FLEXICON

FLEXIBLE CONDUIT SOLUTIONS



Product & Solutions Guide

THE POWER IN CABLE PROTECTION



12TH edition

MADE IN THE UK

WWW.FLEXICON.UK.COM



Foreword

This 12th Edition Product & Solutions Guide demonstrates our focus, capability and specialist knowledge regarding Cable Protection for any application.

Our comprehensive range of systems and solutions continue to protect People, Property and Processes all over the world.

With a strong British Heritage, over 99% of our products are manufactured across our manufacturing centre of excellence located in Birmingham, UK. Continuous investment in new facilities, research and development and people have contributed to our market leading position in Cable Protection Systems. We will have doubled our manufacturing and warehouse footprint over the last two years.

We utilise world leading expertise to develop innovative solutions for the most demanding markets for Cable Protection including Rail & Transportation, Petrochemical, Food & Beverage, Machinery / Automation & OEM's and Utilities sectors. This is evident in our market leading products such as Flexicon Ultra™ and our range of 60 different non-metallic and metallic conduit systems. Our commitment to reliability and performance is underpinned by third party Quality Approvals such as BSI, IRIS, UL, ATEX and IEC Ex.

Our customers are central to our business and we strive to exceed expectations in everything that we do. We work closely with local and international customers to develop high performance solutions for technically demanding applications. Our sales engineers, whether in the UK or across the world, are available when required for local support, and we continue to exhibit at leading Industry Trade Fairs and Exhibitions around the world. Our website is available in six different languages and we have an international network of distribution supporting our global reach.

Our ongoing commitment, dedication and focus have seen us become recognised as a specialist in Cable Protection and Flexible Conduit Solutions.

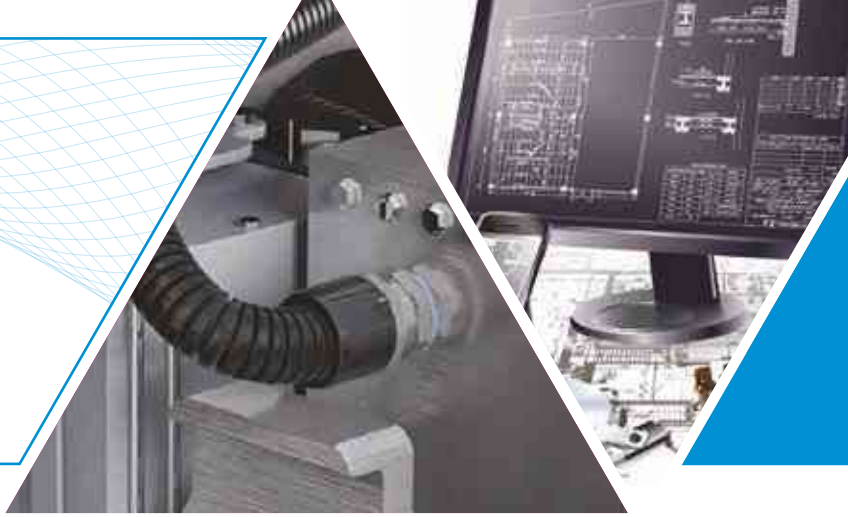
We look forward to supporting our established and new customers and trust you enjoy the new 12th edition Product & Solutions Guide.



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Group Intro

We are focused 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.

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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 the development of our range.

With onsite manufacturing, we can respond quickly and fine tune our service levels to meet our customer requirements.

Our range of non-metallic and metallic products help to protect cables from end to end, in many diverse markets, from Construction, Rail & Transportation, Utilities, Machinery & Automation / OEM's and Hazardous Areas to Food Processing and Pharmaceutical.



Global Presence

With a Global reach, we work closely with customers to become part of the supply chain. We know how important it is to work 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 55 different Countries.

Our Flexicon PTY subsidiary is a dedicated Sales and Distribution operation in Australia and New Zealand, well placed to serve the ANZ Markets.

FLEXICON
FLEXIBLE CONDUIT SOLUTIONS



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 1669, 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...

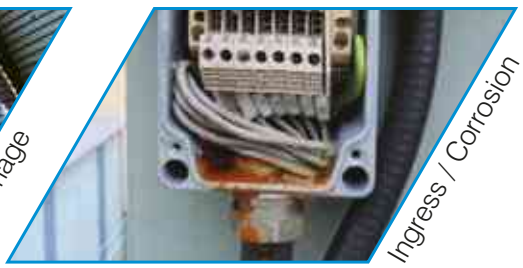

Impact


Impact


Tensile


Impact


UV Damage


Ingress / Corrosion

"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 to consider.



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, virus 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 and 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

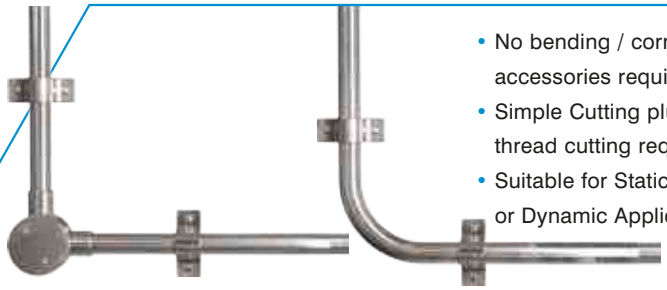
UV
- Resistance to Ultra Violet Radiation

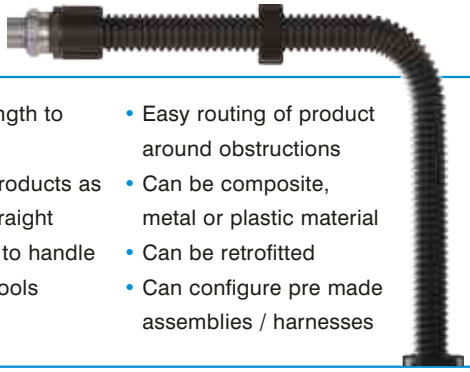


Benefits of using flexible conduit…

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 sealing
- Can be retrofitted with ease
- Suitable for use with multiple cable types
- Quicker to install
- Conduit fittings offering strain relief available
- No need for specialist cables



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 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
- Can be retrofitted
- 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



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



Realise the Benefits of using Flexible Conduit…

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 across the world.

"We specialise in protecting your Cables from hazards for now and for the future"

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With a dedicated design team, we work 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. Our Technical Director is Chairman of both the IEC (worldwide) and CENELEC (European) committees that prepare conduit system standards.

We understand the importance of material properties and how they affect performance and application 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.

Other product testing

- Vibration and Shock Testing to EN 61373 Cat 2
- UV testing to UL 1660, 1,000 hour xenon arc
- Extended UV testing, 13,000 hour xenon arc
- 1,000 hours salt spray testing for corrosion
- Fire performance testing including flammability, smoke, toxicity, halogen content and fire load - see Page 148
- Electrical insulation testing to EN 61386 and ASTM D 495 and 3638
- Direct lightning strike of conduit and fixed fittings
- Low temperature impact testing
- EMC screening performance
- Anti-static testing
- Food contact testing to EU 10 2011

Quality Assurance, Testing & Manufacturing

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



Tested to extremes



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

Certifications and quality approvals we have:

We continuously test our products 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.



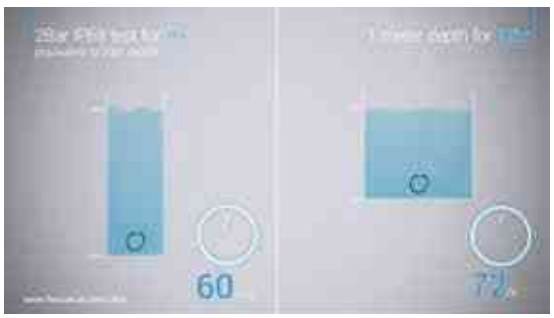
FLEXICON Ultra
THE POWER OF ONE



MADE IN THE UK

Flexicon Ultra™ underwent more than 1,000 individual Ingress Protection tests 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 Ingress Protection Performance to IP68 we tested Flexicon Ultra™ products to a depth of 1m for a period of 72 hours (far beyond the requirement of BS EN IEC 60529) as well as to 2 Bar (equivalent to 20m depth) for a period of 1 hour.



We test our products to simulate the most extreme environmental application conditions giving assurance to our customers of the very best solutions.

We recently demonstrated a fatigue life test representing a service life of 35 years with a minimum 1 million cycles with no point of failure.





NEW

Product Focus – Flexicon Ultra™

The Power of One – Designed for use with Flexicon's Nylon Conduit range (either fine or coarse pitch), this true one piece Flexible Conduit Fitting features Integrated Sealing Technology to offer the ultimate in Strength, Integrity and Assurance for Cable Protection.

Integrated Sealing Technology

The World's Best Conduit Fitting - The Power of One

Flexicon Ultra™ provides a true one piece solution, engineered to provide unrivalled performance with both fine and coarse pitch conduits.

With all round teeth to secure the conduit, Flexicon Ultra™ offers superior dynamic performance providing Integrity, Strength & Assurance in one package.

Integrity • Strength • Assurance









Features and Benefits

Offering Integrity, Strength and Assurance, Flexicon Ultra™ is the best solution for Performance & Safety Critical applications.

Integrity.

- One Piece - Integrated Sealing Technology
- IP68, IP69 performance
- Simple push and twist connection

Strength.

- 360˚ Strength- All round teeth
- 70kg Tensile Strength
- Anti-tamper, Dynamic & Vibration performance

Assurance.

- Lifetime sealing & reliability
- Independently tested to extremes
- UK Manufacturer



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 12th Edition.



FPIHR - Non Metallic Conduit

EN 45545-2 HL3 120

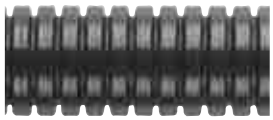
- This new range of corrugated conduits features enhanced fire performance properties combined with excellent dynamic performance for fatigue life and flexibility.

45



44

c UL us



FPASC - UL Listed Non Metallic Conduit

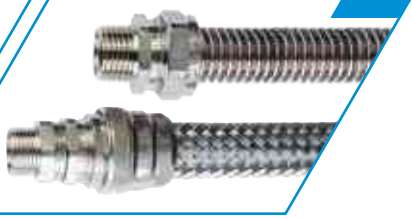
- This new range of Non Metallic Corrugated Flexible Conduits in sizes from 21mm to 67mm have UL Listing to UL 1660, and are suitable for use with FPAX and Flexicon Ultra™ Fittings which are UL Listed to UL 514B.

FSS & FSSBRD

EN 45545-2 HL3 120

- This new range of Stainless Steel conduits offer superior Ingress Protection and Corrosion resistance, combined with an Inherent Fire Performance.

120



84 & 112

HG HYGIENIC RANGE



Hygienic Conduits

- This new range of Hygienic Flexible Conduits offers a smooth, easy to clean surface. Designed for use with our Hygienic range of Stainless Steel fittings this system is ideal for Food & Beverage, Machinery & OEM's Healthcare and Pharmaceutical applications.

Connection Boxes - Round Boxes

- This new range of metallic Connection Boxes provide a reliable and flexible solution with High Ingress Protection levels, for the inter connection of circuits. Available in Brass and Stainless Steel derivatives these boxes have a removable lid for access and inspection.

126

HG HYGIENIC RANGE



76



Clips and Channels

- A new range of fixing solutions for electrical and mechanical services. Our Clips and Channels solutions have been designed to accommodate a wide range of product derivatives including Flexible Conduit and Rigid Conduit.



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 Hospital, Financial Institution, Airport, Hotel, Warehouse or Datacentre 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.

c UL us

CE

REACh

RoHS

BS EN IEC 61386





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.

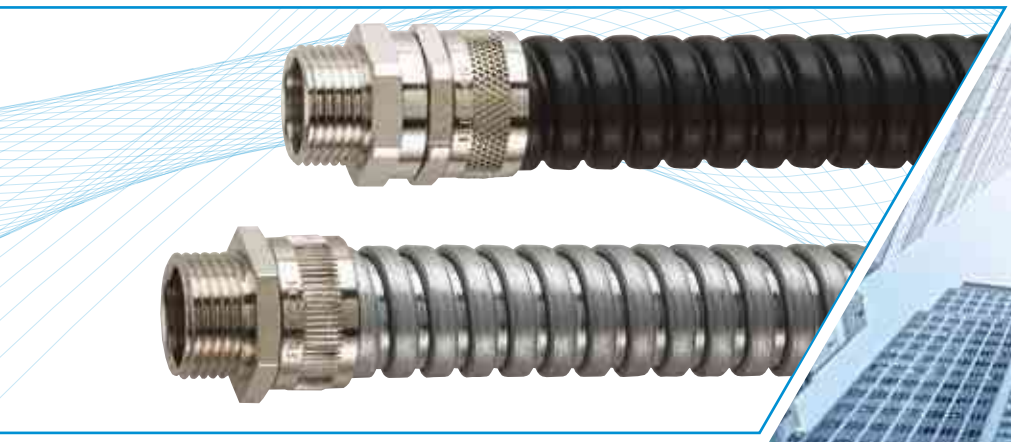
Flexible conduit can be either surface mounted or hidden within the fabric of the building. This can be under floors, above ceilings, down walls or inside concrete pours.

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















Typical Hazards & Product Considerations

- Ingress Protection
- Fire Performance
- Corrosion
- Impact
- 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

Typical Products



- FU - Galvanised Steel



- FSU - PVC Coated Galvanised Steel



- LFHU - LFH Coated Galvanised Steel



- FPAS - PA6 Corrugated



- FPP - Polypropylene



- LTPUL - PVC Coated Liquid Tight UL

Product installation examples:



- FU – Commercial Offices - Underfloor wiring to Distribution Boxes



- FSU – Plant rooms or connection of services - HVAC



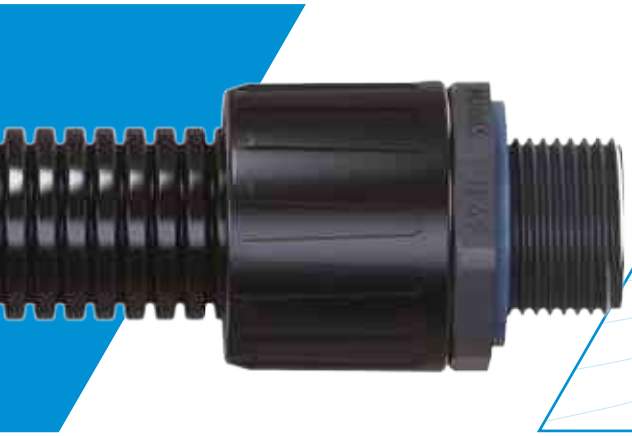
- FU/LFHU – Public or municipal buildings – Emergency Lighting / CCTV where fire safety is paramount



- Nylon Systems – Pre fabricated Buildings –Wiring from Distribution Board



- 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.

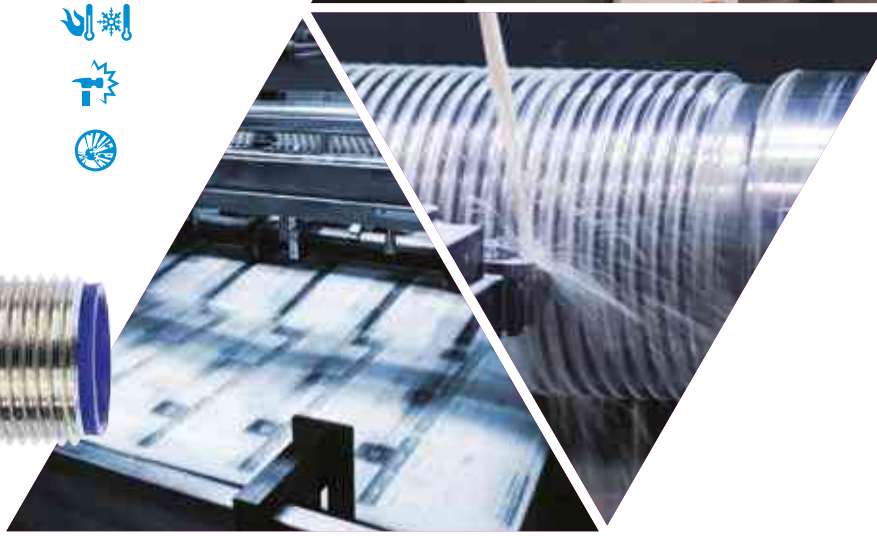
Whether it is performing operations such as processing, assembly, inspection or materials handling, or in some cases a combination of all of these, Manufacturing Automation relies on effective Cable Protection.

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"





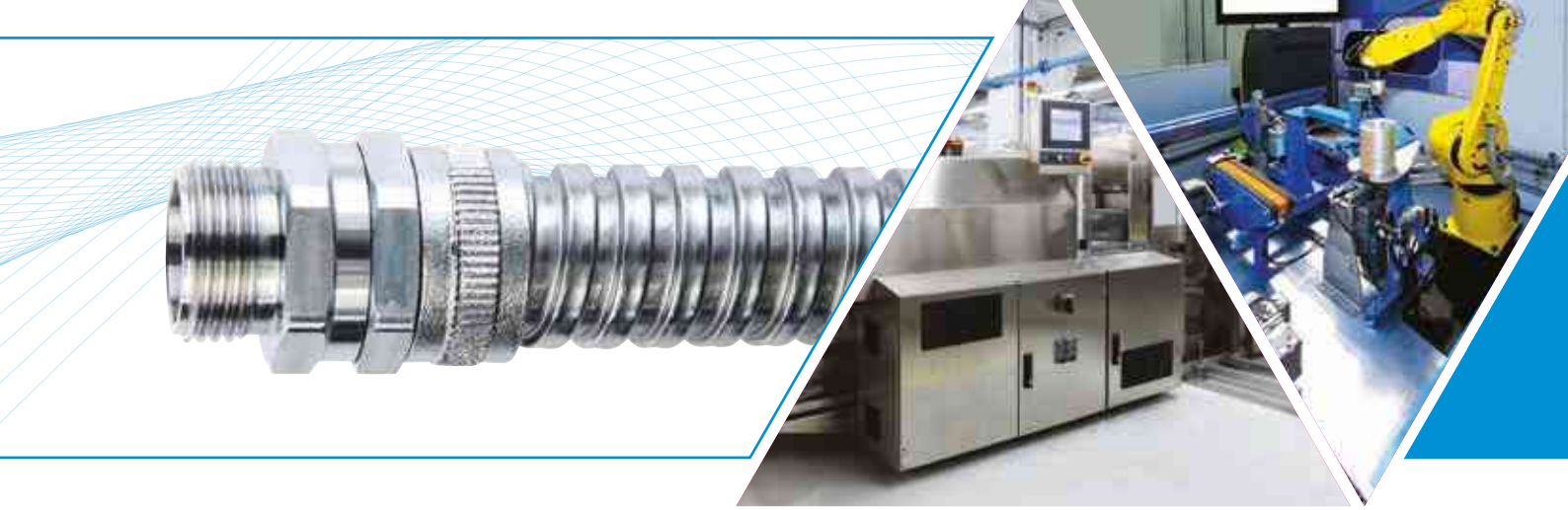


BS EN IEC 61386

Typical hazards & product considerations

- Mechanical Strength
- Flexibility & Fatigue Life
- Ingress Protection
- Abrasion Resistance
- Chemical resistance
- Vibration & Shock Resistance
- Temperature
- Impact
- Hazardous Gases / Dust





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

42 NEW



- FPA / FPAX / FPAU - Range of Non-metallic fittings

102 NEW



- F-Clamps and Fixing Accessories

Typical Products

45



- FPI - PA12 Corrugated

45



- FPAS - PA6 Corrugated

92



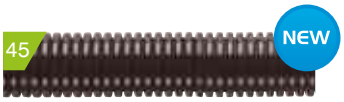
- SSU - Stainless Steel

94



- FSU - PVC Coated Galvanised Steel

45 NEW



- FPASC - PA6 Corrugated UL

98



- LTP - PVC Coated Liquid Tight

98



- LTPPU - Polyurethane Coated Liquid Tight

99



- LTPUL - PVC Coated Liquid Tight UL

Product installation examples:



- FPI – Production Line – Robotic arm



- SSU – Foundry – Lighting & ventilation



- FSU – Electrical 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"







BS EN IEC 61386

Typical hazards & product considerations

- Ingress Protection
- Mechanical Strength
- Fatigue Life
- UV resistance
- Abrasion Resistance
- Chemical resistance
- Corrosion Resistance
- Vibration & Shock Resistance
- Temperature
- Impact
- Hazardous Gases / Dust







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





Typical Products



- FSS - Stainless Steel Corrugated



- SSU - Stainless Steel



- FSU - PVC Coated Galvanised Steel



- FPAS - PA6 Corrugated



- LTP - PVC Coated Liquid Tight



- 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 – Wind / Solar / 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.

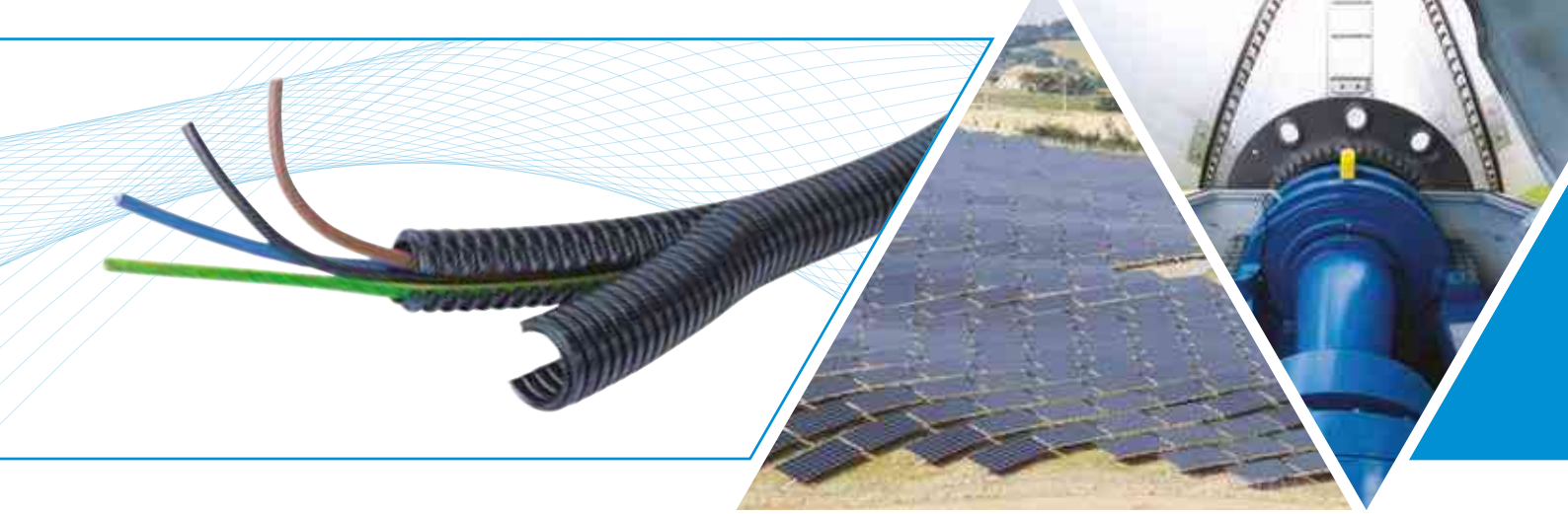
BS EN IEC 61386

Typical hazards & product considerations

- Vibration
- Abrasion
- UV
- Temperature
- Impact
- EMC
- Corrosion
- Ingress Protection
- Lightning Strikes
- Explosive Gases
- Animal attack
- Sand Storms









Example applications

- Biomass
- Hydro Electric
- Wind Turbine:
  - Nacelle
  - Tower & Lighting
  - Electric Pitch System
  - Control System
  - Condition monitoring systems
  - Cooling and Heating
- Solar PV Farms
  - Security and Perimeter Control
  - CCTV
  - DC Combiner boxes
  - Inverters
  - Substation
  - Weather Station



Typical Products



- 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



- FPADS - Dual slit conduit suitable for retrofit



- FPAS - PA6 Corrugated



- SSU - Stainless Steel

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.





Rail - Rolling Stock and Infrastructure

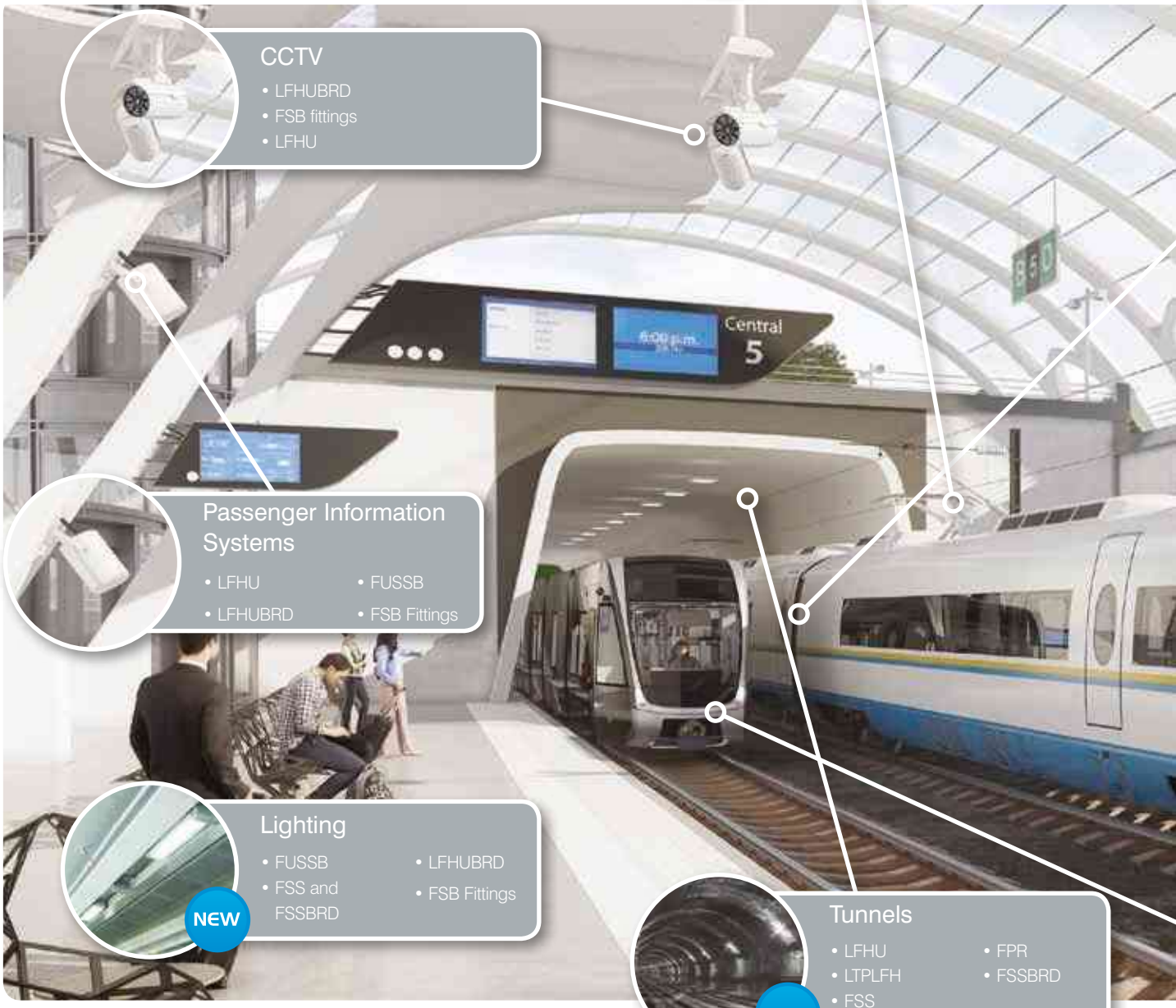
Passenger safety and operational integrity are vital characteristics of a modern rail network.

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.



Exterior Vehicle
- FPIHR
- FTCB
- Flexicon ULTRA™ Fittings

NEW



CCTV
- LFHUBRD
- FSB fittings
- LFHU

Passenger Information Systems
- LFHU
- LFHUBRD
- FUSSB
- FSB Fittings

Lighting
- FUSSB
- FSS and FSSBRD
- LFHUBRD
- FSB Fittings

NEW



Tunnels
- LFHU
- LTPLFH
- FSS
- FPR
- FSSBRD

NEW

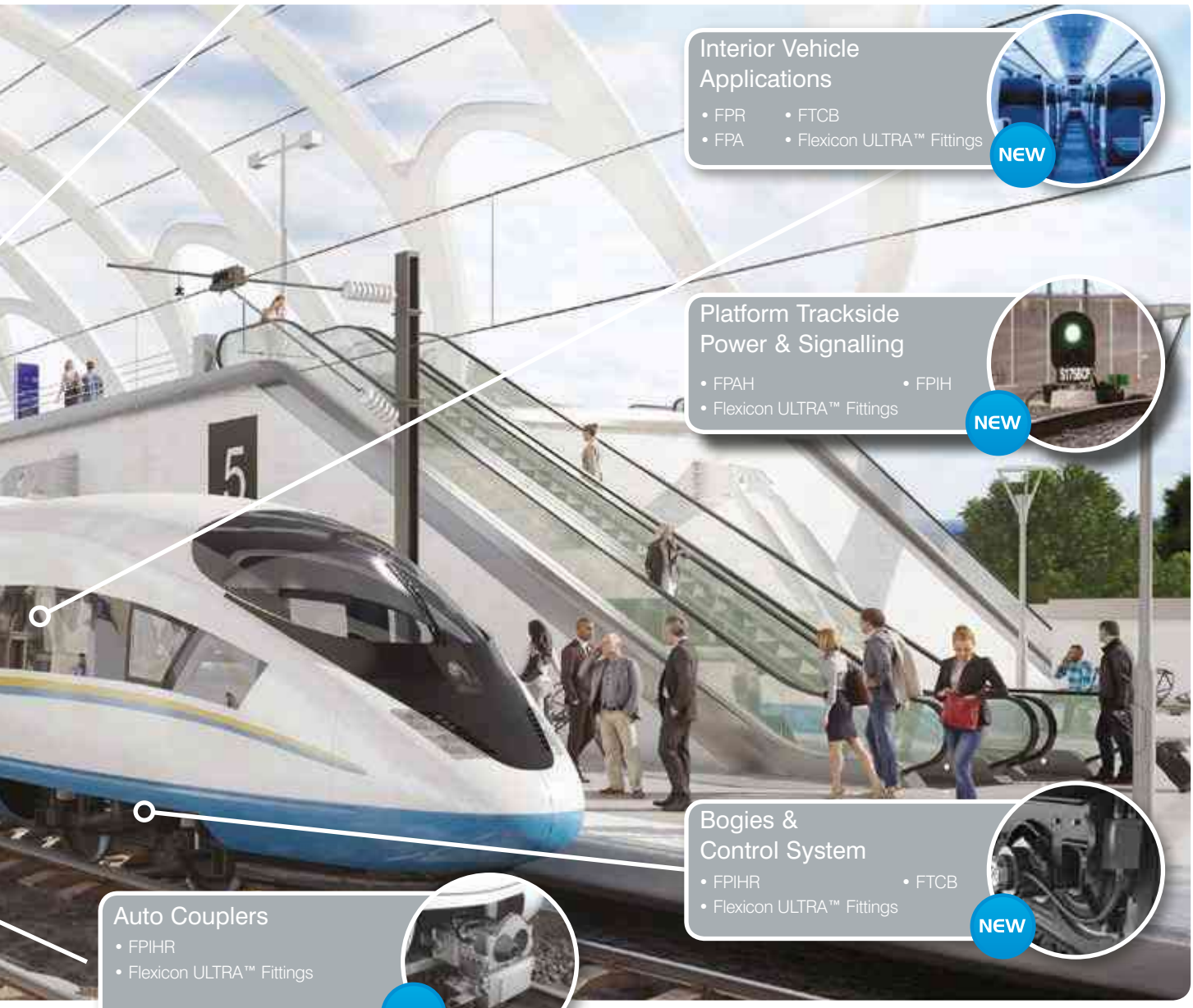


- High performance products offering superior tensile and impact / compression strength
- Designed to meet the strictest standards – EMC testing / vibration
- Wide product range to meet all applications
- Independently tested to the relevant standards
- Vibration proof
- Anti-tamper

Inter Vehicle Jumper Applications

- FPIHR
- FTCB
- Flexicon ULTRA™ Fittings

NEW



Interior Vehicle Applications

- FPR
- FTCB
- FPA
- Flexicon ULTRA™ Fittings

NEW

Platform Trackside Power & Signalling

- FPAH
- FPIH
- Flexicon ULTRA™ Fittings

NEW

Bogies & Control System

- FPIHR
- FTCB
- Flexicon ULTRA™ Fittings

NEW

Auto Couplers

- FPIHR
- Flexicon ULTRA™ Fittings

NEW



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"



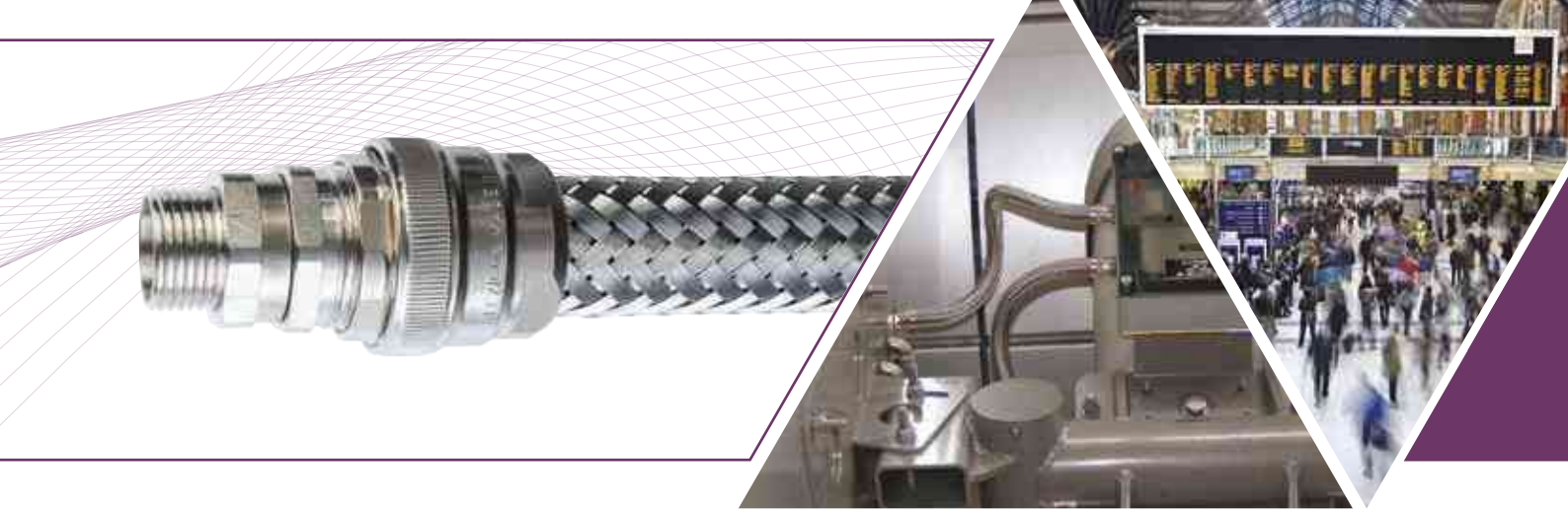




Typical hazards & product considerations

- Fire Performance
- Ingress Protection
- Vibration & Shock Resistance
- Temperature
- Impact
- UV Resistance
- Strength to Weight ratio
- Flexibility
- Fatigue Life
- Abrasion Resistance
- Chemical resistance
- EMC





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

60 NEW



- FPAU - Range of Non-metallic fittings

76 NEW



- F-Clamps and Fixing Accessories

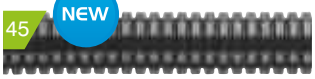
Typical Products

45



- FPR - PA6 Corrugated

45 NEW



- FPIHR - PA12 Corrugated

122



- FPRSS - Stainless Steel Overbraid PA6 Corrugated

96



- LFHU - LFH Coated Galvanised Steel

118



- LFHUBRD - LFH Coated Galvanised Steel with SS Overbraid

98



- LTPLFH - LFH Coated Liquid Tight

99



- LTPPU - Polyurethane Coated Liquid Tight

120 NEW



- FSS - Stainless Steel Corrugated

Product installation examples:



- LFHUBRD – Passenger Information System



- LFHU – Public Address Voice Alarms for staff safety - Rail Depot



- LFHU – CCTV & Security



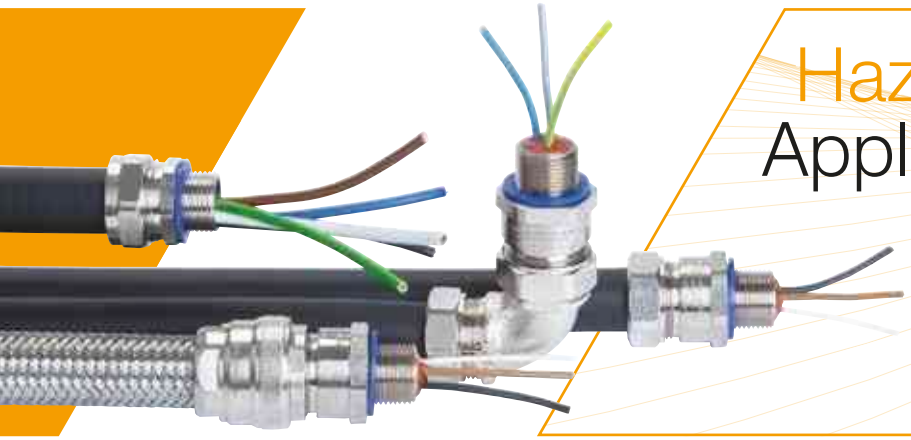
NEW

- FPIHR – Control wiring on top of carriage



NEW

- FPIHR – 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
- Hazardous Area expert sits on EXL/3/ (T/S UK Committee). Can offer guidance on applications and installations.
- Product support offered to;
  - End Users
  - EPC's
  - OEM's
  - Operators
  - Consultants



Presence of Gases & Vapours

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

Presence of Dust

- Mills
- Silos
- Combustion Plants
- Dust extraction
- Polymer Production
- Paint Shops

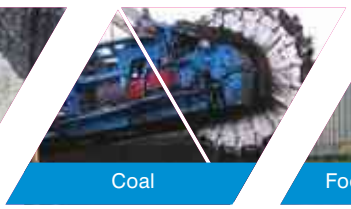
Markets and Applications

- Skids
- Control Boxes
- MCC (Motor Control Centres)
- Motors
- Lighting
- CCTV
- 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 eleven 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 Ex t (Dust Ignition Protection) fittings and accessories offer customers choice when it comes to specifying hazardous area approved equipment.

