21 | 21 | 0-15 |
| 25 | FCL25 | FCL25B-P | | | | | |
| 28 | FCL28 | | FCLAMP- 4-28 | EC28B | REC28 | 28 | 0-21 |
| 32 | FCL32 | | | | | | |
| 34 | FCL34 | FCL33B-P | FCLAMP- 5-34 | EC34B | REC34 | 34 | 0-25 |
| 42 | FCL42 | | FCLAMP- 6-42 | EC42B | REC42 | 42 | 0-34 |
| 54 | FCL54 | | FCLAMP- 7-54 | EC54B | REC54 | 54 | 0-46 |
| 67 | | | FCLAMP- 7-67 | | REC67 | 67 | 0-52 |
| 80 | | | FCLAMP- 8-80 | | REC80 | 80 | 0-62 |

^{*} indicates parts made to order on request and may be subject to MOQ and lead time

Cable glands

Our range of Cable glands provides an easy to assemble, fast fit, liquid tight solution for multipurpose applications. Available in nickel plated brass they have been designed to provide the highest degree of functionality and safety.

| Thread Size. | Nickel plated brass | Thread Length (mm) | Cable Dia (min) (mm) | Cable Dia (max) (mm) | Spanner Size (mm) | Pack Quantity |
|-----------------|---------------------|-----------------------|-------------------------|-------------------------|----------------------|------------------|
| M16 | B-M16-CG | 12 | 4.5 | 10 | 20 | 10 |
| M20 | B-M20-CG | 12 | 7 | 13 | 24 | 10 |
| M25 | B-M25-CG | 12 | 9 | 17 | 29 | 10 |
| M32 | B-M32-CG | 15 | 11 | 21 | 36 | 2 |
| M40 | B-M40-CG | 15 | 19 | 28 | 45 | 2 |
| M50 | B-M50-CG | 15 | 27 | 35 | 54 | 1 |
| M63 | B-M63-CG | 15 | 35 | 47 | 67 | 1 |

Technical Details

- Material: Nickel plated brass
- IP Rating: IP68 (10 bar) + IP69
- · Produced and tested in accordance with EN 50262:1999
- Temperature range:

 - -40°C to +100°C (static) -20°C to +100°C (dynamic)

| Thread Size. | EMC Nickel plated brass | Thread Length (mm) | Cable Dia (min) (mm) | Cable Dia (max) (mm) | Spanner Size (mm) | Pack Quantity |
|-----------------|-------------------------|-----------------------|-------------------------|-------------------------|----------------------|------------------|
| M16 | B-M16-CG-EMC | 12 | 4.5 | 9 | 20 | 10 |
| M20 | B-M20-CG-EMC | 12 | 7 | 12.5 | 24 | 10 |
| M25 | B-M25-CG-EMC | 12 | 9 | 16.5 | 29 | 10 |
| M32 | B-M32-CG-EMC | 15 | 11 | 21 | 36 | 2 |
| M40 | B-M40-CG-EMC | 15 | 19 | 28 | 45 | 2 |
| M50 | B-M50-CG-EMC | 15 | 27 | 35 | 54 | 1 |

Technical Details

- Material: EMC Nickel plated brass
- IP Rating: IP68 (10 bar)
- · Produced and tested in accordance with EN 50262:1999
- Temperature range:

 -40°C to +100°C (static)

 -20°C to +100°C (dynamic)



Accessories

90° Elbow

internal and external threaded nickel plated brass 90° elbow



| threads | part number |
|---------|-------------|
| PG7 | BM90-PG7* |
| M16 | BM90-16M |
| M20 | BM90-20M |
| M25 | BM90-25M |
| M32 | BM90-32M |
| M40 | BM90-40M |
| M50 | BM90-50M |

Couplers

Nickel plated brass internally threaded

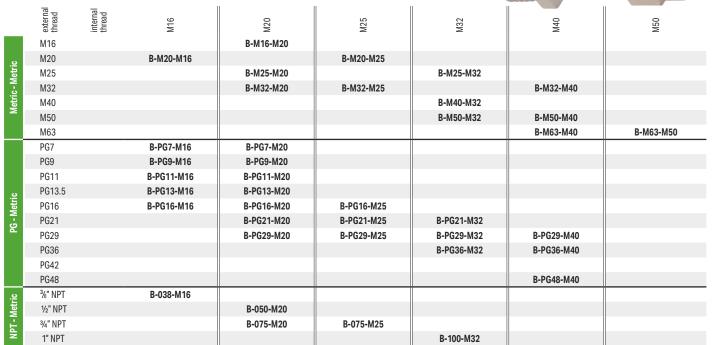


| threads | metric thread part number |
|---------|---------------------------|
| M16 | B-M16-C |
| M20 | B-M20-C |
| M25 | B-M25-C |
| M32 | B-M32-C |
| M40 | B-M40-C |
| M50 | B-M50-C |
| M63 | B-M63-C |
| M75 | B-M75-C |

Thread converters

Nickel plated brass thread convertors, reducers and enlargers external and internal thread.

Metric Internal Threads



PG Internal Threads

| | external thread | internal thread | PG7 | PG9 | PG11 | PG13.5 | PG16 | PG21 | PG29 | PG36 |
|-------------|--------------------|--------------------|------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | M16 | | B-M16-PG7 | B-M16-PG9 | B-M16-PG11 | | | | | |
| 9 | M20 | | B-M20-PG7 | B-M20-PG9 | B-M20-PG11 | B-M20-PG13 | B-M20-PG16 | B-M20-PG21 | | |
| Metric - PG | M25 | | | | | | | B-M25-PG21 | | |
| letri | M32 | | | | | | | B-M32-PG21 | | |
| 2 | M40 | | | | | | | | B-M40-PG29 | |
| | M50 | | | | | | | | | B-M50-PG36 |
| | PG7 | | | B-PG7-PG9 | | | | | | |
| | PG9 | | B-PG9-PG7 | | B-PG9-PG11 | | | | | |
| | PG11 | | B-PG11-PG7 | B-PG11-PG9 | | B-PG11-PG13 | | | | |
| | PG13.5 | | | B-PG13-PG9 | B-PG13-PG11 | | B-PG13-PG16 | | | |
| PG-PG | PG16 | | | B-PG16-PG9 | B-PG16-PG11 | B-PG16-PG13 | | B-PG16-PG21 | | |
| မ် | PG21 | | | | | | B-PG21-PG16 | | B-PG21-PG29 | |
| | PG29 | | | | | | | B-PG29-PG21 | | B-PG29-PG36 |
| | PG36 | | | | | | | | B-PG36-PG29 | |
| | PG42 | | | | | | | | | B-PG42-PG36 |
| | PG48 | | | | | | | | | B-PG48-PG36 |

Note: Refer to page 134 for thread dimensions tables.

For EXD thread converters, please see page 105





Tools

The following tools and accessories are available to aid installation. See page 136 for cutting and assembly advice. Alternatively visit our website & view our handy video clips to aid your installation.

Clamp

Cutting vice to hold metallic conduits and guide hacksaw (16-50mm).



Part Number

BSB clamp

Conduit cutter

For any non metallic flexible and rigid conduits.



Part Number

CC01 up to 34mm conduitsCC02 up to 67mm conduits

Slitting tool

Can be used to slit all corrugated conduits down to 13mm.

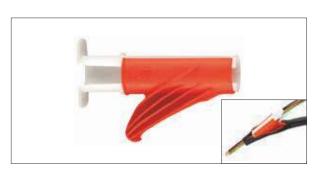


Part Number

CS01 Slitting tool

Slit conduit insertion tool

For easy installation of wires into slit conduit.



| Part Number | for conduit |
|-------------|-----------------|
| ST16 | FPYS16 + FPYS12 |
| ST20 | FPYS20 |
| ST25 | FPYS25 |
| ST32 | FPYS32 |
| | |

4 tooth Flexilok® Removal tool for use with 42mm & 54mm sizes (see page 48)



Part Number For use with:

FLK42RT FLK42-M40, FLK42-M50, FLK42-PG36 FLK54RT FLK54-M50, FLK54-M63, FLK54-PG48

Removal tool for push in Flexilok® fittings (see page 48)



Part Number For use with

RTPF20 FLK16-PL20, FLK20-PL20, FLK21-PL20

RTPF25 FLK25-PL25, FLK28-PL25

RTPF32 FLK34-PL32



Contractor Packs

Hygiene Packs

Each pack contains:

· 3m conduit · 2 fittings · 2 locknuts







20mm I-PACK

I-PACKBUFG20

3m x LPCBUFG20 Conduit 2x LPC-C-FG Fittings 2x SS-M20 Locknuts



Blue Version

I-PACKWEG20

3m x LPCWFG20 Conduit 2x LPC-C-FG Fittings 2x SS-M20 Locknuts



White Version

- · Hygienic design
- · Smooth finish
- · High IP rating
- Corrosion resistant
- Temp: -20°C to +90°C
- · Fewer components
- · Self extinguishing
- · Vibration & shock tested

25mm I-PACK

I-PACKBUFG25

3m x LPCBUFG25 Conduit 2x LPC-C-FG Fittings 2x SS-M25 Locknuts



I-PACKWFG25

3m x LPCWFG25 Conduit 2x LPC-C-FG Fittings 2x SS-M25 Locknuts



White Version

- Hygienic design
- · Smooth finish
- High IP rating
- Corrosion resistant
- Temp: -20°C to +90°C





· Vibration & shock tested

• Fewer components

Self extinguishing









Contractor Packs

Benefits

- · Simplistic ordering
- · Easy storage
- · Ready to use





FPL-CP20W FPL-CP25W

M20 thread M25 thread



- 10 metres of white corrugated upvc FPL20 or FPL25
- Pliable conduit for static applications
- Self extinguishing
- 10 white nylon Flexilok fittings and locknuts FLK20-M20W or FLK25-M25W
- IP66
- 1 part, fast fit

FPADS Contractor Packs

Divisible conduit pack - Retrofit

FPADS - CP21BX5 M20 thread





Conduit wraps around cables

- 5 metres of divisible conduit
- 10 x Hinged fittings and locknuts - M20
- · Self extinguishing

