FLEXIBLE CONDUIT SOLUTIONS

Product & Solutions Guide

THE POWER IN CABLE PROTECTION



annonnanna a

edition

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.



www.flexicon.uk.com

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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.

MADE IN THE

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

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

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

We continue to invest in 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.





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...



"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.



7

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

- · 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

- · 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"

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 NEPA 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

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- Low temperature impact testing

Direct lightning strike of

conduit and fixed fittings

MADE IN THE



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[™] 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

EXİCƏN

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 [IN 45545-2] UIPA 130

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

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 NFPA 130

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



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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.



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.

NEW

45

120

126

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.

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REACh

RoHS

BS EN IEC 61386

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.

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



- ImpactTemperature
- ₹ } ₩₩
- 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

92. • FU - Galvanised Steel





• FPAS - PA6 Corrugated

- 94
- FSU PVC Coated Galvanised Steel



• FPP - Polypropylene

- 96
- LFHU LFH Coated Galvanised Steel



 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.

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RoHS

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

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Mechanical Strength

- Flexibility & Fatigue Life
- Ingress Protection
- Abrasion Resistance
- Chemical resistance

Vibration & Shock Resistance

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- 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

Typical Products

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• FPI - PA12 Corrugated

• FPASC - PA6 Corrugated UL



FPAS - PA6 Corrugated

LTP - PVC Coated

Liquid Tight

92

SSU - Stainless Steel



 LTPPU - Polyurethane Coated Liquid Tight



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



 F-Clamps and Fixing Accessories



 FSU - PVC Coated Galvanised Steel

99

 LTPUL - PVC Coated Liquid Tight UL

Product installation examples:



FPI –
 Production Line –
 Robotic arm



98

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"

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BS EN IEC 61386

RoHS

Typical hazards & product considerations

- Ingress Protection
- Mechanical Strength
- Fatigue Life
- UV resistance
- Abrasion Resistance
- Chemical resistance

- Corrosion Resistance
- Vibration & Shock Resistance

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- Temperature
- Impact
- Hazardous Gases / Dust

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UV

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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



• FPAS - PA6 Corrugated



SSU - Stainless Steel



LTP - PVC Coated Liquid Tight



 FSU - PVC Coated Galvanised Steel



 LTPUL - PVC Coated Liquid Tight UL

Product installation examples:



FSU –
 Water Treatment Plant External lighting



• FPAS – Telecommunication Towers - Machines – Control Wiring



• LTP – Sewage Treatment Works – Pumping Equipment



 FPIH – Primary Treatment Tanks



 LTPUL –
 Electrical Connection –
 Mains Power to machinery

Renewables – Wind / Solar / Hydro / Energy from Waste Renewable Energy is a critical aspect of reducing global

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.

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RoHS

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





Example applications

Biomass

- Hydro Electric
- Wind Turbine: - Nacelle
- Tower & Lighting
- Electric Pitch System
- Control System
- Condition monitoring systems
- Cooling and Heating

Typical Products



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

 FUSSB - Galvanised Steel Core with Stainless Steel Overbraid



 FPADS - Dual slit conduit suitable for retrofit



 LTPSS - PVC Coated Liquid Tight with Stainless Steel inner core



 Polyamide systems and FPAU Ultra[™] Fittings



• FPAS - PA6 Corrugated

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



 EXD - Flameproof Barrier Gland



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



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.







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"



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Certification

NetworkRail

EN 45545

NFPA 130

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Typical hazards & product considerations





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



Range of Non-metallic fittings



 F-Clamps and Fixing Accessories

Typical Products

| 45 | 0000000000000 |
|----|-------------------|
| | |

• FPR - PA6 Corrugated



- LFHUBRD LFH Coated Galvanised Steel with SS Overbraid
- 45 NEW
- FPIHR PA12 Corrugated

• LTPLFH - LFH Coated Liquid



FPRSS - Stainless Steel
 Overbraid PA6 Corrugated



 LTPPU - Polyurethane Coated Liquid Tight



 LFHU - LFH Coated Galvanised Steel



 FSS - Stainless Steel Corrugated

Product installation examples:



LFHUBRD –
 Passenger Information
 System



98

Tight

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



LFHU –
 CCTV & Security



FPIHR –
 Control wiring on top
 of carriage



Hazardous Area Applications

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

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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

- EPC's

- Consultants

- 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
 - Operators

- OEM's

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



• Temperature

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MADE IN THE

- Static charge
- EMC





LTP

LTPAS www.flexicon.uk.com LTPLFH





UL Listed (file no. E247502)

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









08

106.

104

NEW

EXE - Increased safety & Dust Ignition proof

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

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



www.flexicon.uk.com

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.

> HYGIENIC RANGE

> > EU Regulation 10/2011

EN ISO 14159

EN 1672-2

BS EN IEC 61386

EN IEC 61373 Cat 2

CE

RoHS

REACh

FD

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.



NEV

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

In accordance with EN1672-2 & EN ISO 14159

NEW

- Eliminate build up of bacteria & micro-organisms
- IP66, IP67, IP68 (2 Bar) & IP69

Corrosion resistance

- 5 High chemical and thermal resistance
 - Resistant to chemicals & cleaning agents

Fewer components

• Ease of assembly and integrated barrier seal to prevent contamination.

Hygienic Cable Protection Solutions

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

 \bigcirc

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.

NEW

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.

Speed of Installation

G fle ca

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.



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.



Cable Protection for Hygienic Applications

Typical hazards & product considerations

ಲಿ

- Chemicals
- Ingress Protection
- Corrosion – Chemicals and Wash down
- · Steam jets
- · Build up of Microbes and Bacteria

| Contamination | 8 | | | |
|-----------------------------------|------------|--|--|--|
| Temperature | ∭₩ | | | |
| Vibration | {{ | | | |
| Abrasion | \bigcirc | | | |
| 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

Typical Products

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



NEW

LPC-C-FG Fitting



LTP-C-FG Fitting



Round Box (SS316L)



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 CUL us

and UL Recognised Products chus

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

UL standards are exacting and rigorous, with full transparency listed through the UL website. UL Representatives audit factories on a regular basis and any Manufacturers making claims regarding a product being "Listed" or "Recognised" can be verified by visiting the UL website.

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

UL Recognised



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

UL Listed Products



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

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





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









Ultra™

34



CUL 1660 Liquid-Tight, Flexible Non-metallic Conduit



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

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

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

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

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

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

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



CUL 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

c Sus 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



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



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.





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















nonmetallic conduit & fittings









BS EN IEC 61386



Non-metallic conduit selection guide

| - | ystem | FPAS | FPAL | FPAH | FPASC | FPR | FPADS | FPI | HIdd | FPIHR | đđi | FPP-NFR | FPP-H | |
|-----------------------|------------------------------|--------------------------------|-------------|--------------------------------|--------------------------------|-----------------------------------|---------------|--------------------------------|--------------------------------|------------------------------------|--------------|---------|-------|--|
| | Conduit System | | | | NEW | | NEW | | | NEW | | | | |
| | IP40 | _ | | | | | | | | | | | | |
| | IP54 | | | | | | | | | | | | | |
| | IP65 | | | | | | | | | | | | | |
| IP Rating | IP66 | | • | • | • | • | | • | • | • | • | • | • | |
| | IP67 | • | • | • | • | • | | • | • | • | • | • | • | |
| | IP68 | • | • | • | • | • | | • | • | • | • | • | • | |
| | IP69 | • | • | • | • | • | | • | • | • | | | | |
| Compression Streng | th (kg / 100mm) | 75 | 60 | 120 | 75 | 75 | 60 | 45 | 60 | 60 | 35 | 35 | 100 | |
| Pull Off Strength (kg | | 40 | 30 | 70 | 40 | 40 | 15 | 30 | 50 | 35 | 25 | 25 | 40 | |
| | nm) for 21/20mm size | 40 | 40 | 55 | 40 | 40 | 120 | 35 | 45 | 55 | 40 | 40 | 60 | |
| | 111) 101 21/201111 3120 | | | | | | black, blue, | | | | black, grey, | | | |
| Colours | | black, grey | black, grey | black | black, grey | black | orange, white | black | black | black | white | black | black | |
| High Fatigue Life | | • | • | | • | | | • | • | • | | | | |
| | 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 | |
| Temp | 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 | • | • | ٠ | • | ٠ | • | • | • | • | • | ٠ | • | |
| Low Fire Hazard | ** Extra * Standard | STANDARD LOW FIRE HAZARD | | STANDARD LOW FIRE HAZARD | STANDARD LOW FIRE HAZARD | CXTRA LOW FIRE HAZARD ** | | STANDARD LOW FIRE HAZARD | STANDARD LOW FIRE HAZARD | CATERA LOW FIRE HAZARD ** | | | | |
| | Halogen Free | • | • | • | • | • | • | • | • | • | | • | | |
| | Self Extinguishing | • | • | • | • | • | • | • | • | • | • | | • | |
| | EN 45545-2 | | | | | • | | | | • | | | | |
| Fire Tests | NFPA-130 | | | | | • | | | | • | | | | |
| Abrasion Resistance | 2 | • | | • | • | • | • | | • | • | | | | |
| Resistance to solver | | • | • | • | | • | • | • | • | • | | | | |
| UV Resistance | | • | | • | • | • | • | • | • | • | | | | |
| | | | | | | | | | | | | | | |
| | UL Recognised UL Listed | • | • | • | | • | | • | • | | | | | |
| | UL Listed Lloyds | • | | | • | • | | | | | | | | |
| Approvals | Lioyas London Underground | | | | | • | | | | | | | | |
| | Network Rail | • | | • | | • | | | • | • | | | | |
| | Food Contact | | | - | | - | | | | | | | | |
| | vonudi | | | | | | | | | | | | | |
| ROHS | | • | • | • | • | • | • | • | • | • | • | • | • | |
| REACH | | • | • | • | • | • | • | • | • | • | • | • | • | |
| Page Number | | 44 | 44 | 44 | 44 | 45 | 45 | 45 | 45 | 45 | 46 | 46 | 46 | |
| | | | | | | | | | | | | | | |

Non-metallic conduit selection guide

| | | /// | | / ///// | | | | | | | | + 1 | |
|-----------------------|-------------|-------|--------|------------|---------|------------|-------------|----------|-------|----------|--------|-------|----------------------|
| FPL | FPY | FPYS | FPYL | FPYLS | FPCB | FPCG | FPCGN | FPCBU | LPCB | LPCO | LPCBU | LPCGN | LPC-FG |
| | | | | | | | | | | | | | NEW |
| • | • | | • | | | | | | | | | | |
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| | | | | | | | | | • | • | • | • | • |
| 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 white blue |
| 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 |
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| • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| 70 | 72 | 72 | 72 | 72 | 78 | 78 | 78 | 78 | 80 | 80 | 80 | 80 | 84 |
| | | | | - | | | | | | | | | |
| 13 | 8 thread d | lata | 140 te | echnical g | uidance | 1 | 48 low fire | e hazard | WW | w.flexic | on.uk. | com | 41 |

Non-metallic fittings selection guide





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



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 $(-20^{\circ}C \text{ to } + 100^{\circ}C \text{ for moving applications})$
- UL recognised
- · Highly resistant to solvents and oils
- Self extinguishing
- · Halogen, sulphur and phosphorus free



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



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 | F PAS 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 | E. | FPAS10 | 50 | 10.0 | 6.3 | 15 | FPAL10 |) | 50 | 10.0 | 6.5 | 15 | | | | | | | | | | | | |
| 8 | 11 | E F | FPAS11 | 50 | 11.5 | 8.2 | 20 | FPAL11 | | 50 | 11.5 | 8.4 | 20 | | | | | | | | | | | | |
| 10 | 13 | E 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 | E F | FPAS16 | 25, 50 | 15.8 | 11.8 | 35 | FPAL16 | i | 50 | 15.8 | 12.0 | 35 | FPAH16 | ì | 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 | E F | FPAS21 | 10, 25, 50 | 21.2 | 16.7 | 45 | FPAL21 | | 50 | 21.2 | 16.9 | 40 | | | | | | | | | | | | |
| | 21 | C | | | | | | | | | | | | FPAH21 | l | 50 | 21.2 | 15.5 | 55 | FPAS21 | IC | 50 | 21.2 | 6.0 | 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 | FPAS28 | BC | 50 | 28.5 2 | | 50 |
| 29 | 34 | C | FPAS34 | 25, 50 | 34.5 | 28.1 | 60 | FPAL34 | | 25, 50 | 34.5 | 28.3 | 55 | FPAH34 | ļ | 25 | 34.5 | 27.6 | 70 | FPAS34 | ŧC | 50 | 34.5 2 | 28.1 | 60 |
| 29 | 34 | E 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 | 2 | 25 | 42.5 | 34.6 | 80 | FPAS42 | 20 | 25 | 42.5 3 | | 70 |
| 48 | 54 | C | FPAS54 | 10, 25, 50 | 54.5 | 47.2 | 80 | FPAL54 | | 25 | 54.5 | 47.4 | 80 | FPAH54 | Ļ | 25 | 54.5 | 46.0 | 90 | FPAS54 | 1C | 25 | 54.5 4 | 7.2 | 80 |
| 56 | 67 | C | FPAS67 | 10 | 67.2 | 56.3 | 130 | FPAL67 | | 10 | 67.2 | 56.5 | 110 | | | | | | | FPAS67 | 7C | 10 | 67.2 5 | 6.3 | 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

56 67 C FPAS67 10 67.2 56.3 130 **FPAL67** 10 67.2 56.5 110

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.



NetworkRail

For larger diameter conduit see page 74

BS EN IEC 61386 CE ROHS

Achillec





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 |
|---|-----|
| 5 | |

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).

PACE OLD







| 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 (mn | european (NW) siz |
|-------|--------------------------------|------------------|-----------------|--------------------------------|--------------|--------------|---------|-------------|---------------------|--------------|-------|------------------|-------------------|
| FPP10 | 50 | 10.0 | 6.3 | 15 | FCL10 | | | REC10 | 10 | 0-7 | ι F | 10 | 7 |
| | | | | | | | | REC10 | 11 | 0-7 | ι F | 11 | 8 |
| FPP13 | 50 | 13.0 | 9.8 | 25 | FCL13 | | | REC13 | 13 | 0-7 | E. | 13 | 10 |
| FPP16 | 50 | 15.8 | 11.8 | 35 | FCL16 | FCLAMP- 3-16 | EC16B | REC16 | 16 | 0-11 | E. | 16 | 12 |
| | | | | | FCL18 | | | | | | E. | 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, 5 | 0 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 | E. | 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 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)

zes Ê

F = fine pitch C = coarse pitch

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.



Ordering Notes

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

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

| european (NW) sizes | | nominal size (mm) | Ш | FPAS | FPAL | FPAH | FPASC | FPR | FPADS | FPI | F PIH | FPIHR | FPP |
|---------------------|--------|-------------------|--------------|------------------|-----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------|
| eurol | pitch | nom | 0D mm | part number | | part number | | part number | | part number | part number | | part number |
| 7 | E. | 10 | 10.0 | FPAS10 | part number FPAL10 | part number | part number | FPR10 | part number | part number | part number | part number | FPP10 |
| 7 | F | 10 | 10.0 | FFAGIU | FFALIU | | | rrniv | | | | | TTTIU |
| 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 12 | Ę. | 16 16 | | | | | | | | | | | |
| 12 | ÷. | 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 | 25.0 | EDAGOE | EDAL OF | | | EDDOE | | | | | EDD35 |
| 23 | C F | 25 28 | 25.0 28.5 | FPAS25 FPAS28 | FPAL25 FPAL28 | | | FPR25 | | | | | FPP25 FPP28 |
| 23 | C | 28 | 20.0 | 114020 | TIALLU | FPAH28 | FPAS28C | FPR28 | FPADS28 | FPI28 | FPIH28 | FPIHR28 | 11120 |
| 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 | 67.0 | ED4007 | EDAL 67 | | ED40070 | EDDC2 | | EDICZ. | EDILLE7 | EDUID67 | EDD67 |
| 56 | C | 67 | 67.0 | FPAS67 | FPAL67 | | FPAS67C | FPR67 | | FPI67 | FPIH67 | FPIHR67 | FPP67 |

Standards













FPA system nylon

Construction: Nylon (PA66) moulded fittings.

FPA system brass threaded

IP66

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

Colour: Black or Grey.

Fittings

| | | | | 0 | | | | | | | |
|---------------------|-------------------|--------------|-----------------------------------|------------------------|-----------|--|--|---|-------------------------------|--|---------------|
| | | | | | | | | | | | |
| | | | FPA | | | FPA | | FPA | FPA9 | 0 | |
| | | | One piece, fas threaded fittin | g. Suitable for | | straight UNEI swivel interna One piece, fast fit | al thread fitting with | flange One piece, fast fit fitting with nylon | One piece, fa degree elbov | external th ast fit, external t fitting. Suitabl | hreaded 90 |
| | | | KNOCKOUTS OF | threaded entries | i. | nickel plated brass internal thread for circular connector | attachment to | swivel flange with 'O' ring. | for knockout | 5. | |
| | | | IP66 | | | IP66 | | IP66 | IP66 | | |
| european (NW) sizes | nominal size (mm) | ш | | | | | E | | | | |
| europ | nomi | 0D 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 10 | 11 13 | 11.5 13.0 | FPA11-M12 FPA13-M12 | FPA11-PG7 FPA13-PG7 | | FPA13-BU063 | (5/8") | | FPA11-M12-90 FPA13-M16-90 | FPA13-PG9-90 | |
| 10 | 13 | 13.0 | FPA13-M12 FPA13-M16 | FPA13-PG7 | | FPA13-BU005 | (⁷⁸) (³ /4") | | FFA13-W110-90 | FFA13-F09-90 | |
| 10 | 13 | | FPA13-M20 | FPA13-PG11 | | FPA13-BU088 | (74) (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 | (1¼") | | | | |
| | 25 | 25.0 | FPA25-M25 | | | | (4.2.(1)) | 53400 51 | FPA25-M25-90 | | 55100 075 00 |
| 23 | 28 | 28.5 | FPA28-M25 | FPA28-PG21 | FPA28-075 | FPA28-BU138 | (1 ³ %") | FPA28-FL | FPA28-M25-90 | FPA28-PG21-90 | FPA28-075-90 |
| 23 | 28 34 | 245 | FPA28-M32 | FPA28-PG29 | ED424 100 | FPA28-BU144 | (17/16") | | ED424 M22 00 | ED424 DC20 00 | ED424 100 00 |
| 29 29 | 34 34 | 34.5 | FPA34-M32 FPA34-M40 | FPA34-PG29 | FPA34-100 | FPA34-BU144 FPA34-BU175 | (11/16") (13/4") | FPA34-FL | FPA34-M32-90 | FPA34-PG29-90 | FPA34-100-90 |
| 36 | 42 | 42.5 | FPA42-M40 | FPA42-PG36 | FPA42-125 | FPA42-BU200 | (174) | FPA42-FL | FPA42-M40-90 | FPA42-PG36-90 | FPA42-125-90 |
| 36 | 42 | 12.0 | FPA42-M40 | 111112-1 000 | FPA42-120 | FPA42-BU225 | (2 ¹ /4") | 11 A42-1 E | FPA42-M40-90 | 111112 1 000-30 | FPA42-120-90 |
| 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 | | 67.0 | FPA67-M63 | FPA67-PG48 | FPA67-200 | | () | | | 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
- Available on request:
- additional sizes, alternative threads
- additional UNEF threads and combinations