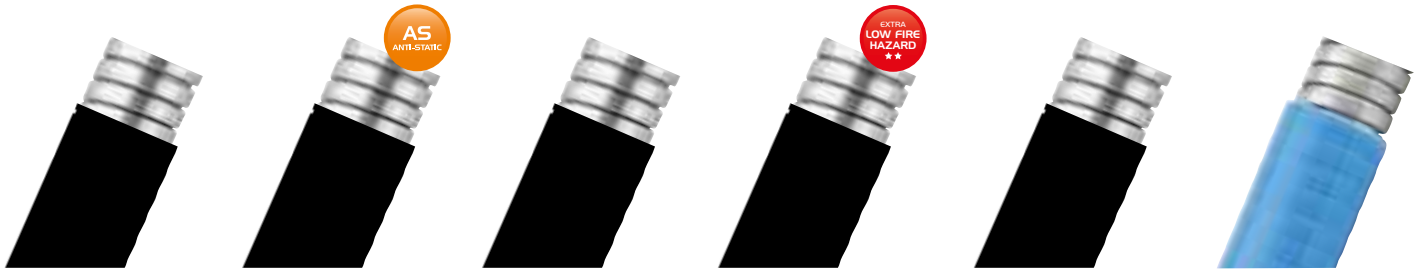
Our products are manufactured to the latest ATEX, IEC Ex, UL and CU-TR directives and standards.





Typical hazards & considerations

- Ingress protection
- Chemical resistance
- Hazardous Gases / Dust
- Low Fire Hazard
- Temperature
- Mechanical strength
- Corrosion resistance
- Static charge
- Abrasion Resistance
- UV Resistance
- EMC



LTP LTPAS LTPHC LTPLFH LTPUL LTPPU





UL Listed (file no. E247502)

NEW

104

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

108

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

106

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.

LTP-EXD Fittings



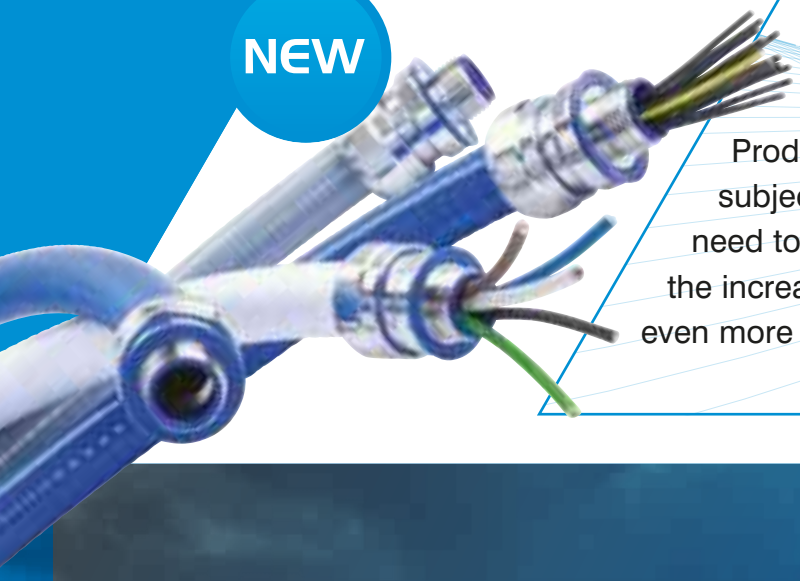


LTPPUAS LTPSS LTBRDP LTBRDLFH LTPBRD

NEW

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.



HG
HYGIENIC RANGE

EU Regulation 10/2011

EN ISO 14159

EN 1672-2

BS EN IEC 61386

EN IEC 61373 Cat 2

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.

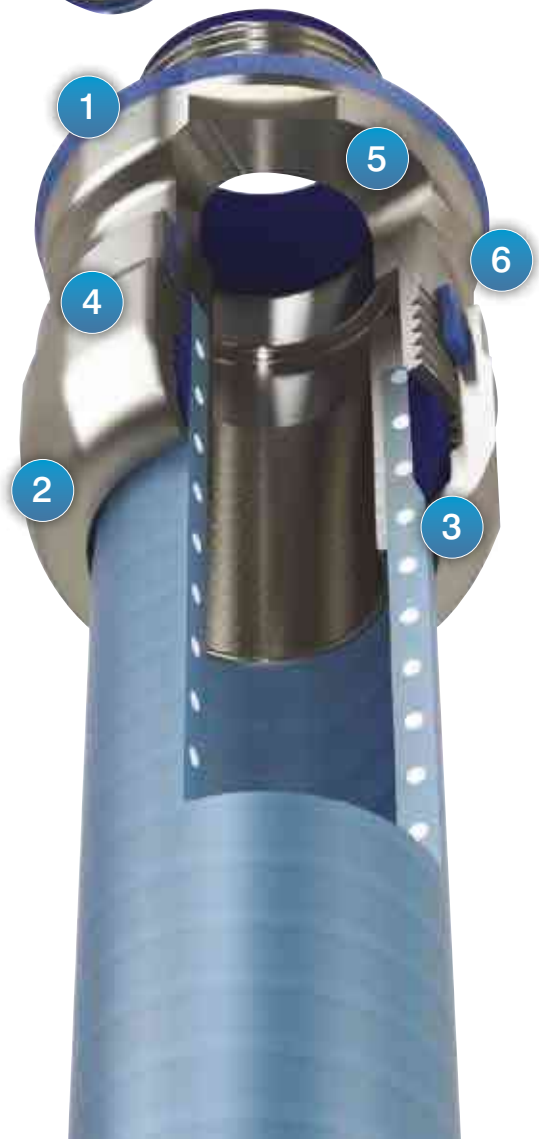


Our new range of Stainless Steel Round Boxes have been designed using SS Grade 316L and feature a range of connection options.

Our Hygienic Glands 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 and thermal resistance**
   - Resistant to chemicals & cleaning agents
6. **Fewer components**
   - Ease of assembly and integrated barrier seal to prevent contamination.

NEW



Hygienic Cable Protection Solutions

HG
HYGIENIC
RANGE

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.

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.





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.

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
- Vibration
- Abrasion
- Continuous & Repeated Movement
- Explosive Gases

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

85 NEW



- LPC-C-FG Fitting

113 NEW



- LTP-C-FG Fitting

126



- Round Box (SS316L)

Typical Products

84 NEW



- LPC-FG -

84 NEW



- LPC-FG -

84 NEW



- LPC-FG -

112 NEW



- LTP-FG -

112 NEW



- LTP-FG -

112 NEW



- LTBRDP-FG -

112 NEW



- LTBRDP-FG -

112 NEW



- LTPSS-FG -

Product installation examples:



- In line detection



- LPC Blue conduit with SS FG fitting



- Mixing Machines



- Connection Box to 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.

UL 514B Listed Conduit Fittings

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



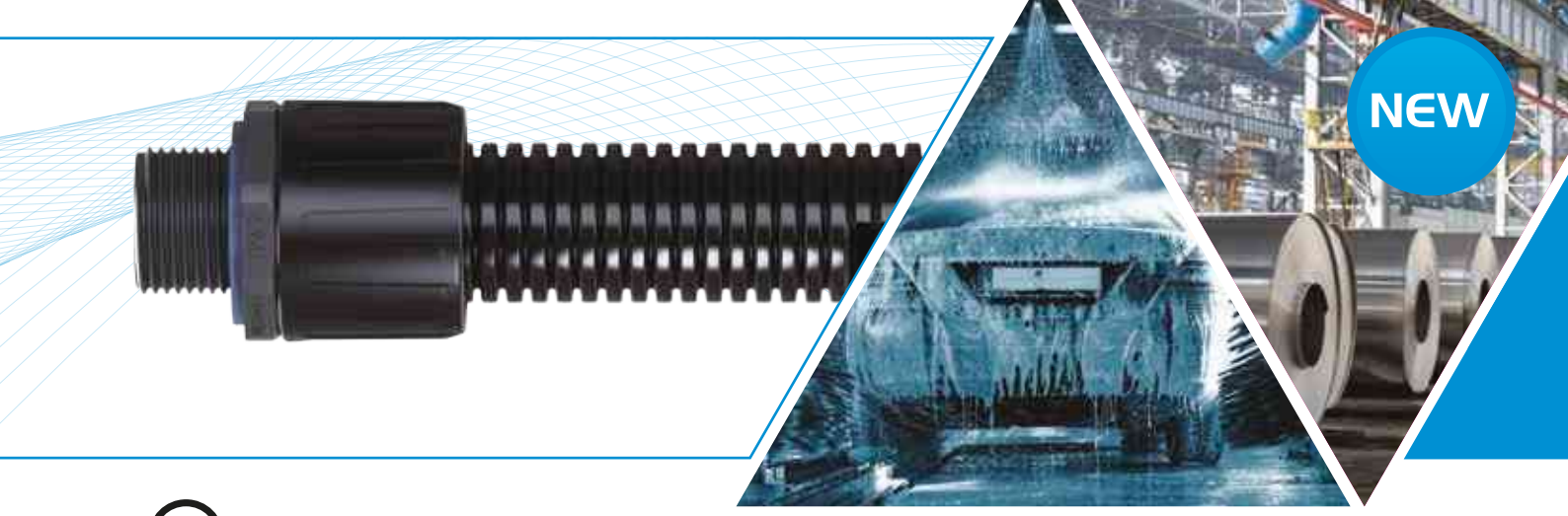
LTP-CUL



FPAX



Ultra™



UL 1660 Liquid-Tight, Flexible Non-metallic Conduit

NEW



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.

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



FLEXICON Ultra NEW

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 UL514B and are 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.

NEW



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

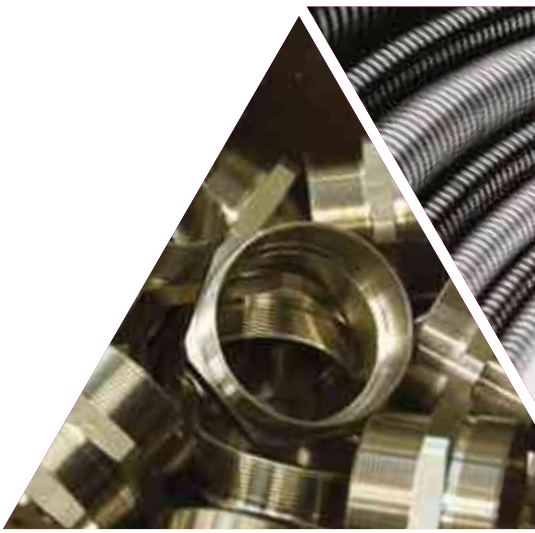
Flexicon can offer true engineering support when it comes to your Cable Protection requirements. When you talk to us, you know you are talking to the people that design, engineer and manufacture the products you are buying.



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”





When it comes to Cable Protection, “one size does not necessarily fit all”. This is why we have over 60 different conduit systems, but occasionally even this is not enough. Given the diversity of applications for our products we are constantly developing bespoke solutions to meet our Customers needs.





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:

Non standard lengths

- **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.



Different Polymer formulations

- 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.



Bespoke thread types

- 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.



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 26 systems in a range of sizes from 7mm to 106mm.

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

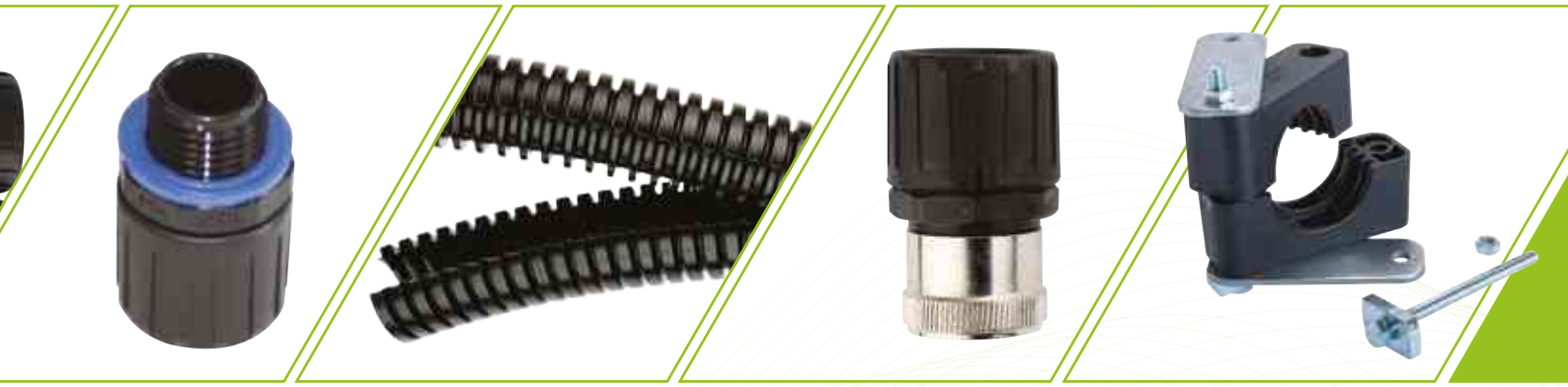


Key Features

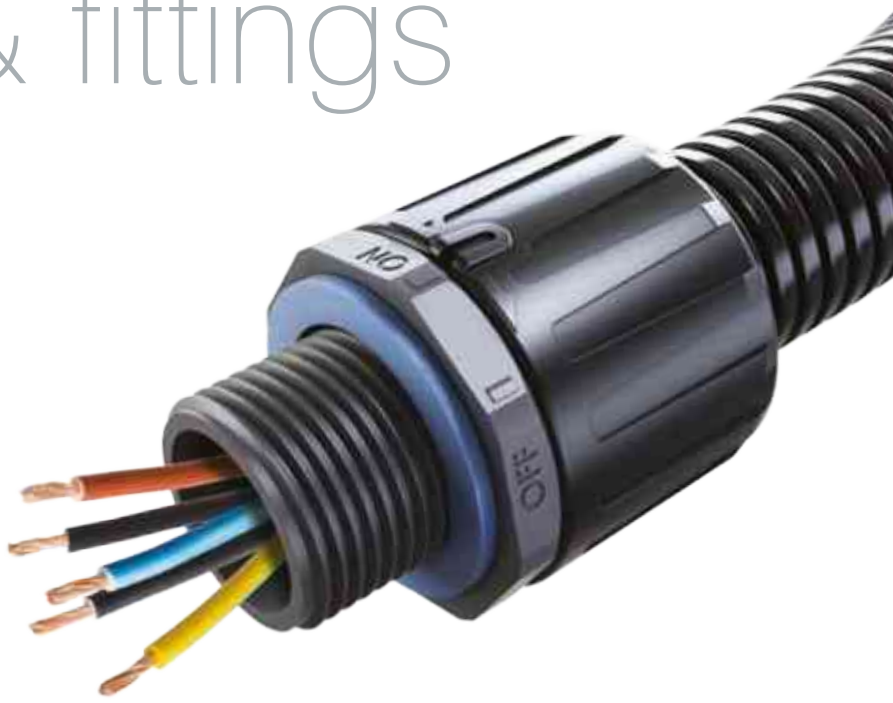
- Wide range of sizes
- Light Weight
- High Strength to Weight ratio
- Easy to cut
- High Fatigue life
- Superior IP ratings - up to IP69
- Non Corrosive
- Highly Flexible

Key Features

- Suitable for a wide range of applications
- Easy to work with for ease of installation
- Reduced installation times
- Reduced whole life costs
- No risk of water or dust ingress
- Suitable for retrofit applications
- Suitable for diverse environments
- Movement without any impact on performance



non-metallic conduit & fittings



IRIS Certification · NetworkRail · RoHS · REACh · BS EN IEC 61386 · CE · LR

Non-metallic conduit selection guide

Conduit System		FPAS	FPAL	FPAH	FPASC	FPR	FPADS	FPI	FPIH	FPIHR	FPP	FPP-NFR	FPP-H
					NEW 		NEW 			NEW 			
IP Rating	IP40						●						
	IP54												
	IP65												
	IP66	●	●	●	●	●		●	●	●	●	●	●
	IP67	●	●	●	●	●		●	●	●	●	●	●
	IP68	●	●	●	●	●		●	●	●	●	●	●
	IP69	●	●	●	●	●		●	●	●			
Compression Strength (kg / 100mm)		75	60	120	75	75	60	45	60	60	35	35	100
Pull Off Strength (kg) for 21/20mm size		40	30	70	40	40	15	30	50	35	25	25	40
Min Bend Radius (mm) for 21/20mm size		45	40	55	45	45	120	35	45	55	40	40	60
Colours		black, grey	black, grey	black	black, grey	black	black, blue, orange, white	black	black	black	black, grey, white	black	black
High Fatigue Life		●	●		●			●	●	●			
Temp	Max	120˚C	120˚C	120˚C	120˚C	120˚C	120˚C	110˚C	110˚C	110˚C	90˚C	90˚C	90˚C
	Min	-40˚C	-40˚C	-40˚C	-40˚C	-40˚C	-40˚C	-50˚C	-50˚C	-50˚C	-20˚C	-20˚C	-20˚C
Category	Flexible	●	●	●	●	●		●	●	●	●	●	●
	Pliable						●						
Low Fire Hazard	** Extra * Standard	*		*	*	**		*	*	**			
	Halogen Free	●	●	●	●	●	●	●	●	●		●	
	Self Extinguishing	●	●	●	●	●	●	●	●	●	●		●
Fire Tests	EN 45545-2					●				●			
	NFPA-130					●				●			
Abrasion Resistance		●		●	●	●	●		●	●			
Resistance to solvents		●	●	●	●	●	●	●	●	●			
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

Non-metallic conduit selection guide

	FPL	FPY	FPYS	FPYL	FPYLS	FPCB	FPCG	FPCGN	FPCBU	LPCB	LPCO	LPCBU	LPCGN	LPC-FG
														 NEW
	●	●		●										
						●	●	●	●					
	●									●	●	●	●	●
	●	●		●						●	●	●	●	●
										●	●	●	●	●
										●	●	●	●	●
	150	60	N/A	45	N/A	60	60	60	60	120	120	120	120	120
	30	25	N/A	15	N/A	25	25	25	25	70	45	60	60	60
	30	40	40	40	40	35	35	35	35	70	70	70	70	70
	black, grey, white	black, grey	black	black	black	black	light grey	green	blue	black	orange	blue	green	white, blue, grey
		●												
	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
	-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
		●		●		●	●	●	●	●	●	●	●	●
	●		●		●									
		●	●	●	●									
	●	●	●			●	●	●	●	●	●	●	●	●
		●	●											
		●	●	●	●									
						●				●				
						●	●	●	●					
														●
	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	70	**72**	**72**	**72**	**72**	**78**	**78**	**78**	**78**	**80**	**80**	**80**	**80**	**84**

Non-metallic fittings selection guide

FPA

IP66

FPAX

IP66 IP67 IP68 IP69

Straight Fitting



48 48 48 51 51



54 54 54 57 57

90° Elbow



48 49 49 51 52



55 55 55 57 58

45° Elbow



49 52 50 52 49



56 58 56 58 56

Fittings with Integral Strain Relief



125 53 53 53



125 59 59 59

Other Fittings

Coupler T-Pieces Reducer Reducing Divider



50 50 66 66 66

Coupler T-Pieces Reducer Reducing Divider



54 67 67 67

Ultra FLEXICON

IP66 IP67 IP68 IP69 NEW

Straight Fitting

Integrated Sealing Technology



60 60 60 61 61

90° Elbow

Integrated Sealing Technology



62 62 62 62 63

45° Elbow

Integrated Sealing Technology



64 63 64 64 63

Fittings with Integral Strain Relief

Integrated Sealing Technology



65 65 65

Other Fittings

Coupler T-Pieces Reducer Reducing Divider



61 67 67 67

Other

Straight



68 78 75

Elbows



69 79 75

Accessories



128 76



128



130 129 130 129



128 129

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.

Non-Metallic Conduit and Fittings

FPAS



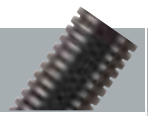
Construction: Standard weight, flame retardant nylon (PA6) corrugated flexible conduit.

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 149
- 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 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
- 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 149
- UL 94 V2 flame retardancy
- Halogen, sulphur and phosphorus free
- UV resistant
- Abrasion resistant
- Highly resistant to solvents and oils

FPASC



Construction: Standard weight, flame retardant nylon (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 149
- UL 94 V2 flame retardancy
- Halogen, sulphur and phosphorus free
- UV resistant (black)
- Abrasion resistant
- Highly resistant to solvents and oils

european (NW) sizes	nominal size (mm)	pitch	FPAS part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	FPAL part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	FPAH part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	FPASC part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)
7	10	F	FPAS10	50	10.0	6.3	15	FPAL10	50	10.0	6.5	15										
8	11	F	FPAS11	50	11.5	8.2	20	FPAL11	50	11.5	8.4	20										
10	13	F	FPAS13	25, 50	13.0	9.8	25	FPAL13	50	13.0	10.0	25	FPAH13	50	13.0	9.0	35					
12	16	F	FPAS16	25, 50	15.8	11.8	35	FPAL16	50	15.8	12.0	35	FPAH16	50	15.8	11.5	45					
14	18	F	FPAS18	50	18.5	14.2	40	FPAL18	50	18.5	14.2	35										
	20	C	FPAS20	10, 25, 50	20.0	14.8	45	FPAL20	50	20.0	15.0	40										
17	21	F	FPAS21	10, 25, 50	21.2	16.7	45	FPAL21	50	21.2	16.9	40										
	21	C											FPAH21	50	21.2	15.5	55	FPAS21C	50	21.2	16.0	45
	25	C	FPAS25	10, 25, 50	25.0	19.1	50	FPAL25	50	25.0	19.3	45										
23	28	F	FPAS28	10, 25, 50	28.5	22.8	50	FPAL28	50	28.5	23.0	45										
23	28	C											FPAH28	50	28.5	21.3	60	FPAS28C	50	28.5	21.7	50
29	34	C	FPAS34	25, 50	34.5	28.1	60	FPAL34	25, 50	34.5	28.3	55	FPAH34	25	34.5	27.6	70	FPAS34C	50	34.5	28.1	60
29	34	F	FPAS34F*	50	34.5	28.8	60															
36	42	C	FPAS42	10, 25, 50	42.5	35.5	70	FPAL42	25	42.5	35.7	65	FPAH42	25	42.5	34.6	80	FPAS42C	25	42.5	35.5	70
48	54	C	FPAS54	10, 25, 50	54.5	47.2	80	FPAL54	25	54.5	47.4	80	FPAH54	25	54.5	46.0	90	FPAS54C	25	54.5	47.2	80
56	67	C	FPAS67	10	67.2	56.3	130	FPAL67	10	67.2	56.5	110						FPAS67C	10	67.2	56.3	130

For larger diameter conduit see page 74

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 131

* 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
  - conduit with pre-installed draw wire
  - fine pitch 34mm sizes
  - Contractor Packs available see page 132 & 133
- For LFH performance see page 149

MORE CONDUITS OVERLEAF!

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.

EN 45545-2 NFPA 130

FPR



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 LUL Std S1085
- UL 94 V0 flame retardancy
- Halogen, sulphur and phosphorus free
- UV resistant
- Abrasion resistant
- Highly resistant to solvents and oils

FPADS



Construction: Double slit nylon (PA6) corrugated conduit.

Colour: Black.

Typical Applications: Retrofit and cable 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
- Also available in polypropylene in Black

FPI



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

Colour: Black.

Typical Applications: Robots and continual flexing.

- Highly flexible
- Exceptional fatigue 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

FPIH



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

EN 45545-2 NFPA 130

FPIHR

NEW



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

Colour: Black.

Typical Applications: Where 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 and NFPA 130

FPR part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	FPADS part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	FPI part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	FPIH part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	FPIHR part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	pitch	nominal size (mm)	european (NW) sizes
FPR10	50	10.0	6.3	15																					F	10	7
					FPADS11*	50	11.5	6.2	70																F	11	8
FPR13	50	13.0	9.8	25	FPADS13	50	13.0	7.9	75	FPI13	50	13.0	9.8	25	FPIH13	50	13.0	9.0	25	FPIHR13	50	13.0	9.0	25	F	13	10
FPR16	50	15.8	11.8	35	FPADS16	50	15.8	10.3	100	FPI16	50	15.8	11.8	30	FPIH16	50	15.8	11.5	35	FPIHR16	50	15.8	11.5	35	F	16	12
																									F	18	14
FPR20	50	20.0	14.8	45																					C	20	
FPR21	50	21.2	16.7	45	FPADS21	50	21.2	13.9	120	FPI21	50	21.2	16.7	35											F	21	17
															FPIH21	50	21.2	15.0	45	FPIHR21	50	21.2	15.0	45	C	21	
FPR25	50	25.0	19.1	50																					C	25	
																									F	28	23
FPR28	50	28.5	21.7	50	FPADS28	50	28.5	20.5	170	FPI28	50	28.5	21.7	45	FPIH28	50	28.5	21.3	50	FPIHR28	50	28.5	21.3	50	C	28	23
FPR34	50	34.5	28.1	60	FPADS34	25	34.5	26.6	180	FPI34	25	34.5	28.1	55	FPIH34	25	34.5	27.6	60	FPIHR34	25	34.5	27.6	60	C	34	29
																									F	34	29
FPR42	25	42.5	35.5	70	FPADS42	25	42.5	32.0	200	FPI42	25	42.5	35.5	60	FPIH42	25	42.5	34.6	70	FPIHR42	25	42.5	34.6	70	C	42	36
FPR54	25	54.5	47.2	80	FPADS54	25	54.5	43.0	240	FPI54	25	54.5	47.2	70	FPIH54	25	54.5	46.0	80	FPIHR54	25	54.5	46.0	80	C	54	48
FPR67	10	67.2	56.3	130						FPI67	10	67.2	56.3	120	FPIH67	10	67.2	56.0	130	FPIHR67	10	67.2	56.0	130	C	67	56

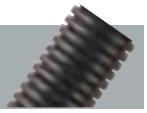
For larger diameter conduit see page 74

Standards

BS EN IEC 61386



FPP



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 FPP-S

Other options available:

FPP-NFR



LS0H conduit for data cabling applications.

FPPH



Heavy weight conduit for buried underground applications.

FCL

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.

FCLAMP

NEW

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 76).

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).









FPP part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	Conduit Clip	FCLAMP	End Cap	part number	to fit conduit size	outlet ID mm	pitch	nominal size (mm)	european (NW) sizes
FPP10	50	10.0	6.3	15	FCL10			REC10	10	0-7	F	10	7
								REC10	11	0-7	F	11	8
FPP13	50	13.0	9.8	25	FCL13			REC13	13	0-7	F	13	10
FPP16	50	15.8	11.8	35	FCL16	FCLAMP- 3-16	EC16B	REC16	16	0-11	F	16	12
					FCL18						F	18	14
FPP20	50	20.0	14.8	40	FCL20						C	20	
FPP21	50	21.2	16.7	40	FCL21	FCLAMP- 3-21	EC21B	REC21	21	0-15	F	21	17
					FCL21	FCLAMP- 3-21	EC21B	REC21	21	0-15	C	21	
FPP25	50	25.0	19.1	50	FCL25						C	25	
FPP28	50	28.5	22.8	55	FCL28	FCLAMP- 4-28	EC28B	REC28	28	0-21	F	28	23
					FCL28	FCLAMP- 4-28	EC28B	REC28	28	0-21	C	28	23
FPP34	25, 50	34.5	28.1	65	FCL34	FCLAMP- 5-34	EC34B	REC34	34	0-25	C	34	29
					FCL34	FCLAMP- 5-34	EC34B	REC34	34	0-25	F	34	29
FPP42	25	42.5	35.5	80	FCL42	FCLAMP- 6-42	EC42B	REC42	42	0-34	C	42	36
FPP54	25	54.5	47.2	100	FCL54	FCLAMP- 7-54	EC54B	REC54	54	0-46	C	54	48
FPP67	10	67.2	56.3	150		FCLAMP- 7-67		REC67	67	0-52	C	67	56

For larger diameter conduit see page 74

F = fine pitch C = coarse pitch

NOTE: FPP - NFR and FPPH.
Contact us for more details

Ordering Notes

- Specify colour (B = Black, G = Grey) and reel length eg: FPP16B-50M for a Black 50m reel
- Some lengths are MTO in Grey

- **Available on request:**
  - longer lengths and bulk packaging
  - cut lengths and assemblies
  - additional sizes
  - other colours
  - conduit with pre-installed draw wire



  - FPADS in Polypropylene (PP)

Non-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.

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



Using this fold out page will illustrate the wide range of non-metallic corrugated conduits we offer. There are ten different non-metallic 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	pitch	nominal size (mm)	OD mm	FPAS	FPAL	FPAH	FPASC	FPR	FPADS	FPI	FPIH	FPIHR	FPP
				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				
10	F	13	13.0	FPAS13	FPAL13	FPAH13		FPR13	FPADS13	FPI13	FPIH13	FPIHR13	FPP13
10	F	13											
10	F	13											
12	F	16	15.8	FPAS16	FPAL16	FPAH16		FPR16	FPADS16	FPI16	FPIH16	FPIHR16	FPP16
12	F	16											
12	F	16											
12	F	16											
14	F	18	18.5	FPAS18	FPAL18								
14	F	18											
	C	20	20.0	FPAS20				FPR20					FPP20
17	F	21	21.2	FPAS21	FPAL21			FPR21		FPI21			FPP21
17	C	21				FPAH21	FPAS21C		FPADS21		FPIH21	FPIHR21	
17	C	21											
	C	25	25.0	FPAS25	FPAL25			FPR25					FPP25
23	F	28	28.5	FPAS28	FPAL28								FPP28
23	C	28				FPAH28	FPAS28C	FPR28	FPADS28	FPI28	FPIH28	FPIHR28	
29	C	34	34.5	FPAS34	FPAL34	FPAH34	FPAS34C	FPR34	FPADS34	FPI34	FPIH34	FPIHR34	FPP34
29	F	34		FPAS34F									
36	C	42	42.5	FPAS42	FPAL42	FPAH42	FPAS42C	FPR42	FPADS42	FPI42	FPIH42	FPIHR42	FPP42
36	C	42											
48	C	54	54.5	FPAS54	FPAL54	FPAH54	FPAS54C	FPR54	FPADS54	FPI54	FPIH54	FPIHR54	FPP54
48	C	54											
56	C	67	67.0	FPAS67	FPAL67		FPAS67C	FPR67		FPI67	FPIH67	FPIHR67	FPP67

Standards

c UL us c UL us IEC EN 61386 CE RoHS REACh



FPA system nylon

Construction: Nylon (PA66) moulded fittings.

FPA system brass threaded

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

Colour: Black or Grey.

IP66

EXTRA LOW FIRE HAZARD ★★

Fittings

FPA

straight external thread

One piece, fast fit, external threaded fitting. Suitable for knockouts or threaded entries.

IP66



FPA

straight UNEF swivel internal thread

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

IP66



FPA

flange

One piece, fast fit fitting with nylon swivel flange with 'O' ring.

IP66



FPA90

90° elbow external thread

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

IP66



european (NW) sizes	nominal size (mm)	OD mm	Ext Metric	Ext PG	Ext NPT	Ext UNEF	Thread	Ext Flange	90 Degree Metric	90 Degree PG	90 Degree NPT
7	10	10.0	FPA10-M12	FPA10-PG7					FPA10-M12-90	FPA10-PG7-90	
7	10		FPA10-M16	FPA10-PG9							
8	11	11.5	FPA11-M12	FPA11-PG7					FPA11-M12-90		
10	13	13.0	FPA13-M12	FPA13-PG7		FPA13-BU063	(5/8")		FPA13-M16-90	FPA13-PG9-90	
10	13		FPA13-M16	FPA13-PG9		FPA13-BU075	(3/4")				
10	13		FPA13-M20	FPA13-PG11		FPA13-BU088	(7/8")				
12	16	15.8	FPA16-M16	FPA16-PG9	FPA16-038	FPA16-BU075	(3/4")	FPA16-FL	FPA16-M16-90	FPA16-PG9-90	FPA16-050-90
12	16		FPA16-M20	FPA16-PG11	FPA16-050	FPA16-BU088	(7/8")		FPA16-M20-90	FPA16-PG11-90	
12	16			FPA16-PG13		FPA16-BU100	(1")			FPA16-PG13-90	
12	16			FPA16-PG16		FPA16-BU119	(1 3/16")				
14	18	18.5	FPA18-M20	FPA18-PG13					FPA18-M20-90		
14	18										
	20	20.0	FPA20-M20						FPA20-M20-90		
17	21	21.2	FPA21-M20	FPA21-PG13	FPA21-050	FPA21-BU100	(1")	FPA21-FL	FPA21-M20-90	FPA21-PG16-90	FPA21-050-90
17	21		FPA21-M25	FPA21-PG16		FPA21-BU119	(1 3/16")				
17	21					FPA21-BU125	(1 1/4")				
	25	25.0	FPA25-M25						FPA25-M25-90		
23	28	28.5	FPA28-M25	FPA28-PG21	FPA28-075	FPA28-BU138	(1 3/8")	FPA28-FL	FPA28-M25-90	FPA28-PG21-90	FPA28-075-90
23	28		FPA28-M32	FPA28-PG29		FPA28-BU144	(1 7/16")				
29	34	34.5	FPA34-M32	FPA34-PG29	FPA34-100	FPA34-BU144	(1 7/16")	FPA34-FL	FPA34-M32-90	FPA34-PG29-90	FPA34-100-90
29	34		FPA34-M40			FPA34-BU175	(1 3/4")				
36	42	42.5	FPA42-M40	FPA42-PG36	FPA42-125	FPA42-BU200	(2")	FPA42-FL	FPA42-M40-90	FPA42-PG36-90	FPA42-125-90
36	42		FPA42-M50		FPA42-150	FPA42-BU225	(2 1/4")		FPA42-M50-90		FPA42-150-90
48	54	54.5	FPA54-M50	FPA54-PG42	FPA54-150	FPA54-BU200	(2")		FPA54-M50-90	FPA54-PG48-90	FPA54-150-90
48	54		FPA54-M63	FPA54-PG48	FPA54-200	FPA54-BU225	(2 1/4")		FPA54-M63-90		FPA54-200-90
56	67	67.0	FPA67-M63	FPA67-PG48	FPA67-200				FPA67-M63-90	FPA67-PG48-90	FPA67-200-90

Ordering Notes

- Specify Black or Grey (B = Black, G = Grey) eg. FPA16-M16B
- The IP rating onto a UNEF threaded connector may be dependent on the design of the connector

* Indicates parts made to order on request and may be subject to MOQ and lead time

- **Available on request:**
  - additional sizes, alternative threads
  - additional UNEF threads and combinations

properties

- 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 149
- Halogen, sulphur and phosphorus free
- Available in Black or Grey (RAL 7031)
- EN 45545 HL3 and NFPA compliant
- Nylon metric threads supplied with glass reinforced nylon locknut
- Face seal washers available on request - see page 128

FPA90

90° elbow UNEF swivel internal thread

One piece, fast fit, 90 degree elbow fitting with nickel plated brass swivel UNEF internal thread for attachment to circular connectors.