- UV Resistant
- Enhanced mechanical protection
- IP40



IP54

IP65

IP66

IP66

STEEL



M20 thread



- 10 metres of galvanised steel with PVC coating
- Temperature range -15°C to +70°C
- Self extinguishing

- · High mechanical strength
- Highly flexible
- 5 M20 fixed fittings
- 5 M20 swivel fittings
- 10 steel locknuts
- . ID54

NYLON

FPAS-CP21B FPAS-CP25B M20 thread M25 thread



- 10 metres of standard weight nylon PA6 FPAS21 or FPAS25
- · Low fire hazard
- · Halogen free
- · Self extinguishing
- · Low smoke and Low toxicity
- · High flexibility and fatigue life
- · High impact strength
- · Oil and solvent resistant
- UV resistant

- Temperature range -40°C to +120°C
- 10 FPA fittings and locknuts FPA21-M20B or FPA25-M25B
- · One part, fast fit
- · Removable using a screwdriver
- High pull-off strength
- Anti-vibration
- IP66
- UV resistant

PVC SPIRAL

FPC-CP20B FPC-CP25B

M20 thread M25 thread



- 10 metres of spiral reinforced pvc FPC20 or FPC25
- · Highly flexible
- Accepts torsional movement
- Self extinguishing
- UV resistant
- Temperature range -5°C to +70°C
- 10 MPC fittings and locknuts
- IP65
- UV resistant
- Smooth bore

NYLON

FPYE-CP20B

M20 thread

FPYE-CP25B





- 10 metres of light weight nylon PA6 FPAL20 or FPAL25
- Flexible
- Halogen free
- Self extinguishing
- Temperature range -40°C to +120°C
- 10 Flexilok fittings and locknuts FLK20-M20B or FLK25-M25B
- . IP66
- · One part, fast fit

POLYPROPYLENE

FPP-CP20B FPP-CP25B M20 thread M25 thread

FPP-CP34B

M32 thread



- 10 metres of polypropylene FPP20, FPP25 or FPP34
- Temperature range -20°C to +90°C
- Self extinguishing
- To specify grey change B to a G eg: FPP-CP20G
- 10 Flexilok (PP) fittings and locknuts FLK20-M20BPP, FLK25-M25BPP or FLK34-M32BPP
- IP66
- · One part, fast fit

Standards







Don't forget

See page 125









Non-Metallic conduit and fittings

| 44 F 44 F 45 F 45 F | FPAS FPAH FPASC FPR FPI FPIH | nylon LFH PA6 corrugated, std weight nylon PA6 corrugated, light weight nylon LFH PA6 corrugated, heavy weight nylon LFH PA6 corrugated, std weight nylon extra LFH PA6 corrugated, std weight nylon extra LFH PA6 corrugated, std weight nylon PA12 corrugated, standard | 1 1 1 | ASTM NO. 2 | 1 | L | ACETONE | × | BENZENE | 1 | | | | CRESOL | DIESEL OIL | | ETHANOL | ETHER | | | | | HYDROCHLORIC ACID (30%) |
|--------------------------------------|---|---|-------|------------|---|----|---------|---|---------|---|---|---|---|--------|------------|---|---------|-------|---|---|---|----|-------------------------|
| 44 F 44 F 45 F 45 F 45 F | FPAH FPASC FPR FPI | Iight weight nylon LFH PA6 corrugated, heavy weight nylon LFH PA6 corrugated, std weight nylon extra LFH PA6 corrugated, std weight nylon extra LFH PA6 corrugated, std weight nylon PA12 corrugated, standard | 1 | | | L | 1 | | | • | × | 1 | L | × | 1 | 1 | 1 | 1 | 1 | ✓ | ✓ | × | × |
| 44 F 45 F 45 F 45 F | FPASC FPR FPI | corrugated, heavy weight nylon LFH PA6 corrugated, std weight nylon extra LFH PA6 corrugated, std weight nylon PA12 corrugated, standard | | 1 | 1 | | • | X | 1 | 1 | × | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | × | × |
| 45 F 45 F 45 F | FPR FPI | corrugated, std weight nylon extra LFH PA6 corrugated, std weight nylon PA12 corrugated, standard | 1 | | | L | 1 | × | 1 | 1 | × | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | ✓ | × | × |
| 45 F 45 F | FPI | corrugated, std weight nylon PA12 corrugated, standard | | 1 | 1 | L | 1 | × | 1 | 1 | × | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | × | × |
| 45 F | | corrugated, standard | 1 | 1 | 1 | L | 1 | × | 1 | 1 | × | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | ✓ | × | × |
| 45 F | FPIH | corrugated, standard weight | | | 1 | L | 1 | L | 1 | 1 | × | 1 | L | × | ✓ | L | L | 1 | L | ✓ | ✓ | × | × |
| | | nylon PA12 corrugated, heavy weight | 1 | 1 | 1 | L | 1 | L | 1 | 1 | × | 1 | L | × | 1 | L | L | 1 | L | 1 | 1 | × | × |
| 45 F | FPIHRL | nylon PA12 corrugated, heavy weight | 1 | 1 | 1 | L | 1 | L | 1 | 1 | × | 1 | L | × | 1 | L | L | 1 | L | 1 | 1 | × | × |
| | FPP | polypropylene corrugated, std weight | 1 | 1 | L | PP | 1 | L | L | L | L | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | ✓ | PP | PP |
| 46 F | FPADS | nylon PA6 double slit corrugated | 1 | 1 | 1 | L | 1 | × | 1 | 1 | × | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | × | × |
| 46 F | FPRDS | nylon extra LFH PA6 corrugated, std weight | 1 | 1 | 1 | L | 1 | × | 1 | 1 | × | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | × | × |
| 46 F | FPPDS | polypropylene corrugated, std weight | 1 | 1 | L | PP | 1 | L | L | L | L | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | PP | PP |
| 66 F | FPL | upvc corrugated | 1 | 1 | 1 | L | × | L | × | L | × | 1 | L | × | 1 | L | 1 | 1 | L | 1 | L | × | × |
| 68 F | FPY | nylon PA6 corrugated | 1 | 1 | 1 | L | 1 | × | 1 | 1 | × | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | × | × |
| 68 F | FPYS | slit nylon PA6 corrugated, std weight | 1 | 1 | 1 | L | 1 | × | 1 | 1 | × | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | × | × |
| 68 F | FPYL | nylon PA6 corrugated, light weight | 1 | 1 | 1 | L | 1 | × | 1 | 1 | × | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | × | × |
| 68 F | FPYLS | slit nylon PA6 corrugated, light weight | 1 | 1 | 1 | L | 1 | × | 1 | 1 | × | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | × | × |
| 74 F | FPCB | pvc spiral reinforced black | × | × | × | L | × | L | × | L | × | 1 | L | × | L | L | × | L | L | L | L | × | × |
| 74 F | FPCG | pvc spiral reinforced grey | × | × | × | L | × | L | × | L | × | 1 | L | × | L | L | × | L | L | L | L | × | × |
| 74 F | FPCGN | pvc spiral reinforced green oil resistant | 1 | 1 | 1 | 1 | × | × | × | L | × | 1 | 1 | L | 1 | L | × | L | L | L | L | L | × |
| 74 F | FPCBU | pvc spiral reinforced blue high temperature | × | × | × | L | × | L | × | L | × | 1 | L | × | L | L | × | L | L | L | L | × | × |
| 76 L | LPCB | smooth, pvc spiral reinforced | 1 | 1 | 1 | 1 | × | × | × | L | × | 1 | 1 | L | 1 | L | × | L | L | L | L | L | × |
| 76 L | LPCO | smooth pvc spiral orange ultra flexible | 1 | 1 | 1 | 1 | × | × | × | L | × | 1 | 1 | L | 1 | L | × | L | L | L | L | L | × |
| 76 L | LPCBU | smooth pvc spiral blue high temperature | 1 | 1 | 1 | 1 | × | × | × | L | × | 1 | 1 | L | 1 | L | × | L | L | L | L | L | × |
| 76 L | LPCGN | smooth pvc spiral green oil resistant | 1 | 1 | 1 | 1 | × | × | × | L | × | 1 | 1 | L | 1 | L | × | L | L | L | L | L | × |
| 80 L | LPC-FG | smooth, pvc spiral reinforced | 1 | 1 | 1 | 1 | × | × | × | L | × | 1 | 1 | L | 1 | L | × | L | L | L | L | L | × |
| 80 4 | AFC UL-FG smooth, non-metallic PVC construction | | L | С | | | | | | | | | | | | | | | | | | | |

Key

✓ good resistance

PP suitable with polypropylene fittings **SS** suitable with stainless steel fittings

X poor resistance



Resistance to Chemicals

Visit our website and use our conduit selector tool to see chemical resistance properties