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

• 1 part fast fit

- Ő IP rating: IP66
- Tamper resistant _
- Can be removed using a screwdriver
- Both 90° & 45° elbows incorporate swept 0
 - bore to facilitate cable installation &
- protect cables when installed Ō
- · All round teeth give high pull off strength 70kg with FPAH21
- Vibration & shock tested to EN61373 Cat 2
 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 | | FPA90 | FPA45 | 5 | | FPA45 | | | | |
|--|---|---|--|------------------------------|---------------|---|---|----------------------------|------------------|----------------------------------|
| 90° elbow UNE internal thread One piece, fast fit, s elbow fitting with ni brass swivel UNEF thread for attachme circular connectors | d 90 degree ckel plated internal ent to | flange One piece, fast fit 90 degree elbow fitting with nylon swivel flange with 'O' ring face seal. | 45° elbow e thread One piece, fast threaded 45 de Suitable for kno | fit, external gree elbow | fitting. | 45° elbow UNI internal threa One piece, fast fit, elbow fitting with n brass swivel UNEF thread for attachm circular connectors | d 45 degree iickel plated internal ent to | | | |
| | | | IP66 | | • | | | nominal size (mm) | um | european (NW) sizes |
| 90 Degree UNEF | Thread | 90 Degree Flange | 45 Degree Metric 4 | 5 Degree PG | 45 Degree NPT | 45 Degree UNEF | Thread | iwou 10 | шш ОО 10.0 | forrog |
| | | | | | | | | 10 | 10.0 | 7 |
| | (T + 1) | | | | | | | 11 | 11.5 | 8 |
| FPA13-BU063-90 FPA13-BU075-90 | (5/8") (3/4") | | | | | | | 13 13 | 13.0 | 10 10 |
| FPA13-BU088-90 FPA16-BU075-90 FPA16-BU088-90 FPA16-BU100-90 FPA16-BU119-90 | (7/6") (3/4") (7/6") (1") (13/16") | FPA16-FL-90 | FPA16-M20-45 FP | PA16-PG13-45 | FPA16-050-45 | FPA16-BU075-45 FPA16-BU088-45 FPA16-BU100-45 FPA16-BU119-45 | (¾") (7%") (1") (1¾6") | 13 16 16 16 16 | 15.8 | 10 12 12 12 12 12 |
| | | | | | | | | 18 18 | 18.5 | 14 14 |
| FPA21-BU100-90 FPA21-BU119-90 FPA21-BU125-90 | (1") (1³⁄₁6") (1¼") | FPA21-FL-90 | FPA21-M20-45 FP FP | PA21-PG13-45 PA21-PG16-45 | FPA21-050-45 | FPA21-BU100-45 FPA21-BU119-45 FPA21-BU125-45 | (1") (1¾16") (1¼") | 20 21 21 21 21 | 20.0 21.2 | 17 17 17 |
| FPA28-BU138-90 FPA28-BU144-90 | (1¾") (1 ⁷ /16") | FPA28-FL-90 | FPA28-M25-45 FP | PA28-PG21-45 | FPA28-075-45 | FPA28-BU138-45 FPA28-BU144-45 | (1¾") (1 ⁷ ⁄16") | 25 28 28 | 25.0 28.5 | 23 23 |
| FPA34-BU144-90 FPA34-BU175-90 | (17⁄16") (13⁄4") | FPA34-FL-90 | FPA34-M32-45 FP | PA34-PG29-45 | FPA34-100-45 | FPA34-BU144-45 FPA34-BU175-45 | (1 ⁷ ⁄ ₁₆ ") (1 ³ ⁄ ₄ ") | 34 34 | 34.5 | 29 29 |
| FPA42-BU200-90 FPA42-BU225-90 | (2") (2 ¹ /4") | FPA42-FL-90 | FPA42-M50-45 FP | PA42-PG36-45 | FPA42-150-45 | FPA42-BU200-45 FPA42-BU225-45 | (2") (2 ¹ /4") | 42 42 | 42.5 | 36 36 |
| FPA54-BU200-90 FPA54-BU225-90 | (2") (2 ¹ /4") | FPA54-FL-90* | FPA54-M50-45 | | FPA54-150-45 | FPA54-BU200-45 FPA54-BU225-45 | (2 ⁿ) (2 ¹ /4 ⁿ) | 54 54 | 54.5 | 48 48 |
| | | | | | | | | 67 | 67.0 | 56 |

Standards EN 45545-2 c Sus & REACh CE <u>RoHS</u> NFPA 130 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.



Fittings

| | | FPA45 | FPA-FPA | FPA-MPC |
|----------------------|--------------|---|---|---|
| | | flange One piece, fast fit 45 degree elbow fitting with nylon swivel flange with 'O' ring face seal. | coupler One piece, fast fit, coupler to join corrugated conduits. Also available in FPAX and FPAU versions. | coupler One piece, fast fit, coupler to join corrugated conduit to rigid conduit. |
| nominal size (mm) | 0D mm | | | |
| | | 45 Degree Flange | Coupler | Rigid Conduit Coupler |
| 10 10 | 10.0 | | | |
| 11 13 | 11.5 13.0 | | | |
| 13 13 | 10.0 | | | |
| 16 16 16 16 | 15.8 | FPA16-FL-45 | FPA16-FPA16 | FPA16-MPC16 |
| 18 18 | 18.5 | | | |
| 20 | 20.0 | | FPA20-FPA20 | |
| 21 21 21 | 21.2 | FPA21-FL-45 | FPA21-FPA21 | FPA21-MPC20 |
| 25 | 25.0 | | FPA25-FPA25 | |
| 28 28 | 28.5 | FPA28-FL-45 | FPA28-FPA28 | FPA28-MPC25 |
| 34 34 | 34.5 | FPA34-FL-45 | FPA34-FPA34 | FPA34-MPC32 |
| 42 42 | 42.5 | FPA42-FL-45 | FPA42-FPA42 | FPA42-MPC40 |
| 54 54 | 54.5 | FPA54-FL-45 | FPA54-FPA54 | |
| | 67.0 | | | |

Ordering Notes

- * Indicates parts made to order on request
- Available on request:
- NPB = Nickel Plated Brass
- colour Grey, other threads
- for brass locknuts and sealing washers see accessories, page 128
- EMC braid clamp version see page 124



european (NW) sizes

17 17 17

• 1 part fast fit 5

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- IP rating: IP66
- Vibration & shock tested to EN61373 Cat 2
- Tamper resistant

Standards

C SUS US REACh / EN 45545-2

BS EN IEC 61386 CE ROHS INFPA 130

- ۵ Can be removed using a screwdriver
 - Both 90° & 45° elbows incorporate swept
 Halogen, sulphur and phosphorus free
 - 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

 - Available in Black or Grey (RAL 7031)
 - EN 45545 HL3 and NFPA compliant

| FPA | | FPA | FPA90 | | | | |
|---|----------------------|---|---|-----------------------|-------------------|--------------|---------------------|
| straight swivel bras | s external | straight swivel brass internal thread | 90° elbow swivel b thread | orass external | | | |
| One piece, fast fit, swivel, i external threaded fitting. S knockouts or threaded ent | uitable for | One piece, fast fit, swivel, nickel plated brass internal threaded fitting. | One piece, fast fit, swive nickel plated brass exter Suitable for knockouts o | nal threaded fitting. | | | |
| IP66 | | 1966 | IP66 | | | | |
| | Constant of Constant | | | | nominal size (mm) | E | european (NW) sizes |
| NPB Ext Metric | NPB Ext PG | NPB Int Metric | NPB Ext Metric | NPB Ext PG | nomir | 0D mm | europi |
| | | | | | 10 | 10.0 | 7 |
| | | | | | 10 11 | 11.5 | 7 8 |
| FPA13-BM16 | FPA13-BPG9 | FPA13-BFM16 | FPA13-BM16-90 | FPA13-BPG9-90 | 13 | 13.0 | 10 |
| | | | | | 13 13 | | 10 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 18 | 18.5 | 12 14 |
| | | | | | 18 | 10.0 | 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 | 05.0 | 17 |
| FPA28-BM25 | FPA28-BPG21 | FPA28-BFM25 | FPA28-BM25-90 | FPA28-BPG21-90 | 25 28 | 25.0 28.5 | 23 |
| TT ALO-DINLO | | | TTALO-DINZO-50 | 11 A20-D1 021-30 | 28 | 20.5 | 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 FPA67-BM63 | | | FPA54-BM63-90 | | 54 67 | 67.0 | 48 56 |
| | | | | | 07 | 01.0 | 00 |



FPA system

brass threaded

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

Colour: Black or Grey.



Fittings

1111

| | | | FPA90 | FPA45 | | FPA45 |
|---------------------|-------------------|-------|--|---|-------------------------|--|
| | | | 90° elbow swivel brass internal thread | 45° elbow swivel thread | brass external | 45° elbow swivel brass internal thread |
| | | | One piece, fast fit, swivel, 90 degree elbow, nickel plated brass internal threaded fitting. | One piece, fast fit, swiv nickel plated brass exte Suitable for knockouts | ernal threaded fitting. | One piece, fast fit, swivel, 45 degree elbow, nickel plated brass internal threaded fitting. |
| european (NW) sizes | nominal size (mm) | 0D mm | | | | PFG |
| | | | NPB Int Metric | NPB Ext Metric | NPB Ext PG | NPB Int Metric |
| 7 7 | 10 10 | 10.0 | | | | |
| 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 12 | 16 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 | 05.0 | | | | |
| 22 | 25 | 25.0 | | | EDA20 DDC21 45 | |
| 23 23 | 28 28 | 28.5 | FPA28-BFM25-90 | FPA28-BM25-45 | FPA28-BPG21-45 | FPA28-BFM25-45 |
| 23 | 34 | 34.5 | FPA34-BFM32-90 | FPA34-BM32-45 | FPA34-BPG29-45 | FPA34-BFM32-45 |
| 29 | 34 | 01.0 | | THOT DINCE TO | | |
| 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
- Available on request:
- NPB = Nickel Plated Brass
- colour Grey, other threadsfor brass locknuts and sealing washers
- see accessories, page 128
- EMC braid clamp version, see page 124



• 1 part fast fit

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

| FPA | FPA90 | FPA45 | | | |
|---|---|---|-------------------|--------------|---------------------|
| cable gland | cable gland | cable gland | | | |
| One piece, fast fit, swivel, nickel plated brass external threaded cable gland fitting. Suitable for knockouts or threaded entries. | One piece, fast fit, swivel, 90 degree elbow, nickel plated brass external threaded cable gland fitting. Suitable for knockouts or threaded entries. | One piece, fast fit, swivel, 45 degree elbow, nickel plated brass external threaded cable gland fitting. Suitable for knockouts or threaded entries. | | | |
| | | | nominal size (mm) | 0D mm | european (NW) sizes |
| NPB Metric | NPB Metric | NPB Metric | nc | 0 | er |
| | | | 10 | 10.0 | 7 |
| | | | 10 | 44.5 | 7 |
| FPA13-BM16-CG | FPA13-BM16-CG-90 | | 11 13 | 11.5 13.0 | 8 10 |
| FFA 13-DW 10-60 | FFA13-DM10-60-90 | | 13 | 15.0 | 10 |
| | | | 13 | | 10 |
| FPA16-BM16-CG | FPA16-BM16-CG-90 | FPA16-BM20-CG-45 | 16 | 15.8 | 12 |
| FPA16-BM20-CG | FPA16-BM20-CG-90 | | 16 | | 12 |
| | | | 16 | | 12 |
| | | | 16 | | 12 |
| | | | 18 | 18.5 | 14 |
| | | | 18 | 00.0 | 14 |
| FPA21-BM20-CG | | | 20 | 20.0 | 17 |
| FFA21-BINI2U-GG | FPA21-BM20-CG-90 | FPA21-BM20-CG-45 | 21 21 | 21.2 | 17 17 |
| | | | 21 | | 17 |
| | | | 25 | 25.0 | |
| FPA28-BM25-CG | FPA28-BM25-CG-90 | FPA28-BM25-CG-45 | 28 | 28.5 | 23 |
| | | | 28 | | 23 |
| FPA34-BM32-CG | FPA34-BM32-CG-90 | FPA34-BM32-CG-45 | 34 | 34.5 | 29 |
| | | | 34 | | 29 |
| FPA42-BM40-CG | FPA42-BM40-CG-90 | FPA42-BM40-CG-45 | 42 | 42.5 | 36 |
| | 53454 53450 00 00 | | 42 | | 36 |
| FPA54-BM50-CG | FPA54-BM50-CG-90 | FPA54-BM50-CG-45 | 54 54 | 54.5 | 48 |
| | | | 54 67 | 67.0 | 48 56 |
| | | | 07 | 07.0 | 00 |

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



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

| | | EDAY | | EDAX | | EDAY |
|-------------------|--------------|--|--|--|--|---|
| | | FPAX | FPAX - FPAX | FPAX | | FPAX |
| | | straight external thread | coupler | straight UNEF | | flange |
| | | Fast fit, external threaded fitting with additional conduit seal. Suitable for knockouts or threaded entries. | Fast fit coupler to join corrugated conduits. Also available in FPA and FPAU versions. | Fast fit fitting with brass swivel UNEF for attachment to a connectors with ad conduit seal. | nickel plated internal thread circular | Fast fit fitting with nylon swivel flange with additional conduit seal and with 'O' ring face seal. |
| | | IP66 IP67 IP68 IP69 | IP66 IP67 IP68 IP69 | IP66 IP67 IP68 | IP69 | IP66 IP67 IP68 IP69 |
| | | | | | | |
| nominal size (mm) | _ | | | | E | |
| nomina | 0D mm | Ext Metric Ext PG Ext NPT | | Int UNEF | Thread | Flange |
| 10 10 | 10.0 | | | | | |
| 11 | 11.5 | | | | | |
| 13 | 13.0 | FPAX13-M16 FPAX13-PG9 | FPAX16-FPAX16 | | | |
| 13 | | | | | | |
| 13 16 | 15.8 | FPAX16-M16 FPAX16-PG9 FPAX16-038 | | FPAX16-BU075 | (3/4") | FPAX16-FL |
| 16 | 10.0 | FPAX16-M20 FPAX16-PG11 FPAX16-050 | | FPAX16-BU088 | (7/8") | |
| 16 | | FPAX16-PG13 | | FPAX16-BU100 | (1") | |
| 16 | | FPAX16-PG16 | | FPAX16-BU119 | (1¾16") | |
| 18 18 | 18.5 | | | | | |
| 20 | 20.0 | | | | | |
| 21 | 21.2 | FPAX21-M20 FPAX21-PG13 FPAX21-050 | FPAX21-FPAX21 | FPAX21-BU100 | (1") | FPAX21-FL |
| 21 | | FPAX21-PG16 | | FPAX21-BU119 | (13⁄16") | |
| 21 | 05.0 | | | FPAX21-BU125 | (1¾") | |
| 25 28 | 25.0 28.5 | FPAX28-M25 FPAX28-PG21 FPAX28-075 | FPAX28-FPAX28 | FPAX28-BU138 | (13/8") | FPAX28-FL |
| 20 | 20.3 | FPAX28-W23 FPAX28-PG29 | TT AALU*TTAALU | FPAX28-BU138 | (178) (17/16") | II AALU"FL |
| 34 | 34.5 | FPAX34-M32 FPAX34-PG29 FPAX34-100 | FPAX34-FPAX34 | FPAX34-BU144 | (17/16") | FPAX34-FL |
| 34 | | FPAX34-M40 | | | | |
| 42 | 42.5 | FPAX42-M40 FPAX42-PG36 FPAX42-125 | FPAX42-FPAX42 | FPAX42-BU200 | (2") | FPAX42-FL |
| 42 | 54.5 | FPAX42-M50 FPAX42-150 | | FPAX42-BU225 | (2 ¹ /4") | |
| 54 54 | 54.5 | FPAX54-M50 FPAX54-PG42 FPAX54-150 FPAX54-M63 FPAX54-PG48 FPAX54-200 | FPAX54-FPAX54 | FPAX54-BU200 FPAX54-BU225 | (2") (2¼") | |
| | 67.0 | FPAX67-M63 FPAX67-200 | | 117004-00220 | (=,*) | |
| | | | | | | |

Ordering Notes

- * Indicates parts made to order on request
- Available on request:
 other threads
- NPB = Nickel Plated Brass
- for brass locknuts and sealing washers see accessories, page 128
- EMC braid clamp version see page 124



european (NW) sizes

 Fast fit 5 ۵

- IP rating:
- IP66 + IP67 + IP68 (2 bar) + IP69
- face seal
- Face seal details:
 - Metric Nylon threads supplied with retained Polyester Elastomer Washer - NPT and PG Nylon threads supplied with Neoprene Washer
- UNEF, Flange and Cable Glands supplied Temperature range -50°C to +135°C with O-ring
- Supplied with additional conduit seal and
 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
- Brass threads supplied with Fibre Washer Suitable for fine and coarse pitch conduits

 - · 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 | 90 | | FPAX90 | | FPAX90 | | | |
|---|----------------|--|--|--|---------------------|-------------------|--------------|---------------------|
| 90° elbow external thread Fast fit, external threaded 90 degree elbow fitting with additional conduit seal. Suitable for knockouts. | | 90° elbow UNEF sy thread Fast fit, 90 degree elbow plated brass swivel UNE attachment to circular co additional conduit seal. | fitting with nickel F internal thread for | flange Fast fit 90 degree elbow fitting with nylon swivel flange with additional conduit seal with 'O' ring face seal. | | | | |
| IP66 IP67 | IP68 IP69 | | IP66 IP67 IP68 IP69 | | IPG6 IPG7 IPG8 IPG9 | | | |
| Ext Metric | Ext PG | Ext NPT | Int UNEF | Thread | Flance | nominal size (mm) | 0D mm | european (NW) sizes |
| EXt Motilo | EXIT | LAUNT | int ONEI | meau | riango | 10 | 10.0 | 7 |
| | | | | | | 10 | | 7 |
| FPAX13-M16-90 | FPAX13-PG9-90 | | | | | 11 13 | 11.5 13.0 | 8 10 |
| FFAA13-W10-90 | FFAX13-F09-90 | | | | | 13 | 13.0 | 10 |
| | | | | | | 13 | | 10 |
| FPAX16-M16-90 | | FPAX16-050-90 | FPAX16-BU075-90 | (³ /4 ⁿ) | FPAX16-FL-90 | 16 | 15.8 | 12 |
| FPAX16-M20-90 | | | FPAX16-BU088-90 | (⁷ /8") | | 16 | | 12 |
| | FPAX16-PG13-90 | | FPAX16-BU100-90 FPAX16-BU119-90 | (1") (13/ II) | | 16 16 | | 12 12 |
| | | | FPAX10-DU119-90 | (1 ³ ⁄ ₁₆ ") | | 18 | 18.5 | |
| | | | | | | 18 | 10.0 | 14 |
| | | | | | | 20 | 20.0 | |
| FPAX21-M20-90 | FPAX21-PG13-90 | FPAX21-050-90 | FPAX21-BU100-90 | (1") | FPAX21-FL-90 | 21 | 21.2 | |
| | FPAX21-PG16-90 | | FPAX21-BU119-90 | (1 ³ / ₁₆ ") | | 21 | | 17 |
| | | | FPAX21-BU125-90 | (1¼") | | 21 | 25.0 | 17 |
| FPAX28-M25-00 | FPAX28-PG21-90 | FPAX28-075-90 | FPAX28-BU138-90 | (13/8") | FPAX28-FL-90 | 25 28 | 25.0 28.5 | 23 |
| 11 MALO ML0-30 | 1170201021-30 | 1111120 010-30 | FPAX28-BU144-90 | (17/16") | | 28 | 20.0 | 23 |
| FPAX34-M32-90 | FPAX34-PG29-90 | FPAX34-100-90 | FPAX34-BU144-90 | (17/16") | FPAX34-FL-90 | 34 | 34.5 | |
| | | | | | | 34 | | 29 |
| | FPAX42-PG36-90 | | FPAX42-BU200-90 | (2") | FPAX42-FL-90 | 42 | 42.5 | |
| FPAX42-M50-90 | | FPAX42-150-90 | FPAX42-BU225-90 | (2 ¹ /4") | | 42 | FAF | 36 |
| FPAX54-M50-90 FPAX54-M63-90 | FPAX54-PG48-90 | FPAX54-150-90 FPAX54-200-90 | FPAX54-BU200-90 FPAX54-BU225-90 | (2") (21/") | | 54 54 | 54.5 | |
| FPAX04-IVI03-90 | | FFAX04-200-90 | FFAX04-BUZZ0-90 | (2¼ ⁿ) | | | 67.0 | 48 56 |