IP66



FPA90

flange

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

IP66



FPA45

45° elbow external thread

One piece, fast fit, external threaded 45 degree elbow fitting. Suitable for knockouts.

IP66



FPA45

45° elbow 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.

IP66



90 Degree UNEF	Thread	90 Degree Flange	45 Degree Metric	45 Degree PG	45 Degree NPT	45 Degree UNEF	Thread	nominal size (mm)	OD mm	european (NW) sizes
								10	10.0	7
								10		7
								11	11.5	8
FPA13-BU063-90	(⅝")							13	13.0	10
FPA13-BU075-90	(¾")							13		10
FPA13-BU088-90	(⅞")							13		10
FPA16-BU075-90	(¾")	FPA16-FL-90	FPA16-M20-45	FPA16-PG13-45	FPA16-050-45	FPA16-BU075-45	(¾")	16	15.8	12
FPA16-BU088-90	(⅞")					FPA16-BU088-45	(⅞")	16		12
FPA16-BU100-90	(1")					FPA16-BU100-45	(1")	16		12
FPA16-BU119-90	(1 3/16")					FPA16-BU119-45	(1 3/16")	16		12
								18	18.5	14
								18		14
								20	20.0	
FPA21-BU100-90	(1")	FPA21-FL-90	FPA21-M20-45	FPA21-PG13-45	FPA21-050-45	FPA21-BU100-45	(1")	21	21.2	17
FPA21-BU119-90	(1 3/16")			FPA21-PG16-45		FPA21-BU119-45	(1 3/16")	21		17
FPA21-BU125-90	(1¼")					FPA21-BU125-45	(1¼")	21		17
								25	25.0	
FPA28-BU138-90	(1⅜")	FPA28-FL-90	FPA28-M25-45	FPA28-PG21-45	FPA28-075-45	FPA28-BU138-45	(1⅜")	28	28.5	23
FPA28-BU144-90	(1 7/16")					FPA28-BU144-45	(1 7/16")	28		23
FPA34-BU144-90	(1 7/16")	FPA34-FL-90	FPA34-M32-45	FPA34-PG29-45	FPA34-100-45	FPA34-BU144-45	(1 7/16")	34	34.5	29
FPA34-BU175-90	(1¾")					FPA34-BU175-45	(1¾")	34		29
FPA42-BU200-90	(2")	FPA42-FL-90	FPA42-M50-45	FPA42-PG36-45	FPA42-150-45	FPA42-BU200-45	(2")	42	42.5	36
FPA42-BU225-90	(2¼")					FPA42-BU225-45	(2¼")	42		36
FPA54-BU200-90	(2")	FPA54-FL-90*	FPA54-M50-45		FPA54-150-45	FPA54-BU200-45	(2")	54	54.5	48
FPA54-BU225-90	(2¼")					FPA54-BU225-45	(2¼")	54		48
								67	67.0	56

Standards

BS EN IEC 61386





FPA system nylon

Construction: Nylon (PA66) moulded fittings.

FPA system brass threaded

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

Colour: Black or Grey.

EXTRA LOW FIRE HAZARD ★★

IP66

Fittings

FPA45

flange

One piece, fast fit 45 degree elbow fitting with nylon swivel flange with 'O' ring face seal.

IP66



FPA-FPA

coupler

One piece, fast fit, coupler to join corrugated conduits. Also available in FPAX and FPAU versions.

IP66



FPA-MPC

coupler

One piece, fast fit, coupler to join corrugated conduit to rigid conduit.

IP66



european (NW) sizes	nominal size (mm)	OD mm	45 Degree Flange	Coupler	Rigid Conduit Coupler
7	10	10.0			
7	10				
8	11	11.5			
10	13	13.0			
10	13				
10	13				
12	16	15.8	FPA16-FL-45	FPA16-FPA16	FPA16-MPC16
12	16				
12	16				
12	16				
14	18	18.5			
14	18				
	20	20.0		FPA20-FPA20	
17	21	21.2	FPA21-FL-45	FPA21-FPA21	FPA21-MPC20
17	21				
17	21				
	25	25.0		FPA25-FPA25	
23	28	28.5	FPA28-FL-45	FPA28-FPA28	FPA28-MPC25
23	28				
29	34	34.5	FPA34-FL-45	FPA34-FPA34	FPA34-MPC32
29	34				
36	42	42.5	FPA42-FL-45	FPA42-FPA42	FPA42-MPC40
36	42				
48	54	54.5	FPA54-FL-45	FPA54-FPA54	
48	54				
56	67	67.0			

Ordering Notes

* Indicates parts made to order on request

- NPB = Nickel Plated Brass

- **Available on request:**
  - colour Grey, other threads
  - for brass locknuts and sealing washers see accessories, page 128
  - EMC braid clamp version see page 124



properties

- 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 149
- Halogen, sulphur and phosphorus free
- Available in Black or Grey (RAL 7031)
- EN 45545 HL3 and NFPA compliant



FPA

straight swivel brass external thread

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

IP66



FPA

straight swivel brass internal thread

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

IP66



FPA90

90° elbow swivel brass external thread

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

IP66



NPB Ext Metric	NPB Ext PG	NPB Int Metric	NPB Ext Metric	NPB Ext PG	nominal size (mm)	OD mm	european (NW) sizes
					10	10.0	7
					10		7
					11	11.5	8
FPA13-BM16	FPA13-BPG9	FPA13-BFM16	FPA13-BM16-90	FPA13-BPG9-90	13	13.0	10
					13		10
					13		10
FPA16-BM16	FPA16-BPG9	FPA16-BFM16	FPA16-BM16-90	FPA16-BPG9-90	16	15.8	12
FPA16-BM20	FPA16-BPG11	FPA16-BFM20	FPA16-BM20-90	FPA16-BPG11-90	16		12
					16		12
					16		12
					18	18.5	14
					18		14
					20	20.0	
FPA21-BM20	FPA21-BPG13	FPA21-BFM20	FPA21-BM20-90	FPA21-BPG13-90	21	21.2	17
	FPA21-BPG16			FPA21-BPG16-90	21		17
					21		17
					25	25.0	
FPA28-BM25	FPA28-BPG21	FPA28-BFM25	FPA28-BM25-90	FPA28-BPG21-90	28	28.5	23
					28		23
FPA34-BM32	FPA34-BPG29	FPA34-BFM32	FPA34-BM32-90	FPA34-BPG29-90	34	34.5	29
					34		29
FPA42-BM40	FPA42-BPG36	FPA42-BFM40	FPA42-BM40-90	FPA42-BPG36-90	42	42.5	36
FPA42-BM50			FPA42-BM50-90		42		36
FPA54-BM50	FPA54-BPG48*	FPA54-BFM50	FPA54-BM50-90	FPA54-BPG48-90*	54	54.5	48
FPA54-BM63			FPA54-BM63-90		54		48
FPA67-BM63					67	67.0	56

Standards

BS EN IEC 61386





FPA system
brass threaded

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

Colour: Black or Grey.

EXTRA LOW FIRE HAZARD ★★

IP66

Fittings

FPA90

90° elbow swivel brass internal thread

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

IP66



FPA45

45° elbow swivel brass external thread

One piece, fast fit, swivel, 45 degree elbow, nickel plated brass external threaded fitting. Suitable for knockouts or threaded entries.

IP66



FPA45

45° elbow swivel brass internal thread

One piece, fast fit, swivel, 45 degree elbow, nickel plated brass internal threaded fitting.

IP66



european (NW) sizes	nominal size (mm)	OD mm	NPB Int Metric	NPB Ext Metric	NPB Ext PG	NPB Int Metric
7	10	10.0				
7	10					
8	11	11.5				
10	13	13.0	FPA13-BFM16-90			
10	13					
10	13					
12	16	15.8	FPA16-BFM16-90	FPA16-BM16-45	FPA16-BPG13-45	FPA16-BFM20-45
12	16		FPA16-BFM20-90	FPA16-BM20-45	FPA16-BPG16-45	
12	16					
12	16					
14	18	18.5				
14	18					
	20	20.0				
17	21	21.2	FPA21-BFM20-90	FPA21-BM20-45	FPA21-BPG13-45	FPA21-BFM20-45
17	21				FPA21-BPG16-45	
17	21					
	25	25.0				
23	28	28.5	FPA28-BFM25-90	FPA28-BM25-45	FPA28-BPG21-45	FPA28-BFM25-45
23	28					
29	34	34.5	FPA34-BFM32-90	FPA34-BM32-45	FPA34-BPG29-45	FPA34-BFM32-45
29	34					
36	42	42.5	FPA42-BFM50-90	FPA42-BM40-45	FPA42-BPG36-45	FPA42-BFM50-45
36	42			FPA42-BM50-45		
48	54	54.5	FPA54-BFM50-90	FPA54-BM50-45	FPA54-BPG48-45*	FPA54-BFM50-45
48	54			FPA54-BM63-45		
56	67	67.0				

Ordering Notes

* Indicates parts made to order on request

- NPB = Nickel Plated Brass

- **Available on request:**
  - colour Grey, other threads
  - for brass locknuts and sealing washers see accessories, page 128
  - EMC braid clamp version, see page 124



properties

- 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 149
- Halogen, sulphur and phosphorus free
- **Refer to accessories for clamping range page 129**



FPA

cable gland

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

IP66



NPB Metric

FPA90

cable gland

One piece, fast fit, swivel, 90 degree elbow, nickel plated brass external threaded cable gland fitting. Suitable for knockouts or threaded entries.

IP66



NPB Metric

FPA45

cable gland

One piece, fast fit, swivel, 45 degree elbow, nickel plated brass external threaded cable gland fitting. Suitable for knockouts or threaded entries.

IP66



NPB Metric

nominal size (mm)	OD mm	european (NW) sizes	FPA	FPA90	FPA45
10	10.0	7			
10		7			
11	11.5	8			
13	13.0	10	FPA13-BM16-CG	FPA13-BM16-CG-90	
13		10			
13		10			
16	15.8	12	FPA16-BM16-CG FPA16-BM20-CG	FPA16-BM16-CG-90 FPA16-BM20-CG-90	FPA16-BM20-CG-45
16		12			
16		12			
16		12			
18	18.5	14			
18		14			
20	20.0				
21	21.2	17	FPA21-BM20-CG	FPA21-BM20-CG-90	FPA21-BM20-CG-45
21		17			
21		17			
25	25.0				
28	28.5	23	FPA28-BM25-CG	FPA28-BM25-CG-90	FPA28-BM25-CG-45
28		23			
34	34.5	29	FPA34-BM32-CG	FPA34-BM32-CG-90	FPA34-BM32-CG-45
34		29			
42	42.5	36	FPA42-BM40-CG	FPA42-BM40-CG-90	FPA42-BM40-CG-45
42		36			
54	54.5	48	FPA54-BM50-CG	FPA54-BM50-CG-90	FPA54-BM50-CG-45
54		48			
67	67.0	56			

Note: PG thread versions and EMC Cable Gland version on request.

Standards

BS EN IEC 61386





FPAX system nylon

Construction: Nylon (PA66) moulded fitting incorporating internal elastomeric seal.

Colour: Black or Grey* on request

EXTRA LOW FIRE HAZARD ★★

IP66 IP67 IP68 IP69

Fittings

FPAX

straight external thread

Fast fit, external threaded fitting with additional conduit seal. Suitable for knockouts or threaded entries.

IP66 IP67 IP68 IP69



FPAX - FPAX

coupler

Fast fit coupler to join corrugated conduits. Also available in FPA and FPAU versions.

IP66 IP67 IP68 IP69



FPAX

straight UNEF swivel internal thread

Fast fit fitting with nickel plated brass swivel UNEF internal thread for attachment to circular connectors with additional conduit seal.

IP66 IP67 IP68 IP69



FPAX

flange

Fast fit fitting with nylon swivel flange with additional conduit seal and with 'O' ring face seal.

IP66 IP67 IP68 IP69



european (NW) sizes	nominal size (mm)	OD mm	Ext Metric	Ext PG	Ext NPT		Int UNEF	Thread	Flange
7	10	10.0							
7	10								
8	11	11.5							
10	13	13.0	FPAX13-M16	FPAX13-PG9		FPAX16-FPAX16			
10	13								
10	13								
12	16	15.8	FPAX16-M16	FPAX16-PG9	FPAX16-038		FPAX16-BU075	(¾")	FPAX16-FL
12	16		FPAX16-M20	FPAX16-PG11	FPAX16-050		FPAX16-BU088	(⅞")	
12	16			FPAX16-PG13			FPAX16-BU100	(1")	
12	16			FPAX16-PG16			FPAX16-BU119	(1 3/16")	
14	18	18.5							
14	18								
	20	20.0							
17	21	21.2	FPAX21-M20	FPAX21-PG13	FPAX21-050	FPAX21-FPAX21	FPAX21-BU100	(1")	FPAX21-FL
17	21			FPAX21-PG16			FPAX21-BU119	(1 3/16")	
17	21						FPAX21-BU125	(1⅜")	
	25	25.0							
23	28	28.5	FPAX28-M25	FPAX28-PG21	FPAX28-075	FPAX28-FPAX28	FPAX28-BU138	(1⅜")	FPAX28-FL
23	28		FPAX28-M32	FPAX28-PG29			FPAX28-BU144	(1 7/16")	
29	34	34.5	FPAX34-M32	FPAX34-PG29	FPAX34-100	FPAX34-FPAX34	FPAX34-BU144	(1 7/16")	FPAX34-FL
29	34		FPAX34-M40						
36	42	42.5	FPAX42-M40	FPAX42-PG36	FPAX42-125	FPAX42-FPAX42	FPAX42-BU200	(2")	FPAX42-FL
36	42		FPAX42-M50		FPAX42-150		FPAX42-BU225	(2¼")	
48	54	54.5	FPAX54-M50	FPAX54-PG42	FPAX54-150	FPAX54-FPAX54	FPAX54-BU200	(2")	
48	54		FPAX54-M63	FPAX54-PG48	FPAX54-200		FPAX54-BU225	(2¼")	
56	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 128
- EMC braid clamp version see page 124



properties

- Fast fit
- IP rating:
  IP66 + IP67 + IP68 (2 bar) + IP69
- Supplied with additional conduit seal and face seal
- Face seal details:
  - **Metric Nylon threads supplied with retained Polyester Elastomer Washer**
  - **NPT and PG Nylon threads supplied with Neoprene Washer**
  - **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
- 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 -50˚C to +135˚C
- **Metric nylon threads supplied complete with glass reinforced nylon locknuts**
- **Swivel UNEF threads allow assembly to military style electrical connectors without twisting of cables and includes sealing 'O' ring face seal**
- Low Fire Hazard (LFH), see page 149
- Halogen, sulphur and phosphorus free
- EN 45545 HL3 and NFPA130 compliant

FPAX90

90° elbow external thread

Fast fit, external threaded 90 degree elbow fitting with additional conduit seal. Suitable for knockouts.

IP66 IP67 IP68 IP69



FPAX90

90° elbow UNEF swivel internal thread

Fast fit, 90 degree elbow fitting with nickel plated brass swivel UNEF internal thread for attachment to circular connectors with additional conduit seal.

IP66 IP67 IP68 IP69



FPAX90

flange

Fast fit 90 degree elbow fitting with nylon swivel flange with additional conduit seal with 'O' ring face seal.

IP66 IP67 IP68 IP69



Ext Metric	Ext PG	Ext NPT	Int UNEF	Thread	Flange	nominal size (mm)	OD mm	european (NW) sizes
						10	10.0	7
						10		7
						11	11.5	8
FPAX13-M16-90	FPAX13-PG9-90					13	13.0	10
						13		10
						13		10
FPAX16-M16-90	FPAX16-PG9-90	FPAX16-050-90	FPAX16-BU075-90	(¾")	FPAX16-FL-90	16	15.8	12
FPAX16-M20-90	FPAX16-PG11-90		FPAX16-BU088-90	(⅞")		16		12
	FPAX16-PG13-90		FPAX16-BU100-90	(1")		16		12
			FPAX16-BU119-90	(1 3/16")		16		12
						18	18.5	14
						18		14
						20	20.0	
FPAX21-M20-90	FPAX21-PG13-90	FPAX21-050-90	FPAX21-BU100-90	(1")	FPAX21-FL-90	21	21.2	17
	FPAX21-PG16-90		FPAX21-BU119-90	(1 3/16")		21		17
			FPAX21-BU125-90	(1¼")		21		17
						25	25.0	
FPAX28-M25-90	FPAX28-PG21-90	FPAX28-075-90	FPAX28-BU138-90	(1⅜")	FPAX28-FL-90	28	28.5	23
			FPAX28-BU144-90	(1 7/16")		28		23
FPAX34-M32-90	FPAX34-PG29-90	FPAX34-100-90	FPAX34-BU144-90	(1 7/16")	FPAX34-FL-90	34	34.5	29
						34		29
FPAX42-M40-90	FPAX42-PG36-90	FPAX42-125-90	FPAX42-BU200-90	(2")	FPAX42-FL-90	42	42.5	36
FPAX42-M50-90		FPAX42-150-90	FPAX42-BU225-90	(2¼")		42		36
FPAX54-M50-90	FPAX54-PG48-90	FPAX54-150-90	FPAX54-BU200-90	(2")		54	54.5	48
FPAX54-M63-90		FPAX54-200-90	FPAX54-BU225-90	(2¼")		54		48
						67	67.0	56

Standards

BS EN IEC 61386







FPAX system
nylon & brass threaded

EXTRA LOW FIRE HAZARD ★★

Construction: Nylon (PA66) moulded fitting incorporating internal elastomeric seal.

Construction: Nylon (PA66) moulded fitting with swivel metal thread. External and internal metallic threads are made from nickel plated brass and incorporate an internal elastomeric seal.

Colour: Black or Grey* on request.

Fittings

FPAX45

45° elbow external thread

Fast fit, external threaded 45 degree elbow fitting with additional conduit seal. Suitable for knockouts.

IP66 IP67 IP68 IP69



FPAX45

45° elbow UNEF swivel internal thread

Fast fit, 45 degree elbow fitting with nickel plated brass swivel UNEF internal thread for attachment to circular connectors with additional conduit seal.

IP66 IP67 IP68 IP69



FPAX45

flange

Fast fit 45 degree elbow fitting with nylon swivel flange with additional conduit seal and 'O' ring face seal.

IP66 IP67 IP68 IP69



european (NW) sizes	nominal size (mm)	OD mm	Ext Metric	Ext PG	Ext NPT	Int UNEF	Thread	Flange
7	10	10.0						
7	10							
8	11	11.5						
10	13	13.0						
10	13							
10	13							
12	16	15.8	FPAX16-M20-45	FPAX16-PG13-45	FPAX16-050-45	FPAX16-BU075-45	(¾")	FPAX16-FL-45
12	16					FPAX16-BU088-45	(⅞")	
12	16					FPAX16-BU100-45	(1")	
12	16					FPAX16-BU119-45	(1 3/16")	
14	18	18.5						
14	18							
	20	20.0						
17	21	21.2	FPAX21-M20-45	FPAX21-PG13-45	FPAX21-050-45	FPAX21-BU100-45	(1")	FPAX21-FL-45
17	21			FPAX21-PG16-45		FPAX21-BU119-45	(1 3/16")	
17	21					FPAX21-BU125-45	(1¼")	
	25	25.0						
23	28	28.5	FPAX28-M25-45	FPAX28-PG21-45	FPAX28-075-45	FPAX28-BU138-45	(1⅜")	FPAX28-FL-45
23	28					FPAX28-BU144-45	(1 7/16")	
29	34	34.5	FPAX34-M32-45	FPAX34-PG29-45	FPAX34-100-45	FPAX34-BU144-45	(1 7/16")	FPAX34-FL-45
29	34							
36	42	42.5	FPAX42-M50-45	FPAX42-PG36-45	FPAX42-150-45	FPAX42-BU200-45	(2")	FPAX42-FL-45
36	42					FPAX42-BU225-45	(2¼")	
48	54	54.5	FPAX54-M50-45		FPAX54-150-45	FPAX54-BU200-45	(2")	
48	54					FPAX54-BU225-45	(2¼")	
56	67	67.0						

Ordering Notes

- Specify Black or Grey (B=Black, G=Grey) eg: FPAX16-M20-45B
- NPB = Nickel Plated Brass

- **Available on request:**
  - other threads
  - for brass locknuts and sealing washers see accessories, page 128
  - EMC braid clamp version, see page 124



properties

- Fast fit
- IP rating: IP66 + IP67 + IP68 (2 bar) + IP69
- Supplied with additional conduit seal and face seal
- Face seal details:
  - **Metric Nylon threads supplied with retained Polyester Elastomer Washer**
  - **NPT and PG Nylon threads supplied with Neoprene Washer**
  - **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
- 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 -50˚C to +135˚C
- **Metric nylon threads supplied complete with glass reinforced nylon locknuts**
- **Swivel UNEF threads allow assembly to military style electrical connectors without twisting of cables and includes sealing 'O' ring face seal**
- Low Fire Hazard (LFH), see page 149
- Halogen, sulphur and phosphorus free
- EN 45545 HL3 and NFPA130 compliant

FPAX

straight swivel brass external thread

Fast fit, swivel, nickel plated brass external threaded fitting. Suitable for knockouts or threaded entries.

IP66 IP67 IP68 IP69



FPAX

straight swivel brass internal thread

Fast fit, swivel, nickel plated brass internal threaded fitting with additional conduit seal.

IP66 IP67 IP68 IP69



FPAX90

90° elbow swivel brass external thread

Fast fit, swivel, 90 degree elbow, nickel plated brass external threaded fitting with additional conduit seal. Suitable for knockouts or threaded entries.

IP66 IP67 IP68 IP69



NPB Ext Metric	NPB Ext PG	NPB Int Metric	NPB Ext Metric	NPB Ext PG	nominal size (mm)	OD mm	european (NW) sizes
					10	10.0	7
					10		7
					11	11.5	8
FPAX13-BM16	FPAX13-BPG9	FPAX13-BFM16	FPAX13-BM16-90	FPAX13-BPG9-90	13	13.0	10
					13		10
					13		10
FPAX16-BM16	FPAX16-BPG9	FPAX16-BFM16	FPAX16-BM16-90	FPAX16-BPG9-90	16	15.8	12
FPAX16-BM20	FPAX16-BPG11	FPAX16-BFM20	FPAX16-BM20-90	FPAX16-BPG11-90	16		12
					16		12
					16		12
					18	18.5	14
					18		14
					20	20.0	
FPAX21-BM20	FPAX21-BPG13	FPAX21-BFM20	FPAX21-BM20-90	FPAX21-BPG13-90	21	21.2	17
	FPAX21-BPG16			FPAX21-BPG16-90	21		17
					21		17
					25	25.0	
FPAX28-BM25	FPAX28-BPG21	FPAX28-BFM25	FPAX28-BM25-90	FPAX28-BPG21-90	28	28.5	23
					28		23
FPAX34-BM32	FPAX34-BPG29	FPAX34-BFM32	FPAX34-BM32-90	FPAX34-BPG29-90	34	34.5	29
					34		29
FPAX42-BM40	FPAX42-BPG36	FPAX42-BFM40	FPAX42-BM40-90	FPAX42-BPG36-90	42	42.5	36
FPAX42-BM50			FPAX42-BM50-90		42		36
FPAX54-BM50	FPAX54-BPG48*	FPAX54-BFM50	FPAX54-BM50-90	FPAX54-BPG48-90*	54	54.5	48
FPAX54-BM63			FPAX54-BM63-90		54		48
					67	67.0	56

Standards

BS EN IEC 61386





FPAX system brass threaded

Construction: Nylon (PA66) moulded fitting with swivel metal thread. External and internal metallic threads are made from nickel plated brass and incorporate an internal elastomeric seal.

Colour: Black.

EXTRA LOW FIRE HAZARD ★★ IP66 IP67 IP68 IP69

Fittings

FPAX90

90° elbow swivel brass internal thread

Fast fit, swivel, 90 degree elbow, nickel plated brass internal threaded fitting with additional conduit seal.

IP66 IP67 IP68 IP69



FPAX45

45° elbow swivel brass external thread

Fast fit, swivel, 45 degree elbow, nickel plated brass external threaded fitting with additional conduit seal. Suitable for knockouts or threaded entries.

IP66 IP67 IP68 IP69



FPAX45

45° elbow swivel brass internal thread

Fast fit, swivel, 45 degree elbow, nickel plated brass internal threaded fitting with additional conduit seal.

IP66 IP67 IP68 IP69



european (NW) sizes	nominal size (mm)	OD mm	NPB Int Metric	NPB Ext Metric	NPB Ext PG	NPB Int Metric
7	10	10.0				
7	10					
8	11	11.5				
10	13	13.0	FPAX13-BFM16-90			
10	13					
10	13					
12	16	15.8	FPAX16-BFM16-90	FPAX16-BM16-45	FPAX16-BPG13-45	FPAX16-BFM20-45
12	16		FPAX16-BFM20-90	FPAX16-BM20-45	FPAX16-BPG16-45	
12	16					
12	16					
14	18	18.5				
14	18					
	20	20.0				
17	21	21.2	FPAX21-BFM20-90	FPAX21-BM20-45	FPAX21-BPG13-45	FPAX21-BFM20-45
17	21				FPAX21-BPG16-45	
17	21					
	25	25.0				
23	28	28.5	FPAX28-BFM25-90	FPAX28-BM25-45	FPAX28-BPG21-45	FPAX28-BFM25-45
23	28					
29	34	34.5	FPAX34-BFM32-90	FPAX34-BM32-45	FPAX34-BPG29-45	FPAX34-BFM32-45
29	34					
36	42	42.5	FPAX42-BFM50-90	FPAX42-BM40-45	FPAX42-BPG36-45	FPAX42-BFM50-45
36	42			FPAX42-BM50-45		
48	54	54.5	FPAX54-BFM50-90	FPAX54-BM50-45	FPAX54-BPG48-45*	FPAX54-BFM50-45
48	54			FPAX54-BM63-45		
56	67	67.0				

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 128
  - EMC braid clamp version, see page 124

properties

- Fast fit
- IP rating: **for conduit & fitting IP66 + IP67 + IP68 (2 bar) + IP69**
  for cable gland: IP68 (10 bar)+IP69
- Supplied with additional conduit seal & face seal
- Face seal details:
  - **Metric Nylon threads supplied with retained Polyester Elastomer Washer**
  - **NPT and PG Nylon threads supplied with Neoprene Washer**
  - **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
- 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 149
- Halogen, sulphur and phosphorus free
- Refer to accessories for clamping range page 129
- EN 45545 HL3 and NFPA compliant

FPAX NEW

cable gland

Fast fit, swivel, nickel plated brass external threaded cable gland fitting with additional conduit seal. Suitable for knockouts or threaded entries.

IP66 IP67 IP68 IP69



NPB Metric

FPAX90 NEW

cable gland

Fast fit, swivel, 90 degree elbow, nickel plated brass external threaded cable gland fitting with additional conduit seal. Suitable for knockouts or threaded entries.

IP66 IP67 IP68 IP69



NPB Metric

FPAX45 NEW

cable gland

Fast fit, swivel, 45 degree elbow, nickel plated brass external threaded cable gland fitting with additional conduit seal. Suitable for knockouts or threaded entries.

IP66 IP67 IP68 IP69



NPB Metric

FPAX	FPAX90	FPAX45	nominal size (mm)	OD mm	european (NW) sizes
			10	10.0	7
			10		7
			11	11.5	8
FPAX13-BM16-CG	FPAX13-BM16-CG-90		13	13.0	10
			13		10
			13		10
FPAX16-BM16-CG	FPAX16-BM16-CG-90	FPAX16-BM20-CG-45	16	15.8	12
FPAX16-BM20-CG	FPAX16-BM20-CG-90		16		12
			16		12
			16		12
			18	18.5	14
			18		14
			20	20.0	
FPAX21-BM20-CG	FPAX21-BM20-CG-90	FPAX21-BM20-CG-45	21	21.2	17
			21		17
			21		17
			25	25.0	
FPAX28-BM25-CG	FPAX28-BM25-CG-90	FPAX28-BM25-CG-45	28	28.5	23
			28		23
FPAX34-BM32-CG	FPAX34-BM32-CG-90	FPAX34-BM32-CG-45	34	34.5	29
			34		29
FPAX42-BM40-CG	FPAX42-BM40-CG-90	FPAX42-BM40-CG-45	42	42.5	36
			42		36
FPAX54-BM50-CG	FPAX54-BM50-CG-90	FPAX54-BM50-CG-45	54	54.5	48
			54		48
			67	67.0	56

Note: PG thread versions and EMC Cable Gland version on request.

Standards

BS EN IEC 61386

Technical Drawing





ULTRA™ system
The World's Best Conduit Fitting

NEW

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.

Integrated Sealing Technology

EXTRA LOW FIRE HAZARD ★★

IP66 IP67 IP68 IP69

Fittings ULTRA™ system straight

FPAU — straight external thread

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

IP66 IP67 IP68 IP69

FPAU — 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.

IP66 IP67 IP68 IP69

FPAU — straight swivel brass external thread

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

IP66 IP67 IP68 IP69







european (NW) sizes	nominal size (mm)	OD mm	Ext Metric	Ext NPT	Int UNEF	Thread	NPB Ext Metric	NPB Ext PG	NPB Ext NPT
7	10	10.0							
7	10								
8	11	11.5							
10	13	13.0	FPAU13-M16				FPAU13-BM16	FPAU13-BPG9	
10	13								
10	13								
12	16	15.8	FPAU16-M16	FPAU16-038	FPAU16-BU075	(¾")	FPAU16-BM16	FPAU16-BPG9	FPAU16-B038*
12	16		FPAU16-M20	FPAU16-050	FPAU16-BU088	(⅞")	FPAU16-BM20	FPAU16-BPG11	FPAU16-B050*
12	16				FPAU16-BU100	(1")			
12	16				FPAU16-BU119	(1 3/16")			
14	18	18.5							
14	18								
	20	20.0							
17	21	21.2	FPAU21-M20	FPAU21-050	FPAU21-BU100	(1")	FPAU21-BM20	FPAU21-BPG13	FPAU21-B050*
17	21		FPAU21-M25		FPAU21-BU119	(1 3/16")		FPAU21-BPG16	
17	21				FPAU21-BU125	(1¼")			
	25	25.0							
23	28	28.5	FPAU28-M25	FPAU28-075	FPAU28-BU138	(1⅜")	FPAU28-BM25	FPAU28-BPG21	FPAU28-B075*
23	28		FPAU28-M32						
29	34	34.5	FPAU34-M32	FPAU34-100	FPAU34-BU144	(1 7/16")	FPAU34-BM32	FPAU34-BPG29	FPAU34-B100*
29	34		FPAU34-M40						
36	42	42.5	FPAU42-M40	FPAU42-125	FPAU42-BU200	(2")	FPAU42-BM40	FPAU42-BPG36	FPAU42-B125*
36	42		FPAU42-M50	FPAU42-150	FPAU42-BU225	(2¼")	FPAU42-BM50		FPAU42-B150*
48	54	54.5	FPAU54-M50	FPAU54-150	FPAU54-BU200	(2")	FPAU54-BM50		FPAU54-B150*
48	54		FPAU54-M63	FPAU54-200	FPAU54-BU225	(2¼")	FPAU54-BM63	FPAU54-BPG48*	FPAU54-B200*
56	67	67.0							

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 128
  - EMC braid clamp version see page 124

Fine Pitch



Coarse Pitch



properties

- Fast fit - True one piece component
- IP rating: for conduit & fitting **IP66 + IP67 + IP68 (2 bar) + 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**
  - **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 149
- Halogen, sulphur and phosphorus free
- UV resistant
- Swivel threads allow assembly without twisting of cables
- EN 45545 HL3 and NFPA 130 compliant

NEW

FPAU

Integrated Sealing Technology

straight swivel brass internal thread

One piece fast fit, swivel, nickel plated brass internal threaded fitting with integrated conduit seal or threaded entries.

IP66 IP67 IP68 IP69



NPB Int Metric

FPAU

Integrated Sealing Technology

flange

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

IP66 IP67 IP68 IP69



Flange

FPAU - FPAU

Integrated Sealing Technology

coupler

One piece fast fit coupler to join corrugted conduits.

IP66 IP67 IP68 IP69



Coupler

NPB Int Metric	Flange	Coupler	nominal size (mm)	OD mm	european (NW) sizes
			10	10.0	7
			10		7
			11	11.5	8
FPAU13-BFM16			13	13.0	10
			13		10
			13		10
FPAU16-BFM16	FPAU16-FL	FPAU16-FPAU16	16	15.8	12
FPAU16-BFM20			16		12
			16		12
			16		12
			18	18.5	14
			18		14
			20	20.0	
FPAU21-BFM20	FPAU21-FL	FPAU21-FPAU21	21	21.2	17
			21		17
			21		17
			25	25.0	
FPAU28-BFM25	FPAU28-FL	FPAU28-FPAU28	28	28.5	23
			28		23
FPAU34-BFM32	FPAU34-FL	FPAU34-FPAU34	34	34.5	29
			34		29
FPAU42-BFM40	FPAU42-FL		42	42.5	36
			42		36
FPAU54-BFM50			54	54.5	48
			54		48
			67	67.0	56

Standards & Approvals

Technical Drawing



Integrated Sealing Technology

FLEXICON Ultra



ULTRA™ system
The World's Best Conduit Fitting

NEW

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.

Integrated Sealing Technology

EXTRA LOW FIRE HAZARD ★★

IP66 IP67 IP68 IP69

Fittings ULTRA™ system 90° and 45°

FPAU 90 — 90° external thread

One piece fast fit, external threaded 90 degree elbow fitting with integrated conduit for knockouts.

IP66 IP67 IP68 IP69



FPAU 90 — 90° UNEF swivel internal thread

One piece fast fit, 90 degree elbow fitting with nickel plated brass swivel UNEF internal thread for attachment to circular connectors with integrated conduit seal.

IP66 IP67 IP68 IP69



FPAU 90 — 90° swivel brass external thread

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

IP66 IP67 IP68 IP69



FPAU 90 — 90° swivel brass internal thread

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

IP66 IP67 IP68 IP69



european (NW) sizes	nominal size (mm)	OD mm	Ext Metric	Ext NPT	Int UNEF		NPB Ext Metric	NPB Ext PG	NPB Ext NPT	NPB Int Metric
7	10	10.0								
7	10									
8	11	11.5								
10	13	13.0	FPAU13-M16-90				FPAU13-BM16-90	FPAU13-BPG9-90		FPAU13-BFM16-90
10	13									
10	13									
12	16	15.8	FPAU16-M16-90	FPAU16-050-90B	FPAU16-BU075-90	(¾")	FPAU16-BM16-90	FPAU16-BPG9-90	FPAU16-B050-90*	FPAU16-BFM16-90
12	16		FPAU16-M20-90		FPAU16-BU088-90	(⅞")	FPAU16-BM20-90	FPAU16-BPG11-90		FPAU16-BFM20-90
12	16				FPAU16-BU100-90	(1")				
12	16				FPAU16-BU119-90	(1 3/16")				
14	18	18.5								
14	18									
	20	20.0								
17	21	21.2	FPAU21-M20-90	FPAU21-050-90B	FPAU21-BU100-90	(1")	FPAU21-BM20-90	FPAU21-BPG13-90	FPAU21-B050-90*	FPAU21-BFM20-90
17	21				FPAU21-BU119-90	(1 3/16")		FPAU21-BPG16-90		
17	21				FPAU21-BU125-90	(1¼")				
	25	25.0								
23	28	28.5	FPAU28-M25-90	FPAU28-075-90B	FPAU28-BU133-90	(1⅜")	FPAU28-BM25-90	FPAU28-BPG21-90	FPAU28-B075-90*	FPAU28-BFM25-90
23	28				FPAU28-BU144-90	(1 7/16")				
29	34	34.5	FPAU34-M32-90	FPAU34-100-90B	FPAU34-BU144-90	(1 7/16")	FPAU34-BM32-90	FPAU34-BPG29-90	FPAU34-B100-90*	FPAU34-BFM32-90
29	34				FPAU34-BU175-90	(1¾")				
36	42	42.5	FPAU42-M40-90	FPAU42-125-90B	FPAU42-BU200-90	(2")	FPAU42-BM40-90	FPAU42-BPG36-90	FPAU42-B125-90*	FPAU42-BFM50-90
36	42		FPAU42-M50-90	FPAU42-150-90B	FPAU42-BU225-90	(2¼")	FPAU42-BM50-90		FPAU42-B150-90*	
48	54	54.5	FPAU54-M50-90	FPAU54-150-90B	FPAU54-BU200-90	(2")	FPAU54-BM50-90	FPAU54-BPG48-90*	FPAU54-B150-90*	FPAU54-BFM50-90
48	54		FPAU54-M63-90	FPAU54-200-90B	FPAU54-BU225-90	(2¼")	FPAU54-BM63-90		FPAU54-B200-90*	
56	67	67.0								

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 128
  - EMC braid clamp version see page 124

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

properties

- Fast fit - True one piece component
- IP rating: for conduit & fitting **IP66 + IP67 + IP68 (2 bar) + 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 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 149
- Halogen, sulphur and phosphorus free
- UV resistant
- Swivel threads allow assembly without twisting of cables
- EN 45545 HL3 and NFPA130 compliant

NEW

FPAU 90

Integrated Sealing Technology

90˚ flange

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

IP66 IP67 IP68 IP69



Flange

FPAU 45

Integrated Sealing Technology

45˚ flange

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

IP66 IP67 IP68 IP69



Flange

FPAU 45

Integrated Sealing Technology

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.