| | | | | | | | | | | | | | | R | es | ist | :ar | C | e t | to | C | ne | mi | ica | als | • | | | | | rope | rties. |
|-------------------------|-------------------------|-------------|-----------------|----------|----------------|-----|-------------------|-------------------|-------------|-------------|--------------|--------|--------|----------|----------------|---------|-----------------|------------------------|------------------------|-----------------------|----------------------|---------|-----------------|-----------------------|-------------------|------------|---------------|--------------|-------|--------------|---------------|-----------|
| HYDROGEN PEROXIDE (30%) | HYDROGEN PEROXIDE (60%) | LACTIC ACID | LUBRICATING OIL | METHANOL | METHYL BROMIDE | MEK | NITRIC ACID (10%) | NITRIC ACID (60%) | OXALIC ACID | OZONE (GAS) | PARAFFIN OIL | PETROL | PHENOL | SEAWATER | SILVER NITRATE | SKYDROL | SODIUM CHLORIDE | SODIUM HYDROXIDE (10%) | SODIUM HYDROXIDE (60%) | SULPHUR DIOXIDE (GAS) | SULPHURIC ACID (10%) | TOLUENE | TRANSFORMER OIL | 1,1,1-TRICHLOROETHANE | TRICHLOROETHYLENE | TURPENTINE | VEGETABLE OIL | VINYLACETATE | Water | WHITE SPIRIT | ZINC CHLORIDE | |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | × | × | 1 | 1 | 1 | L | 1 | 1 | L | 1 | 1 | × | FPAS |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | × | × | 1 | 1 | 1 | L | 1 | 1 | L | 1 | 1 | × | FPAL |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | × | × | 1 | 1 | 1 | L | 1 | 1 | L | 1 | 1 | × | FPAH |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | × | × | 1 | 1 | 1 | L | 1 | 1 | L | 1 | 1 | × | FPASC |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | × | × | 1 | 1 | 1 | L | 1 | 1 | L | 1 | 1 | × | FPR |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | L | × | × | 1 | / | 1 | × | 1 | / | L | 1 | 1 | × | FPI |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | L | × | × | 1 | 1 | 1 | × | 1 | 1 | L | 1 | 1 | × | FPIH |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | L | × | × | 1 | 1 | 1 | × | 1 | 1 | L | 1 | 1 | × | FPIHRL |
| × | × | PP | 1 | L | × | 1 | PP | PP | PP | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | PP | PP | 1 | 1 | L | L | × | 1 | L | 1 | 1 | × | FPP |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | × | × | 1 | 1 | 1 | L | 1 | 1 | L | 1 | 1 | × | FPADS |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | × | × | 1 | 1 | 1 | L | 1 | 1 | L | 1 | 1 | × | FPRDS |
| × | × | PP | 1 | L | × | 1 | PP | PP | PP | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | PP | PP | 1 | 1 | L | L | × | 1 | L | 1 | 1 | × | FPPDS |
| × | × | L | 1 | L | × | × | × | × | L | × | 1 | 1 | × | 1 | 1 | × | 1 | 1 | 1 | × | × | × | 1 | × | × | 1 | 1 | × | 1 | 1 | × | FPL |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | × | × | 1 | 1 | 1 | L | 1 | 1 | L | 1 | 1 | × | FPY |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | × | × | 1 | 1 | 1 | L | 1 | 1 | L | 1 | 1 | × | FPYS |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | × | × | 1 | 1 | 1 | L | 1 | 1 | L | 1 | 1 | × | FPYL |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | × | × | 1 | 1 | 1 | L | 1 | 1 | L | 1 | 1 | × | FPYLS |
| L | × | L | L | × | × | × | × | × | L | × | L | × | × | 1 | 1 | × | 1 | 1 | L | × | × | × | L | × | L | L | L | × | 1 | L | × | FPCB |
| L | × | L | L | × | × | × | × | × | L | × | L | × | × | 1 | 1 | × | 1 | 1 | L | × | × | × | L | × | L | L | L | × | 1 | L | × | FPCG |
| L | × | L | 1 | × | × | × | L | × | 1 | L | 1 | 1 | L | 1 | 1 | × | 1 | 1 | 1 | × | × | × | L | × | L | L | 1 | × | 1 | L | × | FPCGN |
| L | × | L | L | × | × | × | × | × | L | × | L | × | × | 1 | 1 | × | 1 | 1 | L | × | × | × | L | × | L | L | L | × | 1 | L | × | FPCBU |
| L | × | L | 1 | × | × | × | L | × | 1 | L | 1 | 1 | L | 1 | 1 | × | 1 | 1 | 1 | × | SS | × | L | × | L | L | 1 | × | 1 | L | × | LPCB |
| L | × | L | 1 | × | × | × | L | × | 1 | L | 1 | 1 | L | 1 | 1 | × | 1 | 1 | 1 | × | SS | × | L | × | L | L | / | × | 1 | L | × | LPCO |
| L | × | L | 1 | × | × | × | L | × | 1 | L | 1 | 1 | L | 1 | 1 | × | 1 | 1 | 1 | × | SS | × | L | × | L | L | 1 | × | 1 | L | × | LPCBU |
| L | × | L | 1 | × | × | × | L | × | 1 | L | 1 | 1 | L | 1 | 1 | × | 1 | 1 | 1 | × | SS | × | L | × | L | L | 1 | × | 1 | L | × | LPCGN |
| L | × | L | 1 | × | × | × | L | × | 1 | L | 1 | 1 | L | 1 | 1 | × | 1 | 1 | 1 | × | SS | × | L | × | L | L | / | × | 1 | L | × | LPC-FG |
| L | × | С | 1 | С | × | × | 1 | × | 1 | С | С | С | L | 1 | × | × | С | 1 | 1 | С | 1 | × | С | × | × | × | 1 | С | 1 | С | 1 | AFC UL-FG |

The chart above is based on exposure to single chemicals at room temperature and should be used as a selection guide. For additional chemicals, higher concentrations, elevated temperatures or combinations of chemicals, please call +44 (0)1675 466900 for technical advice.



Metallic conduit and fittings

| | | | 1.1 | Cro | יוווג | | OH | uu | ונכ | אווג | 4 11 | CCII | ııy. | 3 | | | | | | | | | |
|----------------|-----------|---|---------------------|------------|------------|------------------|---------|--------------------|---------|----------------------|------------|-------------------|-----------------|--------|------------|--------------|---------|---|------------------|-----------------|----------|-------------------------|-------------------------|
| Page number | Conduit S | System | ASTM NO. 1 | ASTM NO. 2 | ASTM NO. 3 | ACETICACID (10%) | ACETONE | ALUMINIUM CHLORIDE | BENZENE | CARBON TETRACHLORIDE | CHLOROFORM | CITRIC ACID | COPPER SULPHATE | CRESOL | DIESEL OIL | DIETHYLAMINE | ETHANOL | | ETHYLAMINE | ETHYLENE GLYCOL | FREON 32 | HYDROCHLORIC ACID (10%) | HYDROCHLORIC ACID (30%) |
| 88 | FU | galvanised steel | 1 | 1 | 1 | × | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | × | × | × | × |
| 88 | SSU | stainless steel, grade 316 | 1 | 1 | 1 | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | × | × |
| 90 | FSU | galvanised steel, pvc coated | × | × | × | L | × | × | × | × | X | 1 | 1 | L | L | X | × | X | × | L | L | 1 | × |
| 90 | FNU | galvanised steel, nylon coated | 1 | 1 | 1 | L | 1 | × | L | 1 | X | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | × | × |
| 92 | LFHU | galvanised steel, LFH coated | L | L | L | 1 | × | × | × | × | X | 1 | 1 | × | × | 1 | × | X | × | 1 | × | × | × |
| 92 | FPU | galvanised steel, polyurethane coated | 1 | 1 | 1 | × | L | L | L | L | X | 1 | 1 | × | 1 | L | 1 | L | × | 1 | × | × | × |
| 98 | LTP | galv steel, pvc coated, liquid tight | L | L | L | 1 | × | × | × | L | X | 1 | 1 | L | L | L | × | L | L | L | L | L | × |
| 98 | LTPAS | galv steel, pvc coated, liquid tight | L | L | L | 1 | × | × | × | L | X | 1 | 1 | L | L | L | × | L | L | L | L | L | × |
| 98 | LTPHC | galv steel, thermoplastic rubber, liquid tight | 1 | L | L | 1 | 1 | × | × | L | L | 1 | 1 | 1 | 1 | 1 | 1 | 1 | L | 1 | × | 1 | 1 |
| 98 | LTPLFH | galv steel, LFH coated, liquid tight | 1 | 1 | 1 | 1 | × | × | × | L | × | 1 | 1 | L | L | L | × | L | L | L | L | L | × |
| 95 | LTPUL | galv steel, PVC coated, liquid tight | 1 | 1 | 1 | 1 | × | × | × | L | X | 1 | 1 | L | L | L | × | L | L | L | L | L | × |
| 95 | LTPPU | galv steel, polyurethane coated, liquid tight | 1 | 1 | 1 | × | L | L | L | L | × | 1 | 1 | × | 1 | L | 1 | L | × | 1 | × | × | × |
| 95 | LTPPUAS | galv steel, polyurethane coated, liquid tight | 1 | 1 | 1 | × | L | L | L | L | X | 1 | 1 | × | 1 | L | 1 | L | × | 1 | × | × | × |
| 95 | LTPSS | stainless steel, pvc coat- ed, liquid tight | 1 | 1 | 1 | 1 | × | × | × | L | × | 1 | 1 | L | L | L | × | L | L | L | L | L | × |
| 96 | LTBRDP | galv steel, braided core, pvc coated, liquid tight | 1 | 1 | 1 | 1 | × | × | × | L | × | 1 | 1 | L | L | L | × | L | L | L | L | L | × |
| 96 | LTBRDLFH | galv steel, braided core, LFH coated, liquid tight | L | L | L | 1 | × | × | × | × | X | 1 | 1 | × | L | 1 | × | X | × | 1 | × | × | × |
| 106 | LTPBRD | galv steel, rubber coat- ed, SS316 overbraid | 1 | L | L | 1 | 1 | × | × | L | L | 1 | 1 | 1 | 1 | 1 | 1 | 1 | L | 1 | × | 1 | 1 |
| 108 | LTP-FG | galv steel, pvc coated, liquid tight | L | L | L | 1 | × | × | × | L | X | 1 | 1 | L | L | L | × | L | L | L | L | L | × |
| 108 | LTBRDP-FG | galv steel, pvc coated, liquid tight | L | L | L | 1 | × | × | × | L | X | 1 | 1 | L | L | L | × | L | L | L | L | L | × |
| 108 | LTPSS-FG | stainless steel, pvc coated, liquid tight | 1 | 1 | 1 | 1 | × | × | × | L | X | 1 | 1 | L | 1 | L | × | L | L | L | L | L | × |
| 108 | AFC UL-FG | Zinc coated, galvanised low carbon steel strip | L | С | × | L | × | 1 | × | × | × | 1 | С | L | × | С | × | × | С | L | × | × | × |
| 110 | FL | galvanised steel, pliable | ✓ | 1 | 1 | × | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | × | × | × | × |
| 111 | FLP | galvanised steel, pvc coated, pliable | × | × | × | L | × | × | × | L | X | 1 | 1 | L | L | L | × | L | L | L | L | 1 | L |
| 112 | LFHP | galvanised steel, LFH coated, pliable | L | L | L | 1 | × | × | × | × | × | 1 | 1 | × | × | 1 | × | × | × | 1 | × | × | × |
| 112 | FB | galvanised steel, galv steel overbraid | 1 | 1 | 1 | × | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | X | × | × | × |
| 114 | FUSSB | galvanised steel, SS316 overbraid | 1 | 1 | 1 | × | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | X | × | × | × |
| 114 | FSB | galv steel, pvc, galv steel overbraid | × | × | × | L | × | × | × | × | × | 1 | 1 | L | L | × | × | × | × | L | L | 1 | × |
| 116 | LFHUBRD | galv steel, LFH coated, SS316 overbraid | L | L | L | 1 | × | × | × | × | X | 1 | 1 | × | × | 1 | × | X | × | 1 | × | × | × |
| 116 | FSS | stainless steel corrugated | 1 | 1 | 1 | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | × | × |
| 118 | FSSBRD | stainless steel corrugated, overbraid | 1 | 1 | 1 | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | × | × |
| 118 | FPRSS | PA6 corrugated, SS316 overbraid | 1 | 1 | 1 | L | 1 | X | 1 | 1 | × | 1 | L | X | 1 | 1 | 1 | 1 | 1 | 1 | 1 | X | × |
| 118 | FPRTC | PA6 corrugated, tinned copper overbraid | 1 | 1 | 1 | L | 1 | X | 1 | 1 | X | 1 | L | X | 1 | 1 | 1 | 1 | 1 | X | × | X | × |
| 118 | FPISS | PA12 corrugated, SS316 overbraid | 1 | 1 | 1 | L | 1 | L | 1 | 1 | × | 1 | L | X | 1 | L | L | 1 | L | 1 | 1 | X | × |
| 118 | FPIHSS | PA12 corrugated, SS316 overbraid | 1 | 1 | 1 | L | 1 | L | 1 | 1 | X | 1 | L | X | 1 | L | L | 1 | L | 1 | 1 | X | × |
| 118 | FPHIRLSS | PA12 corrugated, SS316 overbraid | 1 | 1 | 1 | L | 1 | L | 1 | ✓ | X | 1 | L | X | 1 | L | L | 1 | L | ✓ | 1 | X | × |
| | key | | resista ed resis | | ; | | | | | | | ropyle ess ste | | | | | | | esista ult us | nce | | | |