FPAX system nylon & brass threaded

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

| | | | FPAX4 | 5 | | FPAX45 | | FPAX45 |
|---------------------|-------------------|------|-------------------|---|---------------|--|--|--|
| | | | Fast fit, externa | external threa I threaded 45 deg tional conduit sea | gree elbow | 45° elbow UNEF sw thread Fast fit, 45 degree elbow f plated brass swivel UNEF attachment to circular con additional conduit seal. | itting with nickel internal thread for | flange Fast fit 45 degree elbow fitting with nylon swivel flange with additional conduit seal and 'O' ring face seal. |
| | | | IP66 IP67 IF | P68 IP69 | | IP66 IP67 IP68 IP69 | | IP66 IP67 IP68 IP69 |
| european (NW) sizes | nominal size (mm) | mm | (| | | | | |
| enro | nom | 0D n | Ext Metric | Ext PG | Ext NPT | Int UNEF | Thread | Flange |
| 7 | 10 | 10.0 | | | | | | |
| 7 | 10 | | | | | | | |
| 8 | 11 | 11.5 | | | | | | |
| 10 10 | 13 13 | 13.0 | | | | | | |
| 10 | 13 | | | | | | | |
| 12 | 16 | 15.8 | FPAX16-M20-45 | FPAX16-PG13-45 | FPAX16-050-45 | FPAX16-BU075-45 | (³ /4") | FPAX16-FL-45 |
| 12 | 16 | | | | | FPAX16-BU088-45 | (7/8") | |
| 12 | 16 | | | | | FPAX16-BU100-45 | (1") | |
| 12 | 16 | | | | | FPAX16-BU119-45 | (1 ³ ⁄16") | |
| 14 | 18 18 | 18.5 | | | | | | |
| 14 | 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 | (13/16") | |
| 17 | 21 | | | | | FPAX21-BU125-45 | (1¼") | |
| | 25 | 25.0 | | | | | | |
| 23 | 28 28 | 28.5 | FPAX28-M25-45 | FPAX28-PG21-45 | FPAX28-075-45 | FPAX28-BU138-45 | (1 ³ / ₈ ") | FPAX28-FL-45 |
| 23 29 | 28 34 | 34.5 | FPAX34-M32-45 | FPAX34-PG29-45 | FPAX34-100-45 | FPAX28-BU144-45 FPAX34-BU144-45 | (1 ⁷ /16") (1 ⁷ /16") | FPAX34-FL-45 |
| 29 | 34 | 01.0 | 11001 102 10 | | | | (1/10) | |
| 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 | 67.0 | | | | FPAX54-BU225-45 | (21/4") | |
| 56 | 0/ | 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



Fast fit

- IP rating: IP66 + IP67 + IP68 (2 bar) + IP69
- Supplied with additional conduit seal and
- face seal
 face seal
 face seal details:
 - Metrie Nylen thre
 - 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

| F | РАХ | | FPAX | FPAX90 | | | | |
|-----------|-------------------------|---|---|---|-------------------------|-------------------|--------------|---------------------|
| | raight swivel t read | orass external | straight swivel brass internal thread | 90° elbow swivel l external thread | brass | | | |
| Fa thr | st fit, swivel, nickel | plated brass external ble for knockouts or | Fast fit, swivel, nickel plated brass internal threaded fitting with additional conduit seal. | Fast fit, swivel, 90 degre brass external threaded conduit seal. Suitable fo threaded entries. | fitting with additional | | | |
| IP | 66 IP67 IP68 IP | 69 | IP66 IP67 IP68 IP69 | IP66 IP67 IP68 IP69 | 9 | | | |
| | | | | | | nominal size (mm) | 0D mm | european (NW) sizes |
| | NPB Ext Metric | NPB Ext PG | NPB Int Metric | NPB Ext Metric | NPB Ext PG | шоп | 0D I | euro |
| | | | | | | 10 | 10.0 | 7 |
| | | | | | | 10 | 44.5 | 7 |
| | FPAX13-BM16 | FPAX13-BPG9 | FPAX13-BFM16 | FPAX13-BM16-90 | FPAX13-BPG9-90 | 11 13 | 11.5 13.0 | 8 10 |
| | TTAXI5-DINITO | TTAX 13-DI 03 | | 11 AX 13-Dill10-30 | 11AX10-DI 03-50 | 13 | 10.0 | 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 | 10.5 | 12 |
| | | | | | | 18 18 | 18.5 | 14 14 |
| | | | | | | 20 | 20.0 | 14 |
| | 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 |
| | FPAX42-BM40 | FPAX42-BPG36 | FPAX42-BFM40 | FPAX42-BM40-90 | FPAX42-BPG36-90 | 34 42 | 42.5 | 29 36 |
| | FPAX42-BM50 | FFAA42-DFUJU | FFAA4 2*DF INI4U | FPAX42-BM50-90 | FFMA42-DF030-90 | 42 | 42.0 | 30 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 |



| | | | | Construction: thread. External a | Nylon (PA66) mc and internal meta ass and incorpora | SS threaded oulded fitting with swivel metal callic threads are made from ate an internal elastomeric seal. |
|----------------------|----------------------|-------|---|--|---|--|
| | | | Fittings | | | |
| | | | FPAX90 | FPAX45 | | FPAX45 |
| | | | 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 | 45° elbow swivel external thread Fast fit, swivel, 45 degr brass external threaded conduit seal. Suitable for threaded entries. | ree elbow, nickel plated d fitting with additional for knockouts or | 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 |
| european (NW) sizes | nominal size (mm) | 0D mm | NPB Int Metric | NPB Ext Metric | NPB Ext PG | NPB Int Metric |
| 7 7 | 10 10 | 10.0 | | | | |
| 8 10 10 10 | 13 13 | 13.0 | FPAX13-BFM16-90 | | | |
| 12 12 12 12 | 16 16 16 16 | 15.8 | FPAX16-BFM16-90 FPAX16-BFM20-90 | FPAX16-BM16-45 FPAX16-BM20-45 | FPAX16-BPG13-45 FPAX16-BPG16-45 | FPAX16-BFM20-45 |
| 14 14 | 18 | | | | | |
| 17 17 17 | 21 21 21 | 21.2 | FPAX21-BFM20-90 | FPAX21-BM20-45 | FPAX21-BPG13-45 FPAX21-BPG16-45 | FPAX21-BFM20-45 |
| 23 | 28 | 28.5 | FPAX28-BFM25-90 | FPAX28-BM25-45 | FPAX28-BPG21-45 | FPAX28-BFM25-45 |
| 23 29 | 34 | 34.5 | FPAX34-BFM32-90 | FPAX34-BM32-45 | FPAX34-BPG29-45 | FPAX34-BFM32-45 |
| 29 36 | 42 | 42.5 | FPAX42-BFM50-90 | FPAX42-BM40-45 | FPAX42-BPG36-45 | FPAX42-BFM50-45 |
| 36 48 48 | 54 | 54.5 | FPAX54-BFM50-90 | FPAX42-BM50-45 FPAX54-BM50-45 FPAX54-BM63-45 | FPAX54-BPG48-45* | FPAX54-BFM50-45 |
| | 67 | | | | | |

Ordering Notes

- * Indicates parts made to order on request
- · Available on request:
- NPB = Nickel Plated Brass
- other threads
- for brass locknuts and sealing washers
- see accessories, page 128
- EMC braid clamp version, see page 124

Fast fit

Ö

0

- 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 | FPAX90 | FPAX45 | | | |
|--|---|---|----------------------------|----------------|----------------------|
| cable gland Fast fit, swivel, nickel plated brass external threaded cable gland fitting with additional conduit seal. Suitable for knockouts or threaded entries. | 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. | 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. | | | |
| | 1P66 1P67 1P68 1P69 | IP66 IP67 IP68 IP69 | nominal size (mm) | Ε | european (NW) sizes |
| NPB Metric | NPB Metric | NPB Metric | 10 10 | ш О 10.0 | douna 7 7 |
| FPAX13-BM16-CG | FPAX13-BM16-CG-90 | | 11 13 13 13 | 11.5 13.0 | 8 10 10 10 |
| FPAX16-BM16-CG FPAX16-BM20-CG | FPAX16-BM16-CG-90 FPAX16-BM20-CG-90 | FPAX16-BM20-CG-45 | 16 16 16 16 | 15.8 | 12 12 12 12 |
| | | | 18 18 | 18.5 | 14 14 |
| FPAX21-BM20-CG | FPAX21-BM20-CG-90 | FPAX21-BM20-CG-45 | 20 21 21 21 21 | 20.0 21.2 | 17 17 17 |
| FPAX28-BM25-CG | FPAX28-BM25-CG-90 | FPAX28-BM25-CG-45 | 25 28 29 | 25.0 28.5 | 23 23 |
| FPAX34-BM32-CG | FPAX34-BM32-CG-90 | FPAX34-BM32-CG-45 | 28 34 34 | 34.5 | 23 29 29 |
| FPAX42-BM40-CG | FPAX42-BM40-CG-90 | FPAX42-BM40-CG-45 | 42 42 | 42.5 | 36 36 |
| FPAX54-BM50-CG | FPAX54-BM50-CG-90 | FPAX54-BM50-CG-45 | 54 54 | 54.5 | 48 48 |
| | | | 67 | 67.0 | 56 |

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



Technical Drawing





ULTRA[™] system

The World's Best Conduit Fitting

Construction: Nylon (PA66) moulded fittings featuring Integrated Sealing Technology

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

Colour: 2 Tone Colour - Black and Grey.

Fittings **ULTRA™** system straight

FPAU

FPAU

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

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

straight UNEF swivel internal







FPAU

thread

threaded entries.

straight swivel brass external

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

NEW

ntegrated

Sealing Technology

) mu

| european (NW) S | nominal size (m | mm | | a second s | | | | | |
|-----------------|-----------------|------|------------|---|--------------|----------|----------------|---------------|--------------|
| enu | non | OD | 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 | | | | | | | |
| 0 | 13 | 13.0 | FPAU13-M16 | | | | FPAU13-BM16 | FPAU13-BPG9 | |
| 0 | 13 | | | | | | | | |
| 0 | 13 | | | | | | | | |
| 2 | 16 | 15.8 | FPAU16-M16 | FPAU16-038 | FPAU16-BU075 | (3/4") | FPAU16-BM16 | FPAU16-BPG9 | FPAU16-B038* |
| 2 | 16 | | FPAU16-M20 | FPAU16-050 | FPAU16-BU088 | (7/8") | FPAU16-BM20 | FPAU16-BPG11 | FPAU16-B050* |
| 2 | 16 | | | | FPAU16-BU100 | (1") | | | |
| 2 | 16 | | | | FPAU16-BU119 | (13/16") | | | |
| 4 | 18 | 18.5 | | | | | | | |
| 4 | 18 | | | | | | | | |
| | 20 | 20.0 | | | | | | | |
| 7 | 21 | 21.2 | FPAU21-M20 | FPAU21-050 | FPAU21-BU100 | (1") | FPAU21-BM20 | FPAU21-BPG13 | FPAU21-B050* |
| | 21 | | FPAU21-M25 | | FPAU21-BU119 | (13/16") | | FPAU21-BPG16 | |
| 7 | 21 | | | | FPAU21-BU125 | (1¼") | | | |
| | 25 | 25.0 | | | | | | | |
| 3 | 28 | 28.5 | FPAU28-M25 | FPAU28-075 | FPAU28-BU138 | (13/8") | FPAU28-BM25 | FPAU28-BPG21 | FPAU28-B075* |
| 3 | 28 | | FPAU28-M32 | | | | | | |
| 9 | 34 | 34.5 | FPAU34-M32 | FPAU34-100 | FPAU34-BU144 | (11/16") | FPAU34-BM32 | FPAU34-BPG29 | FPAU34-B100* |
| 9 | 34 | | FPAU34-M40 | | | | | | |
| 6 | 42 | 42.5 | FPAU42-M40 | FPAU42-125 | FPAU42-BU200 | (2") | FPAU42-BM40 | FPAU42-BPG36 | FPAU42-B125* |
| 6 | 42 | | FPAU42-M50 | FPAU42-150 | FPAU42-BU225 | (21/4") | FPAU42-BM50 | | FPAU42-B150* |
| 8 | 54 | 54.5 | FPAU54-M50 | FPAU54-150 | FPAU54-BU200 | (2") | FPAU54-BM50 | | FPAU54-B150* |
| 8 | 54 | | FPAU54-M63 | FPAU54-200 | FPAU54-BU225 | (21/4") | FPAU54-BM63 | FPAU54-BPG48* | FPAU54-B200* |
| 6 | 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



- · Fast fit True one piece component - PG Brass threads supplied with Temperature range: 5 NEW • IP rating: for conduit & fitting conduit fitting: -50°C to +135°C Ö **Fibre Washer** IP66 + IP67 + IP68 (2 bar) + Low Fire Hazard (LFH) see page 149. UNEF, Flange and Cable Glands supplied IP68 (72hrs @ 1m) + IP69 with O-ring Halogen, sulphur and PA66 Nylon moulded fitting phosphorus free Vibration and shock tested to EN61373 Cat 2 0 Nylon threads supplied complete with glass Tamper resistant UV resistant Both 90° and 45° elbows incorporate swept reinforced nylon locknut Swivel threads allow assembly without Metallic threads made from Nickel Plated Brass bore to facilitate cable installation and protect twisting of cables Face seal details:
 - Metric Nylon threads supplied with retained **Polyester Elastomer Washer**
 - NPT and Metric Brass threads supplied with

FPAU

retained Fibre Washer

FPAU

- 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
- EN 45545 HL3 and NFPA 130 compliant

FPAU - FPAU

| straight swivel brass internal thread | flange One piece fast fit fitting with nylon swivel | coupler One piece fast fit coupler to join | | | |
|---|---|--|-------------------|-------|---------------------|
| One piece fast fit, swivel, nickel plated brass internal threaded fitting with integrated conduit seal or threaded entries. | flange with integrated conduit seal and with 'O' ring face seal. | corrugted conduits. | | | |
| IP66 IP67 IP68 IP69 | IP66 IP67 IP68 IP69 | IP66 IP67 IP68 IP69 | | | |
| NPB Int Metric | Flange | Coupler | nominal size (mm) | 0D mm | european (NW) sizes |
| | i kuligo | outpici | 10 | 10.0 | 7 |
| | | | 10 | 10.0 | 7 |
| | | | 11 | 11.5 | 8 |
| FPAU13-BFM16 | | | 13 | 13.0 | 10 |
| | | | 13 13 | | 10 10 |
| FPAU16-BFM16 | FPAU16-FL | FPAU16-FPAU16 | 16 | 15.8 | 12 |
| FPAU16-BFM20 | | | 16 | | 12 |
| | | | 16 | | 12 |
| | | | 16 | | 12 |
| | | | 18 18 | 18.5 | 14 14 |
| | | | 20 | 20.0 | 14 |
| FPAU21-BFM20 | FPAU21-FL | FPAU21-FPAU21 | | 21.2 | 17 |
| | | | 21 | | 17 |
| | | | 21 | | 17 |
| | | | 25 | 25.0 | |
| FPAU28-BFM25 | FPAU28-FL | FPAU28-FPAU28 | 28 28 | 28.5 | 23 23 |
| FPAU34-BFM32 | FPAU34-FL | FPAU34-FPAU34 | 34 | 34.5 | 23 |
| | | | 34 | 0.110 | 29 |
| FPAU42-BFM40 | FPAU42-FL | | 42 | 42.5 | 36 |
| | | | 42 | | 36 |
| FPAU54-BFM50 | | | 54 | 54.5 | 48 |
| | | | 54 67 | 67.0 | 48 56 |
| | | | 07 | 01.0 | 00 |
| | | | | | |

Standards & Approvals



Technical Drawing





ULTRA[™] system The World's Best Conduit Fitting

Construction: Nylon (PA66) moulded fittings featuring Integrated Sealing Technology

NEW

Integrated

Sealing Technology

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

Colour: 2 Tone Colour - Black and Grey.

Fittings ULTRA™ system 90° and 45°



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



european (NW) sizes

7

7

8

10

10

10

12

12

12

12

14

14

17

17

17

23

23

29

29

36

36

48

- · Fast fit True one piece component - PG Brass threads supplied with Fibre Temperature range: 5 NEW • IP rating: for conduit & fitting conduit fitting: -50°C to +135°C ٩ Washer IP66 + IP67 + IP68 (2 bar) + Low Fire Hazard (LFH) UNEF, Flange and Cable Glands supplied IP68 (72hrs @ 1m) + IP69 with O-ring see page 149 Halogen, sulphur and phosphorus free PA66 Nylon moulded fitting Vibration and shock tested to EN61373 Cat 2 ٩ Metallic threads made from Nickel Plated Brass Tamper resistant UV resistant Both 90° and 45° elbows incorporate swept Nylon threads supplied complete with glass Swivel threads allow assembly without reinforced nylon locknut bore to facilitate cable installation and protect twisting of cables Face seal details: cables when installed
 - Metric Nylon threads supplied with retained **Polyester Elastomer Washer**
 - NPT and Metric Brass threads supplied with
 - retained Fibre Washer
- · Can be removed using a screwdriver All round teeth give high pull off strength 70kg with FPAH21
- Suitable for fine and coarse pitch conduits
- EN 45545 HL3 and NFPA130 compliant

| FPAU 90 | FPAU 45 | FPAU 45 | | | |
|--|--|---|-------------------|-------|---------------------|
| 90° flange | 45° flange | 45° UNEF swivel internal thread | | | |
| One piece fast fit 90 degree elbow fitting with nylon swivel flange with integrated conduit seal and 'O' ring face seal. | One piece fast fit, 45 degree elbow fitting with nylon swivel flange with integrated conduit seal and with 'O' ring face seal. | 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 | IP66 IP67 IP68 IP69 | IP66 IP67 IP68 IP69 | | | |
| | | | nominal size (mm) | 0D mm | european (NW) sizes |
| Flange | Flange | Int UNEF | поп | OD | euro |
| | | | 10 | 10.0 | 7 |
| | | | 10 | | 7 |
| | | | 11 | 11.5 | 8 |
| | | | 13 | 13.0 | 10 |
| | | | 13 | | 10 |
| | | | 13 | 15.0 | 10 |
| FPAU16-FL-90 | FPAU16-FL-45 | FPAU16-BU075-45 (3/4") | 16 | 15.8 | 12 |
| | | FPAU16-BU088-45 (%") | 16 | | 12 12 |
| | | FPAU16-BU100-45 (1") FPAU16-BU119-45 (1%) | 16 16 | | 12 |
| | | FFAUI0-BUII9-43 (1716) | 18 | 18.5 | 14 |
| | | | 18 | 10.5 | 14 |
| | | | 20 | 20.0 | 14 |
| 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 (11/4") | 21 | | 17 |
| | | | 25 | 25.0 | |
| FPAU28-FL-90 | FPAU28-FL-45 | FPAU28-BU133-45 (1%") | 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 | 10.5 | 29 |
| FPAU42-FL-90 | FPAU42-FL-45 | FPAU42-BU200-45 (2") | 42 | 42.5 | 36 |
| | | FPAU42-BU225-45 (2 ¹ / ₄ ") | 42 54 | 54.5 | 36 48 |
| FPAU54-FL-90 | FPAU54-FL-45 | FPAU54-BU200-45 (2") FPAU54-BU225-45 (2 ¹ / ₄ ") | 54 54 | 54.5 | 48 48 |
| | | FFRUJ4-DUZZŪ-40 (274) | | 67.0 | |
| | | | 07 | 01.0 | 00 |

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

Integrated Sealing

Technology

Construction: Nylon (PA66) moulded fittings featuring Integrated Sealing Technology

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

Colour: 2 Tone Colour - Black and Grey.