IP66 IP67 IP68 IP69



Int UNEF

				nominal size (mm)	OD mm	european (NW) sizes
				10	10.0	7
				10		7
				11	11.5	8
				13	13.0	10
				13		10
				13		10
FPAU16-FL-90	FPAU16-FL-45	FPAU16-BU075-45	(¾")	16	15.8	12
		FPAU16-BU088-45	(⅞")	16		12
		FPAU16-BU100-45	(1")	16		12
		FPAU16-BU119-45	(1 3/16")	16		12
				18	18.5	14
				18		14
				20	20.0	
FPAU21-FL-90	FPAU21-FL-45	FPAU21-BU100-45	(1")	21	21.2	17
		FPAU21-BU119-45	(1 3/16")	21		17
		FPAU21-BU125-45	(1¼")	21		17
				25	25.0	
FPAU28-FL-90	FPAU28-FL-45	FPAU28-BU133-45	(1⅜")	28	28.5	23
		FPAU28-BU144-45	(1 7/16")	28		23
FPAU34-FL-90	FPAU34-FL-45	FPAU34-BU144-45	(1 7/16")	34	34.5	29
		FPAU34-BU175-45	(1¾")	34		29
FPAU42-FL-90	FPAU42-FL-45	FPAU42-BU200-45	(2")	42	42.5	36
		FPAU42-BU225-45	(2¼")	42		36
FPAU54-FL-90	FPAU54-FL-45	FPAU54-BU200-45	(2")	54	54.5	48
		FPAU54-BU225-45	(2¼")	54		48
				67	67.0	56

Standards

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
The World's Best Conduit Fitting

NEW

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.

Integrated Sealing Technology

EXTRA LOW FIRE HAZARD ★★

IP66 IP67 IP68 IP69

Fittings ULTRA™ system 45°

FPAU 45

Integrated Sealing Technology

45° external thread

One piece fast fit, external threaded 45 degree elbow fitting with integrated conduit seal. Suitable for knockouts.

IP66 IP67 IP68 IP69



FPAU 45

Integrated Sealing Technology

45° swivel brass external thread

One piece fast fit, swivel, 45 degree elbow, nickel plated brass external threaded fitting with integrated conduit seal. Suitable for knockouts or threaded entries.

IP66 IP67 IP68 IP69



FPAU 45

Integrated Sealing Technology

45° swivel brass internal thread

One piece fast fit, swivel, 45 degree elbow fitting, nickel plated brass internal threaded fitting with integrated conduit seal.

IP66 IP67 IP68 IP69



european (NW) sizes	nominal size (mm)	OD mm	Ext Metric	Ext NPT	NPB Ext Metric	NPB Ext PG	NPB Ext NPT	NPB Int Metric
7	10	10.0						
7	10							
8	11	11.5						
10	13	13.0						
10	13							
10	13							
12	16	15.8	FPAU16-M20-45	FPAU16-050-45	FPAU16-BM16-45	FPAU16-BPG13-45	FPAU16-B050-45*	FPAU16-BFM20-45
12	16				FPAU16-BM20-45	FPAU16-BPG16-45		
12	16							
12	16							
14	18	18.5						
14	18							
	20	20.0						
17	21	21.2	FPAU21-M20-45	FPAU21-050-45	FPAU21-BM20-45	FPAU21-BPG13-45	FPAU21-B050-45*	FPAU21-BFM20-45
17	21					FPAU21-BPG16-45		
17	21							
	25	25.0						
23	28	28.5	FPAU28-M25-45	FPAU28-075-45	FPAU28-BM25-45	FPAU28-BPG21-45	FPAU28-B075-45*	FPAU28-BFM25-45
23	28							
29	34	34.5	FPAU34-M32-45	FPAU34-100-45	FPAU34-BM32-45	FPAU34-BPG29-45	FPAU34-B100-45*	FPAU34-BFM32-45
29	34							
36	42	42.5	FPAU42-M50-45	FPAU42-150-45	FPAU42-BM40-45	FPAU42-BPG36-45	FPAU42-B125-45*	FPAU42-BFM50-45
36	42				FPAU42-BM50-45		FPAU42-B150-45*	
48	54	54.5	FPAU54-M50-45	FPAU54-150-45	FPAU54-BM50-45	FPAU54-BPG48-45*	FPAU54-B150-45*	FPAU54-BFM50-45
48	54				FPAU54-BM63-45		FPAU54-B200-45*	
56	67	67.0						

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 128
  - EMC braid clamp version see page 124

Technical Drawing



properties

- Fast fit - True one piece component
- IP rating: **for conduit & fitting - IP66 + IP67 + IP68 (2 bar) + IP68 (72hrs @ 1m) + IP69 for cable gland - IP68 (10 bar)**
- 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
- 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 149
- Halogen, sulphur and phosphorus free
- UV resistant
- Swivel threads allow assembly without twisting of cables
- EN 45545 HL3 and NFPA130 compliant
- Refer to tables below for clamping range (Cable Range)

NEW

ULTRA™ system R Type Cable Strain Relief

STRAIGHT

Integrated Sealing Technology

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.

IP66 IP67 IP68 IP69



90˚ELBOW

Integrated Sealing Technology

cable gland

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

IP66 IP67 IP68 IP69



45˚ELBOW

Integrated Sealing Technology

cable gland

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.

IP66 IP67 IP68 IP69



STRAIGHT NPB metric	STRAIGHT Cable Range (mm)	STRAIGHT NPB metric	STRAIGHT Cable Range (mm)	90˚ELBOW NPB metric	90˚ELBOW Cable Range (mm)	45˚ELBOW NPB metric	45˚ELBOW Cable Range (mm)	nominal size (mm)	OD mm	european (NW) sizes
								10	10.0	7
								10		7
								11	11.5	8
FPAU13-BM16-CG-R1	4.0 - 6.5			FPAU13-BM16-CG-R1-90	4.0 - 6.5			13	13.0	10
FPAU13-BM16-CG-R2	5.0 - 8.0			FPAU13-BM16-CG-R2-90	5.0 - 8.0			13		10
FPAU13-BM16-CG-R3	6.5 - 9.5			FPAU13-BM16-CG-R3-90	6.5 - 9.5			13		10
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	16	15.8	12
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	16		12
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	16		12
		FPAU16-BM20-CG-R4	7.0 - 10.5			FPAU16-BM20-CG-R4-45	7.0 - 10.5	16		12
								18	18.5	14
								18		14
								20	20.0	
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	21	21.2	17
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	21		17
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	21		17
								25	25.0	
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	28	28.5	23
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	28		23
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	34	34.5	29
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	34		29
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	42	42.5	36
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	42		36
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	54	54.5	48
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	54		48
								67	67.0	56

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).

EXTRA LOW FIRE HAZARD ★★ IP66 IP67 IP68 IP69

Fittings

FPA

T piece with inspection lid
Fast fit T piece with inspection lid.

IP66



FPA

Reducing divider
Fast fit reducing divider

IP66



Reducer/Stop Plug

Fitting to reduce or blank off any outlets.

IP66





european (NW) sizes	Conduit In (mm)	Conduit Out x 2 for divider	FPA	FPA	Reducer/Stop Plug
12	16	13	FPA16T FPA20T	FPA16-13-13	FPA13-R16 SP-R16
17	21	16	FPA21T	FPA21-16-16	FPA16-R21 FPA13-R21 SP-R21
23	28	21	FPA28T	FPA28-21-21	FPA25-R28 FPA21-R28 FPA20-R28 FPA16-R28 FPA13-R28 SP-R28
29	34	28	FPA34T	FPA34-28-28	FPA28-R34 FPA21-R34 FPA16-R34 SP-R34
36	42		FPA42T		FPA34-R42 FPA28-R42 FPA21-R42

Ordering Notes

* Indicates parts made to order on request and may be subject to MOQ and lead time

- **Available on request:**
  - other colours

How to read the fittings code

FPAX21-R28

Conduit Size
T-piece or Reducer Size



properties

- Fast fit
- **IP rating: FPA: IP66**
  FPAX: IP66 + IP67 + IP68 (2 bar)
  FPAX Divider: IP66 + IP67 + IP68 (2 bar) +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 149
- 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 NEW	Reducer / Stop Plug
T piece with inspection lid Fast fit T piece with inspection lid and additional seals for enhanced IP rating. IP66 IP67 IP68	**Divider** Fast fit reducing divider with additional seals for enhanced IP ratings IP66 IP67 IP68 IP69	Fitting to reduce or blank off any outlets. IP66 IP67 IP68







R



SP

european (NW) sizes	Conduit In (mm)	Conduit Out x 2 for divider	FPAX	FPAX Divider	Reducer / Stop Plug
12	16	13	FPAX16T FPAX20T	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	FPAX25-R28 FPAX21-R28 FPAX20-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
48	54	42		FPAX54-42-42	

Standards

BS EN IEC 61386





Flexilok® system

IP66

EXTRA LOW FIRE HAZARD ★★

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 149
- Halogen, sulphur and phosphorus free
- Available in Black, Grey (RAL 7031) and white, see page 71
- 42mm and 54mm feature 4 teeth for added strength

Fittings

FLK

straight external thread

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

IP66



FLK

Push in

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

IP66



FLK-FLK

coupler

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

IP66



european (NW) sizes	nominal size (mm)	OD mm	Ext Metric	Ext PG		Coupler
7	10	10.0	FLK10-M12	FLK10-PG7		
7	10					
8	11	11.5				
10	13	13.0	FLK13-M16	FLK13-PG9		
10	13					
10	13					
12	16	15.8	FLK16-M16	FLK16-PG11	FLK16-PL20	FLK16-FLK16
12	16		FLK16-M20	FLK16-PG13		
12	16					
12	16					
14	18	18.5				
14	18					
	20	20.0	FLK20-M20		FLK20-PL20	FLK20-FLK20
17	21	21.2	FLK21-M20	FLK21-PG16	FLK21-PL20	FLK21-FLK21
17	21					
17	21					
	25	25.0	FLK25-M25		FLK25-PL25	FLK25-FLK25
23	28	28.5	FLK28-M25	FLK28-PG21	FLK28-PL25	FLK28-FLK28
23	28					
29	34	34.5	FLK34-M32	FLK34-PG29	FLK34-PL32	FLK34-FLK34
29	34					
36	42	42.5	FLK42-M40	FLK42-PG36		
36	42		FLK42-M50			
48	54	54.5	FLK54-M50	FLK54-PG48		
48	54		FLK54-M63			
56	67	67.0				

Ordering Notes

- Specify Black or Grey (B=Black, G=Grey) eg. FLK20-M20B
- For white version see page 71
- Details for removal tools can be found on page 131

Also Available

- Push in fitting removal tool - see accessories page 131
- Brass threaded versions
- Two teeth version of 42mm and 54mm available on request

Removal Tool



NOTE: 42mm and 54mm require a removal tool to aid removal if necessary see page 131.

properties

- 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 71
- Polypropylene version suitable for acid environments



FLK90

90° elbow external thread

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

IP66



FLK45

45° elbow external thread

One piece, slim, fast fit, external threaded 45 degree elbow fitting suitable for knockouts.

IP66



FLK-PP

straight external thread

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

IP66



Ext Metric	Ext PG	Ext Metric	Ext Metric (PP)	nominal size (mm)	OD mm	european (NW) sizes
				10	10.0	7
				10		7
				11	11.5	8
				13	13.0	10
				13		10
				13		10
FLK16-M16-90	FLK16-PG11-90		FLK16-M16-PP	16	15.8	12
FLK16-M20-90		FLK16-M20-45		16		12
				16		12
				16		12
				18	18.5	14
				18		14
FLK20-M20-90		FLK20-M20-45	FLK20-M20-PP	20	20.0	
FLK21-M20-90	FLK21-PG16-90	FLK21-M20-45		21	21.2	17
				21		17
				21		17
FLK25-M25-90		FLK25-M25-45	FLK25-M25-PP	25	25.0	
FLK28-M25-90	FLK28-PG21-90	FLK28-M25-45		28	28.5	23
				28		23
FLK34-M32-90	FLK34-PG29-90	FLK34-M32-45	FLK34-M32-PP	34	34.5	29
				34		29
				42	42.5	36
				42		36
				54	54.5	48
				54		48
				67	67.0	56

Standards

c UL us

REACh

CE

RoHS







FPL system
upvc corrugated pliable conduit

IP40 IP66 IP67

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 15kg

Fittings

FLK

straight external thread

One piece, slim, fast fit, nylon external threaded fitting suitable for knockouts or threaded entries.

IP66

FLK90

90° elbow external thread

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

IP66

MP

straight external thread

Straight nylon compression fitting external thread including locknut.

IP40

MPS

straight external thread

Straight nylon compression fitting with seal external thread including locknut.

IP67







MP shown

nominal size (mm)	FPL part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	metric thread part number	metric thread part number	metric thread part number	metric thread part number
16	FPL16	100	16.0	12.0	25	FLK16-M16	FLK16-M16-90	MP-16-M16	MPS-16-M16
16						FLK16-M20	FLK16-M20-90	MP-16-M20	MPS-16-M20
20	FPL20	50, 100	20.0	15.0	30	FLK20-M20	FLK20-M20-90	MP-20-M20	MPS-20-M20
25	FPL25	50	25.0	19.5	40	FLK25-M25	FLK25-M25-90	MP-25-M25	MPS-25-M25
32	FPL32	25	32.0	25.0	50	FLK32-M32*	FLK32-M32-90*		
34	FPL34	25	34.5	27.9	50	FLK34-M32	FLK34-M32-90	MP-32-M32	MPS-32-M32

Ordering Notes

- Specify Black or Grey (B = Black, G = Grey)
- FPL can be used with FPA fittings
- **Available on request:**
  - longer lengths and bulk packaging
  - cut lengths and assemblies, additional sizes
  - alternative threads, other colours
  - heavy duty version

* Indicates parts made to order

Don't Forget



Page 129

Standards

BS EN IEC 61386

REACh ✓

RoHS ✓ CE

White Products

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



Conduit

FPP

For details see page 46

IP66

FPL

For details see page 70

IP66

Fittings

FLK

straight external thread

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

IP66

FLK-90

90° elbow external thread

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

IP66

FLK-FLK

coupler

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

IP66

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 lid

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



european (NW) sizes	OD mm	FPP	50m coil	FPL	50m & 100m coil	Ext Metric	Ext Metric			
20	20.0	FPP20W-50M		FPL20W-100M		FLK20-M20W	FLK20-M20-90W	FLK20-FLK20W	FCL20W	FCL20W-P
25	25.0	FPP25W-50M		FPL25W-50M		FLK25-M25W	FLK25-M25-90W	FLK25-FLK25W	FCL25W	FCL25W-P
32	32.0	FPP32W-50M*				FLK32-M32W*				
34	34.5	FPP34W-50M				FLK34-M32W				

PVC - Contractor pack white

NEW

FPL-CP20W	M20 thread
FPL-CP25W	M25 thread



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

LPC

NEW

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

IP66 IP67 IP68

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

See page 81 for more details

MPC

NEW

straight nylon compression fitting with external thread

IP66 IP67 IP68

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

See page 81 for more details

Standards

REACh ✓

RoHS ✓ CE





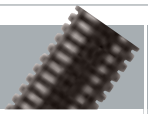
FPY, FPYS, FPYL, FPYLS system
corrugated flexible conduit

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

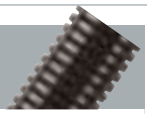
FPY



Construction: Nylon (PA6) corrugated flexible conduit. Colour black.

Typical Applications: Automotive

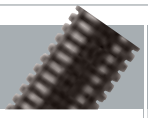
FPYS



Construction: Slit nylon (PA6) corrugated flexible conduit. Colour black.

Typical Applications: Automotive looms, harnesses and retrofit.

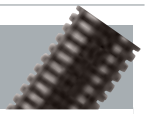
FPYL



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.

european (NW) sizes	nominal size (mm)	pitch	FPY part number	FPY reel length (m)	FPY outside dia (mm)	FPY inside dia (mm)	FPY min inside bend radius (mm)	FPYS part number	FPYS reel length (m)	FPYS outside dia (mm)	FPYS inside dia (mm)	FPYS min inside bend radius (mm)	FPYL part number	FPYL reel length (m)	FPYL outside dia (mm)	FPYL inside dia (mm)	FPYL min inside bend radius (mm)	FPYLS part number	FPYLS reel length (m)	FPYLS outside dia (mm)	FPYLS inside dia (mm)	FPYLS min inside bend radius (mm)
	7	F	FPY6B	100	7.1	4.8	10															
7	10	F	FPY8B	50	10.0	6.5	15	FPYS8B	50	10.0	6.5	15	FPYL8B*	100	10.0	6.5	15	FPYLS8B*	100	10.0	6.5	15
8	11	F	FPY10B	50	11.5	8.5	20	FPYS10B	50	11.5	8.5	20	FPYL10B*	100	11.5	8.5	20	FPYLS10B*	100	11.5	8.5	20
10	13	F	FPY12B	50	13.0	10.0	25	FPYS12B	50	13.0	10.0	25	FPYL12B*	100	13.0	10.1	25	FPYLS12B*	100	13.0	10.1	25
12	16	F	FPY16B	50	16.1	12.8	35	FPYS16B	50	16.1	12.8	35	FPYL16B*	100	16.1	13.0	35	FPYLS16B*	100	16.1	13.0	35
12	16	F																				
14	18	F	FPY18B	50	18.5	14.2	35	FPYS18B	50	18.5	14.2	35	FPYL18B*	100	18.5	14.4	35	FPYLS18B*	100	18.5	14.4	35
17	21	F	FPY20B	50	21.2	16.9	40	FPYS20B	50	21.2	16.9	40	FPYL20B*	100	21.2	17.1	40	FPYLS20B*	100	21.2	17.1	40
22	25.4	F	FPY25B	50	25.4	21.4	45	FPYS25B	50	25.4	21.4	45	FPYL25B*	100	25.4	21.6	45	FPYLS25B*	100	25.4	21.6	45
23	28	F	FPY28B	50	28.5	23.0	45	FPYS28B	50	28.5	23.0	45	FPYL28B*	50	28.5	23.2	45	FPYLS28B*	50	28.5	23.2	45
29	34	C	FPY32B	25	34.5	28.3	55	FPYS32B	25	34.5	28.3	55	FPYL32B*	50	34.5	28.5	55	FPYLS32B*	50	34.5	28.5	55
36	42	C	FPY40B	25	42.5	35.7	65	FPYS40B	25	42.5	35.7	65	FPYL40B*	50	42.5	35.9	65	FPYLS40B*	50	42.5	35.9	65
48	54	C	FPY50B	25	54.5	47.4	80	FPYS50B	25	54.5	47.4	80	FPYL50B*	50	54.5	47.6	80	FPYLS50B*	50	54.5	47.6	80

F = fine pitch C = coarse pitch

Ordering Notes

- **Metric threads supplied complete with locknuts**
  - **Available on request:**
    - reduced outlet T pieces
    - other colours
    - PG threads

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



MP, MP90 & T system

IP40 IP67

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.

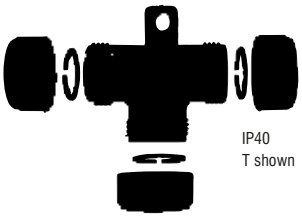


Fittings

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


MP shown


MP shown


IP40
T shown

Ext Metric	Ext Metric	Ext Metric	Ext Metric	T Piece	T Piece	european (NW) sizes	nominal size (mm)	OD mm
						7	10	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

Standards

REACh RoHS

BS EN IEC 61386 CE





Large diameter systems
nylon and polypropylene

NEW

IP40 IP65 IP67+ IP68+

Conduit

EN 45545-2 HFFR 130

LDFPAL

Construction: Light weight nylon (PA6) corrugated flexible conduit.

Colour: Black or Grey (RAL 7031).

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

LDFPAS

STANDARD LOW FIRE HAZARD *

Construction: Standard weight, flame retardant nylon (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 149
- UL 94 V2 flame retardancy
- Halogen, sulphur and phosphorus free
- UV resistant (black)
- Abrasion resistant
- Highly resistant to solvents and oils

LDFPIH

STANDARD LOW FIRE HAZARD *

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
- Highly resistant to solvents and oils
- Self extinguishing
- Halogen, sulphur and phosphorus free
- Low Fire Hazard (LFH), see page 149

Also available in extra low fire hazard version - FPIHR see page 45

LDFPR

EXTRA LOW FIRE HAZARD **

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)
- Lloyd's Register Type Approval
- Extra Low Fire Hazard (LFH)
- Compliant to LUL Std S1085
- UL 94 V0 flame retardancy
- Halogen, sulphur and phosphorus free
- UV resistant
- Abrasion resistant
- Highly resistant to solvents and oils

LDFPP

Construction: Standard weight polypropylene, flexible conduit.

Colour: Black, Grey (RAL 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)	LDFPAL	part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	LDFPAS	part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	LDFPIH	part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	LDFPR	part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	LDFPP	part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)
70	80		LDFPAL80	10	80.0	67.0	150		LDFPAS80	10	80.0	67.0	160		LDFPIH80	10	80.0	66.5	170		LDFPR80	10	80.0	67.0	160		LDFPP80	10	80.0	67.0	300
95	106		LDFPAL106*	10	106.0	91.8	210		LDFPAS106	10	106.0	91.5	210		LDFPIH106*	10	106.0	91.0	250		LDFPR106*	10	106.0	91.5	210		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
- **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 76

* Indicates parts made to order on request and may be subject to MOQ and lead time

Standards

BS EN IEC 61386

REACh RoHS HFFR 130 CE UNDERGROUND EN 45545-2

properties

- Suitable for use with Large Diameter conduits
- Material
  - LDMP and LDMPS: nylon PA6
  - FCLAMP: nylon PA66
  - REC: thermoplastic elastomer
- Temperature Range
  - LDMP & LDMPS fittings: -40° to 120°
  - FCLAMP: -50° to 135°
  - REC: -50° to 120°
- UV resistant
- Fire Performance
  - **LDMP and LDMPS:**
    - Halogen, Sulphur & Phosphorous Free
    - Self extinguishing
  - **REC:**
    - Halogen, Sulphur & Phosphorous Free
  - **FCLAMP:**
    - Extra Low Fire Hazard see page 149
    - Halogen, Sulphur & Phosphorous Free
    - Self extinguishing
    - EN45545 HL3 and NFPA 130 compliant
    - For installation instructions see page 142

NEW

Fittings

LDMP

straight flanged nylon clamp fitting

Flanged body with 2 clamps.

IP40



termination	part number
FL	LDMP-80-FL
FL	LDMP-106-FL

LDMPS

straight flanged nylon clamp fitting with seals

Flanged body with 2 clamps and seals.

IP65 IP67+ IP68+



termination	part number
FL	LDMPS-80-FL
FL	LDMPS-106-FL

LDMP90

90° flanged nylon clamp fitting

Flanged 90° body with 2 clamps.

IP40



termination	part number
FL	LDMP90-80-FL
FL	LDMP90-106-FL

LDMPS90

90° flanged nylon clamp fitting with seals

Flanged 90° body with 2 clamps and seals.

IP65



termination	part number
FL	LDMPS90-80-FL
FL	LDMPS90-106-FL

FCLAMP

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 76).



part number
FCLAMP-8-80

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).



part number
REC80

FCC CLIPS

plated steel P clip with pvc liner

P clip to support and secure conduit.



part number	european (NW) sizes	nominal size (mm)
FCC75	70	80
FCC106	95	106



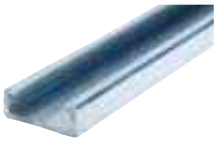


Conduit Fixing range
Clips and Channels

NEW

EXTRA LOW FIRE HAZARD ★★

Channel - Low profile



Aluminium
10mm x 25mm

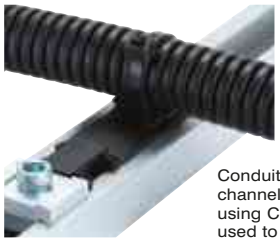
Part No. MCALA-2M

Part No. MCALA-1M

NW Size	Conduit Size (OD) mm	 FCL clip for corrugated	 FCL clip for plain conduit	 Spacer/Cable Tie fixing PA66 black
7	10	FCL10		CS-CT
10	13	FCL13		CS-CT
12	16	FCL16	FCL16-P	CS-CT
14	18	FCL18	FCL18-P	CS-CT
	20	FCL20	FCL20-P	CS-CT
17	21	FCL21	FCL21-P	CS-CT
	25	FCL25	FCL25-P	CS-CT
	26		FCL26-P	CS-CT
23	28	FCL28		CS-CT
	32	FCL32	FCL32-P	CS-CT
25	33		FCL33-P	CS-CT
36	34	FCL34		CS-CT
48	42	FCL42		CS-CT
	54	FCL54		CS-CT

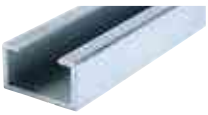


FCL Conduit clips with spacer and secured to channel with End Stops



Conduit secured to channel with Cable Tie using CS-CT. End Stop used to secure position

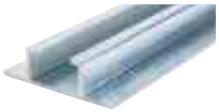
Channel - Standard profile



Aluminium
18mm x 31mm

Part No. MCALB-2M

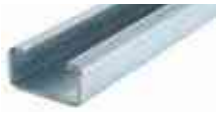
Part No. MCALB-1M



Elongated Aluminium
18mm x 60mm

Part No. MCALC-2M

Part No. MCALC-1M



Galvanised Steel
15mm x 30mm

Part No. MCGSB-2M

Part No. MCGSB-1M



Hot Dip Galvanised Steel Slotted
15mm x 30mm

Part No. MCHDGSLT-2M

Part No. MCHDGSLT-1M

NW Size	Conduit Size (OD) mm	 FCL clip for corrugated conduit	 FCL clip for smooth conduit	 Spacer/Cable Tie fixing PA66 black	 Channel Nut FCL Mount galvanised steel	 Channel Nut anodised aluminium
7	10	FCL10		CS-CT	CN-GS-M5-FCL	
10	13	FCL13		CS-CT	CN-GS-M5-FCL	
12	16	FCL16	FCL16-P	CS-CT	CN-GS-M5-FCL	CN-AL-M5
14	18	FCL18	FCL18-P	CS-CT	CN-GS-M6-FCL	CN-AL-M6
	20	FCL20	FCL20-P	CS-CT	CN-GS-M6-FCL	CN-AL-M6
17	21	FCL21	FCL21-P	CS-CT	CN-GS-M6-FCL	CN-AL-M6
	25	FCL25	FCL25-P	CS-CT	CN-GS-M6-FCL	CN-AL-M6
	26		FCL26-P	CS-CT	CN-GS-M6-FCL	CN-AL-M6
23	28	FCL28		CS-CT	CN-GS-M6-FCL	CN-AL-M6
	32	FCL32	FCL32-P	CS-CT	CN-GS-M6-FCL	CN-AL-M6
25	33		FCL33-P	CS-CT	CN-GS-M6-FCL	CN-AL-M6
36	34	FCL34		CS-CT	CN-GS-M6-FCL	CN-AL-M6
48	42	FCL42		CS-CT	CN-GS-M6-FCL	CN-AL-M6
	54	FCL54		CS-CT	CN-GS-M6-FCL	CN-AL-M6

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

Alternate channel lengths on request. Anodising of Aluminium channel on request. Slotted variants also available. Visit website for more information.

properties

- 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 149
- Halogen, Sulphur & Phosphorous Free
- Self extinguishing
- For installation instructions see page 142
- EN45545 HL3 and NFPA 130 compliant
- Slotted channel versions also available - consult website for details

NEW



System Overview



FCL mounted in channel complete with spacer and fixed with End Stops



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



Channel Nut galvanised steel



End Stop anodised aluminium



End Stop galvanised steel

CN-GS-M5	ES-AL	ES-GS
CN-GS-M5	ES-AL	ES-GS
CN-GS-M5	ES-AL	ES-GS
CN-GS-M6	ES-AL	ES-GS
CN-GS-M6	ES-AL	ES-GS
CN-GS-M6	ES-AL	ES-GS
CN-GS-M6	ES-AL	ES-GS
CN-GS-M6	ES-AL	ES-GS
CN-GS-M6	ES-AL	ES-GS
CN-GS-M6	ES-AL	ES-GS
CN-GS-M6	ES-AL	ES-GS
CN-GS-M6	ES-AL	ES-GS
CN-GS-M6	ES-AL	ES-GS
CN-GS-M6	ES-AL	ES-GS



Channel Nut anodised aluminium



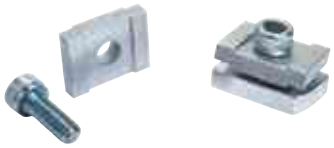
Channel Nut galvanised steel

CN-AL-M6	CN-GS-M6
CN-AL-M6	CN-GS-M6
CN-AL-M6	CN-GS-M6
CN-AL-M6	CN-GS-M6
CN-AL-M6	CN-GS-M6
CN-AL-M6	CN-GS-M6
CN-AL-M6	CN-GS-M6
CN-AL-M6	CN-GS-M6

Configurations



FCL mounted in channel fixed with End Stop



End Stop - Components and complete



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



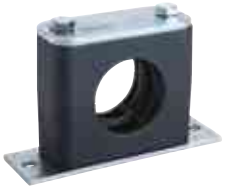
Channel Nut FCL Mount - Components and complete



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



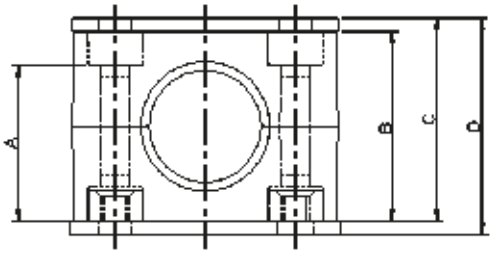
FCLAMP Kit Complete



FCLAMP Kit mounted on channel with Conduit

Thread Length Requirements - Dimension Table

FCLAMP	A	B	C	D
FCLAMP-3-16	29	36	39	42
FCLAMP-3-21	29	36	39	42
FCLAMP-3-28	35	42	45	48
FCLAMP-3-34	49	56	59	62
FCLAMP-3-42	58	65	68	71
FCLAMP-3-54	85	92	97	102
FCLAMP-3-67	85	92	97	102
FCLAMP-3-80	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
spiral reinforced pvc

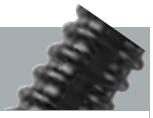
FPCG, FPCGN & FPCBU system
spiral reinforced pvc with special properties

c UL us

IP65

Conduit

FPCB

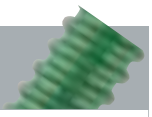


Construction: Smooth bore, helically formed PVC, flexible conduit with spiral UPVC reinforcement and flexible PVC jacket. Also available in UL recognised version (See ordering notes)

Colour: Black

Typical Applications: Routing of cables within machines.

FPCGN

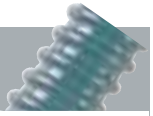


Construction: Smooth bore, helically formed PVC, flexible conduit with spiral UPVC reinforcement and flexible PVC jacket.

Colour: Green

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

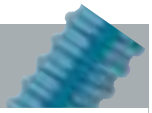
FPCG



Construction: As FPCB except colour grey.

Typical Applications: As FPCB. UL recognised.

FPCBU



Construction: As FPCB except colour blue.

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

Fittings

MPC

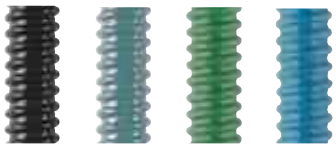
straight nylon compression fitting external thread

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

IP65



nominal size (mm)	FPC Black part number	Grey (RAL 7001)	Green (RAL 6001)	Blue (RAL 5012)	min inside bend radius (mm)	reel length (m)	outside dia (mm)	inside dia (mm)	metric thread part number	PG thread part number	NPT part number
12	FPC12B	FPC12G*	FPC12GN*	FPC12BU*	30	14.5	10.0	25	MPC-12-M16	MPC-12-PG9	
16	FPC16B	FPC16G*	FPC16GN*	FPC16BU*	30	16.5	12.0	25	MPC-16-M16	MPC-16-PG11	
16									MPC-16-M20	MPC-16-PG13	MPC-16-050
20	FPC20B	FPC20G*	FPC20GN*	FPC20BU*	30	21.0	16.0	35	MPC-20-M20	MPC-20-PG16	MPC-20-050
25	FPC25B	FPC25G*	FPC25GN*	FPC25BU*	30	27.5	22.0	45	MPC-25-M25	MPC-25-PG21	MPC-25-075
30	FPC30B*	FPC30G*			30	30.5	25.0	55	MPC-30-M32*	MPC-30-PG29*	
32	FPC32B	FPC32G*	FPC32GN*	FPC32BU*	10, 30	33.5	28.0	60	MPC-32-M32	MPC-32-PG29	MPC-32-100
40	FPC40B	FPC40G*	FPC40GN*	FPC40BU*	10, 30	41.0	35.0	80	MPC-40-M40	MPC-40-PG36	MPC-40-125
50	FPC50B	FPC50G*	FPC50GN*	FPC50BU*	10, 30	46.4	40.0	105	MPC-50-M50	MPC-50-PG42	MPC-50-150
63	FPC63B	FPC63G*	FPC63GN*	FPC63BU*	10, 30	57.0	50.0	120	MPC-63-M63	MPC-63-PG48	MPC-63-200



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



properties

- 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)
  -5˚C to +70˚C (LTS - Silver Grey)
- 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**
- **LTS (Silver Grey) is smooth outer and smooth bore**



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).

IP65



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).

IP65



LTS

smooth bore liquid tight sheathing

PVC, Silver Grey sheathing ideal for routing cables within machines. IP66 rating when used with MPC fittings.

MPC90 metric thread part number	MPC90 PG thread part number	MPC90 NPT part number	MPC45 metric thread part number	MPC45 NPT part number	LTS part number	reel length (m)	outside dia (mm)	inside dia (mm)	nominal size (mm)
									12
MPC90-16-M16	MPC90-16-PG11								16
MPC90-16-M20	MPC90-16-PG13	MPC90-16-050	MPC45-16-M20	MPC45-16-050	LTS16SG-50M	50	16.5	12	16
MPC90-20-M20	MPC90-20-PG16	MPC90-20-050	MPC45-20-M20	MPC45-20-050	LTS20SG-50M	50	21.0	16	20
MPC90-25-M25	MPC90-25-PG21	MPC90-25-075	MPC45-25-M25	MPC45-25-075	LTS25SG-50M	50	27.5	22	25
									30
MPC90-32-M32	MPC90-32-PG29	MPC90-32-100	MPC45-32-M32	MPC45-32-100	LTS32SG-50M	50	33.5	28	32
MPC90-40-M40	MPC90-40-PG36	MPC90-40-125							40
									50
									63

Standards

BS EN IEC 61386

* refer to conduit properties for applicable standards

Technical Drawing



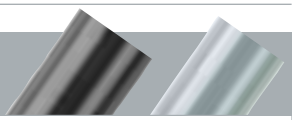


LPC system
smooth spiral reinforced pvc

IP66 IP67 IP68 IP69

Conduit

LPC

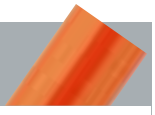


Construction: Smooth bore, smooth cover, helically formed pvc, flexible conduit with spiral upvc reinforcement and flexible pvc jacket.