Δ.



Resistance to Chemicals

Visit our website and use our conduit selector tool to see chemical resistance properties.

| | | | | | | | | | | | | | | K | es | IST | .ar | C | eı | O | CI | 10 | m | C | 31S | | r | esis | tanc | e p | rope | |
|--------------------------|-------------------------|-------------|-----------------|----------|----------------|-----|-------------------|-------------------|-------------|-------------|--------------|--------|--------|-----------|----------------|---------|-----------------|------------------------|------------------------|-----------------------|----------------------|---------|-----------------|-----------------------|-------------------|------------|---------------|---------------|-------|--------------|---------------|-----------------|
| HYDRO GEN PEROXIDE (30%) | HYDROGEN PEROXIDE (60%) | LACTIC ACID | LUBRICATING OIL | METHANOL | METHYL BROMIDE | MEK | NITRIC ACID (10%) | NITRIC ACID (60%) | OXALIC ACID | OZONE (GAS) | PARAFFIN OIL | PETROL | PHENOL | SEA WATER | SILVER NITRATE | SKYDROL | SODIUM CHLORIDE | SODIUM HYDROXIDE (10%) | SODIUM HYDROXIDE (60%) | SULPHUR DIOXIDE (GAS) | SULPHURIC ACID (10%) | TOLUENE | TRANSFORMER OIL | 1,1,1-TRICHLOROETHANE | TRICHLOROETHYLENE | TURPENTINE | VEGETABLE OIL | VINYL ACETATE | Water | WHITE SPIRIT | ZINC CHLORIDE | |
| × | X | X | 1 | 1 | 1 | 1 | × | X | X | X | 1 | 1 | 1 | X | X | 1 | X | X | X | X | × | 1 | 1 | X | X | 1 | 1 | X | X | 1 | × | FU |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | × | × | 1 | 1 | 1 | 1 | 1 | SS | 1 | 1 | SS | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | SSU |
| / | / | L | L | × | × | × | 1 | 1 | X | L | L | × | × | × | 1 | × | × | 1 | L | × | × | × | L | × | X | L | L | × | 1 | L | 1 | FSU |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | × | 1 | 1 | × | 1 | 1 | × | × | 1 | 1 | 1 | L | 1 | 1 | L | 1 | 1 | X | FNU |
| X | × | 1 | L | × | × | × | 1 | × | 1 | 1 | × | × | × | × | 1 | × | 1 | 1 | 1 | × | × | L | L | L | L | × | L | × | 1 | × | 1 | LFHU |
| L | X | L | L | L | × | L | × | × | L | L | L | 1 | × | × | L | × | 1 | L | × | L | L | × | L | × | × | × | 1 | × | 1 | L | L | FPU |
| L | × | L | 1 | × | × | L | L | × | 1 | L | × | L | L | SS | 1 | × | SS | 1 | 1 | × | SS | × | L | × | × | L | 1 | × | 1 | L | X | LTP |
| L | × | L | 1 | × | × | L | L | × | 1 | L | × | L | L | SS | 1 | × | SS | 1 | 1 | × | SS | × | L | × | × | L | 1 | × | 1 | L | X | LTPAS |
| L | × | L | L | 1 | L | 1 | 1 | 1 | 1 | L | 1 | 1 | 1 | SS | 1 | 1 | SS | 1 | × | 1 | SS | × | × | L | X | × | 1 | 1 | 1 | × | 1 | LTPHC |
| L | × | L | L | × | × | × | L | × | 1 | L | L | L | L | SS | 1 | × | SS | 1 | 1 | × | SS | × | L | × | × | L | L | × | 1 | L | × | LTPLFH |
| L | × | L | 1 | × | × | × | L | × | 1 | L | 1 | L | L | SS | 1 | × | SS | 1 | 1 | × | SS | × | L | × | × | L | 1 | × | 1 | L | X | LTPUL |
| L | × | L | L | L | × | L | × | × | L | L | L | 1 | × | SS | L | × | 1 | L | × | L | L | × | L | × | × | × | 1 | × | 1 | L | L | LTPPU |
| L | × | L | L | L | × | L | × | × | L | L | L | 1 | × | SS | L | × | 1 | L | × | L | L | × | L | × | × | × | 1 | × | 1 | L | L | LTPPUAS |
| L | × | L | 1 | × | × | × | L | × | 1 | L | 1 | L | L | SS | 1 | × | SS | 1 | 1 | × | SS | × | L | × | × | L | 1 | × | 1 | L | X | LTPSS |
| L | × | L | 1 | × | × | L | L | × | 1 | L | 1 | L | L | SS | 1 | × | SS | 1 | 1 | × | SS | × | L | × | × | L | 1 | × | 1 | L | X | LTBRDP |
| × | × | 1 | L | × | × | × | 1 | × | 1 | 1 | × | L | × | SS | 1 | × | 1 | 1 | 1 | × | × | L | L | L | L | × | L | × | 1 | × | 1 | LTBRDLFH |
| L | × | L | L | 1 | L | 1 | 1 | 1 | 1 | L | 1 | 1 | 1 | L | 1 | 1 | SS | 1 | × | 1 | SS | × | × | L | × | × | 1 | 1 | 1 | × | 1 | LTPBRD |
| L | X | L | 1 | × | × | L | L | × | 1 | L | × | L | L | SS | 1 | × | SS | 1 | 1 | × | SS | × | L | × | × | L | 1 | × | 1 | L | X | LTP-FG |
| L | × | L | 1 | × | × | L | L | × | 1 | L | × | L | L | SS | 1 | × | SS | 1 | 1 | × | SS | × | L | × | X | L | 1 | × | 1 | L | X | LTBRDP-FG |
| L | × | L | 1 | × | × | × | L | × | 1 | L | 1 | 1 | L | SS | 1 | × | SS | 1 | 1 | × | SS | × | L | × | X | L | 1 | × | 1 | L | X | LTPSS-FG |
| L | × | С | 1 | С | × | × | 1 | × | 1 | С | С | С | L | 1 | × | × | С | 1 | 1 | С | 1 | × | С | × | × | × | 1 | С | 1 | С | 1 | AFC UL-FG |
| X | X | × | 1 | 1 | 1 | 1 | × | × | X | × | 1 | 1 | 1 | × | × | 1 | × | × | × | × | × | 1 | 1 | × | × | 1 | 1 | × | × | 1 | X | FL |
| ✓ | / | L | L | × | × | × | 1 | 1 | L | L | L | × | L | L | 1 | × | L | 1 | L | × | × | × | L | × | × | L | L | × | 1 | L | 1 | FLP |
| X | X | ✓ | L | × | × | × | 1 | × | 1 | 1 | × | × | × | L | 1 | × | 1 | ✓ | 1 | × | × | L | L | L | L | × | L | × | ✓ | × | 1 | LFHP |
| × | × | × | 1 | 1 | 1 | 1 | × | × | × | × | 1 | 1 | 1 | × | × | 1 | × | × | × | × | × | 1 | 1 | × | × | 1 | 1 | × | × | 1 | X | FB |
| X | × | × | 1 | 1 | 1 | 1 | × | × | × | × | 1 | 1 | 1 | × | × | 1 | × | × | × | × | × | 1 | 1 | × | × | 1 | 1 | × | × | 1 | X | FUSSB |
| X | × | × | L | × | × | × | × | × | × | × | L | × | × | × | × | × | × | × | × | × | × | × | L | × | × | L | L | × | × | L | X | FSB |
| X | X | 1 | L | × | × | × | 1 | × | 1 | 1 | × | × | × | × | 1 | × | 1 | 1 | 1 | × | × | L | L | L | L | × | L | × | 1 | × | 1 | LFHUBRD |
| ✓ | / | 1 | 1 | 1 | 1 | 1 | × | × | 1 | 1 | 1 | 1 | 1 | SS | 1 | 1 | SS | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | FSS |
| ✓ | ✓ | 1 | 1 | 1 | 1 | 1 | × | × | 1 | 1 | 1 | 1 | 1 | SS | 1 | 1 | SS | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | FSSBRD |
| X | X | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | L | 1 | 1 | 1 | 1 | 1 | × | × | 1 | 1 | 1 | L | 1 | 1 | L | 1 | 1 | X | FPRSS |
| × | × | × | 1 | L | × | 1 | × | × | × | × | 1 | 1 | × | × | × | × | × | × | × | × | × | 1 | 1 | × | L | 1 | × | L | 1 | 1 | × | FPRTC |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | L | 1 | 1 | 1 | 1 | L | × | × | 1 | 1 | 1 | × | 1 | 1 | L | 1 | 1 | X | FPISS |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | L | 1 | 1 | 1 | 1 | L | × | × | 1 | 1 | 1 | × | 1 | 1 | L | 1 | 1 | × | FPIHSS |
| X | X | L | 1 | L | × | 1 | X | X | L | X | 1 | 1 | × | L | 1 | 1 | 1 | 1 | L | X | X | 1 | 1 | 1 | X | 1 | 1 | L | 1 | 1 | × | FPHIRLSS |

The chart above is based on exposure to single chemicals at room temperature and should be used as a selection guide. For additional chemicals, higher concentrations, elevated temperatures or combinations of chemicals, please call +44 (0)1675 466900 for technical advice.