Fittings ULTRA™ system 45°

| | | | FPAU 45 | Integrated Sealing Technology | FPAU 4 | 5 | Integrated Sealing Technology | FPAU 45 |
|---------------------|-------------------|-------|--|-------------------------------------|---|---|-------------------------------------|---|
| | | | 45° external threa One piece fast fit, externa elbow fitting with integrat Suitable for knockouts. | al threaded 45 degree | One piece fast nickel plated be with integrated | brass extern fit, swivel, 45 deg rass external thre conduit seal. Su breaded entries. | gree elbow, eaded fitting | 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 | | IP66 IP67 II | P68 IP69 | | IP66 IP67 IP68 IP69 |
| european (NW) sizes | nominal size (mm) | | | | | | | |
| europea | nominal | 0D mm | Ext Metric | Ext NPT | NPB Ext Metric | NPB Ext PG | NPB Ext NPT | NPB Int Metric |
| 7 | 10 | 10.0 | | | | | | |
| 7 8 | 10 11 | 11.5 | | | | | | |
| 10 | 13 | 13.0 | | | | | | |
| 10 | 13 | | | | | | | |
| 10 | 13 | | | | | | | |
| 12 12 | 16 16 | 15.8 | FPAU16-M20-45 | FPAU16-050-45 | | FPAU16-BPG13-45 FPAU16-BPG16-45 | FPAU16-B050-45* | FPAU16-BFM20-45 |
| 12 | 10 | | | | FPAU10-DIVI20-40 | FPAU 10-DPG 10-40 | | |
| 12 | 16 | | | | | | | |
| 14 | 18 | 18.5 | | | | | | |
| 14 | 18 | | | | | | | |
| 17 | 20 21 | 20.0 | FPAU21-M20-45 | FPAU21-050-45 | EDA1101 BM20 /6 | FPAU21-BPG13-45 | EDA1121 2050 /5* | FPAU21-BFM20-45 |
| 17 | 21 | 21.2 | FFA021-W20-43 | FFA021-030-43 | FFAUZI-DINIZU-4J | FPAU21-BPG16-45 | FFA021-0030-43 | FFA021-DFW20-43 |
| 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 29 | 28 34 | 34.5 | FPAU34-M32-45 | FPAU34-100-45 | EDA1137_RM32_75 | FPAU34-BPG29-45 | EDA113/1_R100_//5* | FPAU34-BFM32-45 |
| 29 | 34 34 | 04.0 | FFAUJ4-111J2-4J | TTAU34-100-43 | 117034-011132-43 | 11A034-DF 029-43 | 117034-0100-43 | FFA034-DFIN32-40 |
| 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-BPG48-45* | | FPAU54-BFM50-45 |
| 48 56 | 54 67 | 67.0 | | | FPAU54-BM63-45 | | FPAU54-B200-45* | |
| 00 | | 01.0 | | | | | | |

Ordering Notes

- * Indicates parts made to order on request
 - · Available on request:
- NPB = Nickel Plated Brass
- other threads
- for brass locknuts and sealing washers
- see accessories, page 128
- EMC braid clamp version see page 124

Technical Drawing



- 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

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- 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
- NPT and Metric Brass threads supplied with 70k retained Fibre Washer Sui

- 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 screwdriverAll 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

NEW

- 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)
- **ULTRA™ system** R Type Cable Strain Relief

| STRAIGH | т | | Integrated Sealing Technology | 90°ELBOW | Integrated Sealing Technology | 45°ELBOW | Integrated Sealing Technology | | | |
|-------------------|---------------------|---|-------------------------------------|---|--|---|-------------------------------------|-------------------|-------|---------------------|
| | nd fitting w | xel plated brass extension with integrated cond aded entries. | | cable gland One piece fast fit, swivel elbow, nickel plated bras threaded cable gland fit integrated conduit seal. knockouts or threaded e | ss external ting with Suitable for | 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 | | | IP66 IP67 IP68 IP69 | Ð | IP66 IP67 IP68 IP69 | | | | |
| | | | | | | | | nominal size (mm) | E | european (NW) sizes |
| NPB metric | Cable Range (mm) | NPB metric | Cable Range (mm) | NPB metric | Cable Range (mm) | NPB metric | Cable Range (mm) | nomina | 0D mm | europe |
| | | | | | | | | 10 10 | 10.0 | 7 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 | | 40.05 | FPAU13-BM16-CG-R3-90 | 6.5 - 9.5 | | 40.05 | 13 | 45.0 | 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 12 |
| FPAU16-BM16-CG-R3 | 6.5 - 9.5 | FPAU16-BM20-CG-R3 FPAU16-BM20-CG-R4 | 6.5 - 9.5 | FPAU16-BM16-CG-R3-90 | 6.5 - 9.5 | FPAU16-BM20-CG-R3-45 FPAU16-BM20-CG-R4-45 | 6.5 - 9.5 7.0 - 10.5 | 16 16 | | 12 |
| | | FFA010-DM20-60-64 | 7.0 - 10.5 | | | FFAU10-DIVI20-60-N4-43 | 7.0 - 10.5 | 18 | 18.5 | 14 |
| | | | | | | | | 18 | 10.5 | 14 |
| | | | | | | | | 20 | 20.0 | 14 |
| 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-BM50-CG-R1 | | FPAU42-BM40-CG-R1-90 | 17.0 - 20.5 | FPAU42-BM40-CG-R1-45 | 17.0 - 20.5 | 42 | 42.5 | 36 |
| | | FPAU42-BM50-CG-R2 | | FPAU42-BM40-CG-R2-90 | 20.0 - 25.0 | FPAU42-BM40-CG-R2-45 | 20.0 - 25.0 | 42 | | 36 |
| FPAU54-BM50-CG-R1 | | FPAU54-BM63-CG-R1 | | 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 |



How to identify a Flexicon ULTRA[™] fitting



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

FPA & FPAX **T** Pieces and Dividers

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



Fittings

| | | | FPA | FPA | Reducer/Stop Plug | | | | | |
|---------------------|-----------------|-----------------------------|--|---|---|--|--|--|--|--|
| | | | T piece with inspection lid Fast fit T piece with inspection lid. | Reducing divider Fast fit reducing divider | Fitting to reduce or blank off any outlets. | | | | | |
| | | | 1966 | IP66 | IP66 | | | | | |
| european (NW) sizes | Conduit In (mm) | Conduit Out x 2 for divider | | | R SP | | | | | |
| 12 | 16 | 13 | FPA16T | FPA16-13-13 | FPA13-R16 SP-R16 | | | | | |
| | | | FPA20T | | | | | | | |
| 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



T-piece or Reducer Size

Fast fit

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• Fast III

• 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







BS EN IEC 61386

CE ROHS



Flexilok® system

Construction: Nylon (PA66) moulded fitting.

| One piece fast fit | Can be removed using a screwdriver | |
|---|--|---------|
| Slim design | Suitable for fine and coarse pitch conduits | ** |
| IP rating: IP66 | Temperature range -40°C to +120°C | |
| Anti-vibration and | Metric threads supplied complete with locknuts | |
| tamper resistant | Low Fire Hazard (LFH), see page 149 | |
| Pull off strength with: | Halogen, sulphur and phosphorus free | |
| (FLK21 - FPAS21 25kg) | Available in Black, Grey (RAL 7031) and white, see p | bage 71 |
| (FLK21 - FPAL21 20kg) | 42mm and 54mm feature 4 teeth for added strength | |

IP66

Fittings

| | | | FLK | | FLK | FLK-FLK | | | | | |
|---------------------|-------------------|-------|--|--------------------|--|--|--|--|--|--|--|
| | | | straight external Nylon, one piece, slim, threaded fitting suitable threaded entries. | fast fit, external | Push in Simple, one piece, push in fitting suitable for knockouts with no need for locknuts. Ideal for use when enclosure access is restricted. | Coupler One piece, slim, fast fit coupler for joining 2 conduits together. | | | | | |
| european (NW) sizes | nominal size (mm) | 0D mm | | | | | | | | | |
| en | no | 00 | Ext Metric | Ext PG | | Coupler | | | | | |
| 7 7 | 10 10 | 10.0 | FLK10-M12 | FLK10-PG7 | | | | | | | |
| 8 | 11 | 11.5 | | | | | | | | | |
| 10 10 | 13 13 | 13.0 | FLK13-M16 | FLK13-PG9 | | | | | | | |
| 10 | 13 | | | | | | | | | | |
| 12 | 16 | 15.8 | FLK16-M16 | FLK16-PG11 | FLK16-PL20 | FLK16-FLK16 | | | | | |
| 12 | 16 | | FLK16-M20 | FLK16-PG13 | | | | | | | |
| 12 12 | 16 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 | 23 | 28.5 | FLK28-M25 | FLK28-PG21 | FLK28-PL25 | FLK23-FLK23 | | | | | |
| 23 | 28 | 20.0 | T EREO INEO | TEREO T GET | TENED TEED | TEREO TEREO | | | | | |
| 29 | | 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 67 | 67.0 | FLK54-M63 | | | | | | | | |
| 56 | 07 | 67.0 | | | | | | | | | |

Ordering Notes

Also Available

- 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
- 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.

- One piece fast fit
 - Slim design

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- 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 freeAvailable in Black, Grey (RAL 7031)
- and white, see page 71
- Polypropylene version suitable for acid environments

| FLK90 | FLK45 | FLK-PP | | | |
|--|---------------------|--|-------------------|-------|---------------------|
| 90° elbow external thread One piece, slim, fast fit, external thre degree elbow fitting suitable for kno | | nal threaded 45 Polypropylene, one piece, slim, fa | st fit, or | | |
| Ext Metric Ext | PG Ext Metric | Ext Metric (PP) | nominal size (mm) | 0D mm | european (NW) sizes |
| | | | 10 10 | 10.0 | 7 7 |
| | | | 11 | 11.5 | 8 |
| | | | 13 | 13.0 | 10 |
| | | | 13 | | 10 |
| | | | 13 | | 10 |
| FLK16-M16-90 FLK16-P | 'G11-90 | FLK16-M16-PP | 16 | 15.8 | 12 |
| FLK16-M20-90 | FLK16-M20-4 | 5 | 16 | | 12 |
| | | | 16 | | 12 |
| | | | 16 | | 12 |
| | | | 18 | 18.5 | 14 |
| FLK20-M20-90 | FLK20-M20-4 | 5 FLK20-M20-PP | 18 | 20.0 | 14 |
| FLK21-M20-90 FLK21-P | | | 20 | 21.2 | 17 |
| | | • | 21 | | 17 |
| | | | 21 | | 17 |
| FLK25-M25-90 | FLK25-M25-4 | 5 FLK25-M25-PP | 25 | 25.0 | |
| FLK28-M25-90 FLK28-P | G21-90 FLK28-M25-4 | 5 | 28 | 28.5 | 23 |
| | | | 28 | | 23 |
| FLK34-M32-90 FLK34-P | PG29-90 FLK34-M32-4 | 5 FLK34-M32-PP | 34 | 34.5 | 29 |
| | | | 34 | 10.5 | 29 |
| | | | 42 | 42.5 | 36 |
| | | | 42 | 54.5 | 36 48 |
| | | | 54 | 54.5 | 40 |
| | | | | 67.0 | 56 |
| | | | | | |



FPL system

IP67

upvc corrugated pliable conduit

Conduit

FPL

Construction: Standard weight, upvc, corrugated pliable conduit. Colour Black, Grey (RAL 7045) or White. (see page 71 in certain sizes.) Typical Applications: Static connections in buildings.

- High compression strength
- · Bends to a small radius

IP rating: IP40 with MP and T fittings

- IP66 with MPS 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

IP40







(mm) azis (mm)

25

32

34

| FPL | part number | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) |
|-------|-------------|-----------------|------------------|-----------------|--------------------------------|
| FPL16 | | 100 | 16.0 | 12.0 | 25 |
| FPL20 | | 50, 100 | 20.0 | 15.0 | 30 |
| FPL25 | | 50 | 25.0 | 19.5 | 40 |
| FPL32 | | 25 | 32.0 | 25.0 | 50 |
| FPL34 | | 25 | 34.5 | 27.9 | 50 |

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

metric thread part number metric thread part number metric thread part number metric thread part number FLK16-M16 FLK16-M16-90 MP-16-M16 MPS-16-M16 FLK16-M20 FLK16-M20-90 MP-16-M20 MPS-16-M20 FLK20-M20 FLK20-M20-90 MP-20-M20 MPS-20-M20 FLK25-M25 FLK25-M25-90 MP-25-M25 MPS-25-M25 FLK32-M32* FLK32-M32-90* FLK34-M32 FLK34-M32-90 MP-32-M32 MPS-32-M32

Don't Forget



Standards

BS EN IEC 61386



White Products

RoHS CE

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

Conduit

Fittings

| F | PF | | | S.S.S.S. | FLK | FLK-90 | FLK-FLK | FCL | FCL-P |
|------------------------|---------------------|--------------------------|---------|-----------------|---|---|---|---|--|
| IP F | ⁶⁶ PL | tails see tails see | | and the second | straight external thread One piece, slim, fast fit, external threaded fitting suitable for knockouts or threaded entries. | 90° elbow external thread One piece, slim, fast fit, external threaded 90 degree elbow fitting suitable for knockouts. | Coupler One piece, fast fit, slim coupler to join corrugated conduits. | 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. | 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. |
| IP | 66 | | | | | J | 5 [] | | () |
| | | | | | | | the part of | | |
| european (NW) sizes | 0D mm | F P P 50m coil | FPL | 50m & 100m coil | Ext Metric | Ext Metric | | | |
| - | ш О 20.0 | L lico wog | ۵. | | Ext Metric FLK20-M20W | Ext Metric | FLK20-FLK20W | FCL20W | FCL20W-P |
| 20 | | 50m cc | ů. | 100M | | | FLK20-FLK20W FLK25-FLK25W | FCL20W FCL25W | FCL20W-P FCL25W-P |
| 02 european (NM) sizes | 20.0 | FPP20W-50M FPP25W-50M | FPL20W- | 100M | FLK20-M20W | FLK20-M20-90W | | | |

| PVC - Contractor pack | | |
|--|---|---|
| FPL-CP20WM20 threadFPL-CP25WM25 thread | smooth bore, smooth cover, helically formed pvc, flexible conduit with spiral upvc reinforcement and flexible pvc jacket. | straight nylon compression fitting with external thread |
| Indiana International Internat | IP66 IP67 IP68 | IP66 IP67 IP68 |
| 10m of FPL white conduit 10 x Flexilok® fittings | Available in 20mm and 25mm sizes. Use with FCL-P clips to secure. | 2 part compression fitting with internal spigot and all round teeth to grip conduit. |
| 10 x Locknuts | See page 81 for more details | See page 81 for more details |
| Standards | | |
| REACh | | |

FPY, FPYS, FPYL, FPYLS system corrugated flexible conduit

- · 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



Typical Applications: Automotive

Typical Applications: Automotive looms, harnesses and retrofit.

properties

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

Typical Applications: Lightweight automotive

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 | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) | FPYS | part number | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) | FPYL | part number | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) | FPYLS | part number | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) |
|---------------------|-------------------|-------|-----|-------------|-----------------|------------------|-----------------|--------------------------------|------|-------------|-----------------|------------------|-----------------|--------------------------------|------|-------------|-----------------|------------------|-----------------|--------------------------------|-------|-------------|-----------------|------------------|-----------------|--------------------------------|
| | 7 | E. | FF | Y6B | 100 | 7.1 | 4.8 | 10 | | | | | | | | | | | | | | | | | | |
| 7 | 10 | E. | FF | Y8B | 50 | 10.0 | 6.5 | 15 | FPY | S8B | 50 | 10.0 | 6.5 | 15 | FPYL | .8B* | 100 | 10.0 | 6.5 | 15 | FPYLS | 8B* | 100 | 10.0 | 6.5 | 15 |
| 8 | 11 | E. | FP | Y10B | 50 | 11.5 | 8.5 | 20 | FPY | S10B | 50 | 11.5 | 8.5 | 20 | FPYL | .10B* | 100 | 11.5 | 8.5 | 20 | FPYLS | 10B* | 100 | 11.5 | 8.5 | 20 |
| 10 | 13 | E. | FP | Y12B | 50 | 13.0 | 10.0 | 25 | FPY | S12B | 50 | 13.0 | 10.0 | 25 | FPYL | .12B* | 100 | 13.0 | 10.1 | 25 | FPYLS | 12B* | 100 | 13.0 | 10.1 | 25 |
| 12 | 16 | E. | FP | Y16B | 50 | 16.1 | 12.8 | 35 | FPY | S16B | 50 | 16.1 | 12.8 | 35 | FPYL | .16B* | 100 | 16.1 | 13.0 | 35 | FPYLS | 16B* | 100 | 16.1 | 13.0 | 35 |
| 12 | 16 | E. | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | 18 | E. | FP | Y18B | 50 | 18.5 | 14.2 | 35 | FPY | S18B | 50 | 18.5 | 14.2 | 35 | FPYL | .18B* | 100 | 18.5 | 14.4 | 35 | FPYLS | 18B* | 100 | 18.5 | 14.4 | 35 |
| 17 | 21 | E. | FP | Y20B | 50 | 21.2 | 16.9 | 40 | FPY | S20B | 50 | 21.2 | 16.9 | 40 | FPYL | .20B* | 100 | 21.2 | 17.1 | 40 | FPYLS | 20B* | 100 | 21.2 | 17.1 | 40 |
| 22 | 25.4 | E. | FP | Y25B | 50 | 25.4 | 21.4 | 45 | FPY | S25B | 50 | 25.4 | 21.4 | 45 | FPYL | .25B* | 100 | 25.4 | 21.6 | 45 | FPYLS | 25B* | 100 | 25.4 | 21.6 | 45 |
| 23 | 28 | E. | FP | Y28B | 50 | 28.5 | 23.0 | 45 | FPY | S28B | 50 | 28.5 | 23.0 | 45 | FPYL | .28B* | 50 | 28.5 | 23.2 | 45 | FPYLS | 28B* | 50 | 28.5 | 23.2 | 45 |
| 29 | 34 | C | FP | Y32B | 25 | 34.5 | 28.3 | 55 | FPY | S32B | 25 | 34.5 | 28.3 | 55 | FPYL | .32B* | 50 | 34.5 | 28.5 | 55 | FPYLS | 32B* | 50 | 34.5 | 28.5 | 55 |
| 36 | 42 | C | FP | Y40B | 25 | 42.5 | 35.7 | 65 | FPY | S40B | 25 | 42.5 | 35.7 | 65 | FPYL | .40B* | 50 | 42.5 | 35.9 | 65 | FPYLS | 40B* | 50 | 42.5 | 35.9 | 65 |
| 48 | 54 | C | FP | Y50B | 25 | 54.5 | 47.4 | 80 | FPY | \$50B | 25 | 54.5 | 47.4 | 80 | FPYL | .50B* | 50 | 54.5 | 47.6 | 80 | FPYLS | 50B* | 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

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



IP40

IP67





Large diameter systems

nylon and polypropylene



Conduit

LDFP

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

Construction: Standard weight, flame retardant nylon (PA6) corrugated flexible conduit. Colour: Black or Grev (RAL

LDFPA

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)
- Approval
- page 149
- · Halogen, sulphur and
- - Abrasion resistant
 - and oils



IP40

- Lloyd's Register Type
- · Low Fire Hazard (LFH), see
- UL 94 V2 flame retardancy
- phosphorus free
- UV resistant (black)

 - · Highly resistant to solvents



LDFPII

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

EN 45545-2 HEPA 138

LDFPF

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

Typical Applications: Railways, underground and public buildings.

- Highly flexible and high fatique 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)
- · Halogen, sulphur and phosphorus free
- UV resistant
- Abrasion resistant
- Highly resistant to solvents and oils



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 size (mm) DFPAS dia (mm) min inside bend radius (mm) min inside bend radius (mm) min inside bend radius (mm) outside dia (mm outside dia (mm outside dia (mm inside bend us (mm) DFPIH (mm) outside dia (mm nside dia (mm) inside dia (mm) inside dia (mm) DFPA reel length (m) reel length (m) E reel length (m) reel length (m) DFPR DFPP inside b. 3 (mm) part number part number part number part number part number reel length inside dia nside dia nominal s outside (min ins radius (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 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 95 106

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







- Suitable for use with Large Diameter conduits S ð
 - Material

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- LDMP and LDMPS: nylon PA6
- FCLAMP: nylon PA66
- REC: thermoplastic elastomer
- Temperature Range
- LDMP & LDMPS fittings: -40° to 120°

LDMPS

flanged nylon

clamp fitting

Flanged body with

with seals

2 clamps and

seals.

straight

- FCLAMP: -50° to 135°
- REC: -50° to 120° UV resistant

Fittings

LDMP

straight

2 clamps.

flanged nylon

clamp fitting

Flanged body with

- Fire Performance - LDMP and LDMPS:
 - Halogen, Sulphur & **Phosphorous Free** Self extinguishing
 - REC:

LDMP90

90° flanged

fitting

nylon clamp

Flanged 90° body

with 2 clamps.

Halogen, Sulphur & Phosphorous Free

LDMPS90

- FCLAMP:

- Extra Low Fire Hazard see page 149 - Halogen, Sulphur & Phosphorous Free Self extinguishing
- EN45545 HL3 and NFPA 130 compliant

NEW

For installation instructions see page 142

90° flanged non-metallic, rubber end nylon clamp heavy duty cap fitting with conduit clamp seals Nylon PA66, Flanged 90° body with 2 clamps and conduit fixing clamp for corrugated conduit. Suitable for use with with seals. fine or coarse pitch conduits. Can be used with a range

of accessories including cover plates and weld plates (available separately - see page 76).

FCLAMP

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).