Colour: Black or Grey

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

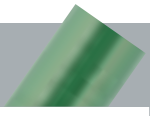
LPCO



Construction: As LPC except colour Orange.

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

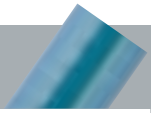
LPCGN



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.

HG HYGIENIC RANGE

Also available in Hygenic version in White, Blue and Grey - see page 84

Fittings

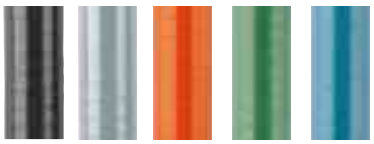
FCL-P

non metallic conduit clip

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



nominal size (mm)	LPC	Black part number	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)	metric thread part number
12		LPC12B	LPC12G*	LPC12O*	LPC12GN*	LPC12BU*	30	14.2	10.0	50	
16		LPC16B	LPC16G	LPC16O	LPC16GN*	LPC16BU*	30	17.8	12.6	50	FCL18-P
16											
20		LPC20B	LPC20G	LPC20O	LPC20GN*	LPC20BU*	10, 30	21.1	16.0	70	FCL21-P
25		LPC25B	LPC25G	LPC25O	LPC25GN*	LPC25BU*	10, 30	26.4	21.0	90	FCL26-P
32		LPC32B	LPC32G	LPC32O	LPC32GN*	LPC32BU*	10, 30	33.1	26.5	140	FCL33-P
40		LPC40B	LPC40G*	LPC40O*	LPC40GN*	LPC40BU*	10, 30	41.8	35.4	190	
50		LPC50B	LPC50G*	LPC50O*	LPC50GN*	LPC50BU*	10, 30	47.9	40.0	240	
63		LPC63B	LPC63G*	LPC63O*	LPC63GN*	LPC63BU*	10, 30	59.7	51.3	270	



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 124

Alternatives



properties

- Smooth, wipe clean surface
- Accepts some torsional movement
- IP rating:
  - **IP66, IP67 and IP68 with MPC fittings**
  - **IP66, IP67, IP68 (2 bar) + 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



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).

IP66 IP67 IP68



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).

IP66 IP67 IP68



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).

IP66 IP67 IP68



MPC			MPC90			MPC45		
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	nominal size (mm)
MPC-16-M16	MPC-16-PG11		MPC90-16-M16	MPC90-16-PG11				12
MPC-16-M20	MPC-16-PG13	MPC-16-050	MPC90-16-M20	MPC90-16-PG13	MPC90-16-050	MPC45-16-M20	MPC45-16-050	16
MPC-20-M20	MPC-20-PG16	MPC-20-050	MPC90-20-M20	MPC90-20-PG16	MPC90-20-050	MPC45-20-M20	MPC45-20-050	20
MPC-25-M25	MPC-25-PG21	MPC-25-075	MPC90-25-M25	MPC90-25-PG21	MPC90-25-075	MPC45-25-M25	MPC45-25-075	25
MPC-32-M32	MPC-32-PG29	MPC-32-100	MPC90-32-M32	MPC90-32-PG29	MPC90-32-100	MPC45-32-M32	MPC45-32-100	32
MPC-40-M40	MPC-40-PG36	MPC-40-125	MPC90-40-M40	MPC90-40-PG36	MPC90-40-125			40
MPC-50-M50	MPC-50-PG42	MPC-50-150						50
MPC-63-M63	MPC-63-PG48	MPC-63-200						63

Standards

REACh ✓

RoHS ✓

BS EN IEC 61386

CE

Technical Drawing





LPC system
metallic fittings for use with LPC conduits

IP66 IP67 IP68 IP69

Fittings

C

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.

IP66 IP67 IP68 IP69



C-S

swivel external thread nickel plated brass

Multipart compression fitting including elastomeric seal. The external thread swivels about the main body even after tightening.

Suitable for knockout or threaded entries.

IP66 IP67 IP68 IP69



C-90

90° external thread nickel plated brass

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

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	(½")	LPC16-M20-S	LPC16-M20-C90
20	LPC20	LPC20-M20-C	LPC20-PG16-C	LPC20-050-C	(½")	LPC20-M20-S	LPC20-M20-C90
25	LPC25	LPC25-M25-C	LPC25-PG21-C	LPC25-075-C	(¾")	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	(1¼")	LPC40-M40-S	LPC40-M40-C90
50	LPC50	LPC50-M50-C	LPC50-PG42-C	LPC50-150-C	(1½")		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 124

Alternatives



see page 78

properties

- Smooth, wipe clean surface
- Accepts some torsional movement
- IP rating:
  - **IP66, IP67 and IP68 with MPC fittings**
  - **IP66, IP67, IP68 (2 bar) + 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)



C-45

45° external thread nickel plated brass
45˚ multipart compression fitting including elastomeric seal. Can be used for knockouts.

IP66 IP67 IP68 IP69



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

CSS

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.

IP66 IP67 IP68 IP69



metric thread part number
LPC16-M16-CSS
LPC16-M20-CSS
LPC20-M20-CSS
LPC25-M25-CSS
LPC32-M32-CSS
LPC40-M40-CSS
LPC50-M50-CSS

C90-SS

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



metric thread part number	nominal size (mm)
	12
	16
LPC16-M20-CSS90	16
LPC20-M20-CSS90	20
LPC25-M25-CSS90	25
LPC32-M32-CSS90	32
	40
	50
	63

Standards

REACh ✓

RoHS ✓

BS EN IEC 61386 CE

Technical Drawing





LPC-HG system
Hygienic Range

NEW

IP66 IP67 IP68 2 bar IP69

HG HYGIENIC RANGE

Conduit

LPC-WFG

HG HYGIENIC RANGE NEW

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.

LPC-BUFG

HG HYGIENIC RANGE NEW

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.

LPC-GFG

HG HYGIENIC RANGE NEW

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.

Fittings

FCC-SS

stainless steel (316L) P clips

P clip to support conduit.



nominal size (mm)	LPC-WFG part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	LPC-BUFG part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	LPC-GFG part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	part number
12																
16	LPCWFG16	30	17.8	12.6	50	LPCBUFG16	30	17.8	12.6	50	LPCGFG16	30	17.8	12.6	50	FCC16-SS
16																FCC16-SS
20	LPCWFG20	10, 30	21.1	16.0	70	LPCBUFG20	10, 30	21.1	16.0	70	LPCGFG20	10, 30	21.1	16.0	70	FCC20-SS
25	LPCWFG25	10, 30	26.4	21.0	90	LPCBUFG25	10, 30	26.4	21.0	90	LPCGFG25	10, 30	26.4	21.0	90	FCC25-SS
32	LPCWFG32	10, 30	33.1	26.5	140	LPCBUFG32	10, 30	33.1	26.5	140	LPCGFG32	10, 30	33.1	26.5	140	FCC32-SS
40	LPCWFG40	10, 30	41.8	35.4	190	LPCBUFG40	10, 30	41.8	35.4	190	LPCGFG40	10, 30	41.8	35.4	190	FCC40-SS
50	LPCWFG50	10, 30	47.9	40.0	240	LPCBUFG50	10, 30	47.9	40.0	240	LPCGFG50	10, 30	47.9	40.0	240	FCC50-SS
63	LPCWFG63	10, 30	59.7	51.3	270	LPCBUFG63	10, 30	59.7	51.3	270	LPCGFG63	10, 30	59.7	51.3	270	FCC63-SS*

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 126

properties

- Smooth, wipe clean surface
- Accepts some torsional movement
- IP rating:
  IP66, IP67, IP68 (2 bar) + 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 126



Conduit & Fittings

C-FG

HG HYGIENIC RANGE NEW

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.

IP66 IP67 IP68 IP69



LOCKNUTS

stainless steel (316L) locknuts

Hexagonal locknut to secure fitting.



I-PACK

This new range of LPC-FG conduits offers a smooth, easy to clean surface making it ideal for food & beverage, machinery & OEMS, Healthcare and Pharmaceutical applications. Featuring a smooth inner bore, the LPC-FG makes it easy to run cables through the conduit, simplifying installation. The I-Pack consists of 3 metres of conduit, 2 Hygienic fittings and 2 Stainless Steel Locknuts.

- Hygienic design
- Smooth finish
- High IP rating
- Corrosion resistant
- High chemical & thermal resistance
- **Simplistic ordering** - one part number
- **Easy Storage** - short length coiled for space saving
- **Ready to use** - all components to create a system

20mm I-PACK

IP66 IP67 IP68 2 bar IP69

I-PACKBUFG20
3m x LPCBUFG20 Conduit
2x LPC-C-FG Fittings
2x SS-M20 Locknuts

I-PACKWFG20
3m x LPCWFG20 Conduit
2x LPC-C-FG Fittings
2x SS-M20 Locknuts

25mm I-PACK

IP66 IP67 IP68 2 bar IP69

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



Blue Version



White Version

Ext Metric	st fitting part number	metric thread part number	part number	part number	nominal size (mm)
					12
LPC16-M16-C-FG		SS-M16			16
		SS-M20			16
LPC20-M20-C-FG	LPC20-M20ST-C-FG	SS-M20	I-PACKBUFG20	I-PACKWFG20	20
LPC25-M25-C-FG		SS-M25	I-PACKBUFG25	I-PACKWFG25	25
LPC32-M32-C-FG		SS-M32			32
LPC40-M40-C-FG		SS-M40			40
LPC50-M50-C-FG		SS-M50			50
LPC63-M63-C-FG*		SS-M63*			63

Standards

REACh RoHS BS EN IEC 61386

CE EN 1672-2 EN ISO 14159 FDA

Technical Drawing







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 34 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 Benefits

- 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
- No risk of water or dust ingress



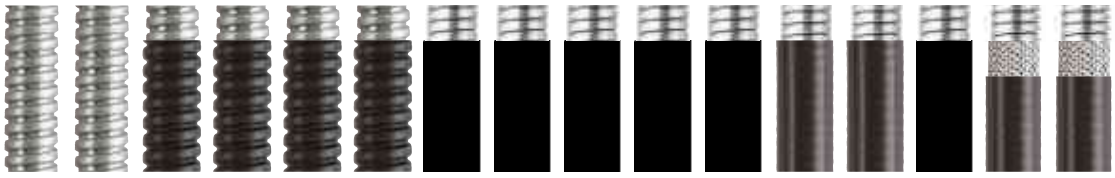



metallic
conduit & fittings



REACh RoHS BS EN IEC 61386 CE LR IEC IECEx Ex

Metallic conduit selection guide



Conduit System		FU	SSU	FSU	FNU	LFHU	FPU	LTP	LTPAS	LTPHC	LTPLFH	LTPUL	LTPPU	LTPPUAS	LTPSS	LTBRDP	LTBRDLFH
IP Rating	IP40	●	●														
	IP54			●	●	●	●										
	IP65			●	●	●	●										
	IP66							●	●	●	●	●	●	●	●	●	●
	IP67							●	●	●	●	●	●	●	●	●	●
	IP68							●	●	●	●	●	●	●	●	●	●
	IP69							●	●	●	●	●	●	●	●	●	●
Compression Strength (kg/100mm)		350	400	350	350	350	350	400	400	400	400	500	400	400	400	400	400
Pull Off Strength (kg) for 20mm size		120	170	120	120	120	120	130	130	130	130	160	130	130	130	130	130
Min Bend Radius (mm) for 20mm size		45	45	45	45	45	45	65	65	65	100	90	65	65	65	65	130
Colours		zinc	stainless 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				●			●						●	●			
Temp	Max	300˚C	600˚C	70˚C	120˚C	90˚C	100˚C	105˚C	105˚C	150˚C	90˚C	75˚C	100˚C	100˚C	105˚C	105˚C	90˚C
	Min	-100˚C	-100˚C	-15˚C	-40˚C	-25˚C	-40˚C	-20˚C	-20˚C	-60˚C	-25˚C	-15˚C	-40˚C	-40˚C	-20˚C	-20˚C	-25˚C
Category	Flexible	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Pliable																
Low Fire Hazard	*** Inerent ** Extra * Standard	●	●			●					●						●
	Halogen Free	●	●		●	●	●			●	●		●	●			●
	Self Extinguishing	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Fire Tests	EN 45545-2	●	●			●					●						●
	NFPA-130	●	●			●					●						●
Abrasion Resistance		●	●		●		●						●	●			
Resistance to solvents		●	●		●		●			●				●	●		
UV Resistance		●	●	●				●	●	●	●	●	●	●	●	●	●
EMC Performance																●	●
Hazardous Locations								●	●	●	●	●	●	●	●	●	●
Anti-Static		●	●						●					●			
Approvals	UL Listed											●					
	Lloyds					●		●									
	London Underground	●	●			●					●						●
	Food Contact																
ROHS		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
REACH		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Page Number		92	92	94	94	96	96	98	98	98	98	99	99	99	99	100	100

Metallic conduit selection guide

	LTPBRD	LTP-FG	LTBRDP-FG	LTPSS-FG	FL	FLP	LFHP	FB	FUSSB	FSB	LFHUBRD	FSS	FSSBRD	FPRSS	FPRTC	FPISS	FPIHSS	FPIHRSS
		NEW	NEW	NEW								NEW	NEW					NEW
					●			●	●									
										●	●							
										●	●							
	●	●	●	●		●	●											
	●	●	●	●		●	●							●	●	●	●	●
	●	●	●	●		●	●					●	●					
	●	●	●	●		●	●											
	400	400	400	400	300	300	570	350	350	350	350	1000	1000	75	75	45	60	60
	350	130	130	130	30	50, 100	50, 100	120	120	120, 300	120, 300	100	150	100	75	100	100	100
	65	65	65	65	35	35	40	45	45	45	45	45	60	45	45	45	45	45
	stainless steel	white, blue	white, blue	blue	zinc	black	black	zinc	stainless steel	zinc	stainless steel	stainless steel, black	stainless steel	stainless steel	tin	stainless steel	stainless steel	stainless steel
																●	●	●
	150˚C	105˚C	105˚C	105˚C	120˚C	70˚C	90˚C	300˚C	300˚C	70˚C	90˚C	400˚C	400˚C	120˚C	120˚C	110˚C	110˚C	110˚C
	-60˚C	-20˚C	-20˚C	-20˚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 ★★★		EXTRA LOW FIRE HAZARD ★★	INHERENT LOW FIRE HAZARD ★★★	INHERENT LOW FIRE HAZARD ★★★		EXTRA LOW FIRE HAZARD ★★	INHERENT LOW FIRE HAZARD ★★★	INHERENT LOW FIRE HAZARD ★★★	EXTRA LOW FIRE HAZARD ★★	EXTRA LOW FIRE HAZARD ★★	STANDARD LOW FIRE HAZARD ★	STANDARD LOW FIRE HAZARD ★	EXTRA LOW FIRE HAZARD ★★
	●				●		●	●	●		●	●	●	●	●	●	●	●
	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
					●		●	●	●		●	●	●	●	●			●
					●		●	●	●		●	●	●	●	●			●
								●	●	●	●		●	●	●	●	●	●
	●							●	●			●	●	●	●	●	●	●
	●		●	●				●	●	●	●	●	●	●	●	●	●	●
	STANDARD EMC SCREEN ★		ENHANCED EMC SCREEN ★★		SUPER EMC SCREEN ★★★	SUPER EMC SCREEN ★★★	SUPER EMC SCREEN ★★★	STANDARD EMC SCREEN ★	STANDARD EMC SCREEN ★	STANDARD EMC SCREEN ★	STANDARD EMC SCREEN ★	STANDARD EMC SCREEN ★	STANDARD EMC SCREEN ★	STANDARD EMC SCREEN ★	ENHANCED EMC SCREEN ★★	STANDARD EMC SCREEN ★	STANDARD EMC SCREEN ★	STANDARD EMC SCREEN ★
	●	●	●	●								●	●					
	AS ANTI-STATIC				AS ANTI-STATIC			AS ANTI-STATIC	AS ANTI-STATIC	AS ANTI-STATIC	AS ANTI-STATIC	AS ANTI-STATIC	AS ANTI-STATIC	AS ANTI-STATIC	AS ANTI-STATIC	AS ANTI-STATIC	AS ANTI-STATIC	AS ANTI-STATIC
						●	●											
							●	●	●		●	●	●					
		●	●	●														
	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	110	112	112	112	114	114	115	116	116	118	118	120	120	122	122	122	122	122

Metallic fittings selection guide

Multipart

NPB


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Stainless steel (316L)


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Liquid Tight

NPB (Nickel Plated Brass)


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103

Stainless steel (316L)


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Other

Hygienic NEW




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Round Boxes NEW


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Cable Glands




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Insert


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Cable Gland


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Clips


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Locknuts


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Hazardous

EXE



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EXD



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Braided



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SS (316L) Corrugated NEW



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Pliable



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Elbows



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Stopping Plugs



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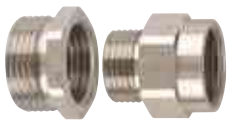
129

Couplers

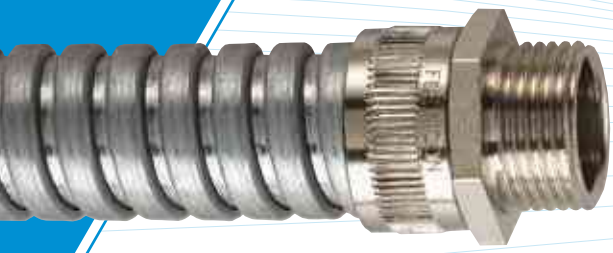


130

Thread Converters



130



FU & SSU system
galvanised steel
and stainless steel

INHERENT LOW FIRE HAZARD ★★★

Conduit

FU

INHERENT LOW FIRE HAZARD ★★★



Construction: Galvanised steel, helically wound, flexible conduit.

Colour: Zinc, self colour.

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

EN 45545-2 HL3 R26 R29 R23 R24 R22 R1 R2 R3 R4 R5 R6 R7 R8 R9 R10 R11 R12 R13 R14 R15 R16 R17 R18 R19 R20 R21 R22 R23 R24 R25 R26 R27 R28 R29 R30 R31 R32 R33 R34 R35 R36 R37 R38 R39 R40

properties

- High mechanical strength
- Highly flexible
- Inherently Low Fire Hazard (LFH) see page 148
- 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)
- IP rating: IP40
- **SSU is highly corrosion resistant**
- **Nickel plated brass fittings**
- **Stainless steel (316L) fittings**
- **EN 45545 HL3 and NFPA130 compliant**



S-SS

swivel external thread stainless steel

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

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.

IP40

F

fixed internal thread nickel plated brass

Two part fitting comprising shell and body with internal thread which can be used to connect with an external thread.

IP40

FCC

plated steel P clip with pvc liner and secure stainless steel P clips

P clip to support and secure conduit.

90° elbow

internal and external threaded nickel plated brass elbow

90˚ elbow which can be screwed onto external threaded fittings to create a 90° elbow termination.











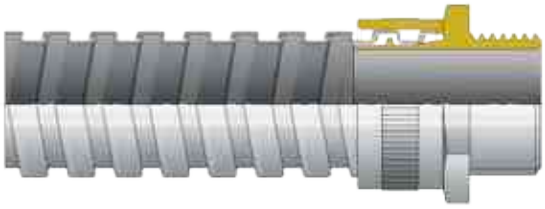
metric thread part number	hole size (mm)	part number	metric thread part number	plated steel part number	stainless steel part number	part number	nominal size (mm)
SSU10-M12-S	9	FU10-P		FCC10	FCC10-SS*	BM90-PG7*	10
SSU12-M16-S	12	FU12-P		FCC12	FCC12-SS	BM90-16M	11
SSU16-M16-S	16	FU16-P	FU16-M16-F	FCC16	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

UNDERGROUND BS EN IEC 61386 CE EN 45545-2 REACh RoHS NFPA 130

Note: refer to conduit properties for applicable standards

Technical Drawing





FSU & FNU system
galvanised steel pvc or nylon coated

Conduit

FSU



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

Colour: Black. Grey or Orange on request.*

Typical Applications: General factory wiring and connections to machines.

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.

Fittings

M

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.

IP54

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.

IP54

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.

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)	metric thread part number	PG thread part number	metric thread part number	PG thread part number	hole size (mm)	part number
10	FSU10B+	25, 50			10.0	6.8	25	FSU10-M12-M	FSU10-PG7-M	FSU10-M12-S	FSU10-PG7-S	9	FSU10-P
12	FSU12B	25, 50			14.0	10.2	30	FSU12-M16-M	FSU12-PG9-M	FSU12-M16-S	FSU12-PG9-S	12	FSU12-P
16	FSU16B	10, 25, 50	FNU16B*	25	17.0	13.0	40	FSU16-M16-M	FSU16-PG11-M	FSU16-M16-S	FSU16-PG11-S	16	FSU16-P
16								FSU16-M20-M		FSU16-M20-S	FSU16-PG13-S		
20	FSU20B	10, 25, 50	FNU20B*	25	21.5	16.9	45	FSU20-M20-M	FSU20-PG16-M	FSU20-M20-S	FSU20-PG16-S	20	FSU20-P
25	FSU25B	10, 25, 50	FNU25B*	25	26.0	21.1	55	FSU25-M25-M	FSU25-PG21-M	FSU25-M25-S	FSU25-PG21-S	25	FSU25-P
32	FSU32B	10, 25	FNU32B*	25	34.0	28.1	60	FSU32-M32-M	FSU32-PG29-M	FSU32-M32-S	FSU32-PG29-S	32	FSU32-P
40	FSU40B	10, 25			44.5	37.6	90	FSU40-M40-M	FSU40-PG36-M	FSU40-M40-S	FSU40-PG36-S	40	FSU40-P
50	FSU50B	10, 25			55.0	48.4	100	FSU50-M50-M	FSU50-PG48-M	FSU50-M50-S	FSU50-PG42-S	51	FSU50-P
63	FSU63B	10			64.5	57.5	115	FSU63-M63-M		FSU63-M63-S		61	FSU63-P
75	FSU75B	10			79.0	70.0	150	FSU75-M75-M				75	FSU75-P

Ordering Notes

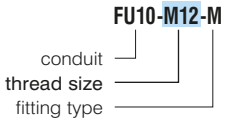
- Add reel length eg: FSU20-25M for 25m reel
- FSU fittings used for FNU conduit

* Indicates parts made to order on request and may be subject to MOQ and lead time

\+ Double interlock section

- **Available on request:**
  - low temperature (-40°C) version of FSU
  - 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



properties

- 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 96)
- Nickel plated brass fittings
- Vibration and shock tested to EN 61373 Cat 2



F
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.

IP54

C
external thread nickel plated brass

Multipart compression fitting including elastomeric seal. Can be used for knockouts or threaded entries as fitting rotates until tightened.

IP65

C-S
external thread nickel plated brass

Multipart compression fitting including elastomeric seal.

The external thread swivels about the main body even after tightening.

IP65

C90
external thread elbow nickel plated brass

Multipart 90˚ compression fitting including elastomeric seal.

IP65

coupler
external thread elbow nickel plated brass

Multipart 90˚ compression fitting including elastomeric seal.

IP65

E
insert nickel plated brass

Single part, machined insert to cap end of conduit.



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-M12-C						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 132

Standards

BS EN IEC 61386

CE

REACh

RoHS

Technical Drawing





LFHU system
galvanised steel LFH coated

EXTRA LOW FIRE HAZARD ★★

FPU system
galvanised steel
polyurethane coated

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.

EN 45545-2 HL3 120

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.

Fittings

M

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.

IP54

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.

IP54

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.

IP54



nominal size (mm)	LFHU part number	LFHU reel length (m)	FPU part number	FPU reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	metric thread part number	PG thread part number	metric thread part number	PG thread part number	hole size (mm)	part number
12	LFHU12B*	25	FPU12B*	25	14.0	10.2	30	FSU12-M16-M	FSU12-PG9-M	FSU12-M16-S	FSU12-PG9-S	12	FSU12-P
16	LFHU16B	25, 50	FPU16B	25	17.0	13.0	40	FSU16-M16-M	FSU16-PG11-M	FSU16-M16-S	FSU16-PG11-S	16	FSU16-P
16								FSU16-M20-M		FSU16-M20-S	FSU16-PG13-S		
20	LFHU20B	10, 25, 50	FPU20B	25, 50	21.5	16.9	45	FSU20-M20-M	FSU20-PG16-M	FSU20-M20-S	FSU20-PG16-S	20	FSU20-P
25	LFHU25B	10, 25, 50	FPU25B	25, 50	26.0	21.1	55	FSU25-M25-M	FSU25-PG21-M	FSU25-M25-S	FSU25-PG21-S	25	FSU25-P
32	LFHU32B	10, 25	FPU32B	25	34.0	28.1	80	FSU32-M32-M	FSU32-PG29-M	FSU32-M32-S	FSU32-PG29-S	32	FSU32-P
40	LFHU40B	10, 25	FPU40B*	10	44.5	37.6	90	FSU40-M40-M	FSU40-PG36-M	FSU40-M40-S	FSU40-PG36-S	40	FSU40-P
50	LFHU50B	10, 25	FPU50B*	10	55.0	48.4	100	FSU50-M50-M	FSU50-PG48-M	FSU50-M50-S	FSU50-PG42-S	51	FSU50-P
63	LFHU63B	10	FPU63B*	10	64.5	57.5	115	FSU63-M63-M		FSU63-M63-S		61	FSU63-P
75	LFHU75B	10	FPU75B*	10	79.0	70.0	150	FSU75-M75-M				75	FSU75-P

Ordering Notes

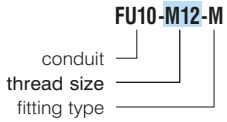
- Add reel length eg: LFHU20B-25M for 25m reel
- FSU fittings used on LFHU conduit
- For metallic blue change B to BU eg FPU20BU-25M

* Indicates parts made to order on request and may be subject to MOQ and lead time



- **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



Important Note

- For LFH performance see page 148

properties

- 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 and NFPA 130
- 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



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. IP54	**external thread nickel plated brass** Multipart compression fitting including elastomeric seal. Can be used for knockouts or threaded entries as fitting rotates until tightened. IP65	**external thread nickel plated brass** Multipart compression fitting including elastomeric seal. The external thread swivels about the main body even after tightening. IP65	**external thread elbow nickel plated brass** Multipart 90˚ compression fitting including elastomeric seal. IP65	**external thread elbow nickel plated brass** Multipart 90˚ compression fitting including elastomeric seal. IP65	**insert nickel plated brass** Single part, machined insert to cap end of conduit.



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

BS EN IEC 61386

Note: refer to conduit properties for applicable standards

Technical Drawing



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) + IP69
- Smooth, wipe clean outer cover
- Cover does not wrinkle when bent
- Temperature range -20˚C to +105˚C
- Good flexibility
- 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 112

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) + 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



Construction: Galvanised steel, helically wound, flexible conduit with smooth thermoplastic elastomer (TPE) cover.

Colour: Black

Typical Applications: High mechanical strength combined with high and low temperature 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) + IP69
- Smooth, wipe clean outer cover
- Cover does not wrinkle when bent
- 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

LTPLFH



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

Colour: Black

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) + 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
- EXTRA Low Fire Hazard UL94 V0 (for LFH see page 148)
- Compliant to LUL Std S1085 (LTPLFH) Cert No. 2020
- EN 45545 to HL3 and NFPA130 compliant
- Vibration and shock tested to EN61373 Cat 2

nominal size (mm)	US trade size (")	outside dia (mm)	inside dia (mm)	LTP part number	LTP reel length (m)	LTP min inside bend radius (mm)	LTPAS part number	LTPAS reel length (m)	LTPAS min inside bend radius (mm)	LTPHC part number	LTPHC reel length (m)	LTPHC min inside bend radius (mm)	LTPLFH part number	LTPLFH reel length (m)	LTPLFH min inside bend radius (mm)
10	¼	11.8	7.0	LTP10B+	50	35									
10															
12	5/16	14.2	10.0	LTP12B	25, 50	40				LTPHC12B+	25	40			
16	⅜	17.8	12.6	LTP16B	10, 25, 50	45	LTPAS16B*	25	45	LTPHC16B	25	45	LTPLFH16B	25	60
16															
20	½	21.1	16.0	LTP20B	10, 25, 50	65	LTPAS20B*	25	65	LTPHC20B	25	65	LTPLFH20B	25	100
25	¾	26.4	21.0	LTP25B	10, 25, 50	100	LTPAS25B*	25	100	LTPHC25B	25	100	LTPLFH25B	25	130
32	1	33.1	26.5	LTP32B	10, 25, 50	135	LTPAS32B*	25	135	LTPHC32B	25	135	LTPLFH32B	10	180
40	1¼	41.8	35.4	LTP40B	10, 25	175	LTPAS40B*	10	175	LTPHC40B	10	175			
50	1½	47.9	40.4	LTP50B+	10, 25	230	LTPAS50B*+	10	230	LTPHC50B+	10	230			
63	2	59.7	51.6	LTP63B+	10, 25	280	LTPAS63B*+	10	280	LTPHC63B*+	10	280			

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

\# PG & NPT threads not supplied with insulated throats

- **Available on request:**
  - longer lengths and bulk packaging
  - cut lengths and assemblies
  - C-S with PG threads
  - other colours
  - internal thread fittings

Liquid Tight Conduits continued

MORE CONDUITS OVERLEAF!

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 strength
- IP rating: IP66 + IP67 + IP68 (5 bar) + IP69
- Smooth, wipe clean outer cover
- Cover does not wrinkle when bent
- 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 EN61373 Cat 2

LTPPU



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.

- High mechanical strength
- Good flexibility
- IP rating: IP66 + IP67 + IP68 (5 bar) + 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)

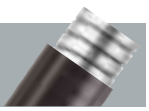
Typical Applications: High mechanical strength with low temperature and high abrasion resistance, combined with extremely high IP rating (IP68 and IP69) suitable for external applications where fire performance is not a requirement.

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) + 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 EN61373 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.

Colour: Black

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) + 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 112

LTPUL part number	reel length (m)	min inside bend radius (mm)	LTPPU part number	inside dia (mm)	min inside bend radius (mm)	LTPPUAS part number	reel length (m)	min inside bend radius (mm)	LTPSS part number	reel length (m)	min inside bend radius (mm)	nominal size (mm)
			LTPPU10*	25	35							10
												10
			LTPPU12*	25	40							12
LTPUL16B	25	50	LTPPU16*	25	45	LTPPUAS16*	25	45	LTPSS16*	25	45	16
												16
LTPUL20B	25	90	LTPPU20*	25	65	LTPPUAS20*	25	65	LTPSS20	25	65	20
LTPUL25B	25	110	LTPPU25*	25	100	LTPPUAS25*	25	100	LTPSS25	25	100	25
LTPUL32B	10, 25	140	LTPPU32*	25	135	LTPPUAS32*	25	135	LTPSS32	10	135	32
LTPUL40B	15	180	LTPPU40*	10	175	LTPPUAS40*	10	175	LTPSS40	10	180	40
LTPUL50B+	15	230	LTPPU50*+	10	230	LTPPUAS50*+	10	230	LTPSS50+	10	230	50
LTPUL63B+	15	280	LTPPU63*+	10	280	LTPPUAS63*+	10	280	LTPSS63+	10	280	63

Standards

IEC EN 61386

Note: refer to conduit properties for applicable standards

Liquid Tight Conduits continued

FOLD PAGE OUT!

EN 61386-2 NFPA 130

LTBRDP

NEW · ENHANCED EMC SCREEN ★★

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) + 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 page 112

LTBRDLFH

NEW · ENHANCED EMC SCREEN ★★ · EXTRA LOW FIRE HAZARD ★★

Construction: Galvanised steel, helically wound, flexible conduit 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) + 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 V0 (for LFH see page 148)
- Compliant to LUL Std S1085 (Cert No. 658)
- EN 45545 to HL3 and NFPA 130 compliant

FCC

plated steel P clip with PVC liner

P clip to support and secure conduit.

FCC-SS

stainless steel (316L) P clips

P clip to support conduit.

E

insert nickel plated brass

Single part, machined insert to cap end of conduit.







LTBRDP part number	inside dia (mm)	min inside bend radius (mm)	LTBRDLFH part number	reel length (m)	min inside bend radius (mm)	plated steel part number	part number	part number	inside dia (mm)	outside dia (mm)	US trade size (")	nominal size (mm)
						FCC10		LTP10-E	7.0	11.8	¼	10
						FCC12	FCC10-SS*	LTP10-E				10
						FCC16	FCC12-SS	LTP12-E	10.0	14.2	5/16	12
						FCC16	FCC16-SS	LTP16-E	12.6	17.8	⅜	16
							FCC16-SS	LTP16-E				16
LTBRDP20B	25	65	LTBRDLFH20B	25	130	FCC20	FCC20-SS	LTP20-E	16.0	21.1	½	20
LTBRDP25B	25	100	LTBRDLFH25B	25	200	FCC25	FCC25-SS	LTP25-E	21.0	26.4	¾	25
LTBRDP32B	25	120	LTBRDLFH32B*	25	270	FCC32	FCC32-SS	LTP32-E	26.5	33.1	1	32
LTBRDP40B	10	140				FCC40	FCC40-SS	LTP40-E	35.4	41.8	1¼	40
LTBRDP50B+	10	180				FCC50	FCC50-SS	LTP50-E	40.4	47.9	1½	50
LTBRDP63B+	10	270				FCC63	FCC63-SS*	LTP63-E	51.6	59.7	2	63

Technical Drawing



LTPPU, LTPPUAS



LTBRDP & LTBRDLFH

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 98 - 100.

Ordering Notes

Once you have chosen your conduit from our wide range of products listed on Pages 98, 99 and 100, 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.



Looking for Cable Protection for Hygienic Applications?

HG HYGIENIC RANGE

See pages 112 & 113 for futher details on our new Liquid Tight Hygienic Range.



nominal size (mm)	US trade size (")	outside dia (mm)	inside dia (mm)	LTP part number	LTPAS part number	LTPHC part number	LTPLFH part number	LTPUL part number	LTPPU part number	LTPPUAS part number	LTPSS part number	LTBRDP part number	LTBRDLFH part number
10	¼	11.8	7.0	LTP10B					LTPPU10				
10					LTPAS16B								
12	5/16	14.2	10.0	LTP12B		LTPHC12B			LTPPU12				
16	⅜	17.8	12.6	LTP16B		LTPHC16B	LTPLFH16B	LTPUL16B	LTPPU16	LTPPUAS16	LTPSS16		
20	½	21.1	16.0	LTP20B	LTPAS20B	LTPHC20B	LTPLFH20B	LTPUL20B	LTPPU20	LTPPUAS20	LTPSS20	LTBRDP20B	LTBRDLFH20B
25	¾	26.4	21.0	LTP25B	LTPAS25B	LTPHC25B	LTPLFH25B	LTPUL25B	LTPPU25	LTPPUAS25	LTPSS25	LTBRDP25B	LTBRDLFH25B
32	1	33.1	26.5	LTP32B	LTPAS32B	LTPHC32B	LTPLFH32B	LTPUL32B	LTPPU32	LTPPUAS32	LTPSS32	LTBRDP32B	LTBRDLFH32B
40	1¼	41.8	35.4	LTP40B	LTPAS40B	LTPHC40B		LTPUL40B	LTPPU40	LTPPUAS40	LTPSS40	LTBRDP40B	
50	1½	47.9	40.4	LTP50B	LTPAS50B	LTPHC50B		LTPUL50B	LTPPU50	LTPPUAS50	LTPSS50	LTBRDP50B	
63	2	59.7	51.6	LTP63B	LTPAS63B	LTPHC63B		LTPUL63B	LTPPU63	LTPPUAS63	LTPSS63	LTBRDP63B	

Standards & Approvals

IEC EN 61386



Liquid Tight Conduit fittings
nickel plated brass fittings

IP66 IP67 IP68 IP69

Fittings

C

external thread nickel plated brass

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

IP66 IP67 IP68 IP69

C-S

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.

IP66 IP67 IP68 IP69

C-F NEW

internal thread nickel plated brass

Multi part compression fitting including elastomeric seal to connect with an external thread.