Thread Data and Cable Carrying Capacity

Metric

Standard thread conforming to EN60423

| Thread size | External thread outside diameter (mm) | Internal thread inside diameter (mm) | Pitch mm |
|-------------|---------------------------------------|--------------------------------------|-------------|
| M12 | 12.0 | 10.4 | 1.5 |
| M16 | 16.0 | 14.4 | 1.5 |
| M20 | 20.0 | 18.4 | 1.5 |
| M25 | 25.0 | 23.4 | 1.5 |
| M32 | 32.0 | 30.4 | 1.5 |
| M40 | 40.0 | 38.4 | 1.5 |
| M50 | 50.0 | 48.4 | 1.5 |
| M63 | 63.0 | 61.4 | 1.5 |
| M75 | 75.0 | 73.4 | 1.5 |
| M85 | 85.0 | | |

PG

German standard thread conforming to DIN40430

| Thread size | External thread outside diameter (mm) | Internal thread inside diameter (mm) | Pitch mm |
|-------------|---------------------------------------|--------------------------------------|-------------|
| PG7 | 12.5 | 11.3 | 1.27 |
| PG9 | 15.2 | 13.9 | 1.41 |
| PG11 | 18.6 | 17.3 | 1.41 |
| PG13.5 | 20.4 | 19.1 | 1.41 |
| PG16 | 22.5 | 21.2 | 1.41 |
| PG21 | 28.3 | 26.8 | 1.59 |
| PG29 | 37.0 | 35.5 | 1.59 |
| PG36 | 47.0 | 45.5 | 1.59 |
| PG42 | 54.0 | 52.5 | 1.59 |
| PG48 | 59.3 | 57.8 | 1.59 |

NPT

American taper pipe thread conforming to ANS/ASME B1.20.1 - 1983

| Thread size (inches) | External thread max outside diameter (mm) | Pitch mm |
|----------------------|---|-------------|
| 3/8" | 17.4 | 1.14 |
| 1/2" | 21.5 | 1.81 |
| 3/4" | 27.0 | 1.81 |
| 1" | 33.6 | 2.21 |
| 11/4" | 42.3 | 2.21 |
| 11/2" | 48.5 | 2.21 |
| 2" | 60.6 | 2.21 |

PF / gas

Japanese conduit thread conforming to JIS B 0202

| Thread size (inches) | External thread outside diameter (mm) | Internal thread inside diameter (mm) | Pitch mm |
|----------------------|---------------------------------------|--------------------------------------|-------------|
| 1/2" | 21.0 | 18.6 | 1.81 |
| 3/4" | 26.4 | 24.1 | 1.81 |
| 1" | 33.3 | 30.3 | 2.31 |
| 11/4" | 41.9 | 39.0 | 2.31 |
| 11/2" | 47.8 | 44.8 | 2.31 |
| 2" | 59.6 | 56.7 | 2.31 |

UNEF / UNS / UN

American unified thread conforming to BS1580 used on circular connectors

| UNEF Imperial sizes | Thread size (inches) | External thread outside diameter (mm) | Internal thread inside diameter (mm) | Pitch mm |
|------------------------|-------------------------|---------------------------------------|--------------------------------------|-------------|
| 5/8" - 24 UNEF | 5/8" | 15.9 | 14.7 | 1.06 |
| 3/4" - 20 UNEF | 3/4" | 19.1 | 17.7 | 1.27 |
| 7/8" - 20 UNEF | 7/8" | 22.2 | 20.9 | 1.27 |
| 1" - 20 UNEF | 1" | 25.4 | 24.0 | 1.27 |
| 13/16" - 18 UNEF | 13/16" | 30.2 | 28.6 | 1.41 |
| 11/4" - 18 UNEF | 11/4" | 31.8 | 30.2 | 1.41 |
| 13/8" - 18 UNEF | 13/8" | 34.9 | 33.4 | 1.41 |
| 17/16" - 18 UNEF | 17/16" | 36.5 | 35.0 | 1.41 |
| 13/4" - 18 UNS | 13/4" | 44.5 | 42.9 | 1.41 |
| 2" - 18 UNS | 2" | 50.8 | 49.3 | 1.41 |
| 21/4" - 18 UN | 21/4" | 57.2 | 55.4 | 1.41 |

Cable carrying capacity

UK wiring regulations BS7671, recommend that the total cross sectional area of the sum of the individual cables should not exceed 40% of the cross sectional area of the conduit. The nominal cross sectional area of single-core, stranded, PVC insulated cables is provided as a guide only. Other cables may have different dimensions.

| Nominal conductor size (mm²) | Nominal overall cross sectional area (mm²) of cable |
|------------------------------|---|
| 1.0 | 6.6 |
| 1.5 | 7.6 |
| 2.5 | 9.6 |
| 4.0 | 14.5 |
| 6.0 | 18.8 |
| 10.0 | 29.3 |
| 16.0 | 40.2 |
| 25.0 | 63.8 |
| 35.0 | 83.5 |
| 50.0 | 113.0 |
| 70.0 | 149.0 |
| 95.0 | 204.0 |

Example: is LTP20 suitable for five 4.0mm² cables?

- The total cross sectional area of the conductors is 5 x 14.5mm² = 73mm²
- The cross sectional area of LTP20 is 3.142 x [inside diameter]¹ = 201mm¹
- % of conduit cross sectional area 73 = 36%

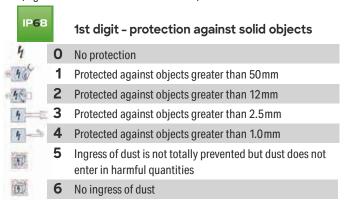
This is less than 40%; therefore this conduit is suitable for this combination of cables.



IP Rating and Technical Guidance

IP ratings guide

(Ingress Protection to BS EN IEC 60529)





Buyer Beware

IP tests are type tests of short duration and do not guarantee long term performance. EN 60529 states that equipment conforming to IP67 or IP68 cannot be assumed to meet IP66 and that the manufacturer shall declare the pressure and duration of the test, for example, FPAX 2 bar for 2 hours.



2nd digit - protection against water

4

No protection

100

Protected against falling drops

747

Protected against drops falling at 15°

- 190

3 Low pressure spray – similar to shower head - up to 60° from vertical



4 Low pressure spray – similar to shower head – from any angle for 5 minutes



Medium pressure jet – similar to garden hose – from any angle for 3 minutes



 High pressure jet – similar to fire hose – from any angle for 3 minutes



7 Submersion at 1 metre for 30 minutes



8 Higher water pressure eg: 2 bar for 2 hours. Conduits are tested in-house at up to 10 bar. (equivalent to 100m underwater)



9 Steam clean, high pressure high temp jet wash

Technical guidance

Application advice

Flexicon can offer impartial advice on which of our wide range of conduit systems are most suited to your application. Factors which may be important include:-

Standards, performance and approvals

Flexicon conduits and fittings are manufactured by Flexicon to comply with the IEC and European conduit standard BS EN IEC 61386 - see classification table below.

Certain tests are carried out internally by Flexicon, other testing is carried out externally by accredited test laboratories. Specific test reports are available upon request.

Vibration and shock testing to EN61373 Cat 2.

Certain conduit systems have been tested and approved to the relevant parts of the Australian Standard AS/NZS 2053:3 2001. Where product performance data over and above the requirements of BS EN IEC 61386 is provided e.g: Low Fire Hazard testing and EMC screening, other appropriate standards have been used.

Cable glands are manufactured to EN 50262.

- Compression strength
- Corrosion resistance
- Tensile strength
- Abrasion resistance
- Impact strength
- UV resistance
- Temperature range
- Anti vibration
- Flexibility
- Fire performance
- Fatique life
- EMC screening
- Electrical insulation or continuity

· Chemical resistance

- Dimensions
- IP rating
- Weight

Classification of conduit systems to BS EN IEC 61386

| Level | 1st digit Compression Strength N/50mm | 2nd digit Impact Strength Joules at min temp | 3rd digit Minimum Temp deg C | 4th digit Maximum Temp deg C | 5th digit Conduit Type | 6th digit Electrical Properties | 7th digit IP Rating Solids | 8th digit IP Rating Water | 9th digit Corrosion Resistance (water) | 10th digit Tensile Strength N | 11th digit Flame Propagation | 12th digit Suspended Load N/48hr |
|-------|--|---|------------------------------------|------------------------------------|------------------------------|---------------------------------------|----------------------------------|---------------------------------|---|-------------------------------------|------------------------------------|--|
| 0 | | | | | | None declared | | 0 | None declared | None declared | | |
| 1 | V. Light (125) | V. Light (0.5) | 5 | 60 | Rigid | Continuous | | 1 | Low in & out | V. Light (100) | Non Flame Propagating | V. Light (20) |
| 2 | Light (320) | Light (1) | -5 | 90 | Pliable | Insulating | | 2 | Medium in & out | Light (250) | Flame Propagating | Light (30) |
| 3 | Medium (750) | Medium (2) | -15 | 105 | Pliable self recoving | Continuous + Insulating | 3 | 3 | Medium in & high out | Medium (500) | | Medium (150) |
| 4 | Heavy (1250) | Heavy (6) | -25 | 120 | Flexible | | 4 | 4 | High in & out | Heavy (1000) | | Heavy (450) |
| 5 | V. Heavy (4000) | V. Heavy (20) | -45 | 150 | | | 5 | 5 | | V. Heavy (2500) | | V. Heavy (850) |
| 6 | | | | 250 | | | 6 | 6 | | | | |
| 7 | | | | 400 | | | | 7 | | | | |

atkore.com/flexicon



Installation Instructions

Cutting Conduit



Scan to visit our Channel to see our latest videos



Non-metallic conduits to 34mm can be easily cut with Flexicon Conduit Cutters, part no. CC01. Use CC02 for sizes up to 67mm. Drop the blade into a corrugation and squeeze and twist until conduit is cut 50% through. Cut the remaining 50% without twisting to achieve a square cut.