REC

plated steel P clip with pvc liner P clip to support

FCC

CLIPS

and secure conduit.

| 4 | | | 0 | 4 | | 30 | | 0 | | | | |
|-------------|-------------|-------------|--------------|-------------|---------------|-------------|----------------|-------------|-------------|-------------|---------------------|-------------------|
| termination | part number | termination | part number | termination | part number | termination | part number | part number | part number | part number | european (NW) sizes | nominal size (mm) |
| FL | LDMP-80-FL | FL | LDMPS-80-FL | FL | LDMP90-80-FL | FL | LDMPS90-80-FL | FCLAMP-8-80 | REC80 | FCC75 | 70 | 80 |
| FL | LDMP-106-FL | FL | LDMPS-106-FL | FL | LDMP90-106-FL | FL | LDMPS90-106-FL | | | FCC106 | 95 | 106 |



Conduit Fixing range

Clips and Channels



Channel - Low profile



Channel - Standard profile

| 10 13 16 18 20 21 25 26 28 32 | FCL clip for corrugated conduit | FCL16-P FCL18-P FCL20-P FCL20-P FCL21-P FCL25-P FCL25-P FCL26-P | Spacer/Cable Tie fixing PA66 black CS-CT CS-CT CS-CT CS-CT CS-CT CS-CT CS-CT CS-CT | Channel Nut FCL Mount galvanised steel CN-GS-M5-FCL CN-GS-M5-FCL CN-GS-M5-FCL CN-GS-M6-FCL CN-GS-M6-FCL CN-GS-M6-FCL CN-GS-M6-FCL | Channel Nut anodised aluminium CN-AL-M5 CN-AL-M6 CN-AL-M6 CN-AL-M6 CN-AL-M6 |
|--|--|---|--|--|---|
| 10 13 16 18 20 21 25 26 28 | for corrugated conduit FCL10 FCL13 FCL16 FCL18 FCL20 FCL21 FCL21 FCL25 | for smooth conduit FCL16-P FCL18-P FCL20-P FCL21-P FCL25-P | fixing PA66 black CS-CT CS-CT CS-CT CS-CT CS-CT CS-CT CS-CT CS-CT | galvanised steel CN-GS-M5-FCL CN-GS-M5-FCL CN-GS-M5-FCL CN-GS-M6-FCL CN-GS-M6-FCL CN-GS-M6-FCL | CN-AL-M5 CN-AL-M5 CN-AL-M6 CN-AL-M6 CN-AL-M6 |
| 13 16 18 20 21 25 26 28 | FCL13 FCL16 FCL18 FCL20 FCL21 FCL25 | FCL18-P FCL20-P FCL21-P FCL25-P | CS-CT CS-CT CS-CT CS-CT CS-CT CS-CT CS-CT | CN-GS-M5-FCL CN-GS-M5-FCL CN-GS-M6-FCL CN-GS-M6-FCL CN-GS-M6-FCL | CN-AL-M6 CN-AL-M6 CN-AL-M6 |
| 16 18 20 21 25 26 28 | FCL16 FCL18 FCL20 FCL21 FCL25 | FCL18-P FCL20-P FCL21-P FCL25-P | CS-CT CS-CT CS-CT CS-CT CS-CT CS-CT | CN-GS-M5-FCL CN-GS-M6-FCL CN-GS-M6-FCL CN-GS-M6-FCL | CN-AL-M6 CN-AL-M6 CN-AL-M6 |
| 18 20 21 25 26 28 | FCL18 FCL20 FCL21 FCL25 | FCL18-P FCL20-P FCL21-P FCL25-P | CS-CT CS-CT CS-CT CS-CT CS-CT | CN-GS-M6-FCL CN-GS-M6-FCL CN-GS-M6-FCL | CN-AL-M6 CN-AL-M6 CN-AL-M6 |
| 20 21 25 26 28 | FCL20 FCL21 FCL25 | FCL20-P FCL21-P FCL25-P | CS-CT CS-CT CS-CT | CN-GS-M6-FCL CN-GS-M6-FCL | CN-AL-M6 CN-AL-M6 |
| 21 25 26 28 | FCL21 FCL25 | FCL21-P FCL25-P | CS-CT CS-CT | CN-GS-M6-FCL | CN-AL-M6 |
| 25 26 28 | FCL25 | FCL25-P | CS-CT | | |
| 26 28 | | | | CN-GS-M6-FCL | CN-AL-M6 |
| 28 | FCI 28 | FCL26-P | 00.07 | | |
| | FCI 28 | | CS-CT | CN-GS-M6-FCL | CN-AL-M6 |
| 32 | I OLLO | | CS-CT | CN-GS-M6-FCL | CN-AL-M6 |
| | FCL32 | FCL32-P | CS-CT | CN-GS-M6-FCL | CN-AL-M6 |
| 33 | | FCL33-P | CS-CT | CN-GS-M6-FCL | CN-AL-M6 |
| 34 | FCL34 | | CS-CT | CN-GS-M6-FCL | CN-AL-M6 |
| 42 | FCL42 | | CS-CT | CN-GS-M6-FCL | CN-AL-M6 |
| 54 | FCL54 | | CS-CT | CN-GS-M6-FCL | CN-AL-M6 |
| ŝ | | | | - | |
| it Size (OD | 0 | | -0 0- | 00 | - |
| Condu mm | FCLAMP | FCLAMP Kit | Extended Weld Plate galvanised steel | Weld Plate galvanised steel | Cover Plate galvanised steel |
| 10 | | | | | - |
| | | | | | FCLAMP-CP3 |
| | | | | | FCLAMP-CP3 |
| | | | | | FCLAMP-CP4 |
| | | | | | FCLAMP-CP5 |
| | | | | | FCLAMP-CP6 |
| | | | | | FCLAMP-CP7 |
| | | | | | FCLAMP-CP7 FCLAMP-CP8 |
| | 34 42 | 34 FCL34 42 FCL42 54 FCL54 FCLAMP 16 FCLAMP-3-16 21 FCLAMP-3-21 28 FCLAMP-4-28 34 FCLAMP-5-34 42 FCLAMP-5-34 42 FCLAMP-6-42 54 FCLAMP-7-57 67 FCLAMP-8-80 | 34 FCL34 42 FCL42 54 FCL54 Import of the second se | 34 FCL34 CS-CT 42 FCL42 CS-CT 54 FCL54 CS-CT 60 FCLAMP FCLAMP 61 FCLAMP-3-16 FCLAMP-Kit 700 FCLAMP-3-21 FCLAMP-KIT21 71 FCLAMP-3-34 FCLAMP-KIT34 72 FCLAMP-6-42 FCLAMP-KIT34 74 FCLAMP-5-34 FCLAMP-KIT42 75 FCLAMP-6-42 FCLAMP-KIT54 76 FCLAMP-7-67 FCLAMP-KIT67 76 FCLAMP-8-80 FCLAMP-KIT80 | 34FCL34CS-CTCN-GS-M6-FCL42FCL42CS-CTCN-GS-M6-FCL54FCL54CS-CTCN-GS-M6-FCL60 $FCLAMP$ $FCLAMP$ $FCLAMP$ 61FCLAMP $FCLAMP$ $FCLAMP-Kit$ 70FCLAMP-3-21FCLAMP-Kit716FCLAMP-EWP371FCLAMP-4-28FCLAMP-Kit72872FCLAMP-5-34FCLAMP-Kit7474FCLAMP-642FCLAMP-Kit7475FCLAMP-642FCLAMP-Kit7476FCLAMP-7-67FCLAMP-Kit7476FCLAMP-7-776FCLAMP-7-776FCLAMP-Kit76776FCLAMP-Kit76776FCLAMP-Kit767 |

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- Suitable for use with flexible, pliable 4 and rigid conduits
- ÷ Clips and F-Clamps manufactured Ū
 - from nylon PA66

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- 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



System Overview



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

Channel Nut

anodised aluminium

CN-AL-M6

CN-AL-M6

CN-AL-M6

CN-AL-M6

CN-AL-M6

CN-AL-M6

CN-AL-M6

CN-AL-M6

Channel Nut galvanised steel

End Stop anodised aluminium





FCLAMP

FCLAMP-3-16

FCLAMP-3-21

FCLAMP-3-28

FCLAMP-3-34

FCLAMP-3-42

FCLAMP-3-54

FCLAMP-3-67

FCLAMP-3-80

А

29

29

35

49

58

85

85

110

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 |
| | | |

10

Channel Nut galvanised steel

CN-GS-M6

CN-GS-M6

CN-GS-M6

CN-GS-M6

CN-GS-M6

CN-GS-M6

CN-GS-M6

CN-GS-M6

Configurations



FCL mounted in channel fixed with End Stop

FCL mounted on channel using FCL Mount kits. FCL Clips

can be rotated to

any angle to help

route conduits

FCLAMP mounted on Weld

Plate with Cover Plate

FCLAMP mounted on

Elongated Weld Plate with Cover Plate





End Stop - Components and complete



Channel Nut FCL Mount -Components and complete



FCLAMP directly mounted on channel using Channel Nuts



FCLAMP directly mounted on channel using Channel Nuts and Cover Plate



FCLAMP Kit Complete FCLAMP Kit mounted on channel with Conduit



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 **CS**US

spiral reinforced pvc with special properties

IP65

Conduit

Construction: Smooth bore,

helically formed PVC, flexible conduit with spiral UPVC

jacket. Also available in UL

reinforcement and flexible PVC

recognised version (See ordering notes)

Typical Applications: Routing of cables within machines.



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.

Fittings

МРС

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).



Colour: Black

FPCB

Construction: As FPCB except colour grey

Typical Applications: As FPCB. UL recognised



Construction: As FPCB except colour blue. Typical Applications: As FPCB but where high temperature is required. UL recognised.

| FPC | Black part numbe | Grey (RAL 7001) | Green (RAL 6001 | Blue (RAL 5012) | min inside bend radius (mm) | reel length (m) | outside dia (mm) | inside dia (mm) |
|------|--|---|---|---|---|--|--|---|
| FPC1 | 2B | FPC12G* | FPC12GN* | FPC12BU* | 30 | 14.5 | 10.0 | 25 |
| FPC1 | 6B | FPC16G* | FPC16GN* | FPC16BU* | 30 | 16.5 | 12.0 | 25 |
| | | | | | | | | |
| FPC2 | 20B | FPC20G* | FPC20GN* | FPC20BU* | 30 | 21.0 | 16.0 | 35 |
| FPC2 | 25B | FPC25G* | FPC25GN* | FPC25BU* | 30 | 27.5 | 22.0 | 45 |
| FPC3 | 80B* | FPC30G* | | | 30 | 30.5 | 25.0 | 55 |
| FPC3 | 32B | FPC32G* | FPC32GN* | FPC32BU* | 10, 30 | 33.5 | 28.0 | 60 |
| FPC4 | IOB | FPC40G* | FPC40GN* | FPC40BU* | 10, 30 | 41.0 | 35.0 | 80 |
| FPC5 | iob | FPC50G* | FPC50GN* | FPC50BU* | 10, 30 | 46.4 | 40.0 | 105 |
| FPC | 63B | FPC63G* | FPC63GN* | FPC63BU* | 10, 30 | 57.0 | 50.0 | 120 |
| | FPC1 FPC2 FPC2 FPC3 FPC3 FPC4 FPC4 | FPC12B FPC16B FPC20B FPC25B FPC30B* FPC32B FPC32B FPC40B FPC50B FPC50B FPC50B | FPC12B FPC12G* FPC16B FPC16G* FPC20B FPC20G* FPC25B FPC25G* FPC30B* FPC30G* FPC40B FPC40C* FPC50B FPC50G* | FPC12B FPC12G* FPC12GN* FPC16B FPC16G* FPC16GN* FPC20B FPC20G* FPC20GN* FPC25B FPC25G* FPC25GN* FPC30B* FPC30G* FPC32G* FPC40B FPC40G* FPC40GN* FPC50B FPC50G* FPC50GN* | FPC12B FPC12G* FPC12GN* FPC12BU* FPC16B FPC16G* FPC16GN* FPC16BU* FPC20B FPC20G* FPC20GN* FPC20BU* FPC25B FPC25G* FPC25GN* FPC25BU* FPC30B* FPC30G* FPC32BU* FPC32BU* FPC40B FPC40G* FPC40BU* FPC40BU* FPC50B FPC50G* FPC50GN* FPC50BU* | FPC12B FPC12G* FPC12GN* FPC12BU* 30 FPC16B FPC16G* FPC16GN* FPC16BU* 30 FPC20B FPC20G* FPC20GN* FPC20BU* 30 FPC25B FPC25G* FPC25GN* FPC25BU* 30 FPC30B* FPC30G* S0 30 30 FPC32B FPC32G* FPC32GN* FPC32BU* 30 FPC32B FPC32G* FPC32GN* FPC32BU* 10, 30 FPC40B FPC40G* FPC40BN* FPC40BU* 10, 30 FPC50B FPC50G* FPC50GN* FPC50BU* 10, 30 | FPC12B FPC12G* FPC12GN* FPC12BU* 30 14.5 FPC16B FPC16G* FPC16GN* FPC16BU* 30 16.5 FPC20B FPC20G* FPC20GN* FPC20BU* 30 21.0 FPC25B FPC25G* FPC25GN* FPC25BU* 30 27.5 FPC30B* FPC30G* 30.5 30.5 30.5 30.5 FPC32B FPC32G* FPC32GN* FPC32BU* 10, 30 33.5 FPC40B FPC40G* FPC40GN* FPC40BU* 10, 30 41.0 FPC50B FPC50G* FPC50GN* FPC50BU* 10, 30 46.4 | FPC12B FPC12G* FPC12GN* FPC12BU* 30 14.5 10.0 FPC16B FPC16G* FPC16GN* FPC16BU* 30 16.5 12.0 FPC20B FPC20G* FPC20GN* FPC20BU* 30 21.0 16.0 FPC25B FPC25G* FPC25GN* FPC25BU* 30 27.5 22.0 FPC30B* FPC30G* 30.5 25.0 30 30.5 25.0 FPC32B FPC32G* FPC32GN* FPC32BU* 10,30 33.5 28.0 FPC40B FPC40G* FPC40BN* FPC40BU* 10,30 41.0 35.0 FPC50B FPC50G* FPC50GN* FPC50BU* 10,30 46.4 40.0 |





Ordering Notes

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



Highly flexible

4

- Accepts torsional movement
 - Vibration and shock tested to EN61373 Cat 2 FPCGN (Green) is oil resistant
 - 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
- 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).

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).

LTS

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





| metric thread part number | PG thread part number | NPT part number | metric thread part number | NPT part number | LTS | part number | reel length (m) | outside dia (mm) | inside dia (mm) | 12 nominal size (mm) |
|------------------------------|--------------------------|--------------------|------------------------------|--------------------|-------|-------------|-----------------|------------------|-----------------|----------------------|
| | MD000 40 D014 | | | | | | | | | 16 |
| MPC90-16-M16 | MPC90-16-PG11 | | | | | | | | | |
| MPC90-16-M20 | MPC90-16-PG13 | MPC90-16-050 | MPC45-16-M20 | MPC45-16-050 | LTS16 | SG-50M | 50 | 16.5 | 12 | 16 |
| MPC90-20-M20 | MPC90-20-PG16 | MPC90-20-050 | MPC45-20-M20 | MPC45-20-050 | LTS20 | SG-50M | 50 | 21.0 | 16 | 20 |
| MPC90-25-M25 | MPC90-25-PG21 | MPC90-25-075 | MPC45-25-M25 | MPC45-25-075 | LTS25 | SG-50M | 50 | 27.5 | 22 | 25 |
| | | | | | | | | | | 30 |
| MPC90-32-M32 | MPC90-32-PG29 | MPC90-32-100 | MPC45-32-M32 | MPC45-32-100 | LTS32 | SG-50M | 50 | 33.5 | 28 | 32 |
| MPC90-40-M40 | MPC90-40-PG36 | MPC90-40-125 | | | | | | | | 40 |
| | | | | | | | | | | 50 |
| | | | | | | | | | | 63 |



* refer to conduit properties for applicable standards

Technical Drawing



LPC system smooth spiral reinforced pvc

IP69

Conduit

LPC

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

IP66

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

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





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

| 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 | |



- * 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



Fittings

FCL-P

non metallic conduit clip

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

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

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- 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
- with locknut
- · Vibration and shock tested to EN 61373 Cat 2
- Metric nylon fittings supplied complete

МРС

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).





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).



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).









CE





LPC system metallic fittings for use with LPC conduits

IP69

IP68

IP66

IP67

Fittings

| | С | | | | | C-S | C-90 |
|--------|--------------------|-------------|--|------------------------------|---|---|--|
| | Multipart | com | netric thread r pression fitting incl for knockout or thre ghtened. | uding elastome | ric seal. | 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. | 90° external thread nickel plated brass 90° multipart compression fitting including elastomeric seal. Can be used for knockouts. |
| | IP66 IF | 967 | IP68 IP69 | | | IP66 IP67 IP68 IP69 | IP66 IP67 IP68 IP69 |
| | | | | | 0 | | |
| | 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 |
| 2 | LPC12 | | LPC12-M16-C | LPC12-PG9-C | | LPC12-M16-S | LPC12-M16-C90 |
| 6 | LPC16 | | LPC16-M16-C | LPC16-PG11-C | | LPC16-M16-S | LPC16-M16-C90 |
| 6 | 10000 | | LPC16-M20-C | LPC16-PG13-C | LPC16-050-C (1/2") | LPC16-M20-S | LPC16-M20-C90 |
| 0 5 | LPC20 LPC25 | | LPC20-M20-C LPC25-M25-C | LPC20-PG16-C LPC25-PG21-C | LPC20-050-C (½") LPC25-075-C (¾") | LPC20-M20-S LPC25-M25-S | LPC20-M20-C90 LPC25-M25-C90 |
| 2 | LPC25 | | LPC32-M25-C | LPC32-PG29-C | LPC23-075-C (%4) | LPC23-M23-3 LPC32-M32-S | LPC23-M23-C90 |
| 0 | LPC40 | | LPC40-M40-C | LPC40-PG36-C | LPC40-125-C (1 ¹ / ₄ ") | | LPC40-M40-C90 |
| 0 | LPC50 | | LPC50-M50-C | LPC50-PG42-C | LPC50-150-C (1½") | | LPC50-M50-C90 |
| 3 | 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

nominal size (mm)

- Smooth, wipe clean surface Φ
 - Accepts some torsional movement

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prol

- IP rating:
- IP66, IP67 and IP68 with MPC fittings - IP66, IP67, IP68 (2 bar) + IP69 with
- metal C-type compression fittings





| 45° external thread nickel plated hs. external thread stainless steel 90° external thread stainless steel of multipat compression fitting including frade 3161, including elastomeric seal. Can be dor knockout or threaded entries as fitting intates until lightened. 90° external thread stainless steel of multipat compression fitting stainless Steel for de 3161, including elastomeric seal. Can be dor knockout or threaded entries as fitting intates until lightened. 90° external thread stainless steel of multipat compression fitting stainless Steel for de 3161, including elastomeric seal. Can be dor knockouts. 100 <t< th=""><th></th></t<> | |
|--|--------------------|
| | eel |
| atric thread artic thread a structure of the sector of the | |
| metric thread part number part number part number part number | |
| | (man) original man |
| LPC16-M16-CSS | 1 |
| LPC16-M20-C45 LPC16-M20-CSS LPC16-M20-CSS90 | 1 |
| LPC20-M20-C45 LPC20-M20-CSS LPC20-M20-CSS90 | 2 |
| LPC25-M25-C45 LPC25-M25-CSS LPC25-M25-CSS90 | 2 |
| LPC32-M32-C45 LPC32-M32-CSS LPC32-M32-CSS90 | 3 |
| LPC40-M40-C45 LPC40-M40-CSS LPC50-M50-C45 LPC50-M50-CSS | 4 |
| LPC30-M30-C45 | 6 |



BS EN IEC 61386

RoHS

Technical Drawing





Conduit



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



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

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

NEW

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 | LPCWFC | G16 | 30 | 17.8 | 12.6 | 50 | LPCBUI | G16 | 30 | 17.8 | 12.6 | 50 | LPCGF | G16 | 30 | 17.8 | 12.6 | 50 | FCC16-SS |
| 16 | | | | | | | | | | | | | | | | | | | FCC16-SS |
| 20 | LPCWFO | G20 | 10, 30 | 21.1 | 16.0 | 70 | LPCBU | G20 | 10, 30 | 21.1 | 16.0 | 70 | LPCGF | G20 | 10, 30 | 21.1 | 16.0 | 70 | FCC20-SS |
| 25 | LPCWFO | G25 | 10, 30 | 26.4 | 21.0 | 90 | LPCBU | G25 | 10, 30 | 26.4 | 21.0 | 90 | LPCGF | G25 | 10, 30 | 26.4 | 21.0 | 90 | FCC25-SS |
| 32 | LPCWFO | G32 | 10, 30 | 33.1 | 26.5 | 140 | LPCBU | G32 | 10, 30 | 33.1 | 26.5 | 140 | LPCGF | G32 | 10, 30 | 33.1 | 26.5 | 140 | FCC32-SS |
| 40 | LPCWF | G40 | 10, 30 | 41.8 | 35.4 | 190 | LPCBU | G40 | 10, 30 | 41.8 | 35.4 | 190 | LPCGF | G40 | 10, 30 | 41.8 | 35.4 | 190 | FCC40-SS |
| 50 | LPCWF | G50 | 10, 30 | 47.9 | 40.0 | 240 | LPCBU | G50 | 10, 30 | 47.9 | 40.0 | 240 | LPCGF | G50 | 10, 30 | 47.9 | 40.0 | 240 | FCC50-SS |
| 63 | LPCWF | G63 | 10, 30 | 59.7 | 51.3 | 270 | LPCBU | G63 | 10, 30 | 59.7 | 51.3 | 270 | LPCGF | G63 | 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