IP66 IP67 IP68 IP69

C-SF NEW

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



#







nominal size (mm)	US trade size (")	outside dia (mm)	inside dia (mm)	metric thread part number	for PG thread size	for NPT thread size	metric thread part number	metric thread part number	metric thread part number
10	¼	11.8	7.0	LTP10-M12-C	PG7				
10				LTP10-M16-C					
12	5/16	14.2	10.0	LTP12-M16-C	PG9		LTP12-M16-S		
16	⅜	17.8	12.6	LTP16-M16-C	PG11	050 (½")	LTP16-M16-S		
16				LTP16-M20-C	PG13	050 (½")	LTP16-M20-S		LTP16-M20-SF
20	½	21.1	16.0	LTP20-M20-C	PG16	050 (½")	LTP20-M20-S	LTP20-M20-F	LTP20-M20-SF
25	¾	26.4	21.0	LTP25-M25-C	PG21	075 (¾")	LTP25-M25-S	LTP25-M25-F	LTP25-M25-SF
32	1	33.1	26.5	LTP32-M32-C	PG29	100 (1")	LTP32-M32-S	LTP32-M32-F	
40	1¼	41.8	35.4	LTP40-M40-C	PG36	125 (1¼")	LTP40-M40-S	LTP40-M40-F	
50	1½	47.9	40.4	LTP50-M50-C	PG42	150 (1½")	LTP50-M50-S	LTP50-M50-F	
63	2	59.7	51.6	LTP63-M63-C	PG48	200 (2")			

When ordering PG or NPT please see below.

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

- conduit
- thread size
- fitting type

i.e **LTP16-PG13-C** or **LTP16-050-C**

properties

- High mechanical strength
- IP rating: IP66 + IP67 + IP68 (5 bar) + 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 105
- 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 98, 99 and 100
- 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 104

C90

external thread nickel plated brass

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

IP66 IP67 IP68 IP69

C45

external thread nickel plated brass

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

IP66 IP67 IP68 IP69

Coupler

nickel plated brass

Multi part compression coupler including elastomeric seals to connect with an external thread.

IP66 IP67 IP68 IP69

FW

fibre, retained face sealing washers

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

IP66 IP67 IP68 IP69

E

insert nickel plated brass

Single part, machined insert to cap end of conduit.











metric thread part number	metric thread part number	part number	metric thread part number	part number	inside dia (mm)	outside dia (mm)	US trade size (")	nominal size (mm)
				LTP10-E	7.0	11.8	¼	10
				LTP10-E				10
LTP12-M16-C90				LTP12-E	10.0	14.2	5/16	12
LTP16-M16-C90				LTP16-E	12.6	17.8	⅜	16
LTP16-M20-C90	LTP16-M20-C45	LTP16-LTP16	FW16	LTP16-E				16
LTP20-M20-C90	LTP20-M20-C45	LTP20-LTP20	FW20	LTP20-E	16.0	21.1	½	20
LTP25-M25-C90	LTP25-M25-C45	LTP25-LTP25	FW25	LTP25-E	21.0	26.4	¾	25
LTP32-M32-C90	LTP32-M32-C45	LTP32-LTP32	FW32	LTP32-E	26.5	33.1	1	32
LTP40-M40-C90	LTP40-M40-C45	LTP40-LTP40	FW40	LTP40-E	35.4	41.8	1¼	40
LTP50-M50-C90	LTP50-M50-C45		FW50	LTP50-E	40.4	47.9	1½	50
LTP63-M63-C90	LTP63-M63-C45		FW63	LTP63-E	51.6	59.7	2	63

Standards & Approvals

RoHS REACh

BS EN IEC 61386

CE UNDERGROUND c UL us

Technical Drawing





Liquid Tight Conduit fittings

UL listed fittings and stainless steel fittings

NEW

IP66 IP67 IP68 IP69

Fittings

C-UL NEW

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.

IP66 IP67 IP68 IP69



C-UL90 NEW

external thread nickel plated brass

90° multipart compression fitting including nylon compression seal. Can be used for knockouts. UL Listed to UL514B.

IP66 IP67 IP68 IP69



C-UL45 NEW

external thread nickel plated brass

45° multipart compression fitting including nylon compression seal. Can be used for knockouts. UL Listed to UL514B.

IP66 IP67 IP68 IP69



nominal size (mm)	US trade size (")	outside dia (mm)	inside dia (mm)	C-UL metric thread part number	C-UL NPT thread size	C-UL90 metric thread part number	C-UL45 metric thread part number
10	¼	11.8	7.0				
10							
12	5/16	14.2	10.0				
16	⅜	17.8	12.6	LTP16-M20-CUL	LTP16-050-CUL (½")	LTP16-M20-CUL90	LTP16-M20-CUL45
16							
20	½	21.1	16.0	LTP20-M20-CUL	LTP20-050-CUL (¾")	LTP20-M20-CUL90	LTP20-M20-CUL45
25	¾	26.4	21.0	LTP25-M25-CUL	LTP25-075-CUL (1")	LTP25-M25-CUL90	LTP25-M25-CUL45
32	1	33.1	26.5	LTP32-M32-CUL	LTP32-100-CUL (1¼")	LTP32-M32-CUL90	LTP32-M32-CUL45
40	1¼	41.8	35.4	LTP40-M40-CUL	LTP40-125-CUL (1½")	LTP40-M40-CUL90	LTP40-M40-CUL45
50	1½	47.9	40.4	LTP50-M50-CUL	LTP50-150-CUL (1½")	LTP50-M50-CUL90	LTP50-M50-CUL45
63	2	59.7	51.6	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

properties

- High mechanical strength
- IP rating: IP66 + IP67 + IP68 (5 bar) + 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 (file No. E247502). 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 fibre washer face seal
- Metric Threads supplied with NPB locknut

Stainless Steel fittings:

- Stainless steel fittings manufactured from SS 316L - offer superior corrosion resistance
- Metric threads supplied with Insulated Throats
- For compatible conduits see page 98, 99 and 100
- Vibration and shock tested to EN61373 Cat 2
- Conforms to EN 61386
- Interchangeable with all Liquidtight conduits made to American (UL360) sizes.

C-SS

external thread stainless steel

Multipart compression fitting with Stainless Steel (316L) body and nut and nickel plated brass insert, including elastomeric seal.
Can be used for knockout or threaded entries as fitting rotates until tightened.

IP66 IP67 IP68 IP69



C90-SS

external thread stainless steel (316L)

90° multipart compression fitting with Stainless Steel (316L) body and nut and nickel plated brass insert, including elastomeric seal.
Can be used for knockouts.

IP66 IP67 IP68 IP69



LOCKNUT-SS

stainless steel (316L) locknuts

Hexagonal locknut to secure fitting.



FCC-SS

stainless steel (316L) P clips

P clip to support conduit.



metric thread part number	metric thread part number	part number	part number	inside dia (mm)	outside dia (mm)	US trade size (")	nominal size (mm)
				7.0	11.8	¼	10
							10
				10.0	14.2	5/16	12
LTP16-M16-CSS		SS-M16	FCC16-SS	12.6	17.8	⅜	16
LTP16-M20-CSS		SS-M20	FCC16-SS				16
LTP20-M20-CSS	LTP16-M20-CSS90	SS-M20	FCC20-SS	16.0	21.1	½	20
LTP25-M25-CSS	LTP20-M20-CSS90	SS-M25	FCC25-SS	21.0	26.4	¾	25
LTP32-M32-CSS	LTP25-M25-CSS90	SS-M32	FCC32-SS	26.5	33.1	1	32
LTP40-M40-CSS	LTP32-M32-CSS90	SS-M40	FCC40-SS	35.4	41.8	1¼	40
LTP50-M50-CSS		SS-M50	FCC50-SS	40.4	47.9	1½	50
LTP63-M63-CSS*		SS-M63*	FCC63-SS*	51.6	59.7	2	63

Standards & Approvals

RoHS ✓ REACh ✓

BS EN IEC 61386

CE

c UL us

Technical Drawing



LTPPU, LTPPUAS



Hazardous area liquid tight conduit solutions
EXD Conduit Glands
flameproof EXD barrier cable gland

NEW

properties

- IP Rating: IP66 + IP67 + IP68 (5 bar) + 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 CoC NO.
  - No TC RU C-GB.BH02.B.00386

Glands

Standards

CE 0359 Ex

BS EN IEC 61386

IEC IECEx EAC

RoHS ✓

REACh ✓

Hazardous Area Approvals

Group I	**ATEX APPROVAL to EN60079-0 2012**	**CML Certificate no:**	**CML 15ATEX1037X**
	Ex d Flameproof	Ex d I Mb	EN 60079-1 2007
	Ex e Increased Safety	Ex e I Mb	EN 60079-7 2007
	IECEx APPROVAL to IEC60079-0 2011	**CML Certificate no:**	**CML 15.0020X**
	Ex d Flameproof	Ex d I Mb	IEC 60079-1 2014-06
	Ex e Increased Safety	Ex e I Mb	IEC 60079-7 2006-7
Group II	**ATEX APPROVAL to EN60079-0 2012**	**CML Certificate no:**	**CML 15ATEX1037X**
	Ex d Flameproof	Ex d II C Gb	EN 60079-1 2007
	Ex e Increased Safety	Ex e II C Gb	EN 60079-7 2007
	Ex ta Dust Ignition Proof	Ex ta IIIC Da IP6X	IEC 60079-31 2009
	IECEx APPROVAL to IEC60079-0 2011	**CML Certificate no:**	**CML 15.0020X**
	Ex d Flameproof	Ex d II C Gb	IEC 60079-1 2014-06
	Ex e Increased Safety	Ex e II C Gb	IEC 60079-7 2006-7
	Ex ta Dust Ignition Proof	Ex ta IIIC Da IP6X	IEC 60079-31 2013

LTP - EXD

NEW

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) + IP69



IP66 IP67 IP68 IP69

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

LTP - EXD - SS

NEW

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.

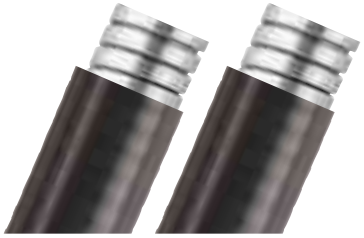
Typical Applications: Flameproof barrier gland offering a high specification, high quality solution for Ex d, Ex e and Ex ta applications where additional corrosion resistance is required.
IP rating: IP66 + IP67 + IP68 (5 bar) + IP69



IP66 IP67 IP68 IP69

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

Used with the following conduits:- as featured on pages 98, 99 & 100



LTP / LTPAS

NEW AS ANTI-STATIC

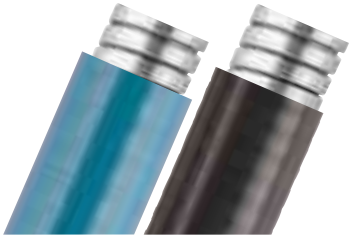


LTPHC



LTPLFH

NEW EXTRA LOW FIRE HAZARD



LTPPU / LTPPUAS

NEW AS ANTI-STATIC NEW

properties

- IP Rating: IP66 + IP67 + IP68 (5 bar)
- 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)
- Also available as Stainless Steel (316L) on request*



Hazardous Area Approvals

ATEX APPROVAL to EN60079-0 2012	**CML Certificate no: CML 15ATEX1037X**
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

IECEx APPROVAL to IEC60079-0 2012	**CML Certificate no: CML 15.0020X**
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



LTP - EXD - 90

NEW

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)



IP66 IP67 IP68

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

LTP - EXD - 45

NEW

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)



IP66 IP67 IP68

To fit nominal size (mm)	metric thread part number
16	LTP16-M20-EXD-45
20	LTP20-M20-EXD-45
25	LTP25-M25-EXD-45
32	LTP32-M32-EXD-45
40	LTP40-M40-EXD-45
50	LTP50-M50-EXD-45
63	LTP63-M63-EXD-45

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



LTPSS



LTPUL



LTBRDP

NEW ENHANCED EMC SCREEN



LTBRDLFH

NEW ENHANCED EMC SCREEN EXTRA LOW FIRE HAZARD

Hazardous area liquid tight conduit solutions
EXE - Increased Safety and Dust Ignition Proof

NEW

properties

- IP Rating: IP66 for Ex e and Ex t applications
- IP Rating: IP67 + IP68 (5 bar) + 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
- 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

Group II			
	ATEX APPROVAL to EN60079-0 2009	**Intertek Certificate no:**	**ITS 14ATEX37958U**
	Ex e Increased Safety	Ex e II Gb	EN 60079-7 2007
	Ex tb Dust Ignition Proof	Ex tb IIIC Da IP6X	EN 60079-31 2009
	IECEx APPROVAL to IEC60079-0 2007	**Intertek Certificate no:**	**IECEx ITS 14.005U**
	Ex e Increased Safety	Ex e II Gb	IEC 60079-7 2006
	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



LTP - EXE

NEW

external thread nickel plated brass
Multipart compression fitting including elastomeric seal. Can be used for knockout or threaded entries as fitting rotates until tightened.

IP66



LTP - EXE - 90

NEW

external thread nickel plated brass
90˚ multipart compression fitting including elastomeric seal. Can be used for knockout.

IP66



LTP - EXE - 45

NEW

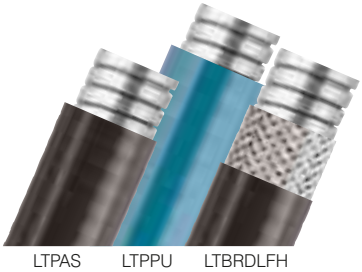
external thread nickel plated brass
90˚ multipart compression fitting including elastomeric seal. Can be used for knockout.

IP66



nominal size (mm)	metric thread part number	PG thread	NPT thread part number		metric thread part number	metric thread part number
16	LTP16-M16-EXE	LTP16-PG11-EXE	LTP16-050-EXE	(½")	LTP16-M16-EXE-90	LTP16-M16-EXE-45
16	LTP16-M20-EXE	LTP16-PG13-EXE			LTP16-M20-EXE-90	LTP16-M20-EXE-45
20	LTP20-M20-EXE	LTP20-PG16-EXE	LTP20-050-EXE	(½")	LTP20-M20-EXE-90	LTP20-M20-EXE-45
25	LTP25-M25-EXE	LTP25-PG21-EXE	LTP25-075-EXE	(¾")	LTP25-M25-EXE-90	LTP25-M25-EXE-45
32	LTP32-M32-EXE	LTP32-PG29-EXE	LTP32-100-EXE	(1")	LTP32-M32-EXE-90	LTP32-M32-EXE-45
40	LTP40-M40-EXE	LTP40-PG36-EXE	LTP40-125-EXE	(1¼")	LTP40-M40-EXE-90	LTP40-M40-EXE-45
50	LTP50-M50-EXE	LTP50-PG42-EXE	LTP50-150-EXE	(1½")	LTP50-M50-EXE-90	LTP50-M50-EXE-45
63	LTP63-M63-EXE	LTP63-PG48-EXE	LTP63-200-EXE	(2")	LTP63-M63-EXE-90	LTP63-M63-EXE-45

Used with



LTPAS LTPPU LTBRDLFH

or any of the LTP conduit types, see page 98

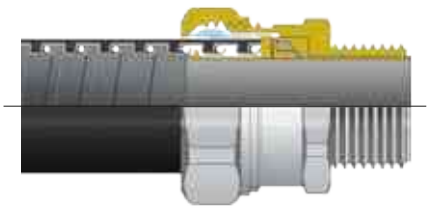
Standards

BS EN IEC 61386

CE 0359

RoHS REACh

Technical Drawing



LTP - EXE

Flexicon
EXD Accessories Range

properties

- ATEX Certification Detail
  IEC Ex Certification Detail
- Continuous Operating Temperature:
  -60°C to +200°C
- Ingress Protection Rating: Up to IP68 when fitted with a suitable Sealing Washer
- Materials: Nickel Plated Brass
- Optional Accessories: Locknut, Serrated Washer, Earth Tag, Sealing Washer. See page 128

Designed to provide a permanent or temporary means of blanking unused cable entry holes in Flameproof enclosures enabling the equipment to be safely deployed in the Hazardous Area. Always inserted from the outside of the enclosure, we have a range of stopping plug options depending on the required installation method.

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 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

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

EXD Thread Converters and Adaptors

NEW

Our thread converters are Nickel Plated Brass as standard.

Internal **Metric** to External **Metric**

Male Thread - External	Female Thread - Internal 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

Internal **Metric** to External **NPT**

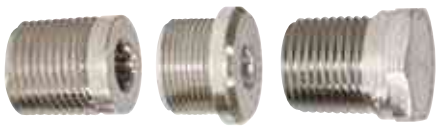
Male Thread - External	Female Thread - Internal M20	M25	M32
½"	B-050-M20-EXD		
¾"	B-075-M20-EXD	B-075-M25-EXD	
1"			B-100-M32-EXD

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

NEW

Our stopping plugs are Nickel Plated Brass as standard.



Size Range	Standard	Dome Head	Hex Head
M16	B-M16-SP-EXD	B-M16-DSP-EXD	B-M16-HSP-EXD
M20	B-M20-SP-EXD	B-M20-DSP-EXD	B-M20-HSP-EXD
M25	B-M25-SP-EXD	B-M25-DSP-EXD	B-M25-HSP-EXD
M32	B-M32-SP-EXD	B-M32-DSP-EXD	B-M32-HSP-EXD
M40	B-M40-SP-EXD	B-M40-DSP-EXD	B-M40-HSP-EXD
M50	B-M50-SP-EXD	B-M50-DSP-EXD	B-M50-HSP-EXD
M63	B-M63-SP-EXD	B-M63-DSP-EXD	B-M63-HSP-EXD

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 - Hexagon 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



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 as steel works.

- High mechanical strength
- Good flexibility
- IP rating: IP66 + IP67 + IP68 (5 bar) + 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

C

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.

IP66 IP67 IP68 IP69

C-S

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.

IP66 IP67 IP68 IP69



nominal size (mm)	LTPBRD part number	reel length (m)	reel length (m)	outside dia (mm)	inside dia (mm)	metric thread part number	metric thread part number
16	LTPBRD16	25	19.3	12.6	45	LTPB16-M16-C	LTPB16-M16-S
16						LTPB16-M20-C	LTPB16-M20-S
20	LTPBRD20	25	22.6	16.0	65	LTPB20-M20-C	LTPB20-M20-S
25	LTPBRD25	25	27.9	21.0	100	LTPB25-M25-C	LTPB25-M25-S
32	LTPBRD32	25	34.6	26.5	135	LTPB32-M32-C	LTPB32-M32-S
40	LTPBRD40	10	43.3	35.4	175	LTPB40-M40-C	LTPB40-M40-S
50	LTPBRD50*+	10	49.3	40.4	230	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

REACh ✓

RoHS ✓

BS EN IEC 61386

CE

properties

- High mechanical strength
- Good flexibility
- IP rating: IP66 + IP67 + IP68 (5 bar) + 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) + 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



C90

external threaded elbow nickel plated brass

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

IP66 IP67 IP68 IP69

LTPB - EXD NEW

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.

IP66 IP67 IP68 IP69

FW

fibre retained face sealing washers

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

IP66 IP67 IP68 IP69

locknuts

galvanised steel and nickel plated brass locknuts

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

FCC

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

P clip to support conduit.







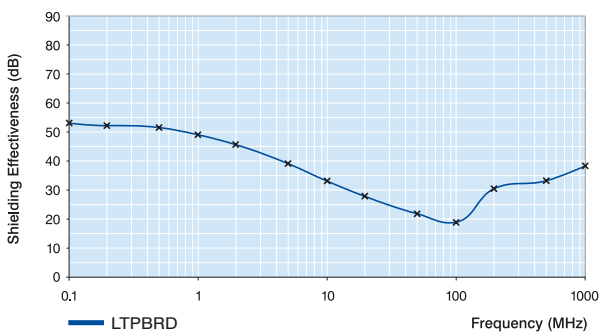


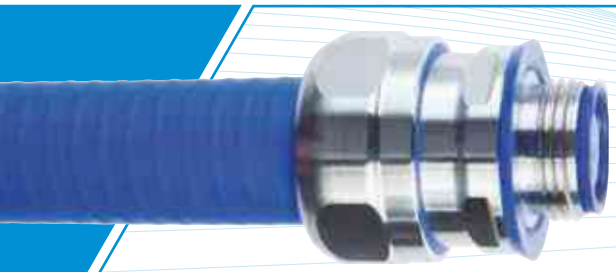
metric thread part number	metric thread part nu mber	NPT thread part number	metric thread part number	metric thread steel part number	metric thread EMC part number	metric thread brass part number	plated steel part number	stainless steel part number	nominal size (mm)
LTPB16-M16-C90			FW16	S-M16		B-M16	FCC16	FCC16-SS	16
LTPB16-M20-C90			FW20						16
LTPB20-M20-C90	LTPB20-M20-EXD	LTPB20-050-EXD	FW20	S-M20	B-M20-EMC	B-M20	FCC20	FCC20-SS	20
LTPB25-M25-C90	LTPB25-M25-EXD	LTPB25-075-EXD	FW25	S-M25	B-M25-EMC	B-M25	FCC25	FCC25-SS	25
LTPB32-M32-C90	LTPB32-M32-EXD	LTPB32-100-EXD	FW32	S-M32	B-M32-EMC	B-M32	FCC32	FCC32-SS	32
LTPB40-M40-C90	LTPB40-M40-EXD	LTPB40-125-EXD	FW40	S-M40	B-M40-EMC	B-M40	FCC40	FCC40-SS	40
LTPB50-M50-C90*	LTPB50-M50-EXD*	LTPB50-150-EXD*	FW50	S-M50		B-M50	FCC50	FCC50-SS	50

Hazardous Area Approvals

Group I	**ATEX APPROVAL to EN60079-0 2012**	**CML Certificate no:**	**CML 15ATEX1037X**
	Ex d Flameproof	Ex d I Mb	EN 60079-1 2007
	Ex e Increased Safety	Ex e I Mb	EN 60079-7 2007
	IECEx APPROVAL to IEC60079-0 2011	**CML Certificate no:**	**CML 15.0020X**
	Ex d Flameproof	Ex d I Mb	IEC 60079-1 2014-06
	Ex e Increased Safety	Ex e I Mb	IEC 60079-7 2006-7
Group II	**ATEX APPROVAL to EN60079-0 2012**	**CML Certificate no:**	**CML 15ATEX1037X**
	Ex d Flameproof	Ex d II C Gb	EN 60079-1 2007
	Ex e Increased Safety	Ex e II C Gb	EN 60079-7 2007
	Ex ta Dust Ignition Proof	Ex ta IIIC Da IP6X	IEC 60079-31 2009
	IECEx APPROVAL to IEC60079-0 2011	**CML Certificate no:**	**CML 15.0020X**
	Ex d Flameproof	Ex d II C Gb	IEC 60079-1 2014-06
	Ex e Increased Safety	Ex e II C Gb	IEC 60079-7 2006-7
	Ex ta Dust Ignition Proof	Ex ta IIIC Da IP6X	IEC 60079-31 2013

EMC Screening Performance





LTP-FG system
LTBRDP-FG system
LTPSS-FG system

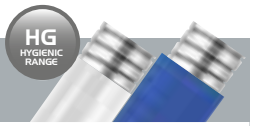
NEW

HG HYGIENIC RANGE

IP66 IP67 IP68 5 bar IP69

Conduit

LTP-FG



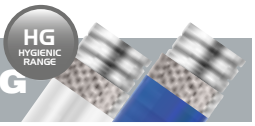
Construction: Galvanised steel, helically wound, flexible conduit with smooth White or Blue PVC cover.

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.

IP66 IP67 IP68 IP69

LTBRDP-FG



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.

IP66 IP67 IP68 IP69

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.

IP66 IP67 IP68 IP69

nominal size (mm)	LTP-FG part number	reel length (m)	outside dia (mm)	inside dia (mm)	LTPBRDP-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)
16	LTPWFG16	25	17.8	12.6					LTPSSBUFG16	25	17.8	12.6
16												
20	LTPWFG20	10, 25	21.1	16.0	LTBRDPWFG20	10, 25	21.1	16.0	LTPSSBUFG20	25	21.1	16.0
25	LTPWFG25	10, 25	26.4	21.0	LTBRDPWFG25	10, 25	26.4	21.0	LTPSSBUFG25	25	26.4	21.0
32	LTPWFG32	10, 25	33.1	26.5	LTBRDPWFG32	10, 25	33.1	26.5	LTPSSBUFG32	10	33.1	26.5
40	LTPWFG40	10	41.8	35.4	LTBRDPWFG40	10	41.8	35.4	LTPSSBUFG40	10	41.8	35.4
50	LTPWFG50+	10	47.9	40.4	LTBRDPWFG50+	10	47.9	40.4	LTPSSBUFG50+	10	47.9	40.4
63	LTPWFG63+	10	59.7	51.6								

Part number for White version shown above

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

REACh RoHS CE

FDA

EU Regulation 10/2011 **EN ISO 14159**

EN 1672-2 **BS EN IEC 61386** **EN IEC 61373 Cat 2**

properties

- Hygienic design in accordance with EN1672-2 & EN ISO 14159
- Smooth finish eliminates build up of bacteria & micro-organisms
- High IP rating IP66, IP67, IP68 (2 Bar) & IP69
- Temperature range **-20°C to +105°C**
- Corrosion resistance Material type (SS316L)
- High chemical and thermal resistance
- Resistant to chemicals & cleaning agents
- Fewer components
- Ease of assembly and integrated barrier seal to prevent contamination
- Compatible with Hygienic Round Box - see page 126

NEW

HG HYGIENIC RANGE



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.

IP66 IP67 IP68 IP69

FCC-SS

stainless steel (316L) P clips

P clip to support conduit.

LOCKNUTS

stainless steel (316L) locknuts

Hexagonal locknut to secure fitting.





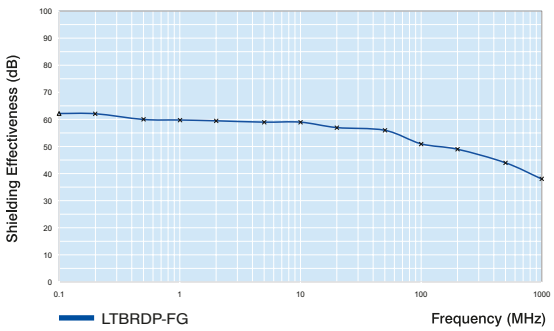




part number	st fitting part number	part number	part number	nominal size (mm)
LTP16-M16-C-FG		FCC16-SS	SS-M16	16
		FCC16-SS	SS-M20	16
LTP20-M20-C-FG	LTP20-M20ST-C-FG	FCC20-SS	SS-M20	20
LTP25-M25-C-FG		FCC25-SS	SS-M25	25
LTP32-M32-C-FG		FCC32-SS	SS-M32	32
LTP40-M40-C-FG		FCC40-SS	SS-M40	40
LTP50-M50-C-FG		FCC50-SS	SS-M50	50
LTP63-M63-C-FG*		FCC63-SS*	SS-M63	63

EMC Screening Performance

EMC Screening Performance



Technical Drawing





FL system
galvanised steel pliable

FLP system
galvanised steel
pvc coated, pliable

Conduit

FL



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

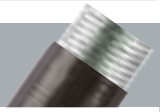
Multipart compression fitting including elastomeric compression seal. Can be used for knockout or threaded entries as fitting rotates until tightened. Provides EMC screening.

IP40



Conduit

FLP



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

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

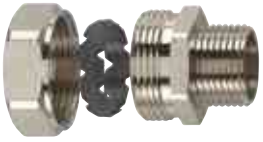
Fittings

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 (see diagram on page 141).

IP40



nominal size (mm)	FL part number	reel length (m)	reel length (m)	outside dia (mm)	inside dia (mm)	metric thread part number
16						
20	FL20	25	19.0	14.6	35	FL20-M20-C
25	FL25	25	25.1	20.4	45	FL25-M25-C
32						
40						
50						

FLP part number	reel length (m)	min inside bend radius (mm)	outside dia (mm)	inside dia (mm)	metric thread part number
FLP16B	25	35	17.8	11.6	FLP16-M16-C
FLP20B	10,25,50	35	20.9	14.6	FLP20-M20-C
FLP25B	10,25,50	45	27.3	20.4	FLP25-M25-C
FLP32B	10,25	55	34.0	26.7	FLP32-M32-C
FLP40B*	10,25	80	44.5	37.1	FLP40-M40-C*
FLP50B*	10,25	150	50.5	49.1	FLP50-M50-C*

Standards

BS EN IEC 61386

Note: refer to conduit properties for applicable standards

Technical Drawing



FLP with C type

Flexicon Ultrascreen™

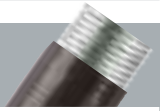
LFHP system
galvanised steel
extra LFH coated, pliable



Conduit

EN 45545-2 NFPA 130

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 + IP68 (5 bar) + IP69
- 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 and NPFA 130 compliant

Fittings

C-HS

external thread
brass - high specification

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 (see diagram on page 141).

IP66 IP67 IP68 IP69

F-HS

internal thread
brass - high specification

Multipart compression fitting including serrated elastomeric seal. Provides EMC screening once outer plastic sheath is trimmed from end of conduit (see diagram on page 141).

IP66 IP67 IP68 IP69





nominal size (mm)	LFHP part number	reel length (m)	min inside bend radius (mm)	outside dia (mm)	inside dia (mm)	metric thread part number	metric thread part number
16	LFHP16B	25	40	17.8	11.6	FLP16-M16-C-HS*	FLP16-M16-F-HS*
20	LFHP20B	25	40	20.9	14.6	FLP20-M20-C-HS*	FLP20-M20-F-HS*
25	LFHP25B	25	55	27.3	20.4	FLP25-M25-C-HS*	FLP25-M25-F-HS*
32	LFHP32B	25	65	34.0	26.7	FLP32-M32-C-HS*	FLP32-M32-F-HS*
40							
50							

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

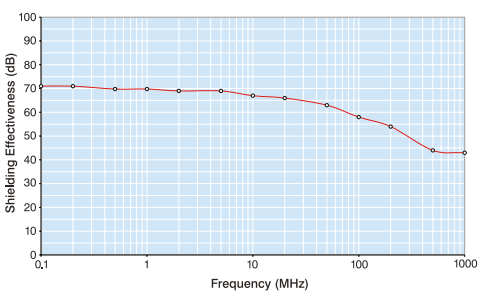
How to read the fittings code

FLP20-M20-C

- FLP20 — conduit
- M20 — thread size
- C — fitting type

* Indicates parts made to order on request and may be subject to MOQ and lead time

EMC Screening Performance





FB system
galvanised steel core
galvanised steel overbraid

FUSSB system
galvanised steel core
stainless steel overbraid

Conduit

FB

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

Colour: Zinc, self colour.

Typical Applications: Industrial environments and high temperatures.

EN 45545-2 NFPA 130

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.

EN 45545-2 NFPA 130

Fittings

M

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)	FB part number	FUSSB part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	M metric thread part number	M PG thread part number	S metric thread part number	S PG thread part number
12	FB12	FUSSB12*	25	14.0	10.2	30	FB12-M16-M	FB12-PG9-M	FB12-M16-S	FB12-PG9-S
16	FB16	FUSSB16*	25	17.5	13.0	40	FB16-M16-M	FB16-PG11-M	FB16-M16-S	FB16-PG11-S
16							FB16-M20-M		FB16-M20-S	
20	FB20	FUSSB20	25	21.5	16.9	45	FB20-M20-M	FB20-PG16-M	FB20-M20-S	FB20-PG16-S
25	FB25	FUSSB25	25	26.0	21.1	55	FB25-M25-M	FB25-PG21-M	FB25-M25-S	FB25-PG21-S
32	FB32	FUSSB32	25	34.0	28.1	70	FB32-M32-M	FB32-PG29-M	FB32-M32-S	FB32-PG29-S
40	FB40	FUSSB40*	10	43.5	37.6	80	FB40-M40-M	FB40-PG36-M	FB40-M40-S	FB40-PG36-S
50	FB50	FUSSB50*	10	54.5	48.4	90	FB50-M50-M	FB50-PG48-M	FB50-M50-S	FB50-PG42-S

Ordering Notes

- 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

- FB20 — conduit
- M20 — thread size
- M — fitting type

Standards

UNDERGROUND

BS EN IEC 61386

REACh

CE

RoHS

EN 45545-2 NFPA 130

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 148
- Fully compliant to LUL Std S1085.
  (Cert No. 296)
- Nickel plated brass fittings
- EN45545-2 to HL3 and
  NFPA130



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.

IP40

90° elbow

internal and external threaded nickel plated brass elbow

90° elbow which can be screwed onto external threaded fittings.

locknuts

galvanised steel and nickel plated brass locknuts

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

FCC

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

P clip to support and secure conduit.









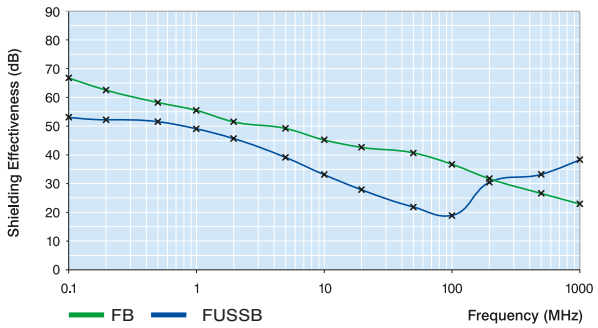




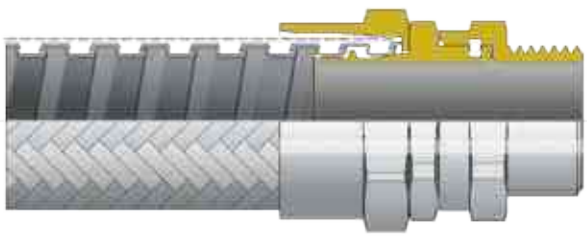


hole size (mm)	part number	metric thread part number	metric thread steel part number	metric thread EMC part number	metric thread brass part number	plated steel part number	stainless steel part number	nominal size (mm)
12	FB12-P	BM90-16M	S-M16		B-M16	FCC12	FCC12-SS	12
16	FB16-P	BM90-16M	S-M16		B-M16	FCC16	FCC16-SS	16
		BM90-20M	S-M20	B-M20-EMC	B-M20	FCC16	FCC16-SS	16
20	FB20-P	BM90-20M	S-M20	B-M20-EMC	B-M20	FCC20	FCC20-SS	20
25	FB25-P	BM90-25M	S-M25	B-M25-EMC	B-M25	FCC25	FCC25-SS	25
32	FB32-P	BM90-32M	S-M32	B-M32-EMC	B-M32	FCC32	FCC32-SS	32
40	FB40-P	BM90-40M	S-M40	B-M40-EMC	B-M40	FCC40	FCC40-SS	40
51	FB50-P	BM90-50M	S-M50		B-M50	FCC50	FCC50-SS	50

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.

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).

EN 45545-2 HL3 R26

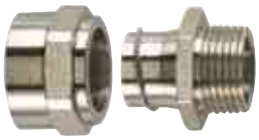
Fittings

M

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.

IP54



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.

IP54



nominal size (mm)	FSB part number	LFHUBRD part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	M metric thread part number	M PG thread part number	S metric thread part number	S PG thread part number
12	FSB12		25	15.2	10.2	30	FSB12-M16-M	FSB12-PG9-M	FSB12-M16-S	FSB12-PG9-S
16	FSB16		25	18.2	13.0	40	FSB16-M16-M	FSB16-PG11-M	FSB16-M16-S	FSB16-PG11-S
16							FSB16-M20-M		FSB16-M20-S	
20	FSB20	LFHUBRD20	25	22.7	16.9	45	FSB20-M20-M	FSB20-PG16-M	FSB20-M20-S	FSB20-PG16-S
25	FSB25	LFHUBRD25	25	27.2	21.1	55	FSB25-M25-M	FSB25-PG21-M	FSB25-M25-S	FSB25-PG21-S
32	FSB32	LFHUBRD32	25	35.2	28.1	70	FSB32-M32-M	FSB32-PG29-M	FSB32-M32-S	FSB32-PG29-S
40	FSB40	LFHUBRD40	10	45.7	37.6	80	FSB40-M40-M	FSB40-PG36-M	FSB40-M40-S	FSB40-PG36-S
50	FSB50		10	57.7	48.4	90	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 and NFPA130



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.

IP54

C

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.

IP65

CS

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.