Metallic conduits should be cut with a fine tooth (32 TPI) hacksaw or bandsaw. Ensure you make a straight vertical cut. Our clamping vice, part no. BSB makes the use of a hacksaw much easier.



Cutting of overbraided conduit is made much easier by tightly wrapping self adhesive tape around the conduit and sawing through the middle of the tape. The tape should be removed after cutting if EMC screening is required. Ensure you make a straight vertical cut.

Note: Conduit length is measured under light tension. When cutting an exact number of lengths from a reel (e.g. 5 x 5m from 25m) please take into account the length tolerance of the reel and each cut length.

Non-Metallic Fittings



Flexilok®, FPA and FPAX are all push fit fittings which are quick to assemble once you have cut the conduit to length.



For $Ultra^{\mbox{\tiny TM}},$ $Flexilok^{\mbox{\tiny 0}}$ and FPA fittings simply push the conduit into the end of the fitting with a slight twist until it will go no further. Pull back slightly to ensure the locking teeth mechanism has engaged with the corrugations.



The FPAX fitting features a conduit seal to provide an IP rating up to IP69. This simply fits onto the end of the conduit before the fitting is connected to the conduit. To aid assembly moisten this seal. For a one piece fitting with an IP69 rating use Ultra™ (An FPA fitting cannot be uprated to IP69 with the addition of a seal). Pull back slightly to ensure the locking teeth mechanism has engaged with the corrugations.

To remove the Ultra™, FPA or FPAX fittings simply insert a small screwdriver into the screwdriver slot and move the screwdriver handle towards the "off" position. Remove the screwdriver then manually twist the cap further towards the off position - the fitting can then be released from the conduit. Once removed, the fitting can be reused by simply twisting the cap so that the screwdriver slot lines up with the ON position.

Scan to view our videos

Metallic Fittings



Our fitting's components are supplied part assembled to illustrate how they go together. Our C type fittings consist of a compression nut, an elastomeric seal, an insert and a body.



Firstly place the back nut on the conduit followed by the seal (note the orientation). Next, screw the insert into the end of the conduit until this gives a secure fit.



Bring the body to mate with the back nut. Metal fittings should be tightened with grips or spanner to ensure security



EMC & Installation Instructions

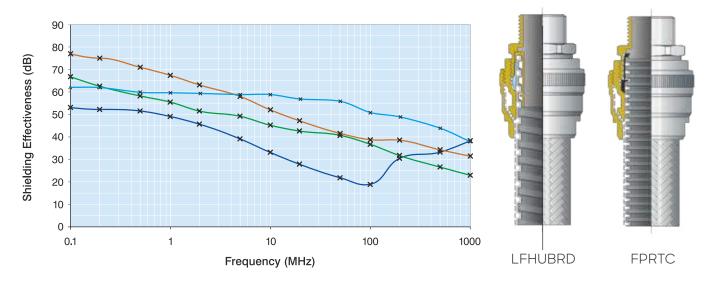
EMC Screening Using Pliable Conduit

To obtain EMC screening on pliable FLP conduit, the outer plastic sheath must be trimmed back prior to assembly of the fitting to ensure good electrical contact with the tapered bore of the fitting body as shown

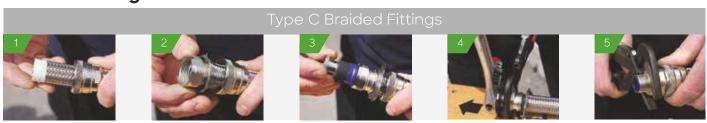
EMC Screening Performance

| Flexicon has classified EMC screening of our products as follows; | | | | | | | |
|---|------------------------|----------------------|--|--|--|--|--|
| STANDARD EMC SCREEN | ENHANCED EMC SCREEN ** | SUPER EMC SCREEN *** | | | | | |
| Standard 50dB @ IMHz | Enhanced 60dB @ IMHz | Super 70dB @ IMHz | | | | | |

| Braid Material | Part number |
|-----------------|--|
| Galv Steel | LTBRDP, LTBRDP-FG, LTBRDLFH |
| Galv Steel | FB |
| Stainless Steel | LFHUBRD, FUSSB, FPRSS, FPISS, FPIHSS, FPIHRLSS, FSSBRD |
| Tinned Copper | FPRTC, FTCB |



Braided Fittings - Installation



Our type-C braided fittings consist of an outer compression nut, an inner compression nut, an elastomeric seal, an insert and a body. Firstly place the outer compression nut on the conduit as per 1. Remove the tape securing the braid and pull back to allow the inner compression nut to be fitted as per 2. Next, fit the elastomeric seal (note the orientation) and screw the insert into the end of the conduit until this gives a secure fit as per 3.

Bring the body to mate with the inner compression nut and secure. Next, bring the back shell to mate with the inner compression nut to secure the braid as per 4. Metal fittings should be tightened with grips or spanner to ensure securing and IP rating as per 5.



Conduit Mounting Options

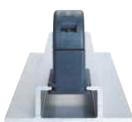
Conduit Clips and Mounting Channel

Clip Mounting



Clips can be secured using the fixing hole in the base of the clip.





Clips can be located by sliding into the end of the channel. To install, slide the FCL clip in from the end of the channel.

The FCL clips have been designed to easily fit within the channel

A choice of fixing options are available to securely fasten the FCL clip within or to the channel.

Securing Conduit - FCL Clips and F-Clamps

Fixing Conduit



Ensure the hinged lid is open and insert the conduit from above. The clip size is shown on the

clip for easy reference. The clip provides a secure fit whether the hinge is open or closed. The

FCL clip includes an internal rib to help locate and retain corrugated conduits. The FCL-P clips do not have this rib and can therefore be used with plain or smooth outer conduits.

Once the conduit is located, close the hinge and listen for a click. The clip does not rely on the hinge to retain the conduit in place however the lid increases conduit retention.

Simple Remova



To remove the conduit insert a small screwdriver where it states OPEN. Push down and lever to release. The hinge should then be free to open.

Fixina Conduit



Our F-Clamp solution is ideal for added security and fixing of conduits which could be subject to vibration, stresses or continuous and repeated movement. There are various fixing options depending on the installation.

- Fig.1 represents a Weld Plate with an F-Clamp with a Cover Plate.
- Fig.2 represents an elongated Weld Plate with an F-Clamp and a Cover Plate.
- Fig.3 shows an F-Clamp mounted directly onto Channel Profile B using Channel Nuts.
- Fig.4 shows and F-Clamp mounted directly onto Channel Profile B using Channel Nuts with a Cover Plate.





Accessories



The Cover plate sits on top of the F-Clamp and can be used to provide additional strength when using the F-Clamps.

For additional strength the F-Clamps can be mounted onto Weld plates.
Flexicon can offer two versions. For further details consult us.

F-Clamp Stacking



The F-Clamps products can be mounted side by side and / or can be stacked vertically. This offers a flexible and adaptable method of support for different conduit sizes.

For stacking arrangements and stacking bolts contact us for further details.



FCLAMP - Dimensions Table

| Thread Length Requirements - Dimension Table | | | | | | | | | | | |
|--|-----|-----|-----|-----|---|-----|---|---|-----|---|---|
| FCLAMP | A | В | С | D | | | | | | | |
| FCLAMP-3-16 | 29 | 36 | 39 | 42 | | | • | | - 1 | ı | 1 |
| FCLAMP-3-21 | 29 | 36 | 39 | 42 | | | | | | | |
| FCLAMP-4-28 | 35 | 42 | 45 | 48 | • | | | | | | |
| FCLAMP-5-34 | 49 | 56 | 59 | 62 | | | | | | | |
| FCLAMP-6-42 | 58 | 65 | 68 | 71 | | | | | | | |
| FCLAMP-7-54 | 85 | 92 | 97 | 102 | | | | | | | |
| FCLAMP-7-67 | 85 | 92 | 97 | 102 | • | 1 1 | | ! | - 1 | 1 | |
| FCLAMP-8-80 | 110 | 117 | 124 | 129 | | | | | | | ' |

For Stacking Kit please contact Flexicon.

Unistrut Channel Nuts

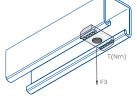
For a full and comprehensive range of channels and fixing options visit www.aktore.com/unistrut

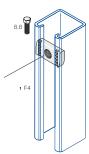














| | Part No. | l l | F3 |
|---------|----------|------|-------|
| | ZP | (Nm) | kN |
| P1000 | PNP06 | 12 | 4.20 |
| | PNP08 | 28 | 4.70 |
| P 9 | PNP10 | 55 | 6.00 |
| 41 | PNP12 | 70 | 8.00 |
| | PNP16 | 125 | 10.30 |
| 41 | | | |
| P3300 | PNS06 | 12 | 4.20 |
| <u></u> | PNS08 | 28 | 4.70 |
| | PNS10 | 55 | 6.00 |
| 41 | PNS12A | 60 | 6.00 |
| | | | |
| P4000 | PNL06 | 12 | 4.20 |
| ₽ ¶ 21 | PNL08 | 28 | 4.70 |
| | PNL10 | 40 | 6.00 |
| 41 | PNL12A | 60 | 8.00 |

| | Part No. | T | F3 |
|----------|----------|------|-------|
| | SS | (Nm) | kN |
| P1000 | PNP06 | 12 | 4.20 |
| | PNP08 | 28 | 4.70 |
| P 9 41 | PNP10 | 55 | 6.00 |
| | PNP12A | 70 | 8.00 |
| 41 | PNP16 | 125 | 10.30 |
| | | | |
| P3300 | PNP06 | 12 | 4.20 |
| <u> </u> | PNP08 | 28 | 4.70 |
| | PNP10 | 55 | 6.00 |
| 41 | PNP12A | 60 | 6.00 |

Contact our technical team today for further information.