 Smooth, wipe clean surface 5

- Accepts some torsional movement
- IP rating:

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- 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





(F EN 1672-2



Technical Drawing



(mm)

size

nominal

16

16

25

32

40

63



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





BS EN IEC 61386







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Metallic conduit selection guide

| | | FC | SSU | FSU | FNU | LFHU | FPU | LTP | LTPAS | LTPHC | LTPLFH | LTPUL | LTPPU | LTPPUAS | LTPSS | LTBRDP | LTBRDLFH | |
|------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------|-------|-----------------------------------|----------------|---------------------------|---------------------------|-------|--------------------|-------|----------------|---------|-------|--------|--------------------|--|
| | = | <u> </u> | () | 6 | ш. | | 6 | | | | | | | | | | | |
| | collan | | | | | | | | | | | | Ħ | Ŧ | | Ħ | H | |
| | IP40 | • | • | | | | | | | | | | | | | | | |
| | IP54 | | | • | • | • | • | | | | | | | | | | | |
| | IP65 | | | • | • | • | • | | | | | | | | | | | |
| IP Rating | IP66 | | | | | | | • | • | • | • | • | • | • | • | • | • | |
| | IP67 | | | | | | | • | • | • | • | • | • | • | • | • | • | |
| | IP68 | | | | | | | • | • | • | • | • | • | • | • | • | • | |
| | IP69 | | | | | | | • | • | • | • | • | • | • | • | • | • | |
| Compression Strengtl | n (ka/100mm) | 350 | 400 | 350 | 350 | 350 | 350 | 400 | 400 | 400 | 400 | 500 | 400 | 400 | 400 | 400 | 400 | |
| Pull Off Strength (kg) | | 120 | 170 | 120 | 120 | 120 | 120 | 130 | 130 | 130 | 130 | 160 | 130 | 130 | 130 | 130 | 130 | |
| Min Bend Radius (mn | | 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 | | | | | | | • | orange | orange | | | | • | • | | | | |
| | 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 | |
| Temp | Min | | -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 | |
| | | -100 0 | -100 0 | -10 0 | -40 0 | -20 0 | -40 0 | -20 0 | -20 0 | -00 0 | -20 0 | -10 0 | -40 0 | -40 0 | -20 0 | -20 0 | -20 0 | |
| Category | Flexible Pliable | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | |
| Low Fire Hazard | *** Inerent ** Extra * Standard | INHERENT LOW FIRE HAZARD *** | UNHERENT LOW FIRE HAZARD *** | | | CXTRA LOW FIRE HAZARD ** | | | | | LOW FIRE HAZARD | | | | | | LOW FIRE HAZARD | |
| | Halogen Free | • | • | | • | • | • | | | • | • | | • | • | | | • | |
| | Self Extinguishing | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | |
| Fire Tests | EN 45545-2 | • | • | | | • | | | | | • | | | | | | • | |
| Fire Tests | NFPA-130 | • | • | | | • | | | | | • | | | | | | • | |
| Abrasion Resistance | | | | | | | | | | | | | | • | | | | |
| Resistance to solvent | S | • | • | | • | | • | | | • | | | | • | • | | | |
| UV Resistance | | • | • | • | | | | • | • | • | • | • | • | • | • | • | • | |
| EMC Performance | | | | | | | | | | | | | | | | | | |
| Hazardous Locations | | | | | | | | • | • | • | • | • | • | • | • | • | • | |
| Anti-Static | | AS | ANILSTATE | | | | | | AS | | | | | AS | | | | |
| | UL Listed | | | | | | | | | | | • | | | | | | |
| Approvals | Lloyds | | | | | • | | • | | | | | | | | | | |
| | London Underground | • | • | | | • | | | | | • | | | | | | • | |
| | Food Contact | | | | | | | | | | | | | | | | | |
| ROHS | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | |
| REACH | | • | • | • | • | • | • | • | | | | • | • | • | • | • | | |
| | | | | | | | | | | | | | | | | | | |

Metallic conduit selection guide



148 low fire hazard

89

138 thread data

Metallic fittings selection guide

Multipart Liquid Tight NPB (Nickel Plated Brass) NPB 102 102 93 124 Stainless steel (316L) Stainless steel (316L) 93 Other Cable Glands Hygienic **Round Boxes** NEW NEW 113 126 126 124 Accessories Cable Gland Insert Clips Locknuts 103 129 128

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90





AccessoriesElbowsStopping PlugsCouplersThread ConvertersImage: Complex of the transmission of transmission of the transmission of transm

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FU & SSU system

galvanised steel and stainless steel



Conduit



Fittings

| FU | М | M-SS | S |
|--|--|---|---|
| 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. | 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. | fixed external thread stainless steel Two part fitting comprising shell and body with external thread. This fitting can be inserted into a knockout and secured with a locknut. | 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. |
| SSU | IP40 | IP40 | IP40 |
| | | | |

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

Colour: Stainless steel, self colour.

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





| nominal size (mm) | 5 | part number | reel length (m) | SSU | part number | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) |
|-------------------|-------|-------------|-----------------|-------|-------------|-----------------|------------------|-----------------|--------------------------------|
| 10 | FU10+ | | 25, 50 | SSU10 | + | 10, 25, 50 | 9.0 | 6.8 | 25 |
| 12 | FU12 | | 25, 50 | SSU12 | + | 10, 25, 50 | 13.0 | 10.2 | 30† |
| 16 | FU16 | | 10, 25, 50 | SSU16 | i | 10, 25, 50 | 16.0 | 13.0 | 40 |
| 16 | | | | | | | | | |
| 20 | FU20 | | 10, 25, 50 | SSU20 | | 10, 25 | 20.5 | 16.9 | 45 |
| 25 | FU25 | | 10, 25, 50 | SSU25 | | 10, 25 | 25.0 | 21.1 | 55 |
| 32 | FU32 | | 10, 25 | SSU32 | | 10, 25 | 32.0 | 28.1 | 60 |
| 40 | FU40 | | 10, 25 | SSU40 | | 10 | 42.5 | 37.6 | 80 |
| 50 | FU50 | | 10, 25 | SSU50 | | 10 | 53.0 | 48.4 | 90 |
| 63 | FU63 | | 10 | SSU63 | * | 10 | 62.5 | 57.5 | 115 |
| 75 | FU75 | | 10 | | | | 77.0 | 70.0 | 150 |

| | metric thread part number | PG thread part number | metric thread part number | metric thread part number | PG thread part number |
|---|------------------------------|--------------------------|------------------------------|------------------------------|--------------------------|
| | FU10-M12-M | FU10-PG7-M | SSU10-M12-M | FU10-M12-S | FU10-PG7-S |
| | FU12-M16-M | FU12-PG9-M | SSU12-M16-M | FU12-M16-S | FU12-PG9-S |
| | FU16-M16-M | FU16-PG11-M | SSU16-M16-M | FU16-M16-S | FU16-PG11-S |
| | FU16-M20-M | | | FU16-M20-S | FU16-PG13-S |
| | FU20-M20-M | FU20-PG16-M | SSU20-M20-M | FU20-M20-S | FU20-PG16-S |
| | FU25-M25-M | FU25-PG21-M | SSU25-M25-M | FU25-M25-S | FU25-PG21-S |
| | FU32-M32-M | FU32-PG29-M | SSU32-M32-M | FU32-M32-S | FU32-PG29-S |
| | FU40-M40-M | FU40-PG36-M | SSU40-M40-M | FU40-M40-S | FU40-PG36-S |
| | FU50-M50-M | FU50-PG48-M | SSU50-M50-M | FU50-M50-S | FU50-PG42-S |
| 5 | FU63-M63-M | | SSU63-M63-M* | FU63-M63-S | |
|) | FU75-M75-M | | | | |
| | | | | | |

Ordering Notes

- Add reel length eg: FU20-25M for 25m reel
- * Indicates parts made to order on request and may be subject to MOQ and lead time
- + Double interlock section
- † SSU12 Minimum bend radius is 50mm
- Available on request:
- longer lengths and bulk packaging
- cut lengths and assemblies
- alternative threads

How to read the fittings code





- High mechanical strength S à
 - Highly flexible

0

- 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 +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
- -100°C to +600°C (SSU + SS fittings)



| S-SS | Р | F | FCC | 90° elbow |
|--|--|---|--|---|
| 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. | plain hole connector nickel plated brass Two part fitting comprising shell and body without thread. The body is fitted through the opposite side of the entry to the conduit and acts as a locking device also providing a smooth entry bush. | fixed 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. | plated steel P clip with pvc liner and secure stainless steel P clips P clip to support and secure conduit. | internal and external threaded nickel plated brass elbow 90° elbow which can be screwed onto external threaded fittings to create a 90° elbow termination. |
| IP40 | IP40 | IP40 | | |
| | | | | |

| metric thread part number | hole size (mm) | part number | metric thread part number | plated steel part number | stainless steel part number | part number | nominal size (mm) |
|------------------------------|----------------|-------------|------------------------------|-----------------------------|--------------------------------|-------------|-------------------|
| SSU10-M12-S | 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

Œ EN 45545-2 BS EN IEC 61386 NFPA 130 **RoHS** REACh / /^. Note: refer to conduit properties for applicable standards

Technical Drawing





FSU & FNU system

Fittings

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.



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.

| м | S | Р |
|---|---|---|
| fixed external thread nickel plated brass | swivel external thread nickel plated brass | plain hole connector 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. | Two part fitting comprising shell and body. The external thread swivels about the main body. Can be used with threaded entries, or knockout secured with a locknut. | Two part fitting comprisin shell and body without thread. The body is fitted through the opposite side of the entry to the condui and acts as a locking device also providing a smooth entry bush. |
| IP54 | IP54 | IP54 |



| nominal size (mm) | FSU | part number | reel length (m) | D N L | part number | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) |
|-------------------|-------|-------------|-----------------|-------|-------------|-----------------|------------------|-----------------|--------------------------------|
| 10 | FSU10 | B+ | 25, 50 | | | | 10.0 | 6.8 | 25 |
| 12 | FSU12 | В | 25, 50 | | | | 14.0 | 10.2 | 30 |
| 16 | FSU16 | В | 10, 25, 50 | FNU16 | 6B* | 25 | 17.0 | 13.0 | 40 |
| 16 | | | | | | | | | |
| 20 | FSU20 | В | 10, 25, 50 | FNU20 |)B* | 25 | 21.5 | 16.9 | 45 |
| 25 | FSU25 | В | 10, 25, 50 | FNU25 | iB* | 25 | 26.0 | 21.1 | 55 |
| 32 | FSU32 | В | 10, 25 | FNU32 | 2B* | 25 | 34.0 | 28.1 | 60 |
| 40 | FSU40 | В | 10, 25 | | | | 44.5 | 37.6 | 90 |
| 50 | FSU50 | В | 10, 25 | | | | 55.0 | 48.4 | 100 |
| 63 | FSU63 | В | 10 | | | | 64.5 | 57.5 | 115 |
| 75 | FSU75 | В | 10 | | | | 79.0 | 70.0 | 150 |

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

Ordering Notes

- Add reel length eg: FSU20-25M for 25m reel
- 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











| 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 |
| F\$U32-M32-F | FSU32-M32-C | FSU32-PG29-C | FSU32-100-C | FSU32-M32-C-S | FSU32-M32-C90 | F\$U32-F\$U32 | 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

REACh





Also available in a Contractor Pack - see page 132

Technical Drawing





LFHU system

galvanised steel LFH coated

FPU system galvanised steel polyurethane coated

Conduit

LFHU

Colour: Black

FPU

Colour: Black and Metallic Blue

strength are important.

Fittings

M 5 E **Construction:** Galvanised steel, helically wound, flexible steel conduit with Low Fire Hazard (LFH) coating. fixed external swivel external plain hole thread nickel thread nickel connector nickel plated brass plated brass plated brass Typical Applications: Public and commercial buildings Two part fitting Two part fitting comprising Two part fitting comprising comprising shell and body with external shell and body. The external thread swivels shell and body without thread. The body is fitted and tunnels where low fire hazard performance is a requirement. thread. This fitting can be inserted into a knockout about the main body. Can be used with threaded through the opposite side of the entry to the conduit EN 45545-2 NFPA 130 and acts as a locking and secured with a entries, or knockout secured with a locknut locknut. device also providing a smooth entry bush. Construction: Galvanised steel, helically wound, flexible steel conduit with low temperature, high abrasion, high fatigue life halogen free polyurethane coating.



| nominal size (mm) | LFHU | part number | reel length (m) | FPU | part number | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) |
|-------------------|--------|--------------|-----------------|-------|-------------|-----------------|------------------|-----------------|--------------------------------|
| 12 | LFHU12 | B* 25 | | FPU12 | 3* | 25 | 14.0 | 10.2 | 30 |
| 16 | LFHU16 | B 25, | 50 | FPU16 | 3 | 25 | 17.0 | 13.0 | 40 |
| 16 | | | | | | | | | |
| 20 | LFHU20 | B 10, | 25, 50 | FPU20 | 3 | 25, 50 | 21.5 | 16.9 | 45 |
| 25 | LFHU25 | B 10, | 25, 50 | FPU25 | 3 | 25, 50 | 26.0 | 21.1 | 55 |
| 32 | LFHU32 | B 10, | 25 | FPU32 | 3 | 25 | 34.0 | 28.1 | 80 |
| 40 | LFHU40 | B 10, | 25 | FPU40 | 3* | 10 | 44.5 | 37.6 | 90 |
| 50 | LFHU50 | B 10, | 25 | FPU50 | 3* | 10 | 55.0 | 48.4 | 100 |
| 63 | LFHU63 | B 10 | | FPU63 | 3* | 10 | 64.5 | 57.5 | 115 |
| 75 | LFHU75 | B 10 | | FPU75 | 3* | 10 | 79.0 | 70.0 | 150 |

Typical Applications: Where low temperature and mechanical

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

Ordering Notes

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



- 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

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• High mechanical strength Compliant to LUL Std S1085 (LFHU) S à · Highly flexible (Cert No. 297) · IP rating: IP54 with standard fittings, • EN45545-2 HL3 for LFHU and NFPA 130 IP65 with type C compression fittings • Temperature range: 1 • Extra low Fire Hazard UL94 V0, for LFH -25°C to +90°C (LFHU) see page 148 (LFHU) -40°C to +100°C (FPU) High fatigue life and high abrasion Nickel plated brass fittings 2 resistant (FPU) · Vibration and shock tested to Halogen, sulphur and phosphorus free EN61373 Cat 2





| 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 (r |
|------------------------------|------------------------------|--------------------------|---------------------------|------------------------------|------------------------------|-------------|-------------|-----------------|
| | 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 |





Technical Drawing



mm)

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



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 antistatic 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



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

Colour. Diac

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
- Resistant to oils and greases
 Vibration and shock tested to
- EN61373 Cat 2



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

Colour: Black

LTPLFH

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

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

- High mechanical strength
- IP rating: IP66 + IP67 + IP68 (5 bar) + IP69
- Smooth, wipe clean outer cover
- · Cover does not wrinkle when bent
- Temperature range
- -25°C to +90°C (LTPLFH)
- Good flexibilityUV 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 | reel length (m) | min inside bend radius (mm) | LTPAS | part number | reel length (m) | min inside bend radius (mm) | ГТРНС | part number | reel length (m) | min inside bend radius (mm) | ГТРЦЕН | part number | reel length (m) | min inside bend radius (mm) |
|-------------------|-------------------|------------------|-----------------|--------------------|-----------------|--------------------------------|---------|-------------|-----------------|--------------------------------|---------|-------------------------|-----------------|--------------------------------|--------|-------------|-----------------|--------------------------------|
| 10 | 1⁄4 | 11.8 | 7.0 | LTP10B+ | 50 | 35 | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | |
| 12 | 5⁄16 | 14.2 | 10.0 | LTP12B | 25, 50 | 40 | | | | | LTPHC12 | B ⁺ 2 | 5 | 40 | | | | |
| 16 | 3/8 | 17.8 | 12.6 | LTP16B | 10, 25, 50 | 45 | LTPAS1 | 6B* | 25 | 45 | LTPHC16 | B 2 | 5 | 45 | LTPLFH | 16B | 25 | 60 |
| 16 | | | | | | | | | | | | | | | | | | |
| 20 | 1/2 | 21.1 | 16.0 | LTP20B | 10, 25, 50 | 65 | LTPAS2 | 0B* | 25 | 65 | LTPHC20 | B 2 | .5 | 65 | LTPLFH | 20B | 25 | 100 |
| 25 | 3⁄4 | 26.4 | 21.0 | LTP25B | 10, 25, 50 | 100 | LTPAS2 | 5B* | 25 | 100 | LTPHC25 | B 2 | 5 | 100 | LTPLFH | 25B | 25 | 130 |
| 32 | 1 | 33.1 | 26.5 | LTP32B | 10, 25, 50 | 135 | LTPAS3 | 2B* | 25 | 135 | LTPHC32 | B 2 | .5 | 135 | LTPLFH | 32B | 10 | 180 |
| 40 | 11⁄4 | 41.8 | 35.4 | LTP40B | 10, 25 | 175 | LTPAS40 | 0B* | 10 | 175 | LTPHC40 | B 1 | 0 | 175 | | | | |
| 50 | 1½ | 47.9 | 40.4 | LTP50B+ | 10, 25 | 230 | LTPAS5 | 0B*+ | 10 | 230 | LTPHC50 | B ⁺ 1 | 0 | 230 | | | | |
| 63 | 2 | 59.7 | 51.6 | LTP63B+ | 10, 25 | 280 | LTPAS63 | 3B*+ | 10 | 280 | LTPHC63 | B* + 1 | 0 | 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

98

Liquid Tight Conduits continued

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



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



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

(RAL 5015)

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

anti-static performance coating.

- 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





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 |
| LTPUL1 | 6B | 25 | 50 | LTPPU16* | 25 | 45 | LTPPUA | \$16* | 25 | 45 | LTPSS1 | 6* | 25 | 45 | 16 16 |
| LTPUL2 | 20B | 25 | 90 | LTPPU20* | 25 | 65 | LTPPUA | S20* | 25 | 65 | LTPSS2 | 0 | 25 | 65 | 20 |
| LTPUL2 | 25B | 25 | 110 | LTPPU25* | 25 | 100 | LTPPUA | S25* | 25 | 100 | LTPSS2 | 5 | 25 | 100 | 25 |
| LTPUL | 32B | 10, 25 | 140 | LTPPU32* | 25 | 135 | LTPPUA | S32* | 25 | 135 | LTPSS3 | 2 | 10 | 135 | 32 |
| LTPUL | 40B | 15 | 180 | LTPPU40* | 10 | 175 | LTPPUA | S40* | 10 | 175 | LTPSS4 | 0 | 10 | 180 | 40 |
| LTPUL | 50B+ | 15 | 230 | LTPPU50*+ | 10 | 230 | LTPPUA | \$50*+ | 10 | 230 | LTPSS5 | 0+ | 10 | 230 | 50 |
| LTPUL | 63B+ | 15 | 280 | LTPPU63*+ | 10 | 280 | LTPPUA | \$63* ⁺ | 10 | 280 | LTPSS6 | 3+ | 10 | 280 | 63 |

Standards



Colour: Black (B) and Blue (BU)

Typical Applications: High mechanical

temperature performance, high abrasion and high fatigue life.

LTPPUAS As per LTPPU but with an

· High mechanical strength

Liquid Tight Conduits continued

EN 45545-2



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



NFPA 130

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 & greasesTemperature 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
- EN 45545 to HL3 and NFPA 130 compliant



plated steel

P clip with

P clip to support

PVC liner

and secure

conduit.

stainless steel (316L) P clips

P clip to support conduit. insert nickel plated brass

Single part, machined insert to cap end of conduit.







Technical Drawing



LTPPU. LTPPUAS



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.