IP65

C90

external thread elbow nickel plated brass

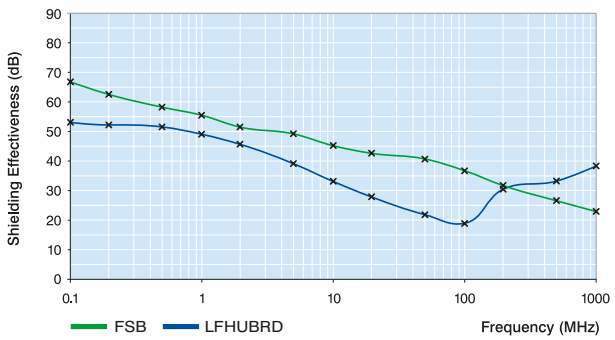
Multipart 90˚ compression fitting including elastomeric seal. Braid is locked between inner and outer compression nuts.

IP65

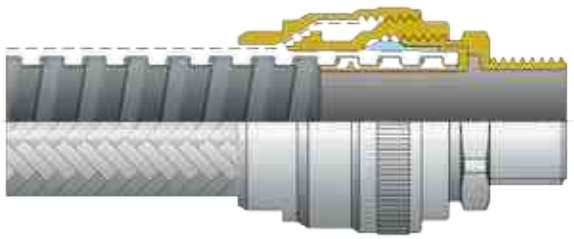


hole size (mm)	part number	metric thread part number	PG thread part number	metric thread part number	metric thread part number	nominal size (mm)
12	FSB12-P					12
16	FSB16-P	FSB16-M16-C	FSB16-PG11-C	FSB16-M16-C-S	FSB16-M16-C90	16
		FSB16-M20-C	FSB16-PG13-C	FSB16-M20-C-S	FSB16-M20-C90	16
20	FSB20-P	FSB20-M20-C	FSB20-PG16-C	FSB20-M20-C-S	FSB20-M20-C90	20
25	FSB25-P	FSB25-M25-C	FSB25-PG21-C	FSB25-M25-C-S	FSB25-M25-C90	25
32	FSB32-P	FSB32-M32-C	FSB32-PG29-C	FSB32-M32-C-S	FSB32-M32-C90	32
40	FSB40-P					40
50	FSB50-P					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 and tunnels.

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

- IP rating: IP68
- Temperature range -100°C to +400°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 NPFA 130 compliant
- Excellent Corrosion resistance
- Oil resistant
- UV resistant
- Provides EMC screening
- Offers Antistatic properties

IP68

EN 45545-2 NFPA 130

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: IP68
- Temperature range -100°C to +400°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 NPFA 130 compliant
- Excellent Corrosion resistance
- Oil resistant
- UV resistant
- Provides EMC screening – Standard
- Offers Antistatic properties

IP68

EN 45545-2 NFPA 130

Fittings

C

fixed external thread nickel plated brass

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 FSS version.

IP68



S-F

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.

IP68



nominal size (mm)	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)	for use with FSS	for use with FSSBRD	for use with FSS
20	FSS20	25	21.6	16.2	45	FSSBRD20	25	21.6	16.2	60	FSS20-M20-C	FSSBRD20-M20-C	FSS20-FM20-S
25	FSS25	25	26.8	20.2	55	FSSBRD25	25	28.3	20.2	70	FSS25-M25-C	FSSBRD25-M25-C	FSS25-FM25-S
32	FSS32*	25	32.5	25.4	65	FSSBRD32*	25	33.8	25.4	80	FSS32-M32-C*	FSSBRD32-M32-C*	FSS32-FM32-S*
40	FSS40*	10	41.3	34.1	105	FSSBRD40*	10	43.0	34.1	120	FSS40-M40-C*	FSSBRD40-M40-C*	FSS40-FM40-S*
50	FSS50*	10	50.0	40.0	130	FSSBRD50*	10	51.2	40.0	145	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

EN 45545-2 NFPA 130

properties

- IP rating: IP68
- 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



C-S

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.

IP68



C90

NEW

external thread nickel plated brass

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

IP68



C45

NEW

external thread nickel plated brass

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

IP68



FCC-SS CLIPS

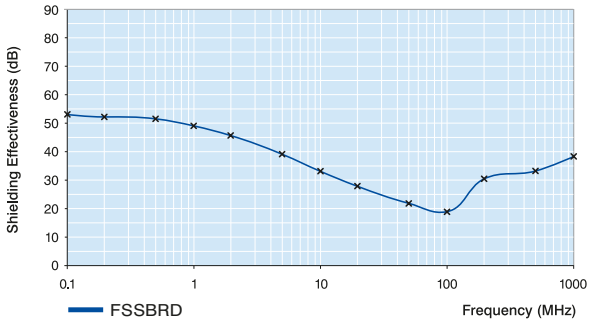
stainless steel (316L) P clips

P clip to support conduit.



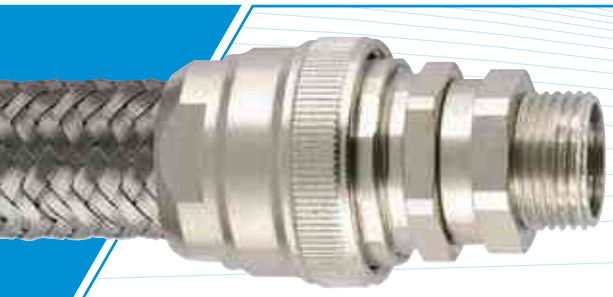
for use with FSS	for use with FSSBRD	for use with FSS	for use with FSS		nominal size (mm)
FSS20-M20-S	FSSBRD20-M20-S	FSS20-M20-C90	FSS20-M20-C45	FCC20-SS	20
FSS25-M25-S	FSSBRD25-M25-S	FSS25-M25-C90	FSS25-M25-C45	FCC25-SS	25
FSS32-M32-S*	FSSBRD32-M32-S*	FSS32-M32-C90*	FSS32-M32-C45*	FCC32-SS	32
FSS40-M40-S*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

EMC Screening Performance



Technical Drawing





FPRSS system
corrugated nylon, (PA6)
stainless steel overbraid

FPRTC system
corrugated nylon, (PA6)
tinned copper overbraid

Conduit

FPRSS

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

Typical Applications: Metro rail stations for anti-vandal.

FPRTC

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

Typical Applications: Inside railway carriages where screening is required.

FPISS

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

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

FPIHSS

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

Typical Applications: Under railway carriages where low temperatures, abrasion, impact and regular movement occurs.

FPIHRSS

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

Typical Applications: Under railway carriages where extra low fire hazard, low temperatures, abrasion, impact and regular movement occurs.

Fittings

C

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.

IP67

C-S

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.

IP67



nominal size (mm)	FPRSS part number	FPRTC part number	FPISS part number	FPIHSS part number	FPIHRSS part number	outside dia (mm)	min inside dia (mm)	min inside bend radius (mm)
16	FPRSS16-50M	FPRTC16-50M*	FPISS16-50M*	FPIHSS16-50M	FPIHRSS16-50M	17.3	11.5	35
21	FPRSS21-50M	FPRTC21-50M*	FPISS21-50M*	FPIHSS21-50M	FPIHRSS21-50M	22.7	15.0	45
28	FPRSS28-50M	FPRTC28-50M*	FPISS28-50M*	FPIHSS28-50M	FPIHRSS28-50M	30.0	21.3	50
34	FPRSS34-50M	FPRTC34-50M*	FPISS34-25M*	FPIHSS34-25M	FPIHRSS34-25M	36.0	27.6	60
42	FPRSS42-25M*	FPRTC42-25M*	FPISS42-25M*	FPIHSS42-25M*	FPIHRSS42-25M	44.0	35.5	70
54	FPRSS54-25M*	FPRTC54-25M*	FPISS54-25M*	FPIHSS54-25M*	FPIHRSS54-25M	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*	

Ordering Notes

* 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
  - full copies of independent test report confirming screening effectiveness

How to read the fittings code

BC21-M20-C

- BC21 — conduit
- M20 — thread size
- C — fitting type

Standards

BS EN IEC 61386

EN 45545-2

HFPA T30

Note: refer to conduit properties for applicable standards

FPISS, FPIHSS system corrugated nylon, (PA12), stainless steel overbraid

FPIHRSS system corrugated nylon, (PA12), stainless steel overbraid

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 148
- 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**

FPISS, FPIHRSS & FPIHSS

- 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
- **FPIHRSS EN 45545-2 to HL3 and NFPA130**

C-90

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.

IP67

90° elbow

internal and external threaded nickel plated brass elbow

90˚ elbow which can be screwed onto external threaded fittings.

FW

fibre retained face sealing washers

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

sealing washers

fibre face sealing washers

Sealing washer to maintain IP rating of fitting to adjacent equipment.

locknuts

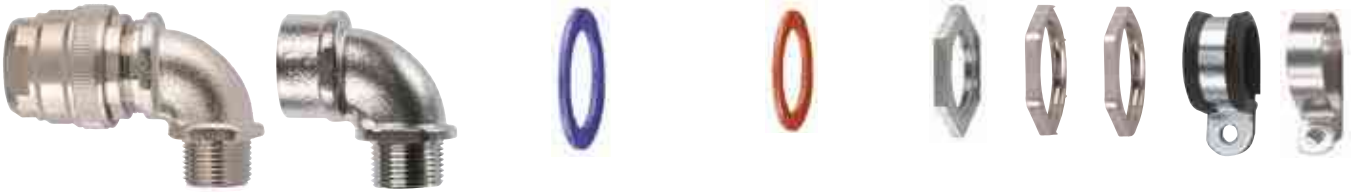
galvanised steel and nickel plated brass locknuts

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

FCC

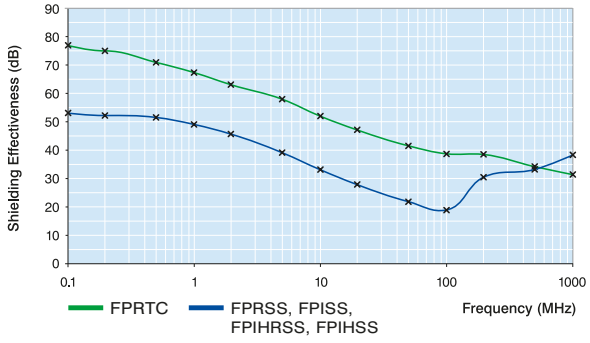
plated steel P clip with pvc liner, stainless steel P clips

P clip to support conduit.



C-90 metric thread part number	90° elbow metric thread part number	FW metric thread part number	sealing washers part number	locknuts metric thread steel part number	locknuts metric thread EMC part number	locknuts metric thread brass part number	FCC plated steel part number	FCC 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



Cable Gland Fittings

cable strain relief and enhanced IP rating for Flexicon conduits

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: IP68 (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			16	**FSU16-M16-CG**	IP40	IP68 (10 bar)+IP69	4.5-10mm
			20	**FSU20-M20-CG**			7-13mm
			25	**FSU25-M25-CG**			9-17mm
			32	**FSU32-M32-CG**			11-21mm
FSU, FNU, LFHU and FPU			16	**FSU16-M16-CG**	IP65	IP68 (10 bar)+IP69	4.5-10mm
			20	**FSU20-M20-CG**			7-13mm
			25	**FSU25-M25-CG**			9-17mm
			32	**FSU32-M32-CG**			11-21mm
LTP, LTPHC, LTPUL, LTPAS, LTPSS, LTPLFH LTBRDP, LTBRDLFH, LTPPU and LTPPUAS			16	**LTP16-M16-CG**	IP66+IP67+ IP68 (5 bar)+IP69	IP68 (10 bar)+IP69	4.5-10mm
			20	**LTP20-M20-CG**			7-13mm
			25	**LTP25-M25-CG**			9-17mm
			32	**LTP32-M32-CG**			11-21mm
FB & FUSSB			16	**FSB16-M16-CG**	IP40	IP68 (10 bar)+IP69	4.5-10mm
			20	**FSB20-M20-CG**			7-13mm
			25	**FSB25-M25-CG**			9-17mm
			32	**FSB32-M32-CG**			11-21mm
FSB & LFHUBRD			16	**FSB16-M16-CG**	IP65	IP68 (10 bar)+IP69	4.5-10mm
			20	**FSB20-M20-CG**			7-13mm
			25	**FSB25-M25-CG**			9-17mm
			32	**FSB32-M32-CG**			11-21mm
LTPBRD			16	**LTPB16-M16-CG**	IP66+IP67+ IP68 (5 bar)+IP69	IP68 (10 bar)+IP69	4.5-10mm
			20	**LTPB20-M20-CG**			7-13mm
			25	**LTPB25-M25-CG**			9-17mm
			32	**LTPB32-M32-CG**			11-21mm
LPC, LPCG, LPCO, LPCBU			16	**LPC16-M16-CG**	IP66+IP67+ IP68 (5 bar)+IP69	IP68 (10 bar)+IP69	4.5-10mm
			20	**LPC20-M20-CG**			7-13mm
			25	**LPC25-M25-CG**			9-17mm
			32	**LPC32-M32-CG**			11-21mm

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

Standards

BS EN IEC 61386

CE

REACh ✓ RoHS ✓





FTCB Braided sleeving
tinned copper braid system for EMC screening

ENHANCED EMC SCREEN ★★

INHERENT LOW FIRE HAZARD ★★★

properties

- EMC Screening 67dB @ 1Mhz for 20mm
- Minimum optical cover 90%
- Can offer mechanical support
- Can offer abrasion resistance

Overbraid

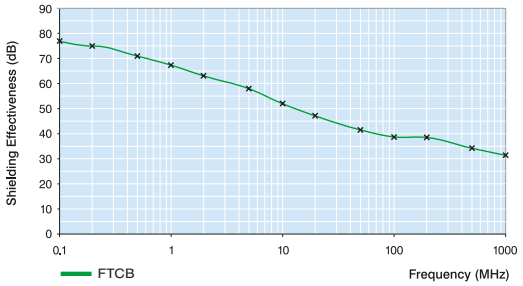
FTCB

Construction: Tinned copper braided sleeving.

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)	Usable ø mm min	Usable ø 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 | FPAX | FPAU NEW

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.

	FPA		FPAX		FPAU		
	IP66		IP66 IP67 IP68 IP69		IP66 IP67 IP68 IP69		
conduit size (mm)	FPA part number		FPAX part number		FPAU part number		Use with Braid
21	FPA21-M20-SBCA		FPAX21-M20-SBCA		FPAU21-M20-SBCA		FTCB10, FTCB12, FTCB15
28	FPA28-M25-SBCA		FPAX28-M25-SBCA		FPAU28-M25-SBCA		FTCB15, FTCB20, FTCB25
34	FPA34-M32-SBCA		FPAX34-M32-SBCA		FPAU34-M32-SBCA		FTCB20, FTCB25, FTCB30
42	FPA42-M40-SBCA		FPAX42-M40-SBCA		FPAU42-M40-SBCA		FTCB25, FTCB30, FTCB35

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





Round Connection boxes
stainless steel
nickel plated brass

NEW

IP66 IP67 IP68 IP69

Connection Boxes

ROUND BOX - STAINLESS STEEL - HYGIENIC

NEW HG HYGIENIC RANGE

IP66 IP67 IP68 IP69



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

	Part Number	Height (mm)	Diameter (mm)
2 Way	FBOX75X60-M20X2-SS	65	75
4 Way	FBOX75X60-M20X4-SS	65	75

ROUND BOX - NICKEL PLATED BRASS

NEW

IP66 IP67 IP68 IP69



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

	Part Number	Height (mm)	Diameter (mm)
2 Way	FBOX75X60-M20X2-NPB	65	75
4 Way	FBOX75X60-M20X4-NPB	65	75

For non-metallic Round Connection Boxes visit our website

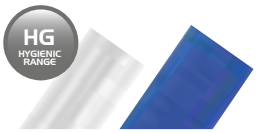


properties

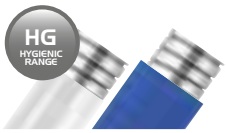
- IP rating: IP66, IP67, IP68, IP69
- Temperature range -50˚C to +135˚C
- Hygienic Box designed using principles given in EN1672-2 and EN ISO 14159
- Blue high visibility polyester elastomer lid and base seals
- 3 Way, 2 Way 90˚ and 1 Way available on request
- Other diameters and heights available on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



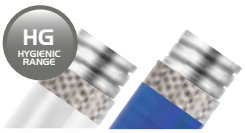
Terminations



LPC-FG
See page 84



LTP-FG
See page 112



LTBRDP-FG
See page 112



LTPSS-FG
See page 112

Conduits



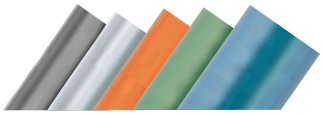
Part Number	Part Number	Part Number	Part Number
LPCWFG20 **LPCBUFG20**	**LTPWFG20** **LTPBUFG20**	**LTBRDPWFG20** **LTBRDPBUFG20**	**LTPSSBUFG20**



Fittings



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 85	See page 113	See page 113	See page 113	



LPC Type
See page 80



Liquid Tight
See pages 98

Conduits



Part Number	Part Number				
LPC20B **LPC20G** **LPC20O** **LPC20GN** **LPC20BU**	**LTP20** **LTPAS20** **LTPHC20** **LTPUL20**	**LTPLFH20** **LTPPU20** **LTPPUAS20** **LTPSS20**	**LTBRDP20** **LTBRDLFH20**		

Fittings



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 81	See page 102	See page 129	See page 128

For non-metallic Round Connection Boxes visit our website



Accessories

metric locknuts

nickel plated brass, plated steel, stainless steel, nylon black or grey



nickel plated brass part number	nickel plated EMC part number	plated steel part number	stainless steel part number	nylon part number
B-M12				LM12-N#
B-M16		S-M16	SS-M16	LM16-N#
B-M20	B-M20-EMC	S-M20	SS-M20	LM20-N#
B-M25	B-M25-EMC	S-M25	SS-M25	LM25-N#
B-M32	B-M32-EMC	S-M32	SS-M32	LM32-N#
B-M40	B-M40-EMC	S-M40	SS-M40	LM40-N#
B-M50		S-M50	SS-M50	LM50-N#
B-M63		S-M63	SS-M63*	LM63-N#
B-M75				

PG locknuts

nickel plated brass, Zinc, nylon black or grey



nickel plated brass part number	nylon part number
B-PG7	PG7-N#
B-PG9	PG9-N#
B-PG11	PG11-N#
B-PG13	PG13-N#
B-PG16	PG16-N#
B-PG21	PG21-N#
B-PG29	PG29-N#
B-PG36	PG36-N#
B-PG42	PG42-N#
B-PG48	PG48-N#

NPT locknuts

Zinc or nylon (black)



zinc part number	nylon part number
Z-050	050-NB
Z-075	075-NB
Z-100	100-NB
Z-125	
Z-150	
Z-200	

stop plug

nylon metric black — nylon PG (grey)

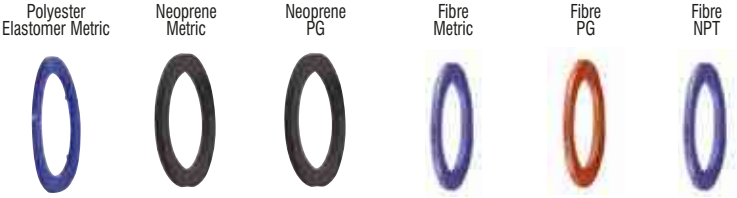


metric part number	PG part number
SP-M12*	SP-PG7*
SP-M16	SP-PG9
SP-M20	SP-PG11
SP-M25	SP-PG13
SP-M32	SP-PG16
SP-M40*	SP-PG21
	SP-PG29

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

sealing washers

Polyester Elastomer, Neoprene and fibre face sealing washers



Polyester Elastomer Metric	Neoprene Metric	Neoprene PG	Fibre Metric	Fibre PG	Fibre NPT
metric thread part number	metric thread part number	PG thread part number	metric thread part number	PG thread part number	NPT thread part number
	SW12	SWPG7	FW12	FWPG7	
RSW16	SW16	SWPG9	FW16	FWPG9	
RSW20	SW20	SWPG11	FW20	FWPG11	FW050
RSW25	SW25	SWPG13	FW25	FWPG13	FW075
RSW32	SW32	SWPG16	FW32	FWPG16	FW100
RSW40	SW40	SWPG21	FW40	FWPG21	FW125
RSW50	SW50	SWPG29	FW50	FWPG29	FW150
RSW63	SW63	SWPG36	FW63	FWPG36	FW200
		SWPG42			
		SWPG48		FWPG48	

earthing washers

shake proof washer — earth tag washer



shake proof washer metric thread part number	earth tag washer metric thread part number
SPW16	
SPW20	ET-M20
SPW25	ET-M25
SPW32	

fixing clips

plated steel with black pvc liner or stainless steel.

LFH liner available on request





conduit clip

nylon conduit clip with integral lid - black or grey



FCLAMP NEW

non-metallic, heavy duty conduit clamp

Nylon PA66, Nylon conduit fixing clamp for corrugated conduit.



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 NEW

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).



(For fixing rails & accessories see page 76)

to fit conduit size	part number	part number
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	

to fit nominal conduit sizes	conduit clip for corrugated	conduit clip for plain or rigid	fclamp	end cap	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 NEW

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)
- UL Listed



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)
- UL Listed

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

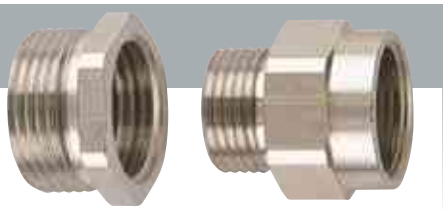
couplers

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

	external thread	internal thread	M16	M20	M25	M32	M40	M50
Metric - Metric	M16			B-M16-M20				
	M20		B-M20-M16		B-M20-M25			
	M25			B-M25-M20		B-M25-M32		
	M32			B-M32-M20	B-M32-M25		B-M32-M40	
	M40					B-M40-M32		
	M50					B-M50-M32	B-M50-M40	
	M63						B-M63-M40	B-M63-M50
PG - Metric	PG7		B-PG7-M16	B-PG7-M20				
	PG9		B-PG9-M16	B-PG9-M20				
	PG11		B-PG11-M16	B-PG11-M20				
	PG13.5		B-PG13-M16	B-PG13-M20				
	PG16		B-PG16-M16	B-PG16-M20	B-PG16-M25			
	PG21			B-PG21-M20	B-PG21-M25	B-PG21-M32		
	PG29			B-PG29-M20	B-PG29-M25	B-PG29-M32	B-PG29-M40	
	PG36					B-PG36-M32	B-PG36-M40	
	PG42							
	PG48						B-PG48-M40	
NPT - Metric	⅜" NPT		B-038-M16					
	½" NPT			B-050-M20				
	¾" NPT			B-075-M20	B-075-M25			
	1" NPT					B-100-M32		

PG Internal Threads

	external thread	internal thread	PG7	PG9	PG11	PG13.5	PG16	PG21	PG29	PG36
Metric - PG	M16		B-M16-PG7	B-M16-PG9	B-M16-PG11					
	M20		B-M20-PG7	B-M20-PG9	B-M20-PG11	B-M20-PG13	B-M20-PG16	B-M20-PG21		
	M25							B-M25-PG21		
	M32							B-M32-PG21		
	M40								B-M40-PG29	
	M50									B-M50-PG36
PG - PG	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			
	PG16			B-PG16-PG9	B-PG16-PG11	B-PG16-PG13		B-PG16-PG21		
	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 138 for thread dimensions tables.

For EXD thread converters, please see page 109

Tools

The following tools and accessories are available to aid installation. See page 140 for cutting and assembly advice. Alternatively visit our website & view our handy video clips to aid your installation.

clamp

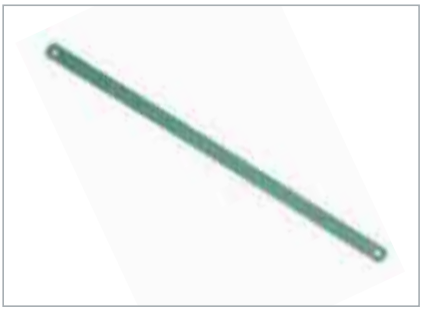
cutting vice to hold metallic conduits and guide hacksaw (16-50mm).



Part Number	
BSB	clamp

hacksaw blade

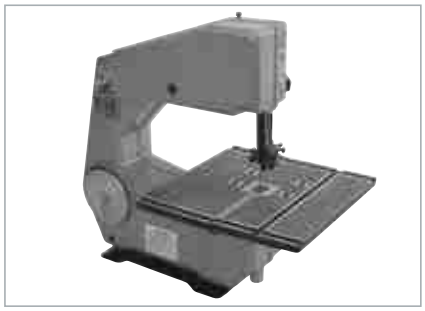
fine tooth (32 TPI) blade for standard hacksaw.



Part Number	
HACKSAWBLADE	

bandsaw

bench mounted, 240v, fine toothed (32TPI) bandsaw.



Part Number	
BANDSAW	
BANDSAWBLADE	(spare blades)

conduit cutter

for any non metallic flexible and rigid conduits.



Part Number	
CC01	up to 34mm conduits
CC02	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**

removal tool for push in Flexilok® fittings (see page 68)



Part Number	For use with:
RTPF20	**FLK16-PL20, FLK20-PL20, FLK21-PL20**
RTPF25	**FLK25-PL25, FLK28-PL25**
RTPF32	**FLK34-PL32**

4 tooth Flexilok® Removal tool for use with 42mm & 54mm sizes (see page 68)



Part Number	For use with:
FLK42RT	**FLK42-M40, FLK42-M50, FLK42-PG36**
FLK54RT	**FLK54-M50, FLK54-M63, FLK54-PG48**

Contractor Packs

Hygiene Packs



Each pack contains:
- **3m conduit**
- **2 fittings**
- **2 locknuts**

20mm I-PACK

NEW | HG HYGIENIC RANGE | IP66 | IP67 | IP68 2 bar | IP69

I-PACKBUFG20
3m x LPCBUFG20 Conduit
2x LPC-C-FG Fittings
2x SS-M20 Locknuts



Blue Version

I-PACKWFG20
3m x LPCWFG20 Conduit
2x LPC-C-FG Fittings
2x SS-M20 Locknuts



White Version

- Hygienic design
- Smooth finish
- High IP rating
- Corrosion resistant
- High chemical & thermal resistance
- Fewer components
- Self extinguishing
- Vibration & shock tested

25mm I-PACK

NEW | HG HYGIENIC RANGE | IP66 | IP67 | IP68 2 bar | IP69

I-PACKBUFG25
3m x LPCBUFG25 Conduit
2x LPC-C-FG Fittings
2x SS-M25 Locknuts



Blue Version

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
- High chemical & thermal resistance
- Fewer components
- Self extinguishing
- Vibration & shock tested

Contractor Packs

Benefits

- Simplistic ordering
- Easy storage
- Ready to use



FPAS-CP21B

Each pack contains:
- **10m conduit**
- **10 fittings**
- **10 locknuts**

PVC
white

IP66

FPL-CP20W M20 thread
FPL-CP25W 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

SLIT POLYPROPYLENE
grey

FPPS-TP21G





- 10 metres of slit grey polypropylene FPP21G
- Self extinguishing
- Can be slipped over existing cables to tidy up and protect them
- 1 slit conduit insertion tool ST20

STEEL
- pvc coating - Black

IP54

FSU-CP20B 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
- IP54

NYLON
- Black

IP66

STANDARD LOW FIRE HAZARD

FPAS-CP21B M20 thread
FPAS-CP25B 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
- Black

IP65

FPC-CP20B M20 thread
FPC-CP25B 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
- Black

IP66

FPYE-CP20B M20 thread
FPYE-CP25B M25 thread



- 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
- Black or Grey

IP66

FPP-CP20B M20 thread
FPP-CP25B M25 thread



- 10 metres of polypropylene FPP20 or FPP25
- 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 or FLK25-M25BPP
- IP66
- One part, fast fit

Standards

CE RoHS REACh

Don't forget

See page 76



Technical Data - Resistance to Chemicals

Page number	Conduit System		ASTM NO. 1	ASTM NO. 2	ASTM NO. 3	ACETIC ACID (10%)	ACETONE	ALUMINIUM CHLORIDE	BENZENE	CARBON TETRACHLORIDE	CHLOROFORM	CITRIC ACID	COPPER SULPHATE	CRESOL	DIESEL OIL	DIETHYLAMINE	ETHANOL	ETHER	ETHYLAMINE	ETHYLENE GLYCOL	FREON 32	HYDROCHLORIC ACID (10%)	HYDROCHLORIC ACID (30%)
44	**FPAS**	nylon LFH PA6 corrugated, std weight	✓	✓	✓	L	✓	X	✓	✓	X	✓	L	X	✓	✓	✓	✓	✓	✓	✓	X	X
44	**FPAL**	nylon PA6 corrugated, light weight	✓	✓	✓	L	✓	X	✓	✓	X	✓	L	X	✓	✓	✓	✓	✓	✓	✓	X	X
44	**FPAH**	nylon LFH PA6 corrugated, heavy weight	✓	✓	✓	L	✓	X	✓	✓	X	✓	L	X	✓	✓	✓	✓	✓	✓	✓	X	X
44	**FPASC**	nylon LFH PA6 corrugated, std weight	✓	✓	✓	L	✓	X	✓	✓	X	✓	L	X	✓	✓	✓	✓	✓	✓	✓	X	X
45	**FPR**	nylon extra LFH PA6 corrugated, std weight	✓	✓	✓	L	✓	X	✓	✓	X	✓	L	X	✓	✓	✓	✓	✓	✓	✓	X	X
45	**FPADS**	nylon PA6 double slit corrugated	✓	✓	✓	L	✓	X	✓	✓	X	✓	L	X	✓	✓	✓	✓	✓	✓	✓	X	X
45	**FPI**	nylon PA12 corrugated, standard weight	✓	✓	✓	L	✓	L	✓	✓	X	✓	L	X	✓	L	L	✓	L	✓	✓	X	X
45	**FPIH**	nylon PA12 corrugated, heavy weight	✓	✓	✓	L	✓	L	✓	✓	X	✓	L	X	✓	L	L	✓	L	✓	✓	X	X
45	**FPIHR**	nylon PA12 corrugated, heavy weight	✓	✓	✓	L	✓	L	✓	✓	X	✓	L	X	✓	L	L	✓	L	✓	✓	X	X
46	**FPP**	polypropylene corrugated, std weight	✓	✓	L	PP	✓	L	L	L	L	✓	L	X	✓	✓	✓	✓	✓	✓	✓	PP	PP
46	**FPP-NFR**	polypropylene corrugated non flame retarded	✓	✓	L	PP	✓	L	L	L	L	✓	L	X	✓	✓	✓	✓	✓	✓	✓	PP	PP
46	**FPP-H**	polypropylene corrugated heavy weight	✓	✓	L	PP	✓	L	L	L	L	✓	L	X	✓	✓	✓	✓	✓	✓	✓	PP	PP
70	**FPL**	upvc corrugated	✓	✓	✓	L	X	L	X	L	X	✓	L	X	✓	L	✓	✓	L	✓	L	X	X
72	**FPY**	nylon PA6 corrugated	✓	✓	✓	L	✓	X	✓	✓	X	✓	L	X	✓	✓	✓	✓	✓	✓	✓	X	X
72	**FPYS**	slit nylon PA6 corrugated, std weight	✓	✓	✓	L	✓	X	✓	✓	X	✓	L	X	✓	✓	✓	✓	✓	✓	✓	X	X
72	**FPYL**	nylon PA6 corrugated, light weight	✓	✓	✓	L	✓	X	✓	✓	X	✓	L	X	✓	✓	✓	✓	✓	✓	✓	X	X
72	**FPYLS**	slit nylon PA6 corrugated, light weight	✓	✓	✓	L	✓	X	✓	✓	X	✓	L	X	✓	✓	✓	✓	✓	✓	✓	X	X
78	**FPCB**	pvc spiral reinforced black	X	X	X	L	X	L	X	L	X	✓	L	X	L	L	X	L	L	L	L	X	X
78	**FPCG**	pvc spiral reinforced grey	X	X	X	L	X	L	X	L	X	✓	L	X	L	L	X	L	L	L	L	X	X
78	**FPCGN**	pvc spiral reinforced green oil resistant	✓	✓	✓	✓	X	X	X	L	X	✓	✓	L	✓	L	X	L	L	L	L	L	X
78	**FPCBU**	pvc spiral reinforced blue high temperature	X	X	X	L	X	L	X	L	X	✓	L	X	L	L	X	L	L	L	L	X	X
80	**LPCB**	smooth, pvc spiral reinforced	✓	✓	✓	✓	X	X	X	L	X	✓	✓	L	✓	L	X	L	L	L	L	L	X
80	**LPCO**	smooth pvc spiral orange ultra flexible	✓	✓	✓	✓	X	X	X	L	X	✓	✓	L	✓	L	X	L	L	L	L	L	X
80	**LPCBU**	smooth pvc spiral blue high temperature	✓	✓	✓	✓	X	X	X	L	X	✓	✓	L	✓	L	X	L	L	L	L	L	X
80	**LPCGN**	smooth pvc spiral green oil resistant	✓	✓	✓	✓	X	X	X	L	X	✓	✓	L	✓	L	X	L	L	L	L	L	X
84	**LPC-FG**	smooth, pvc spiral reinforced	✓	✓	✓	✓	X	X	X	L	X	✓	✓	L	✓	L	X	L	L	L	L	L	X

key

✓ good resistance
L limited resistance
PP suitable with polypropylene fittings
SS suitable with stainless steel fittings
X poor resistance

Non-Metallic conduit and fittings

Visit our website and use our conduit selector tool to see chemical resistance properties.



HYDROGEN PEROXIDE (30%)	HYDROGEN PEROXIDE (60%)	LACTIC ACID	LUBRICATING OIL	METHANOL	METHYL BROMIDE	MEK	NITRIC ACID (10%)	NITRIC ACID (60%)	OXALLIC 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	L	✓	L	X	✓	X	X	L	X	✓	✓	X	✓	✓	✓	✓	✓	✓	X	X	✓	✓	✓	L	✓	✓	L	✓	✓	X	**FPAS**
X	X	L	✓	L	X	✓	X	X	L	X	✓	✓	X	✓	✓	✓	✓	✓	✓	X	X	✓	✓	✓	L	✓	✓	L	✓	✓	X	**FPAL**
X	X	L	✓	L	X	✓	X	X	L	X	✓	✓	X	✓	✓	✓	✓	✓	✓	X	X	✓	✓	✓	L	✓	✓	L	✓	✓	X	**FPAH**
X	X	L	✓	L	X	✓	X	X	L	X	✓	✓	X	✓	✓	✓	✓	✓	✓	X	X	✓	✓	✓	L	✓	✓	L	✓	✓	X	**FPASC**
X	X	L	✓	L	X	✓	X	X	L	X	✓	✓	X	✓	✓	✓	✓	✓	✓	X	X	✓	✓	✓	L	✓	✓	L	✓	✓	X	**FPR**
X	X	L	✓	L	X	✓	X	X	L	X	✓	✓	X	✓	✓	✓	✓	✓	✓	X	X	✓	✓	✓	L	✓	✓	L	✓	✓	X	**FPADS**
X	X	L	✓	L	X	✓	X	X	L	X	✓	✓	X	✓	✓	✓	✓	✓	L	X	X	✓	✓	✓	X	✓	✓	L	✓	✓	X	**FPI**
X	X	L	✓	L	X	✓	X	X	L	X	✓	✓	X	✓	✓	✓	✓	✓	L	X	X	✓	✓	✓	X	✓	✓	L	✓	✓	X	**FPIH**
X	X	L	✓	L	X	✓	X	X	L	X	✓	✓	X	✓	✓	✓	✓	✓	L	X	X	✓	✓	✓	X	✓	✓	L	✓	✓	X	**FPIHR**
X	X	PP	✓	L	X	✓	PP	PP	PP	X	✓	✓	X	✓	✓	✓	✓	✓	✓	PP	PP	✓	✓	L	L	X	✓	L	✓	✓	X	**FPP**
X	X	PP	✓	L	X	✓	PP	PP	PP	X	✓	✓	X	✓	✓	✓	✓	✓	✓	PP	PP	✓	✓	L	L	X	✓	L	✓	✓	X	**FPP-NFR**
X	X	PP	✓	L	X	✓	PP	PP	PP	X	✓	✓	X	✓	✓	✓	✓	✓	✓	PP	PP	✓	✓	L	L	X	✓	L	✓	✓	X	**FPP-H**
X	X	L	✓	L	X	X	X	X	L	X	✓	✓	X	✓	✓	X	✓	✓	✓	X	X	X	✓	X	X	✓	✓	X	✓	✓	X	**FPL**
X	X	L	✓	L	X	✓	X	X	L	X	✓	✓	X	✓	✓	✓	✓	✓	✓	X	X	✓	✓	✓	L	✓	✓	L	✓	✓	X	**FPY**
X	X	L	✓	L	X	✓	X	X	L	X	✓	✓	X	✓	✓	✓	✓	✓	✓	X	X	✓	✓	✓	L	✓	✓	L	✓	✓	X	**FPYS**
X	X	L	✓	L	X	✓	X	X	L	X	✓	✓	X	✓	✓	✓	✓	✓	✓	X	X	✓	✓	✓	L	✓	✓	L	✓	✓	X	**FPYL**
X	X	L	✓	L	X	✓	X	X	L	X	✓	✓	X	✓	✓	✓	✓	✓	✓	X	X	✓	✓	✓	L	✓	✓	L	✓	✓	X	**FPYLS**
L	X	L	L	X	X	X	X	X	L	X	L	X	X	✓	✓	X	✓	✓	L	X	X	X	L	X	L	L	L	X	✓	L	X	**FPCB**
L	X	L	L	X	X	X	X	X	L	X	L	X	X	✓	✓	X	✓	✓	L	X	X	X	L	X	L	L	L	X	✓	L	X	**FPCG**
L	X	L	✓	X	X	X	L	X	✓	L	✓	✓	L	✓	✓	X	✓	✓	✓	X	X	X	L	X	L	L	✓	X	✓	L	X	**FPCGN**
L	X	L	L	X	X	X	X	X	L	X	L	X	X	✓	✓	X	✓	✓	L	X	X	X	L	X	L	L	L	X	✓	L	X	**FPCBU**
L	X	L	✓	X	X	X	L	X	✓	L	✓	✓	L	✓	✓	X	✓	✓	✓	X	SS	X	L	X	L	L	✓	X	✓	L	X	**LPCB**
L	X	L	✓	X	X	X	L	X	✓	L	✓	✓	L	✓	✓	X	✓	✓	✓	X	SS	X	L	X	L	L	✓	X	✓	L	X	**LPCO**
L	X	L	✓	X	X	X	L	X	✓	L	✓	✓	L	✓	✓	X	✓	✓	✓	X	SS	X	L	X	L	L	✓	X	✓	L	X	**LPCBU**
L	X	L	✓	X	X	X	L	X	✓	L	✓	✓	L	✓	✓	X	✓	✓	✓	X	SS	X	L	X	L	L	✓	X	✓	L	X	**LPCGN**
L	X	L	✓	X	X	X	L	X	✓	L	✓	✓	L	✓	✓	X	✓	✓	✓	X	SS	X	L	X	L	L	✓	X	✓	L	X	**LPC-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.