Hazardous Areas

Introduction

Hazardous Areas exist where a flammable mixture of gas and air, or dust and air, can exist in large enough quantities and for long enough periods to create a risk of explosion if an ignition source is present. Wherever possible it is important to minimise the risk of explosive mixtures forming and / or the risk of ignition. In the instances where this is impossible or impractical then means of providing a level of protection are required.

This guide will briefly explain how people and plant can be protected in hazardous areas. The guide is particularly focussed towards applications for the Flexicon EXD conduit gland and is not intended to be a full guide to hazardous areas. Users of this conduit gland should be fully qualified, competent and conversant with hazardous area requirements.

Flammable Mixtures & Ignition Sources

Flammable gases when mixed with air can be explosive. Gases are categorised into 3 groups with Group A being the least explosive and Group C being the most explosive. Equipment is also classified from T1 to T6 according to maximum allowed temperature of the equipment to prevent ignition of the gas/air mixture it is designed to work in. Certain fine dusts dispersed in air can also be explosive. Ignition sources include: sparking due to static discharge, electrical arcs, lightning, hot engine exhaust, hot equipment and heat from chemical reactions.

Hazardous Area Zones

The level of risk in hazardous areas is defined by a zoning system.



Zone 0

A place in which an explosive atmosphere consisting of a mixture with air of dangerous substances in the form of gas, vapour or mist is present continuously or for long periods or frequently.



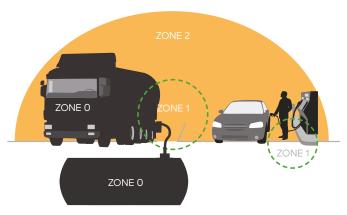
Zone 1

A place in which an explosive atmosphere consisting of a mixture with air of dangerous substances in the form of gas, vapour or mist is likely to occur in normal operation occasionally.



Zone 2

A place in which an explosive atmosphere consisting of a mixture with air of dangerous substances in the form of gas, vapour or mist is not likely to occur in normal operation but, if it does occur, will persist for a short period only.



Combustible Dust Hazards

IEC 60079-31 - Electrical apparatus for use in the presence of combustible dust.



Zone 20

A place in which an explosive atmosphere in the form of a cloud of combustible dust in air is present continuously, or for long periods or frequently.



Zone 21

A place in which an explosive atmosphere in the form of a cloud of combustible dust in air is likely to occur in normal operation occasionally.



Zone 22

A place in which an explosive atmosphere in the form of a cloud of combustible dust in air is not likely to occur in normal operation but, if it does occur, will persist for a short period only.

Flexicon's EXD barrier glands range can be used in Zone 1 and Zone 2 areas where Group A, B or C gases are present. As the gland does not add to the temperature of the enclosure, it does not have a temperature classification and so can be used with all temperature classes. Flexicon's EXD barrier glands can be used in Zone 20, Zone 21 and Zone 22 where explosive dust may be present.

Anti-Static Applications

Clause 7.4 of EN60079-0 refers to the avoidance of a build-up of electrostatic charge on Group I or Group II electrical equipment. Electrical equipment shall be so designed that under normal conditions of use, maintenance and cleaning, danger of ignition due to electrostatic charges shall be avoided. This requirement is satisfied by suitable selection of the material so that surface resistance complies with either of the limits given below when measured in accordance with 26.13;

10° Ω measured at (50 ± 5) % relative humidity; or 10° Ω measured at (30 ± 5) % relative humidity.





Installation

Watch the Connectabox™ animation now!

For instructions on how to install, upgrade and to experience all of the benefits of Connectabox™ please watch the Connectabox animation using the QR code for a direct link.









4 way with Splicing Connector



3 Way using Blanking Plug (different size conduits)



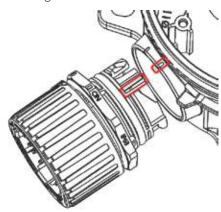
Watch the **Connectabox™** animation now!



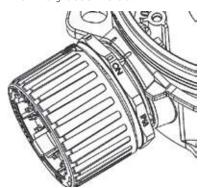
Multi Way using Flexible Conduit & Cable Glands

Accessory fitting guide

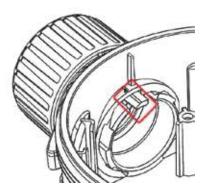
 Align slot in conduit fitting and index mark on box. Lubricate O-ring before installation.



2. Push fitting fully home into box and rotate until it clicks. Fitting is now fully assembled.



3. To remove fitting, push down on tab, rotate fitting to release and withdraw.

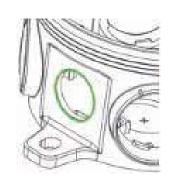


Note-fittings cannot be removed whilst box lid is in place

Accessory fitting guide for user drilled holes

When using genuine Flexicon accessories in a correctly sized hole with a sealing washer and nut correctly torqued up, the IP of the assembled unit will be maintained to the rating stated for the accessory.

Warning Use of third party accessories may affect the IP rating of the assembled unit.



Flexicon Non-Metallic Conduit



The Flexicon Connectabox™ Fittings are compatible with 16 Flexicon Non-Metallic flexible corrugated conduits. IP ratings quoted within this brochure are based on using Flexicon Conduit. Flexicon cannot guaranteed IP ratings if other brands of conduit are used.

For help choosing the most suitable conduit for your application, check out the FlexiApp.



Scan and use our FlexiApp now!



Product Testing & Approvals

Compliance with international standards

Our products have been designed to be compliant with international standards from EN, NFF, DIN, BS, ASTM and UL. We have extensive third party and in house testing to support product performance.

Flexicon has been assessed and certified in accordance with the International Railway Industry Standard (IRIS) for the activities of Design and Development and Manufacturing for the scope of certification: 20 (Single railway components) Design, development and manufacture of Flexible Conduit Cable Protection Systems.

















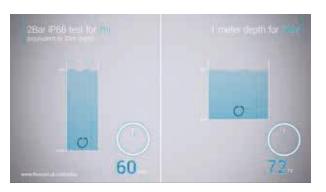






Tested to Extremes





Our products have been tested to the extremes to ensure suitability for technically demanding environments.

For example, to demonstrate the Ingress Protection performance to IP68 we've tested our products for Ingress Protection to 1 metre depth for a period of 72 hours, far beyond the requirements of the BS EN IEC 60529.

We've also tested our products for 2 Bar (equivalent to 20 metre depth) for a period of 1 hour. These tests are conducted at minimum bend radius.

Customer Tests







FPHIRL different sizes



With Brass threaded Flexicon fittings

Fatigue Life - Simulation of minimum 35 years service - >1million cycles

Customers are looking for confidence and reassurance in the materials / products they are using and often specify performance tests that are far in excess of any product standards which may be too generic or perhaps not arduous enough due to specific hazards or risks. A good example is a fatigue life test to represent a service life of 35 years for conduit used for Intercar jumpers. This test was conducted over 1 million cycles with no point of failure so we can clearly demonstrate servicable lifetimes beyond 1 million cycles.



Testing and Approvals

Other Product Testing



Vibration and Shock Testing to EN 61373 Cat 2



 Direct lightning strike of conduit and fixed fittings



- UV testing to UL 1660, 1,000 hour xenon arc
- Extended UV testing, 13,000 hour xenon arc



· Low temperature impact testing



• 1,000 hours salt spray testing for corrosion



• EMC screening performance



 Fire performance testing including flammability, smoke, toxicity, halogen content and fire load - see page 148



Anti-static testing



 Electrical insulation testing to EN 61386 and ASTM D 495 and 3638



• Food contact testing to EU 10 2011



Enviromental - 2 weeks at 95°C - 90%rh

- 2 weeks at 105°C

International and National Conduit Standards

- BS EN IEC 61386-1 Conduit Systems, generally accepted worldwide other than North America
- BS EN IEC 61386-23 Flexible Conduit Systems
- BS EN IEC 61386-22 Pliable Conduit Systems
- AS/NZS 2053, Australia and New Zealand but based on IEC 61386
- UL 1660, Non-metallic UL listed conduit for North America

- UL 360, Metallic UL listed conduit for North America
- UL 514B, UL listed conduit fittings for North America
- UL 1696, Non-metallic UL recognised conduit systems for North America





Datasheets & Technical Info

We pride ourselves on the rigorous testing and approvals we apply to our products.

To give you confidence and help you select the correct products for your application we can provide Technical datasheets for all our products, documenting performance properties and key specification information.

Our datasheets are available on request and provide supplementary information on;

- Key Dimensions Line Drawing (Full 3D CAD models also available)
- Construction and Materials
- Product Features & Applications
- Testing and Approvals Report details and Test Certificate Numbers
- Performance data e.g. HL Classifications, LOI % etc





Fire Performance

The reaction of products in the event of a fire is critical when it comes to effective product specification. There are recognised national and international standards related to products performance and reaction to fire. Flexicon can offer a wide range of conduit systems which have been independently tested.

Low Fire Hazard systems are required to protect the public, personnel and property in the event of a fire and are demanded by specifiers, Industry Bodies, Train and Network Operators, fire services and even insurers.

At Flexicon we define a Low Fire Hazard product by having all of the following properties:

Highly Flame Retardant

To prevent a fire starting or limit its development if one does start.

Low Smoke

Emission in the event of a fire to enable personnel to see their way to escape.

Low Toxicity

In the event of a fire to ensure personnel are not overcome during their escape. $\,$

Halogen Free

Gives an indication of low smoke and low toxicity. It also rules out halogen acid gas emission - a fact that is of interest to insurers as acid smoke can destroy computer equipment and damage the structure of a building. Halogens are Fluorine, Chlorine, Bromine and Iodine.