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.







nominal size (mm)

10

10 12

16

16

20

25

32 40

50

63



Liquid Tight Conduit fittings

nickel plated brass fittings



Fittings





| 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 | 1⁄4 | 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 | 3/8 | 17.8 | 12.6 | LTP16-M16-C | PG11 | 050 (1/2") | LTP16-M16-S | | |
| 16 | | | | LTP16-M20-C | PG13 | 050 (1/2") | LTP16-M20-S | | LTP16-M20-SF |
| 20 | 1/2 | 21.1 | 16.0 | LTP20-M20-C | PG16 | 050 (1/2") | LTP20-M20-S | LTP20-M20-F | LTP20-M20-SF |
| 25 | 3/4 | 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 | 11⁄4 | 41.8 | 35.4 | LTP40-M40-C | PG36 | 125 (1¼") | LTP40-M40-S | LTP40-M40-F | |
| 50 | 11/2 | 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



102

- · High mechanical strength 5
- đ • IP rating: IP66 + IP67 + IP68 (5 bar) + IP69
 - Temperature range
 - -50°C to +135°C
- 4 Oil resistant

6

0 UV resistant

and re-use

- 8 Nickel Plated Brass Fittings
 - Earthing ferrule is manufactured in machined Nickel Plated Brass to facilitate easy assembly
- 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

Coupler C45 **C90** FW Ξ external thread external thread nickel plated fibre, retained insert nickel nickel plated brass nickel plated brass face sealing plated brass 90° multipart compression brass washers Multi part compression Single part, machined fitting including elastomeric seal. Can be coupler including elastomeric seals to 45° multipart Retained sealing washer insert to cap end of conduit. compression fitting including elastomeric to maintain IP rating of fitting to adjacent connect with an external thread. used for knockouts. seal. Can be used for equipment. knockouts.



| 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 | 1⁄4 | 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 | 3/8 | 16 |
| LTP16-M20-C90 | LTP16-M20-C45 | LTP16-LTP16 | FW16 | LTP16-E | | | | 16 |
| LTP20-M20-C90 | LTP20-M20-C45 | LTP20-LTP20 | FW20 | LTP20-E | 16.0 | 21.1 | 1/2 | 20 |
| LTP25-M25-C90 | LTP25-M25-C45 | LTP25-LTP25 | FW25 | LTP25-E | 21.0 | 26.4 | 3/4 | 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 | 11⁄4 | 40 |
| LTP50-M50-C90 | LTP50-M50-C45 | | FW50 | LTP50-E | 40.4 | 47.9 | 11/2 | 50 |
| LTP63-M63-C90 | LTP63-M63-C45 | | FW63 | LTP63-E | 51.6 | 59.7 | 2 | 63 |

Standards & Approvals



Technical Drawing





Liquid Tight Conduit

fittings UL listed fittings and stainless steel fittings NEW

IP68

IP69

IP66

IP67

Fittings





How to read the fittings code



outside dia (mm) US trade size (")

nominal size (mm)

10 1/4

10 12 5/16

16 3/8

16 20

25 3/4

32 1

40

50

- High mechanical strength
 IP rating: IP66 + IP67 + IP66
 - IP rating: IP66 + IP67 + IP68 (5 bar) + IP69
 - Temperature range
 - -50°C to +135°C
 - Oil resistant
 - UV resistant

1

 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 | C90-SS | LOCKNUT-SS | FCC-SS | | | | |
|---|--|--------------------------------------|-----------------------------------|------------------|------------------|-------------------|-------------------|
| external thread stainless steel | external thread stainless steel (316L) | stainless steel (316L) locknuts | stainless steel (316L) P clips | | | | |
| Multipart compression fitting with Stainless Steel (316L) body and nut and nickel plate brass insert, including elastomeric seal. Can be used for knockout or threaded entries as fitting rotates until tightened. | 90° multipart compression fitting with Stainless Steel (316L) body | Hexagonal locknut to secure fitting. | P clip to support conduit. | | | | |
| IP66 IP67 IP68 IP69 | IP66 IP67 IP68 IP69 | | | | | | |
| | | C | | | | | |
| 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 1 | 1.8 | 1⁄4 | 10 10 |
| | | | | 10.0 1 | 4.2 | 5/16 | 12 |
| LTP16-M16-CSS | | SS-M16 | FCC16-SS | 12.6 1 | 7.8 | 3⁄8 | 16 |
| LTP16-M20-CSS | | SS-M20 | FCC16-SS | 10.0.0 | 4.4 | 1/ | 16 |
| LTP20-M20-CSS | LTP16-M20-CSS90 | SS-M20 | FCC20-SS FCC25-SS | 16.0 2 21.0 2 | | 1/2 3/4 | 20 |
| LTP25-M25-CSS LTP32-M32-CSS | LTP20-M20-CSS90 LTP25-M25-CSS90 | SS-M25 SS-M32 | FCC25-SS FCC32-SS | 21.0 2 | | | 25 32 |
| LTP40-M40-CSS | LTP32-M32-CSS90 | SS-M32 | FCC40-SS | 35.4 4 | | | 32 40 |
| LTP50-M50-CSS | | SS-M50 | FCC50-SS | 40.4 4 | | | 50 |
| LTP63-M63-CSS* | | SS-M63* | FCC63-SS* | 51.6 5 | | | 63 |
| | | | | | | | |

Standards & Approvals

BS EN IEC 61386

Technical Drawing



LTPPU, LTPPUAS

Hazardous area liquid tight NEW conduit solutions **EXD Conduit Glands**

flameproof EXD barrier cable gland

- 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

Hazardous Area Approvals

ATEX APPROVAL to EN60079-0 2012

IECEx APPROVAL to IEC60079-0 2011

ATEX APPROVAL to EN60079-0 2012

IECEx APPROVAL to IEC60079-0 2011

NEW

5

Φ

Φ

Ex d Flameproof

Ex d Flameproof

Ex d Flameproof

Ex d Flameproof

Ex e Increased Safety

Ex e Increased Safety

Ex e Increased Safety

Ex e Increased Safety

Ex ta Dust Ignition Proof

Ex ta Dust Ignition Proof

Can be used in Zone 1, Zone 2, Zone 20, Zone 21 and Zone 22 Hazardous areas

CML Certificate no:

CML Certificate no:

Ex d I Mb

Ex e I Mb

Ex d I Mb

Ex e I Mb

Ex d II C Gb

Ex e II C Gb

Ex d II C Gb

Ex e II C Gb

Ex ta IIIC Da IP6X

Ex ta IIIC Da IP6X

CML Certificate no:

CML 15ATEX1037X

EN 60079-1 2007

EN 60079-7 2007

IEC 60079-1 2014-06

IEC 60079-7 2006-7

CML 15.0020X

EN 60079-1 2007

EN 60079-7 2007

CML 15.0020X

IEC 60079-31 2009

IEC 60079-1 2014-06

IEC 60079-7 2006-7

IEC 60079-31 2013

CML Certificate no: CML 15ATEX1037X

- 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



LTP - EXD

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

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



LTP - EXD - SS

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

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



IEC Ma

IEC IEE

NEW

| To fit nominal size (mm) | metric thread part number | NPT thread part number | To fit nominal size (mm) | metric thread part number | NPT thread part number |
|--------------------------|---------------------------|------------------------|--------------------------|---------------------------|------------------------|
| 16 | LTP16-M20-EXD | LTP16-050-EXD | 16 | LTP16-M20-EXD-SS | LTP16-050-EXD-SS |
| 20 | LTP20-M20-EXD | LTP20-050-EXD | 20 | LTP20-M20-EXD-SS | LTP20-050-EXD-SS |
| 25 | LTP25-M25-EXD | LTP25-075-EXD | 25 | LTP25-M25-EXD-SS | LTP25-075-EXD-SS |
| 32 | LTP32-M32-EXD | LTP32-100-EXD | 32 | LTP32-M32-EXD-SS | LTP32-100-EXD-SS |
| 40 | LTP40-M40-EXD | LTP40-125-EXD | 40 | LTP40-M40-EXD-SS | LTP40-125-EXD-SS |
| 50 | LTP50-M50-EXD | LTP50-150-EXD | 50 | LTP50-M50-EXD-SS | LTP50-150-EXD-SS |
| 63 | I TP63-M63-FXD | ITP63-200-FXD | 63 | 1TP63-M63-FXD-SS | TP63-200-FXD-SS |

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











NEW

NEW

www.flexicon.uk.com



Hazardous Area Approvals

| ATEX APPROVAL to EN60079-0 2012 | CML Certificate no: CML 15ATEX1037X | (£x |
|-----------------------------------|-------------------------------------|----------|
| 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 | IEC ACEx |
| 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 - 9 | 90 New | LI | P - EXD - 45 | NEW |
|--|--|---|--|------------------------|
| Construction: 90° elbow, Nickel gland with a nylon and elastome part epoxy resin pack. Supplied complete with instructions and g Typical Applications: Flamepro- ideal for use when there is restri- terminate into an enclosure / eqi IP rating: IP66 + IP67 + IP68 (5 | ric seal and two in boxes of one loves. of barrier gland cted space to uipment. | gland two p one Typi d ideal term | struction: 45° elbow, nickel plated brass d with a nylon and elastomeric seal and part epoxy resin pack. Supplied in boxes of complete with instructions and gloves. cal Applications: Flameproof barrier gland for use when there is restricted space to inate into an enclosure / equipment. ting: IP66 + IP67 + IP68 (5 bar) | |
| | IP66 IP67 IP68 | | | IP66 IP67 IP68 |
| To fit nominal size (mm) | metric thread part number | To fit | nominal size (mm) met | ric thread part number |
| 16 | LTP16-M20-EXD-90 | 16 | u u | P16-M20-EXD-45 |
| 20 | LTP20-M20-EXD-90 | 20 | | P20-M20-EXD-45 |
| 25 | LTP25-M25-EXD-90 | 25 | 0 | P25-M25-EXD-45 |
| 32 | LTP32-M32-EXD-90 | 32 | LI LI | P32-M32-EXD-45 |
| 40 | LTP40-M40-EXD-90 | 40 | 0 | P40-M40-EXD-45 |
| 50 | LTP50-M50-EXD-90 | 50 | | P50-M50-EXD-45 |
| 63 | LTP63-M63-EXD-90 | 63 | L1 | P63-M63-EXD-45 |

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



LTPSS







www.flexicon.uk.com

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

- 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

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| ATEX APPROVAL to EN60079-0 2009 | Intertek Certificate no: | ITS 14ATEX37958U | |
|--|--|-------------------|-----------------------|
| Ex e Increased Safety | Ex e II Gb | EN 60079-7 2007 | $\langle x 3 \rangle$ |
| 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 | |
| IECEx APPROVAL to IEC60079-0 2007 Ex e Increased Safety | Intertek Certificate no: Ex e II Gb | IECEx ITS 14.005U | IEC IECEx |

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

LTP - EXE NEW LTP - EXE - 90 NEW LTP - EXE - 45 NEW external thread nickel plated brass external thread nickel external thread nickel Multipart compression fitting including elastomeric seal. Can plated brass plated brass be used for knockout or threaded entries as fitting rotates 90° multipart compression fitting including 90° multipart compression fitting including until tightened. elastomeric seal. Can be used for knockout. elastomeric seal. Can be used for knockout. (mm) metric thread part number nominal size metric thread part number thread metric thre part numb thread Bg NPT LTP16-PG11-EXE LTP16-M16-EXE-90 LTP16-M16-EXE-45 16 LTP16-M16-EXE LTP16-050-EXE (1/2") 16 LTP16-M20-EXE LTP16-PG13-EXE LTP16-M20-EXE-90 LTP16-M20-EXE-45 LTP20-M20-EXE-90 LTP20-M20-EXE-45 20 LTP20-M20-EXE LTP20-PG16-EXE LTP20-050-EXE (1/2") LTP25-PG21-EXE LTP25-M25-EXE-90 LTP25-M25-EXE-45 25 LTP25-M25-EXE LTP25-075-EXE (¾") 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 1TP40-M40-FXF-90 ITP40-M40-FXF-45 (11/4") LTP50-M50-EXE-45 50 1TP50-M50-FXF ITP50-PG42-FXF ITP50-150-FXF (11/2") ITP50-M50-FXF-90 LTP63-M63-EXE LTP63-PG48-EXE LTP63-M63-EXE-45 63 LTP63-200-EXE (2") LTP63-M63-EXE-90 **Technical Drawing** Standards Used with **BS EN IEC 61386** CE LTP - EXE LTPPU LTBRDLFH **LTPAS** RoHS 🧸 REACh or any of the LTP conduit types, see page 98
Flexicon EXD Accessories Range



- ATEX Certification Detail IEC Ex Certification Detail
- · Continuous Operating Temperature:
- -60°C to +200°C
- Ingress Protection Rating: Up to IP68 when fitted
- 4 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.

NEW

EXD Thread Converters and Adaptors

Our thread converters are Nickel Plated Brass as standard.

| Internal I | Metric to Externa | Metric | Female Thre | ad - Internal | | | Internal I | Vletric to Externa | NPT Female | e Thread - Internal |
|------------------------------|-------------------|---------------|---------------|---------------|---------------|---------------|------------------------------|---|------------------------|-----------------------|
| Male Thread - External | M16 | M20 | M25 | M32 | M40 | M50 | Male Thread - External | M20 | M25 | M32 |
| M16 | | B-M16-M20-EXD | | | | | 1⁄2" | B-050-M20-EXD | | |
| M20 | B-M20-M16-EXD | | B-M20-M25-EXD | | | | 3⁄4" | B-075-M20-EXD | B-075-M25-EXD | |
| M25 | | B-M25-M20-EXD | | B-M25-M32-EXD | | | 1" | | | B-100-M32-EXD |
| M32 | | | B-M32-M25-EXD | | B-M32-M40-EXD | | | Adaptor & Reducer n | | · · |
| M40 | | | | B-M40-M32-EXD | | | | ep 1 - Select male thr itep 2 - Select the fen | , 0 | e left hand column of |
| M50 | | | | B-M50-M32-EXD | B-M50-M40-EXD | | | t the top of tables, an | , | 0 |
| M63 | | | | | B-M63-M40-EXD | B-M63-M50-EXD | | step 1. Please note t nd Reducers that are | | |
| | | | | | | | Adaptors at | nu neuucers triat are | certilied for use in F | lazaruous Areas. |

EXD Stopping Pluas

Our stopping plugs are Nickel Plated Brass as standard.



Tamperproof

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

| | ne Head and Tamperproof pping 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 - He | kagon 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

| I M2/II 2 G D/II 1 D |
|--|
| Ex db I/IIC Mb/Gb; Ex eb I/IIC Mb Gb; Ex ta IIIC Da |
| 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



| | 61 | | | |
|----------|------|-------|---------|----|
| \\/\/\// | TIOY | (ICOD | .uk.com | Ì. |
| | | | .uk.com | I. |
| | | | | |



LTPBRD system

galvanised steel core, thermoplastic elastomer coated and stainless steel overbraid

Conduit



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

LTPBRD

- 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

| С | C-S |
|--|--|
| external thread nickel plated brass Multipart compression fitting including elastomeric seal. Can be used for knockout. Braid is locked between inner and outer compression nuts. | swivel external thread nickel plated brass Multipart compression fitting including elastomeric seal can be used for knockouts or threaded entries. Braid is locked between inner and outer compression nuts. |
| IP66 IP67 IP68 IP69 | IP66 IP67 IP68 IP69 |



| nominal size (mm) | LTPBRD | part number reel length (m) | | outside dia (mm) | inside dia (mm) | metric thread part number | metric thread part number |
|-------------------|-----------|--------------------------------|--------|------------------|-----------------|------------------------------|------------------------------|
| 16 | LTPBRD16 | 25 | 5 19.3 | 12.6 | 45 | LTPB16-M16-C | LTPB16-M16-S |
| 16 | | | | | | LTPB16-M20-C | LTPB16-M20-S |
| 20 | LTPBRD20 | 25 | 5 22.6 | 16.0 | 65 | LTPB20-M20-C | LTPB20-M20-S |
| 25 | LTPBRD25 | 25 | 5 27.9 | 21.0 | 100 | LTPB25-M25-C | LTPB25-M25-S |
| 32 | LTPBRD32 | 25 | 5 34.6 | 26.5 | 135 | LTPB32-M32-C | LTPB32-M32-S |
| 40 | LTPBRD40 | 1(|) 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 **Standards**

LTPB20-M20-M

conduit thread size





- High mechanical strength
 - Good flexibility

à

C90

external threaded

Multipart compression fitting

including elastomeric seal. Braid is locked between

elbow nickel

plated brass

- 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 teste
 - Vibration and shock tested to EN61373
 Cat 2
 - Inherent Anti-Static performance properties

LTPB - EXD

nickel plated brass with a

nylon and elastomeric

resin pack

seal and two part epoxy

Flameproof barrier gland for external

- 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

NEW

 Can be used with individual cores or oversheathed cable

FW

fibre retained face

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

sealing washers

locknuts

galvanised steel and

Hexagonal locknut to secure

fitting. EMC locknuts have raised corners to ensure

nickel plated brass

locknuts

FCC

plated steel P

liner, stainless steel P clips

clip with pvc

P clip to support

conduit.

braided conduit systems where high mechanical protection and / or EMC inner and outer compression good continuity. nuts. screening is required. nominal size (mm) stainless steel part number metric thread part number metric thread part number thread u mber thread thread metric thread brass part number thread plated steel part number NPT thread part number number t number netric th metric steel part nu metric EMC part nu LTPB16-M16-C90 FW16 B-M16 FCC16 FCC16-SS 16 S-M16 FW20 LTPB16-M20-C90 16 LTPB20-M20-C90 LTPB20-M20-EXD LTPB20-050-EXD FW20 S-M20 B-M20-EMC FCC20 FCC20-SS 20 B-M20 LTPB25-M25-C90 LTPB25-M25-EXD FW25 S-M25 B-M25-EMC B-M25 FCC25 FCC25-SS 25 LTPB25-075-EXD S-M32 LTPB32-M32-C90 LTPB32-M32-EXD LTPB32-100-EXD FW32 B-M32-EMC B-M32 FCC32 FCC32-SS 32 S-M40 LTPB40-M40-C90 LTPB40-M40-EXD LTPB40-125-EXD FW40 B-M40-EMC B-M40 FCC40 FCC40-SS 40 S-M50 LTPB50-M50-C90* LTPB50-M50-EXD* LTPB50-150-EXD* FW50 B-M50 FCC50 FCC50-SS 50

Hazardous Area Approvals

| | ATEX APPROVAL to EN60079-0 2012 | CML Certificate no: | CML 15ATEX1037X | (Ex) |
|---|-----------------------------------|---------------------|---------------------|---------|
| | 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 | IEC REA |
| | 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 | |
| | | | | |
| | ATEX APPROVAL to EN60079-0 2012 | CML Certificate no: | CML 15ATEX1037X | ⟨Łx⟩ |
| | 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 | |
| ē | IECEx APPROVAL to IEC60079-0 2011 | CML Certificate no: | CML 15.0020X | IEC REE |
| | 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



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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.



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.



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.



| 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 | | | | | | LTPSSBUF | G16 | 25 | 17.8 | 12.6 |
| 16 | | | | | | | | | | | | | | | |
| 20 | LTPWFG20 | | 10, 25 | 21.1 | 16.0 | LTBRDPW | FG20 | 10, 25 | 21.1 | 16.0 | LTPSSBUF | G20 | 25 | 21.1 | 16.0 |
| 25 | LTPWFG25 | | 10, 25 | 26.4 | 21.0 | LTBRDPW | FG25 | 10, 25 | 26.4 | 21.0 | LTPSSBUF | G25 | 25 | 26.4 | 21.0 |
| 32 | LTPWFG32 | | 10, 25 | 33.1 | 26.5 | LTBRDPW | FG32 | 10, 25 | 33.1 | 26.5 | LTPSSBUF | G32 | 10 | 33.1 | 26.5 |
| 40 | LTPWFG40 | | 10 | 41.8 | 35.4 | LTBRDPW | FG40 | 10 | 41.8 | 35.4 | LTPSSBUF | G40 | 10 | 41.8 | 35.4 |
| 50 | LTPWFG50+ | ł | 10 | 47.9 | 40.4 | LTBRDPW | FG50+ | 10 | 47.9 | 40.4 | LTPSSBUF | G50+ | 10 | 47.9 | 40.4 |
| 63 | LTPWFG63- | ł | 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



- Hygienic design in accordance with EN1672-2 & EN ISO 14159
- Smooth finish eliminates build up of bacteria & micro-organisms
- U 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

Fittings

| C-FG external thread stainless stee Multipart compression fitting designed u EN ISO 14159. Manufactured from 316L elastomer compression seals to prevent used for knockout or threaded entries as ST fittings are designed for use with Rou shorter thread to maximise space within | sing principles given in EN1672-2 and stainless steel, complete with polyester ingress of food or bacteria. Can be s fitting rotates until tightend. Jnd Boxes on page 126. They have a | FCC-SS stainless steel (316L) p clips P clip to support conduit. | LOCKNUTS stainless steel (316L) locknuts Hexagonal locknut to secure fitting. | |
|--|---|---|---|-------------------|
| IP66 IP67 IP68 IP69 | | | | |
| | | | Q | |
| part number | st fitting part number | part number | part number | nominal size (mm) |
| LTP16-M16-C-FG | | FCC16-SS FCC16-SS | SS-M16 SS-M20 | 16 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 |

Resistant to chemicals &

integrated barrier seal to

prevent contamination

Hygienic Round Box

cleaning agents

Compatible with

- see page 126

Fewer componentsEase of assembly and

NEW

HG

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

С Туре

Fittings

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.