Page number	Conduit System		ASTM NO. 1	ASTM NO. 2	ASTM NO. 3	ACETIC ACID (10%)	ACETONE	ALUMINIUM CHLORIDE	BENZENE	CARBON TETRACHLORIDE	CHLOROFORM	CITRIC ACID	COPPER SULPHATE	CRESOL	DIESEL OIL	DIETHYLAMINE	ETHANOL	ETHER	ETHYLAMINE	ETHYLENE GLYCOL	FREON 32	HYDROCHLORIC ACID (10%)	HYDROCHLORIC ACID (30%)
92	FU	galvanised steel	✓	✓	✓	X	✓	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	X	X	X
92	SSU	stainless steel, grade 316	✓	✓	✓	✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	X
94	FSU	galvanised steel, pvc coated	X	X	X	L	X	X	X	X	X	✓	✓	L	L	X	X	X	X	L	L	✓	X
94	FNU	galvanised steel, nylon coated	✓	✓	✓	L	✓	X	L	✓	X	✓	L	X	✓	✓	✓	✓	✓	✓	✓	X	X
96	LFHU	galvanised steel, LFH coated	L	L	L	✓	X	X	X	X	X	✓	✓	X	X	✓	X	X	X	✓	X	X	X
96	FPU	galvanised steel, polyurethane coated	✓	✓	✓	X	L	L	L	L	X	✓	✓	X	✓	L	✓	L	X	✓	X	X	X
98	LTP	galv steel, pvc coated, liquid tight	L	L	L	✓	X	X	X	L	X	✓	✓	L	L	L	X	L	L	L	L	L	X
98	LTPAS	galv steel, pvc coated, liquid tight	L	L	L	✓	X	X	X	L	X	✓	✓	L	L	L	X	L	L	L	L	L	X
98	LTPHC	galv steel, thermoplastic rubber, liquid tight	✓	L	L	✓	✓	X	X	L	L	✓	✓	✓	✓	✓	✓	✓	L	✓	X	✓	✓
98	LTPLFH	galv steel, LFH coated, liquid tight	✓	✓	✓	✓	X	X	X	L	X	✓	✓	L	L	L	X	L	L	L	L	L	X
99	LTPUL	galv steel, PVC coated, liquid tight	✓	✓	✓	✓	X	X	X	L	X	✓	✓	L	L	L	X	L	L	L	L	L	X
99	LTPPU	galv steel, polyurethane coated, liquid tight	✓	✓	✓	X	L	L	L	L	X	✓	✓	X	✓	L	✓	L	X	✓	X	X	X
99	LTPPUAS	galv steel, polyurethane coated, liquid tight	✓	✓	✓	X	L	L	L	L	X	✓	✓	X	✓	L	✓	L	X	✓	X	X	X
99	LTPSS	stainless steel, pvc coated, liquid tight	✓	✓	✓	✓	X	X	X	L	X	✓	✓	L	L	L	X	L	L	L	L	L	X
100	LTBRDP	galv steel, braided core, pvc coated, liquid tight	✓	✓	✓	✓	X	X	X	L	X	✓	✓	L	L	L	X	L	L	L	L	L	X
100	LTBRDLFH	galv steel, braided core, LFH coated, liquid tight	L	L	L	✓	X	X	X	X	X	✓	✓	X	L	✓	X	X	X	✓	X	X	X
110	LTPBRD	galv steel, rubber coated, SS316 overbraid	✓	L	L	✓	✓	X	X	L	L	✓	✓	✓	✓	✓	✓	✓	L	✓	X	✓	✓
112	LTP-FG	galv steel, pvc coated, liquid tight	L	L	L	✓	X	X	X	L	X	✓	✓	L	L	L	X	L	L	L	L	L	X
112	LTBRDP-FG	galv steel, pvc coated, liquid tight	L	L	L	✓	X	X	X	L	X	✓	✓	L	L	L	X	L	L	L	L	L	X
112	LTPSS-FG	stainless steel, pvc coated, liquid tight	✓	✓	✓	✓	X	X	X	L	X	✓	✓	L	✓	L	X	L	L	L	L	L	X
114	FL	galvanised steel, pliable	✓	✓	✓	X	✓	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	X	X	X
115	FLP	galvanised steel, pvc coated, pliable	X	X	X	L	X	X	X	L	X	✓	✓	L	L	L	X	L	L	L	L	✓	L
116	LFHP	galvanised steel, LFH coated, pliable	L	L	L	✓	X	X	X	X	X	✓	✓	X	X	✓	X	X	X	✓	X	X	X
116	FB	galvanised steel, galv steel overbraid	✓	✓	✓	X	✓	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	X	X	X
118	FUSSB	galvanised steel, SS316 overbraid	✓	✓	✓	X	✓	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	X	X	X
118	FSB	galv steel, pvc, galv steel overbraid	X	X	X	L	X	X	X	X	X	✓	✓	L	L	X	X	X	X	L	L	✓	X
120	LFHUBRD	galv steel, LFH coated, SS316 overbraid	L	L	L	✓	X	X	X	X	X	✓	✓	X	X	✓	X	X	X	✓	X	X	X
120	FSS	stainless steel corrugated	✓	✓	✓	✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	X
122	FSSBRD	stainless steel corrugated, overbraid	✓	✓	✓	✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	X
122	FPRSS	PA6 corrugated, SS316 overbraid	✓	✓	✓	L	✓	X	✓	✓	X	✓	L	X	✓	✓	✓	✓	✓	✓	✓	X	X
122	FPRTC	PA6 corrugated, tinned copper overbraid	✓	✓	✓	L	✓	X	✓	✓	X	✓	L	X	✓	✓	✓	✓	✓	X	X	X	X
122	FPISS	PA12 corrugated, SS316 overbraid	✓	✓	✓	L	✓	L	✓	✓	X	✓	L	X	✓	L	L	✓	L	✓	✓	X	X
122	FPIHSS	PA12 corrugated, SS316 overbraid	✓	✓	✓	L	✓	L	✓	✓	X	✓	L	X	✓	L	L	✓	L	✓	✓	X	X
122	FPIHRSS	PA12 corrugated, SS316 overbraid	✓	✓	✓	L	✓	L	✓	✓	X	✓	L	X	✓	L	L	✓	L	✓	✓	X	X

key

✓ good resistance
L limited resistance
X poor resistance
PP suitable with polypropylene fittings
SS suitable with stainless steel fittings

Metallic conduit and fittings

Visit our website and use our conduit selector tool to see chemical resistance properties.

NEW



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	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	
×	×	×	✓	✓	✓	✓	×	×	×	×	✓	✓	✓	×	×	✓	×	×	×	×	×	✓	✓	×	×	✓	✓	×	×	✓	×	**FU**
✓	✓	✓	✓	✓	✓	✓	×	×	✓	✓	✓	✓	✓	SS	✓	✓	SS	✓	L	×	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**SSU**
✓	✓	L	L	×	×	×	✓	✓	×	L	L	×	×	×	✓	×	×	✓	L	×	×	×	L	×	×	L	L	×	✓	L	✓	**FSU**
×	×	L	✓	L	×	✓	×	×	L	×	✓	✓	×	×	✓	✓	×	✓	✓	×	×	✓	✓	✓	L	✓	✓	L	✓	✓	×	**FNU**
×	×	✓	L	×	×	×	✓	×	✓	✓	×	×	×	×	✓	×	✓	✓	✓	×	×	L	L	L	L	×	L	×	✓	×	✓	**LFHU**
L	×	L	L	L	×	L	×	×	L	L	L	✓	×	×	L	×	✓	L	×	L	L	×	L	×	×	×	✓	×	✓	L	L	**FPU**
L	×	L	✓	×	×	L	L	×	✓	L	×	L	L	SS	✓	×	SS	✓	✓	×	SS	×	L	×	×	L	✓	×	✓	L	×	**LTP**
L	×	L	✓	×	×	L	L	×	✓	L	×	L	L	SS	✓	×	SS	✓	✓	×	SS	×	L	×	×	L	✓	×	✓	L	×	**LTPAS**
L	×	L	L	✓	L	✓	✓	✓	✓	L	✓	✓	✓	SS	✓	✓	SS	✓	×	✓	SS	×	×	L	×	×	✓	✓	✓	×	✓	**LTPHC**
L	×	L	L	×	×	×	L	×	✓	L	L	L	L	SS	✓	×	SS	✓	✓	×	SS	×	L	×	×	L	L	×	✓	L	×	**LTPLFH**
L	×	L	✓	×	×	×	L	×	✓	L	✓	L	L	SS	✓	×	SS	✓	✓	×	SS	×	L	×	×	L	✓	×	✓	L	×	**LTPUL**
L	×	L	L	L	×	L	×	×	L	L	L	✓	×	SS	L	×	✓	L	×	L	L	×	L	×	×	×	✓	×	✓	L	L	**LTPPU**
L	×	L	L	L	×	L	×	×	L	L	L	✓	×	SS	L	×	✓	L	×	L	L	×	L	×	×	×	✓	×	✓	L	L	**LTPPUAS**
L	×	L	✓	×	×	×	L	×	✓	L	✓	L	L	SS	✓	×	SS	✓	✓	×	SS	×	L	×	×	L	✓	×	✓	L	×	**LTPSS**
L	×	L	✓	×	×	L	L	×	✓	L	✓	L	L	SS	✓	×	SS	✓	✓	×	SS	×	L	×	×	L	✓	×	✓	L	×	**LTBRDP**
×	×	✓	L	×	×	×	✓	×	✓	✓	×	L	×	SS	✓	×	✓	✓	✓	×	×	L	L	L	L	×	L	×	✓	×	✓	**LTBRDLFH**
L	×	L	L	✓	L	✓	✓	✓	✓	L	✓	✓	✓	L	✓	✓	SS	✓	×	✓	SS	×	×	L	×	×	✓	✓	✓	×	✓	**LTPBRD**
L	×	L	✓	×	×	L	L	×	✓	L	×	L	L	SS	✓	×	SS	✓	✓	×	SS	×	L	×	×	L	✓	×	✓	L	×	**LTP-FG**
L	×	L	✓	×	×	L	L	×	✓	L	×	L	L	SS	✓	×	SS	✓	✓	×	SS	×	L	×	×	L	✓	×	✓	L	×	**LTBRDP-FG**
L	×	L	✓	×	×	×	L	×	✓	L	✓	✓	L	SS	✓	×	SS	✓	✓	×	SS	×	L	×	×	L	✓	×	✓	L	×	**LTPSS-FG**
×	×	×	✓	✓	✓	✓	×	×	×	×	✓	✓	✓	×	×	✓	×	×	×	×	×	✓	✓	×	×	✓	✓	×	×	✓	×	**FL**
✓	✓	L	L	×	×	×	✓	✓	L	L	L	×	L	L	✓	×	L	✓	L	×	×	×	L	×	×	L	L	×	✓	L	✓	**FLP**
×	×	✓	L	×	×	×	✓	×	✓	✓	×	×	×	L	✓	×	✓	✓	✓	×	×	L	L	L	L	×	L	×	✓	×	✓	**LFHP**
×	×	×	✓	✓	✓	✓	×	×	×	×	✓	✓	✓	×	×	✓	×	×	×	×	×	✓	✓	×	×	✓	✓	×	×	✓	×	**FB**
×	×	×	✓	✓	✓	✓	×	×	×	×	✓	✓	✓	×	×	✓	×	×	×	×	×	✓	✓	×	×	✓	✓	×	×	✓	×	**FUSSB**
×	×	×	L	×	×	×	×	×	×	×	L	×	×	×	×	×	×	×	×	×	×	×	L	×	×	L	L	×	×	L	×	**FSB**
×	×	✓	L	×	×	×	✓	×	✓	✓	×	×	×	×	✓	×	✓	✓	✓	×	×	L	L	L	L	×	L	×	✓	×	✓	**LFHUBRD**
✓	✓	✓	✓	✓	✓	✓	×	×	✓	✓	✓	✓	✓	SS	✓	✓	SS	✓	L	×	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**FSS**
✓	✓	✓	✓	✓	✓	✓	×	×	✓	✓	✓	✓	✓	SS	✓	✓	SS	✓	L	×	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**FSSBRD**
×	×	L	✓	L	×	✓	×	×	L	×	✓	✓	×	L	✓	✓	✓	✓	✓	×	×	✓	✓	✓	L	✓	✓	L	✓	✓	×	**FPRSS**
×	×	×	✓	L	×	✓	×	×	×	×	✓	✓	×	×	×	×	×	×	×	×	×	✓	✓	×	L	✓	×	L	✓	✓	×	**FPRTC**
×	×	L	✓	L	×	✓	×	×	L	×	✓	✓	×	L	✓	✓	✓	✓	L	×	×	✓	✓	✓	×	✓	✓	L	✓	✓	×	**FPISS**
×	×	L	✓	L	×	✓	×	×	L	×	✓	✓	×	L	✓	✓	✓	✓	L	×	×	✓	✓	✓	×	✓	✓	L	✓	✓	×	**FPIHSS**
×	×	L	✓	L	×	✓	×	×	L	×	✓	✓	×	L	✓	✓	✓	✓	L	×	×	✓	✓	✓	×	✓	✓	L	✓	✓	×	**FPIHRSS**

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

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
⅜"	17.4	1.14
½"	21.5	1.81
¾"	27.0	1.81
1"	33.6	2.21
1¼"	42.3	2.21
1½"	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
½"	21.0	18.6	1.81
¾"	26.4	24.1	1.81
1"	33.3	30.3	2.31
1¼"	41.9	39.0	2.31
1½"	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
⅝" - 24 UNEF	⅝"	15.9	14.7	1.06
¾" - 20 UNEF	¾"	19.1	17.7	1.27
⅞" - 20 UNEF	⅞"	22.2	20.9	1.27
1" - 20 UNEF	1"	25.4	24.0	1.27
1⅜" - 18 UNEF	1⅜"	30.2	28.6	1.41
1¼" - 18 UNEF	1¼"	31.8	30.2	1.41
1⅜" - 18 UNEF	1⅜"	34.9	33.4	1.41
1⅞" - 18 UNEF	1⅞"	36.5	35.0	1.41
1¾" - 18 UNS	1¾"	44.5	42.9	1.41
2" - 18 UNS	2"	50.8	49.3	1.41
2¼" - 18 UN	2¼"	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 (mm^2)	Nominal overall cross sectional area (mm^2) 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 4.0mm^2 cables?

- The total cross sectional area of the conductors is 5 x 14.5mm^2 = 73mm^2
- The cross sectional area of LTP20 is 3.142 x $\left[\frac{\text{inside diameter}}{2}\right]^2$ = 201mm^2
- % of conduit cross sectional area $\frac{73}{201}$ = 36%

This is less than 40%; therefore this conduit is suitable for this combination of cables.

UK wiring regulations

UK wiring regulations BS7671 prohibit the use of flexible or pliable conduit as an earthing conductor.

Where conduits of 40mm and above penetrate fire barriers in buildings the wiring regulations stipulate that internal seals should be used to maintain fire resistance.

To meet the UK wiring regulations conduit should be self extinguishing unless they are to be buried or contained in non combustible material e.g: concrete or plaster.

Please telephone the Flexicon hotline for further guidance, +44 (0)1675 466900.

IP Rating and Technical Guidance

IP ratings guide

(Ingress Protection to BS EN IEC 60529)

IP40

1st digit – protection against solid objects



0	No protection
1	Protected against objects greater than 50mm
2	Protected against objects greater than 12mm
3	Protected against objects greater than 2.5mm
4	Protected against objects greater than 1.0mm
5	Ingress of dust is not totally prevented but dust does not enter in harmful quantities
6	No ingress of dust

IP40

2nd digit – protection against water



0	No protection
1	Protected against falling drops
2	Protected against drops falling at 15°
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
5	Medium pressure jet – similar to garden hose – from any angle for 3 minutes
6	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

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.

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
- Tensile strength
- Impact strength
- Temperature range
- Flexibility
- Fatigue life
- Electrical insulation or continuity
- IP rating
- Chemical resistance
- Corrosion resistance
- Abrasion resistance
- UV resistance
- Anti vibration
- Fire performance
- EMC screening
- Dimensions
- 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				

Cutting Conduit

Non-Metallic



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



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.

Overbraided



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

FPA & Ultra™ Fitting



Our range of non-metallic conduit fittings, Flexicon Ultra™, Flexilok®, FPA and FPAX are all push fit fittings which are quick to assemble once you have cut the conduit to length.

FPA & Ultra™



For Ultra™, Flexilok® 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.

FPAX



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.

WATCH THE VIDEO

Metallic Fittings

FSU Conduit



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.

Insert being fitted



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.

Attaching the body



Bring the body to mate with the back nut. Metal fittings should be tightened with grips or spanner to ensure security and IP rating.

EMC Screening Performance

EMC Screening Using Pliable Conduit

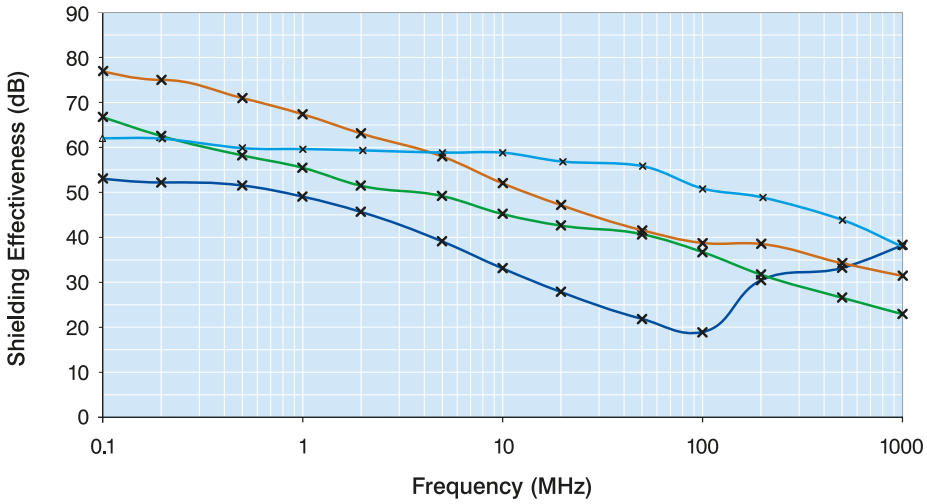


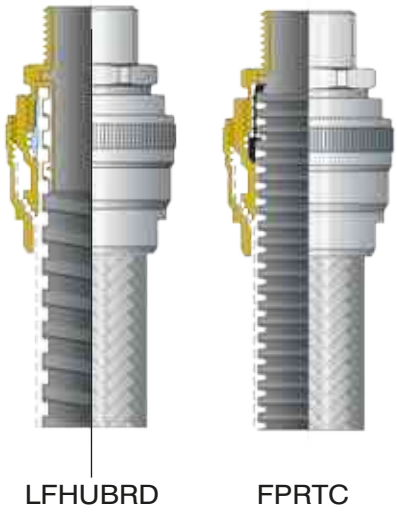
FLP conduit with sheath trimmed back

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

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, FPIHRSS, FSSBRD
Tinned Copper		FPRTC, FTCB





Braided Fittings - Installation

Type C Braided Fittings



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.

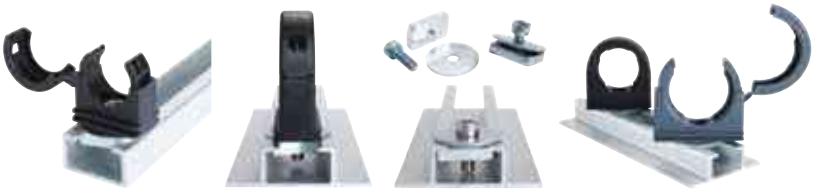


Clips can be located by sliding into the end of the channel. To install, slide the FCL clip in from the end of the channel.

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.

Fixing Conduit

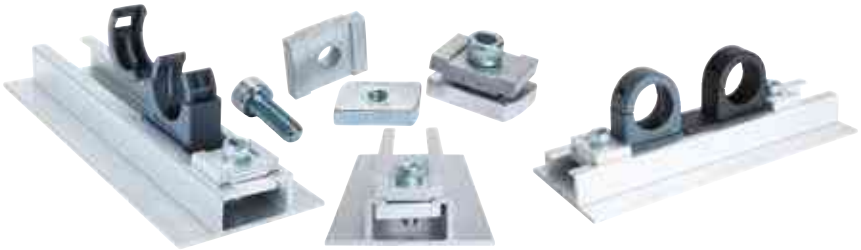


Conduit clips can be mounted directly onto the channel using the FCL Mount Kit.

This allows new clips to be added and positioned at any point along the channel without the need to access the ends using the FCL Mount Kit. Ideal for when a channel system is already populated, installed or access to the end of the channel is restricted.

This method of mounting enables the FCL clip to be rotated to your desired angle to suit the required routing of the conduit system.

End Stop



Slide the FCL or FCL-P clip in from the end of the channel rail. Move the clips into the desired position and use the End Stop to secure.

The **ES** can be inserted from above at any given position, or alternatively from the end of the rail if accessible.

Secure its position using the bolt. Tighten the bolt until secure. Note the orientation of the top plate will align with the channel for added security when tightening.

Note: The End Stop is not compatible with the A profile channel.

The **ES** products can be inserted from above at any given position along the rail to secure the FCL Conduit Clips.

The above picture shows 2 FCL clips seperated by a spacer (CS-CT) and secured by 2 End Stops (ES-AL) to maintain position in the Channel.

Channel Nut



The Channel Nut can be used to create a fixing base for Mounting Channels of Profile B and C. It is used when securing the FCLAMP on to Mounting Channel.

The Channel Nut can be inserted at any position along the channel, from above. Its position is secured using a bolt (not supplied). The bolt length will be dependant on the Channel depth and configuration of components.

Use Table on page 77 to calculate dimensions of components.

Note the orientation of the Channel Nut for correct installation. Ensure TOP is facing up to ensure correct fixing. The Channel Nut is available in either Aluminium or Galvanised Steel.

Spacer / Cable Tie



Multiple FCL clips can be positioned along the channel. Use CS-CT between the FCL clips to provide access for the hinged lid. This also provides a clear space between conduit runs.

A Spacer is required to ensure enough room to access the hinged lid design of the FCL clip, which offers added security for Conduit retention.



The CS-CT is a multi purpose component suitable for use within Mounting Channels.

It can be used as a Spacer to create a gap between conduit systems / runs. To use as a Spacer slide into the channel from the end in the orientation as shown in fig.1

It can also be used to secure Cable Ties or create a fixing point for identification. To use with a Cable Tie or fixing point slide into the channel from the end in the orientation as shown in fig.2

Fig.1
Orientation when used as a Spacer.



Fig.2
Orientation when used to secure conduit with a Cable Tie.



Design acts as either a spacer or if reversed will act as a location to secure a Cable Tie.

The design of CS-CT works to allow Cable Ties to secure conduit in the either the horizontal or vertical orientation.



The design of CS-CT works to allow Cable Ties to secure conduit in the either the horizontal or vertical orientation.

Ensure you slide the CS-CT in the desired orientation to create the required fixing point for the cable tie.

Fig.3 Offers fixing for conduit routed at 90° to channel.

Fig. 4 Creates fixing for conduit routed in line with channel.

Securing Conduit - FCL Clips and F-Clamps

Fixing Conduit



Simple Removal



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.

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.

Fixing Conduit



Fig.1



Fig.2



Fig.3



Fig.4

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.

F-Clamp KIT Installation

Step by Step Guide - F-Clamp Kit

The F-Clamp Kit is the ultimate in simplicity for a secure mounting assembly for Conduit on Channel.

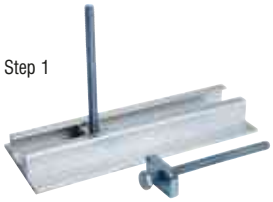
Simply select your size of F-Clamp Kit from the table on Page 76, depending on the size conduit to be secured, and everything you need is included in the kit. The Step by Step guide below shows the construction.

F-Clamp Kit consists of:

- 1 x F-Clamp - Top and Bottom sections
- 2 x Cover Plates - Top and Bottom
- 2 x Channel Nut Assembly
- 2 x Nuts



Step 1



Step 2



Step 3



Step 4



Step 5



Step 6



Step 7



Step 8



F-Clamp Other Options

Universal Adaptor





The Universal adaptor provides a mounting option for F-Clamps when used with various channel rails.

The Universal adaptor allows compatibility with other channel rails such as Unistrut®, Halfen and Hilti rails. For further details consult us or visit our website.

The F-Clamps products can be mounted (and stacked) securely. For further details contact us.

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.

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

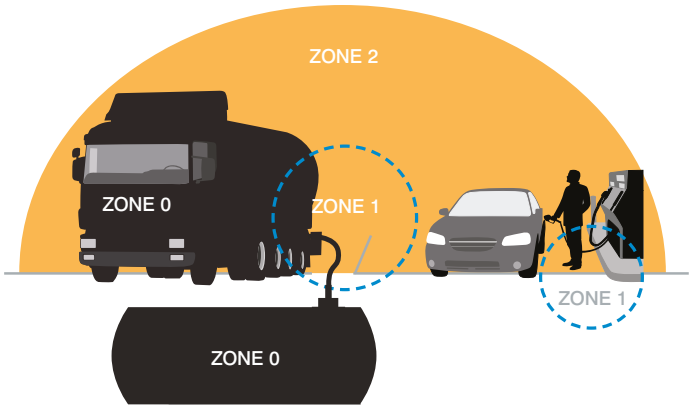
A place in which an explosive atmosphere consisting of a mixture with air of dangerous substances in the form of gas, vapour or mist is present continuously or for long periods or frequently.

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

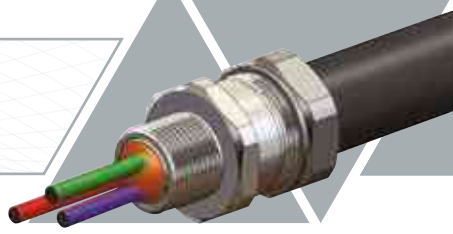
A place in which an explosive atmosphere in the form of a cloud of combustible dust in air is not likely to occur in normal operation but, if it does occur, will persist for a short period only.

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;

$10^9\Omega$ measured at (50 ± 5) % relative humidity; or $10^{11}\Omega$ measured at (30 ± 5) % relative humidity.



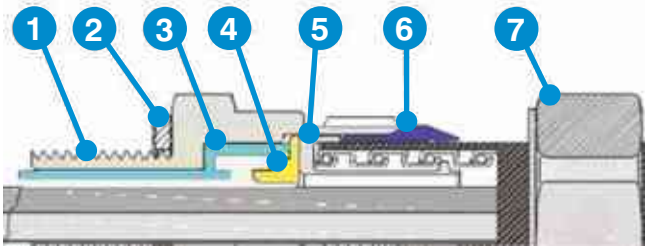
Flexicon EXD Conduit Gland

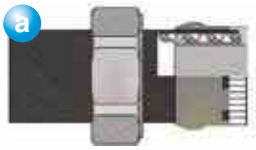
Installation Guide & Instructions

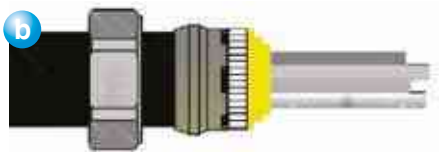
Technical data and specification.

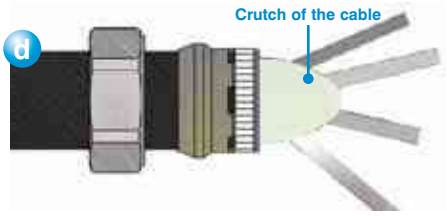
Conduit Gland Components

1. Gland Body
2. RSW Washer
3. Compound Tube
4. Cap
5. Conduit Insert
6. Conduit Seal
7. Compression Nut

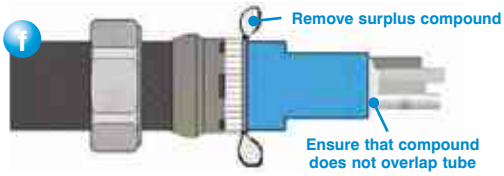














NOTE: For LTPB-EXD and LTP-EXD-90 & 45 installation instructions visit our website for further information.

Installation instructions for Flexicon conduit gland type EXD

Please read all instructions carefully before beginning the installation

a Disconnect the Compression Nut(7) and remove the Conduit Seal (6) and Conduit Insert (5) from the gland. Slide the nut over the conduit, followed by the conduit seal (oriented as shown below) and screw the conduit insert into place.

b Remove the Compound Tube (3), and Cap (4) as an assembly from the Gland Body (1). Feed the prepared cable/cores through the flexible conduit and then pass the cap over the cores so that it rests on the conduit insert (5).

c If the installallation involves a cable, remove any bedding or filers from around the cable cores. If the cable cores have screens, these should be unravelled and then twisted together to form a single core. Wearing the protective gloves supplied, mix all of the two-part epoxy compound as supplied until it is pliable and an even colour is achieved. The minimum temperature when mixing is 10°C.
Note: Ensure compound is within use by date. If not please contact Flexicon for replacement.

d Separate the cable cores and apply the compound to the crutch of the cable for a distance of about 6mm and pack into place. If a drain wire is present then it should be sleeved with some heat shrink tubing which is pushed into the compound before shrinking with the application of some heat. Screens that have been twisted together should be treated as a drain wire.

e Bring the cores together again and pack more compound around them to a length and diameter sufficient to fill the compound tube, ending in a taper.

f Pass the compound tube (3) over the conductors until the stepped end is fully located with the cap (4). Pack more compound into place until the compound tube is fully filled and all conductors are fully surrounded with the compound. Ensure compound **does not** overlap tube. Remove **all** compound from surface of tube. Remove all excess compound when assembling.

g Re-install the conduit assembly into the entry item making sure the compound is not disturbed and loosely tighten the compression nut (7) onto the gland body (1). When the compound has cured the entry item should be removed from the assembly and fitted to the apparatus. The gland can then be retrofitted into it and the compression nut (7) finally tightened. Typical cure times are shown below.

Installation Instructions

Installation should only be performed by a competent person using the correct tools. Read all instructions before beginning installation.

Special Conditions For Safe Use

1 The cable gland shall only be used where the temperature at the point of entry is in the range of –60°C to +85°C.

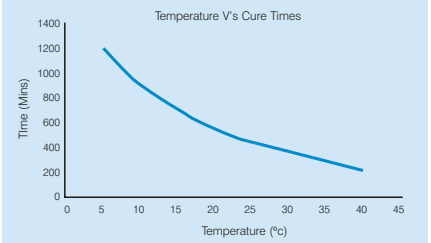
2 The female entry may need additional sealing to maintain the ingress protection rating as applicable to the associated equipment to which it is attached.

3 The cable gland is designed for use in Group I applications where the installed cable is compliant with the requirements of the local code of practice and conduit provides additional mechanical protection.

4 When installing the gland into a plain hole ensure that the diameter of the hole is no greater than 0.7mm larger than the diameter of the thread. An appropriate metal locking nut should also be used.

5 Ensure throughout the compound length at least 20% of the cross sectional area of the compound tube is filled with compound.

6 The fittng is only suitable for fixed installations. Ensure the conduit is effectively clamped to prevent twisting and pulling.



Product Testing & Approvals

Compliance with international standards

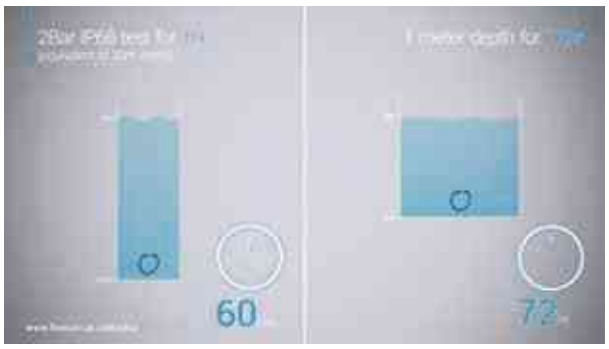
Our products have been designed to be compliant with international standards from EN, NFF, DIN, BS, ASTM and UL. We have extensive third party and in house testing to support product performance.

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.

Flexicon are RISQS verified so buyers can quickly establish and assess our Safety Management, Capacity, Quality Management and Corporate legislation compliance. Flexicon's Hazardous area approvals are audited to EN/ISO 80079-34.

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



Testing rig with FPIH and FPIHR



FPIH and FPIHR 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.

Product Testing & Approvals

Other Product Testing

- Vibration and Shock Testing to EN 61373 Cat 2
- UV testing to UL 1660, 1,000 hour xenon arc
- Extended UV testing, 13,000 hour xenon arc
- 1,000 hours salt spray testing for corrosion
- Fire performance testing including flammability, smoke, toxicity, halogen content and fire load - see page 148
- Electrical insulation testing to EN 61386 and ASTM D 495 and 3638
- Enviromental - 2 weeks at 95˚C - 90%rh
  - 2 weeks at 105˚C
- Direct lightning strike of conduit and fixed fittings
- Low temperature impact testing
- EMC screening performance
- Anti-static testing
- Food contact testing to EU 10 2011

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 1669, 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



Technical Data - 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 <u>all</u> 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.

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

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 fluoro-polymers 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.

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, FPIHR, FPIHRSS and FPRTC.



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.

Standards and Approvals

Information



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, Ian Gibson, is the chairman of both the IEC (worldwide) and CENELEC (European) committees that prepare conduit standards.

CE

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 by SGS 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.

RISQS

Flexicon are RISQS verified so buyers can quickly establish and assess our Safety Management, Capacity, Quality Management and Corporate legislation compliance.

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) & Rail Alliance

Flexicon are active members in the Railway Industry Association and Rail Alliance.

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 have been UL listed and are 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. 246572.

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.

LTPUL conduit is UL listed to UL360 and CSA approved. Our LTP-CUL fittings are UL listed to UL514B and are 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 No. E229161.

We have tested a selection of our products for UV performance against UL 1660 test criteria (see UL Test Report No. 13CA50836)

EU Regulation 10/2011

EN 1672-2 EN ISO 14159

Hygienic Applications

Flexicon's Hygienic products are manufactured from FDA approved ingredients and have been independently tested to European Food Regulation 10/2011.

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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