Methods of Assessing Fire Performance



Flame Retardancy The minimum requirement is self-extinguishing according to the worldwide conduit system standard BS EN IEC 61386 where a vertical sample of conduit is exposed to a 1kW burner and must extinguish within 30 seconds of the removal of the flame. The char must not have travelled more than a certain distance up the sample and there must be no flaming droplets. Fittings are tested by means of a 750°C glow wire test.

To assess how flame retardant a material is, the normal test method is to measure the Limiting Oxygen Index (LOI) according to BS EN ISO 4589-2 which determines the percentage of oxygen that needs to be present to support combustion. The higher the LOI percentage, the greater the flame retardancy of the material. Oxygen present in normal air is approx. 21%. Another method is the glow wire test, BS EN IEC 60695-2, which applies a glow wire to a plaque of material at 750°C, 850°C or 960°C.

UL94 is an Underwriters Laboratories standard that measures the rate of burning up a vertical test plaque, category V0 is the most flame retardant followed by V1 and V2. There is a category HB but this indicates that the material is flammable even along a horizontal test plaque.



Low Smoke emission There are a number of fire tests, mainly from the rail industry, where a specified sample of material is burnt under controlled conditions in a given size smoke

chamber and the smoke obscuration of a defined beam of light is measured. Although the different tests are similar, the results and the requirements are different.



Low Toxicity There are a number of fire tests, mainly from the rail industry, where a specified sample of material is burnt under controlled conditions in a given size smoke chamber and the fumes are analysed for various gases, the concentration of each gas is then multiplied by

its toxic potency to give a toxicity index.

Although the different tests are similar, the results and the requirements are different.

If halogens, sulphur or phosphorus are present in a material, it is unlikely to pass the low toxicity tests.



Halogen Free The Halogens are fluorine, chlorine, bromine and iodine. Chlorine is the most common in PVC, fluorine is in fluoropolymers and bromine appears in flame retardants. All of them give off highly toxic fumes and thick smoke. A material cannot be

considered as Low Fire Hazard if it contains halogen. However a halogen free material is not necessarily Low Fire hazard as it may not be low toxicity, low smoke and highly flame retardant.

Halogen content is assessed by various chemical tests and analytical techniques.





Fire Performance

Our product development programme involves extensive testing to the latest Rail Industry standards to ensure the safety of our products, thus providing confidence for specifiers and consultants when it comes to their reaction to fire.

EN 45545 - European Fire Safety

This new European standard is rapidly replacing national standards in Europe and consists of 7 parts.

Conduit performance is quoted to EN 45545-2. R22 is for interior parts and R23 is for exterior parts.

There are three defined levels of performance related to the reaction of fire, HL1, HL2 and HL3. HL3 is the highest level of performance when it comes to the reaction to fire, and will be specified for higher risk applications.

BS 6853

This UK standard relates to passenger rolling stock and are classified into two main categories depending on the operating environment.

Category I relates to Underground applications, which is then sub divided into 2 parts, depending on operating conditions. Category II relates to Surface stock.

TFL S1085 - Transport for London

This standard is used by London Underground to control the materials used throughout their Underground and Crossrail System.

This standard considers flammability, smoke and toxic fume emissions and includes tests from BS 6853.

Products approved for use have APR numbers.

Flexicon's range of conduit systems have 6 Certificates, covering 11 products as Authorised for use.

Certificate No. 296, conduit types FU, SSU and FUSSB.

Certificate No. 297, conduit types LFHU, LFHUBRD & LFHP.

Certificate No. 298, conduit types FPR and FPRSS.

Certificate No. 658, conduit type LTBRDLFH.

Certificate No. 2020, conduit type LTPLFH.

Certificate No. 2624, EXD barrier glands.

Flexicon products tested to;





NFPA 130 - North American Standard

This standard is used by US Rail authorities.
Tests called up by NFPA 130 are ASTM E 162
(for flammability) and ASTM E 662 (for smoke). Other
North American standards are: ASTM E 1354 Heat
Load, Boeing BSS 7239 Toxicity

NF F 16-101/2

This French rail standard consists of an Ignition rating (I) and a Fume Rating (F).

The lower the number the higher the level of performance when it comes to the reaction to fire. I2 F2 offers more protection than I3 F2.

DIN 5510

This German standard consists of three elements including Flame Spread, Smoke evolution and Flaming droplets.

Products categorisation looks like this: S4 / SR2 / ST2.

AS/NZS 1530.3 - Australian Standard

This standard is used by Australian Rail.

CEI 11170 - Italian Standard

This standard is used by the Italian Rail. Products categorisation looks like this: LR4.

Russian Fire Safety Certificate - 1374363

Classification of Low Fire Hazard performance (LFH)



Inherently Low Fire Hazard

These products are made entirely from metals so there is no non-metallic material to burn or create smoke or toxic fumes.

Inherently Low Fire Hazard products include; FU, SSU, FB, FUSSB, FTCB, FSS, FSSBRD and metal fittings.



Extra Low Fire Hazard

These products have a Limiting Oxygen Index of greater than 32% as well as being low smoke and low toxicity.

Extra Low Fire Hazard products include; LFHU, LFHUBRD, LTPLFH, LTBRDLFH, LFHP, FPR, FPRSS, FPIHRL, FPIHRLSS, FPRTC, FPA, FPAX and FPAU fittings.



Standard Low Fire Hazard

These products have a Limiting Oxygen Index of greater than 26% as well as being low smoke and low toxicity.

Standard Low Fire Hazard products include; FPAS, FPAH, FPI, FPISS, FPIH, FPIHSS and PA66 fittings.



atkore.com/flexicon



Standards and Approvals



ISO 9001 - 2015

Flexicon is accredited to ISO 9001 2015 by the British Standards Institution (BSI) for the design and manufacture of conduit systems and accessories. Certificate No FM58347.



BS EN IEC 61386

BS EN IEC 61386

BS EN IEC 61386 is the worldwide standard for conduit systems providing standardised tests and classifications of system performance.

Our Technical Director, sits on the committees of both the IEC (worldwide) and CENELEC (European) that prepare conduit standards.

UK CA

UKCA

From 1st January 2023 the use of UKCA marking will become mandatory in Great Britain (GB) for product types that are currently CE marked. Businesses have been able to use the UKCA mark since 1 January 2021 to demonstrate their conformity with product standards in England, Scotland and Wales. As our products are intended for global sales, they will carry both CE and UKCA marking on product labels.



CF

Flexicon are marked with the CE mark to show that they comply with the essential requirements of the relevant European Directives.



RoHS

All Flexicon's products meet the requirements of the European RoHS Directive, Restriction of Hazardous substances. This precludes the use of certain toxic materials and heavy metals.



REACH

All Flexicon's products meet the requirements of the European RoHS Directive, Restriction of Hazardous substances. This precludes the use of certain toxic materials and heavy metals.



IRIS - International Railway Industry Standard

Flexicon has been assessed and certified in accordance with IRIS for the activities of Design and Development and Manufacturing for the scope of certification: 20 (Single Railway Components) Design, development and manufacture of Flexible Conduit Cable Protection Systems.



Transport for London - TFL

Flexicon have a number of products that have been approved for use by London Underground and Crossrail.



Network Rail - PADS Approval

Flexicon have a number of products approved to the new enhanced PADS approval for Flexible Conduits, Glands and Accessories intended for use in signalling and infrastructure applications. This requirement now includes applications prone to flooding or prolonged immersion under water.



Railway Industry Association (RIA)

Flexicon are active members in the Railway Industry Association.



Hazardous Area Approvals

Flexicon's EXD glands have been independently tested and accredited for ATEX and IECEx Ex d, Ex e and Ex t applications. These glands also have CU-TR approvals.





Our LTP EXE range of fittings have been tested and accredited for both ATEX and IEC Ex. Our LTP-CUL fittings are UL Listed for use in USA and Canada, UL file No. E247502 (ordinary locations). Suitable for use in hazardous locations as per NEC: Article 501 (B)(2), Class I Div 2. Article 502 (A)(2) & (B)(2) Class II Div 1&2. Article 503 (A)(3) & (B)(3) Class III Div 1&2.



Hazardous area products

IEC 60079-1, Ex d Flameproof glands

IEC 60079-7, Ex e Increased Safety glands and conduit fittings

IEC 60079-31, Ex t Dust Ignition Protection glands and conduit fittings

IEC Ex factory approval for the manufacture of Ex d, Ex e and Ex t products by Intertek.

- EN 60079-1, Ex d Flameproof glands
- EN 60079-7, Ex e Increased Safety glands and conduit fittings

ATEX factory approval for the manufacture of Ex d and Ex e products by Intertek.







North American Approvals

Our FPASC nylon conduits from 21mm to 67mm have Underwriters Laboratories (UL) listing for use in USA and Canada to the UL standard UL1660 - File No. E246572.

Our FPAX and FPAU fittings have UL listing to UL514B and CSA standard C22.2 No. 18.3-04. File No. E247502.

Most of Flexicon's nylon conduits (FPAS, FPAL, FPAH, FPR, FPI and FPIH) and fittings (FPA, FPAX, and FLK) have UL recognition to UL 1696 for use in USA and Canada - File No. E229161. Our LTP-CUL fittings are UL Listed for use in USA and Canada, UL file No. E247502 (ordinary locations). Suitable for use in hazardous locations as per NEC: Article 501 (B)(2), Class I Div 2. Article 502 (A)(2) & (B)(2) Class II Div 1&2. Article 503 (A)(3) & (B)(3) Class III Div 1&2. FPC conduits and MPC fittings are UL recognised to UL1696 for use in USA and Canada - File

We have tested a selection of our products for UV performance against UL 1660 test criteria (see UL Test Report No. 13CA50836)



Hygienic Applications

Flexicon's Hygienic products are manufactured from FDA approved ingredients and have been independently tested to European Food Regulation 10/2011.

Flexicon's Hygienic multipart compression fittings have been designed using principles given in EN1672-2 and EN ISO 14159.



Lloyds Register of Shipping Type Approval

Specific conduit systems from Flexicon have Lloyds Register of Shipping Type Approval having been assessed for suitability for marine and other arduous applications.



UK MOD - NCAGE No. U5256

Flexicon is a registered supplier to the UK Ministry of Defence NCAGE No. U5256 and holds NATO codification numbers for specific conduits.



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