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



С Туре

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).





| part number | reel length (m) | reel length (m) | outside dia (mm) | inside dia (mm) | metric thread part number |
|-------------|-----------------|-----------------|------------------|-----------------|------------------------------|
| | | | | | |
| | 25 | 19.0 | 14.6 | 35 | FL20-M20-C |
| | 25 | 25.1 | 20.4 | 45 | FL25-M25-C |
| | | | | | |
| | | | | | |
| | | | | | |

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

Standards



Note: refer to conduit properties for applicable standards

Technical Drawing



Flexicon Ultrascreen™

LFHP system galvanised steel extra LFH coated, pliable

Conduit



LFHP

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

Colour: Black

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

- Pull off strength: Type C-HS 100kg (20mm)
- Extra low fire hazard, oil resistant and UV resistant
- Vibration and shock tested to EN61373 Cat 2
- High compression strength 570kg/100mm
- Provides EMC screening
- IP rating: IP66 + IP67 + 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).





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).





| nominal size (mm) | L F H P 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



* 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 | | | STANDARD EMC SCREEN | INHERENT LOW FIRE HAZARD *** | Null I | м | | S | |
|-------------------|---|---------------------------------------|-----------------|--------------------------------|---------------------------------------|--------------------------------|---|---------------------------------------|--|-------------------------------------|
| | Construction: Galvanised steel, helically wound conduit with galvanised steel overbraid. | | | | | th | fixed external t plated brass | thread nickel | swivel external | thread nickel |
| | 0 | Zinc, self colour. | | | | | Two part fitting comp | orising shell and | Two part fitting com | orising shell and |
| | Typical Applications: Industrial environments and high temperatures. | | | | | | body with external th can be inserted into secured with a lockn | nread. This fitting a knockout and | body. The external the main body. Can threaded entries, or with a locknut. | hread swivels about be used with |
| | FU | SSB | | STANDARD EMC SCREEN * | INHERENT LOW FIRE HAZARD *** | Null I | IP40 | | IP40 | |
| | | uction: Galvanis with stainless st | | | ound, flexib | le | | | | |
| | | Applications: U ies and EMC scr | • | | | Н | | | | |
| | | | | EN 455 | 45-2 NF | M 130 | | | | |
| | | | | | | | | | | |
| nominal size (mm) | Ð | Part number FUSSB 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 |
| 12 | FB12 | FUSSB12* | 25 | 14.0 | .= | 30 | FB12-M16-M | FB12-PG9-M | EB12-M16-S | FB12-PG9-S |
| 12 | FB16 | FUSSB12* | 25 | 17.5 | 13.0 | 40 | FB12-M10-M | FB16-PG11-M | FB12-M10-S | FB16-PG11-S |
| 16 | 1010 | 1000010 | 20 | 11.0 | 10.0 | 10 | FB16-M20-M | 1010 TUTT III | FB16-M20-S | 1010 Turr 0 |
| 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



Standards



- High mechanical strength
- Highly flexible

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- 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 fittingsEN45545-2 to HL3 and
- NFPA130

90° elbow locknuts FCC Ρ plain hole connector internal and external galvanised steel and nickel plated plated steel P clip with pvc liner, stainless steel P clips nickel plated brass threaded nickel **brass locknuts** plated brass elbow Two part fitting comprising Hexagonal locknut to secure fitting. EMC locknuts P clip to support and secure conduit. shell and body without thread. The body is fitted 90° elbow which can be have raised corners to ensure good continuity. screwed onto external threaded fittings. through the opposite side of the entry to the conduit and acts as a locking device also providing a smooth entry bush. IP40 100 /III

| (um) um) estandaduunu r raduunu r raduunu r r estandbaby r | | 目 | | Q | | 0 | | | |
|--|----------------|-------------|------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|-----------------------------|--------------------------------|-------------------|
| 16 FB16-P BM90-16M S-M16 B-M16 FCC16 FCC16-SS 16 20 FB20-P 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 | 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) |
| 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 FC20-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 | 12 | FB12-P | BM90-16M | S-M16 | | B-M16 | FCC12 | FCC12-SS | 12 |
| 20 FB20-P BM90-20M S-M20 B-M20-EMC B-M20 FC20 FC20-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 | 16 | FB16-P | BM90-16M | S-M16 | | B-M16 | FCC16 | FCC16-SS | 16 |
| 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 | | | BM90-20M | S-M20 | B-M20-EMC | B-M20 | FCC16 | FCC16-SS | |
| 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 | 20 | FB20-P | BM90-20M | S-M20 | B-M20-EMC | B-M20 | FCC20 | FCC20-SS | 20 |
| 40 FB40-P BM90-40M S-M40 B-M40-EMC B-M40 FCC40 FCC40-SS 40 | 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 |
| 51 FB50-P BM90-50M S-M50 B-M50 FCC50 FCC50-SS 50 | 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



М

FSB

SCREEN

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.

<u>LF</u>HUBRD

LFHUBRI

LFHUBRD20

LFHUBRD25

LFHUBRD32

LFHUBRD40

part numbei

aart number

CEMC SCREEN *

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

length (m)

25

25

25

25

25

10

10

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

outside dia (mm

15.2

18.2

22.7

27.2

35.2

45.7

577



dia (mm)

nside .

10.2

13.0

16.9

21.1

28.1

37.6

48.4

inside bend us (mm)

min ins radius

30

40

45

55

70

80

٩N

Fittings

S

fixed external thread nickel swivel extern plated brass plated brass

thread t number

PG 1 part

FSB12-PG9-M

FSB16-PG11-M

FSB20-PG16-M

FSB25-PG21-M

FSB32-PG29-M

FSB40-PG36-M

FSB50-PG48-M

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

swivel external thread nickel

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





metric thread part number

FSB12-M16-M

FSB16-M16-M

FSB16-M20-M

FSB20-M20-M

FSB25-M25-M

FSB32-M32-M

FSB40-M40-M

FSB50-M50-M



PG thread part number

FSB12-PG9-S

FSB16-PG11-S

FSB20-PG16-S

FSB25-PG21-S

FSB32-PG29-S

FSB40-PG36-S

FSB50-PG42-S

| nominal size | FSB |
|--------------|-------|
| 12 | FSB12 |
| 16 | FSB16 |
| 16 | |
| 20 | FSB20 |
| 25 | FSB25 |
| 32 | FSB32 |
| 40 | FSB4 |
| 50 | FSB5(|

mm

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





Standards



ic thread number

metric t part nui

FSB12-M16-S

FSB16-M16-S

FSB16-M20-S

FSB20-M20-S

FSB25-M25-S

FSB32-M32-S

FSB40-M40-S

FSB50-M50-S

Note: refer to conduit properties for applicable standards

· High mechanical strength Temperature range S ð · Tensile strength with standard -15°C to +70°C (FSB) fittings 120kg for 20mm size -20°C to +90°C (LFHUBRD) · Tensile strength with C type fittings · LFHUBRD is extra low fire hazard 1 300kg for 20mm size Compliant to LUL Std S1085 Highly flexible (LFHUBRD) (Cert No. 297) • IP rating: IP54 for standard fittings, Nickel plated brass fittings IP65 for C type fittings Vibration and shock High abrasion resistance tested to EN61373 Cat 2 · Resists hot metal swarf and splashes • LFHUBRD is EN45545-2 to · Provides EMC screening HL3 and NFPA130





| hole size (mm) | part number | metric thread part number | PG thread part number | metric thread part number | metric thread part number | nominal size (m |
|----------------|---|---|--|---|---|---|
| 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 |
| | No No 12 16 20 25 32 40 | Bit Bit <td>Big High High 12 FSB12-P </td> <td>ass unu tra ass as<</td> <td>asis biologyup up up up up up up up up up up up up dasis up up up up up dasis up up up up up up up up dasis up up up up up up up up up up up up dasis up the up the up the </br></br></br></br></td> <td>as bookundas bookas bookundas book12FSB12-PFSB16-M16-CFSB16-PG11-CFSB16-M16-C-SFSB16-M16-C9016FSB16-PFSB16-M16-CFSB16-PG13-CFSB16-M16-C-SFSB16-M16-C9020FSB20-PFSB20-M20-CFSB20-PG16-CFSB20-M20-C-SFSB20-M20-C9020FSB25-PFSB25-M25-CFSB20-PG16-CFSB20-M20-C-SFSB20-M20-C9025FSB25-PFSB25-M25-CFSB25-PG21-CFSB25-M25-C-SFSB25-M25-C9032FSB32-PFSB32-M32-CFSB32-PG29-CFSB32-M32-C-SFSB32-M32-C9040FSB40-PFSB40-PFSB40-PFSB40-PFSB40-P</td> | Big High High 12 FSB12-P | ass unu tra ass as< | asis biologyup up up up up up up up up up up up | as bookundas bookas bookundas book12FSB12-PFSB16-M16-CFSB16-PG11-CFSB16-M16-C-SFSB16-M16-C9016FSB16-PFSB16-M16-CFSB16-PG13-CFSB16-M16-C-SFSB16-M16-C9020FSB20-PFSB20-M20-CFSB20-PG16-CFSB20-M20-C-SFSB20-M20-C9020FSB25-PFSB25-M25-CFSB20-PG16-CFSB20-M20-C-SFSB20-M20-C9025FSB25-PFSB25-M25-CFSB25-PG21-CFSB25-M25-C-SFSB25-M25-C9032FSB32-PFSB32-M32-CFSB32-PG29-CFSB32-M32-C-SFSB32-M32-C9040FSB40-PFSB40-PFSB40-PFSB40-PFSB40-P |

EMC Screening Performance



Technical Drawing



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stainless steel corrugated conduit

FSSBRD system stainless steel corrugated conduit with overbraid



NEW

Conduit



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

IP68

- · Provides EMC screening
- · Offers Antistatic properties

EN 45545-2



corrugated conduit with stainless steel (316L) overbraid.

hazard performance with superior Ingress Protection (IP68), excellent corrosion resistance and enhanced EMC performance together with abrasion resistance. Metro rail stations and tunnels.

- 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
- Oil resistant

IP68

 Provides EMC screening – Standard Offers Antistatic properties



bend

inside be us (mm)

min ins radius (

60

70

80

120

145

Fittings



nominal size (mm) 20 25 32 40

50

| FSS | part number | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) | FSSBRD | part number | reel length (m) | outside dia (mm) | inside dia (mm) |
|--------|-------------|-----------------|------------------|-----------------|--------------------------------|--------|-------------|-----------------|------------------|-----------------|
| FSS20 | | 25 | 21.6 | 16.2 | 45 | FSSBR | D20 | 25 | 21.6 | 16.2 |
| FSS25 | | 25 | 26.8 | 20.2 | 55 | FSSBR | D25 | 25 | 28.3 | 20.2 |
| FSS32* | r | 25 | 32.5 | 25.4 | 65 | FSSBR | 032* | 25 | 33.8 | 25.4 |
| FSS40* | r | 10 | 41.3 | 34.1 | 105 | FSSBR | D40* | 10 | 43.0 | 34.1 |
| FSS50* | • | 10 | 50.0 | 40.0 | 130 | FSSBR | D50* | 10 | 51.2 | 40.0 |

NFPA 130

Ordering Notes

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

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

Standards



FSSBRD Construction: Stainless steel (316L) annually

Typical Applications: Inherent Low Fire

- Colour: Self colour
- IP rating: IP68 • Temperature range -100°C to +400°C

High Mechanical Strength · High Abrasion resistance

- · Excellent Corrosion resistance
- UV resistant



• IP rating: IP68

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- 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





| for use with FSS for use with FSS with FSS for use with FSS | | nominal size |
|---|-------------|--------------|
| FSS20-M20-S FSSBRD20-M20-S FSS20-M20-C90 FSS20-M20-C45 | FCC20-SS 2 | 20 |
| FSS25-M25-S FSSBRD25-M25-S FSS25-M25-C90 FSS25-M25-C45 | FCC25-SS 2 | 25 |
| F\$\$32-M32-\$* F\$\$BRD32-M32-\$* F\$\$32-M32-C90* F\$\$32-M32-C45* | FCC32-SS 3 | 2 |
| FSS40-M40-S* FSSBRD40-M40-S* FSS40-M40-C90* FSS40-M40-C45* | FCC40-SS 4 | 0 |
| FSS50-M50-S* FSSBRD50-M50-S* FSS50-M50-C90* FSS50-M50-C45* | FCC50-SS 50 | 0 |

EMC Screening Performance







www.flexicon.uk.com



FPRTC system corrugated nylon, (PA6) tinned copper overbraid



Conduit



low fire hazard, corrugated nylon (PA6), with stainless steel (316L) overbraid.

Typical Applications: Metro rail stations for anti-vandal. EN 45545-2 | KFPA 138

FPIHRSS



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

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



Typical Applications: Inside railway carriages where screening is required.



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.



EN 45545-2 | HFPA 138

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.

Construction: Heavy weight, extra low fire hazard,

| 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 | 6-50M | FPRTC16 | -50M* | FPISS16 | ·50M* | FPIHSS1 | 6-50M | FPIHRSS1 | 6-50M | 17.3 | 11.5 | 35 |
| 21 | FPRSS21 | I-50M | FPRTC21 | -50M* | FPISS21 | ·50M* | FPIHSS2 | 1-50M | FPIHRSS2 | 21-50M | 22.7 | 15.0 | 45 |
| 28 | FPRSS28 | 3-50M | FPRTC28 | -50M* | FPISS28 | ·50M* | FPIHSS28 | B-50M | FPIHRSS2 | 28-50M | 30.0 | 21.3 | 50 |
| 34 | FPRSS34 | 1-50M | FPRTC34 | -50M* | FPISS34 | ·25M* | FPIHSS34 | 4-25M | FPIHRSS | 84-25M | 36.0 | 27.6 | 60 |
| 42 | FPRSS42 | 2-25M* | FPRTC42 | -25M* | FPISS42 | ·25M* | FPIHSS42 | 2-25M* | FPIHRSS4 | 2-25M | 44.0 | 35.5 | 70 |
| 54 | FPRSS54 | 1-25M* | FPRTC54 | -25M* | FPISS54 | ·25M* | FPIHSS54 | 4-25M* | FPIHRSS | 64-25M | 56.0 | 47.2 | 80 |

C fixed external swivel external thread

Fittings

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

nickel plated brass

Multipart compression fitting including conduit retention clip

threaded entries. Braid is locked

and elastomeric seal. Can be used for knockouts and

between inner and outer compression nuts.



| 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 | |



Standards



122

FPISS, FPIHSS

system corrugated nylon, (PA12), stainless steel overbraid FPIHRSS system (FA12), stainless steel overbraid

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

ealing

• 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 | 90° elbow | FW | washers | loc | knuts | 5 | FCC | | |
|---|--|---|--|--|---|---------------------------------------|--|--------------------------------|---|
| external thread elbow nickel plated brass Multipart 90° compression fitting including conduit retention clip and elastomeric seal. Can be used with knockouts. Braid is locked between inner and outer compression nuts. | internal and external threaded nickel plated brass elbow 90° elbow which can be screwed onto external threaded fittings. | fibre retained face sealing washers Retained sealing washer to maintain IP rating of fitting to adjacent equipment. | fibre face sealing washers Sealing washer to maintain IP rating of fitting to adjacent equipment. | nicke lockn Hexago fitting. E raised o | nised ster I plated b uts nal locknut t EMC locknuts corners to en ontinuity. | rass o secure s have | plated P clip pvc lin stainle steel F P clip to conduit. | with er, ess clips | |
| | | 0 | 0 | Ģ | 0 | Q | | | |
| metric thread part number | metric thread part number | metric thread part number | part number | metric thread steel part number | metric thread EMC part number | metric thread brass part number | plated steel part number | stainless steel part number | - |
| | BM90-16M | FW16 | FWPG11 | S-M16 | | B-M16 | FCC16 | FCC16-SS | 1 |
| BC21-M20-C90 | BM90-20M | FW20 | FWPG16 | S-M20 | B-M20-EMC | B-M20 | FCC20 | FCC20-SS | 2 |
| | BM90-25M | FW25 | FWPG21 | | B-M25-EMC | B-M25 | FCC25 | FCC25-SS | 2 |
| | BM90-32M | FW32 | FWPG29 | | B-M32-EMC | B-M32 | FCC32 | FCC32-SS | 3 |
| | BM90-40M | FW40 | | | B-M40-EMC | B-M40 | FCC40 | FCC40-SS | 4 |
| | BM90-50M | FW50 | | S-M50 | | B-M50 | FCC50 | FCC50-SS | 1 |
| | | | | | | | | | |

EMC Screening Performance



Technical Drawing



nominal size (mm)

| Cab IP ra For applic enhanced | le strain r ating for f cations that require the | nd Fittin elief and e lexicon co conduit system to provid s being mechanically prot construction sector. | e stra | hanced duits in relief and | cable c Cable c Additio Nickel Cable c Additio Nickel Cable c Tempe -40°C t -20°C t | strain relief nal IP rating on cable in plated brass fittings gland properties: IP68 (rature range to +100°C for static app to +100°C for dynamic | side conduit* 10 bar) + IP69 blications applications |
|--|--|---|----------------------|--|---|--|---|
| | | | | | • EMC c | able gland version on re | equest |
| 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 20 25 32 | FSU16-M16-CG FSU20-M20-CG FSU25-M25-CG FSU32-M32-CG | IP40 | IP68 (10 bar)+IP69 | 4.5-10mm 7-13mm 9-17mm 11-21mm |
| FSU, FNU, LFHU and FPU | | | 16 20 25 32 | FSU16-M16-CG FSU20-M20-CG FSU25-M25-CG FSU32-M32-CG | IP65 | IP68 (10 bar)+IP69 | 4.5-10mm 7-13mm 9-17mm 11-21mm |
| LTP, LTPHC, LTPUL, LTPAS, LTPSS, LTPLFH LTBRDP, LTBRDLFH, LTPPU and LTPPUAS | 2.11.5 × 17 × | | 16 20 25 32 | LTP16-M16-CG LTP20-M20-CG LTP25-M25-CG LTP32-M32-CG | IP66+IP67+ IP68 (5 bar)+IP69 | IP68 (10 bar)+IP69 | 4.5-10mm 7-13mm 9-17mm 11-21mm |
| FB & FUSSB | | <u>T</u> ÉGEP | 16 20 25 32 | FSB16-M16-CG FSB20-M20-CG FSB25-M25-CG FSB32-M32-CG | IP40 | IP68 (10 bar)+IP69 | 4.5-10mm 7-13mm 9-17mm 11-21mm |
| FSB & LFHUBRD | | Treep | 16 20 25 32 | FSB16-M16-CG FSB20-M20-CG FSB25-M25-CG FSB32-M32-CG | IP65 | IP68 (10 bar)+IP69 | 4.5-10mm 7-13mm 9-17mm 11-21mm |
| LTPBRD | | | 16 20 25 32 | LTPB16-M16-CG LTPB20-M20-CG LTPB25-M25-CG LTPB32-M32-CG | IP66+IP67+ IP68 (5 bar)+IP69 | IP68 (10 bar)+IP69 | 4.5-10mm 7-13mm 9-17mm 11-21mm |
| LPC, LPCG, LPCO, LPCBU | | | 16 20 25 32 | LPC16-M16-CG LPC20-M20-CG LPC25-M25-CG LPC32-M32-CG | IP66+IP67+ IP68 (5 bar)+IP69 | IP68 (10 bar)+IP69 | 4.5-10mm 7-13mm 9-17mm 11-21mm |

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







FTCB Braided sleeving tinned copper braid system

for EMC screening

properties

- EMC Screening 67dB @ 1Mhz for 20mmMinimum 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 -mm ² |
|--------|-------------|-----------------|-----------------|--------------------|--------------------|---------------------------------------|
| 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.



Ordering Notes

Available on request:

- 90° and 45° elbows
- PG threads





- 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





FTCB10, FTCB12, FTCB15 FTCB15, FTCB20, FTCB25 FTCB20, FTCB25, FTCB30 FTCB25, FTCB30, FTCB35

Technical Drawing





Connection Boxes

ROUND BOX - STAINLESS STEEL - HYGIENIC



Diameter (mm)

75

75

Diameter (mm)



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.

NEW

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

Part NumberHeight (mm)2 WayFB0X75X60-M20X2-SS654 WayFB0X75X60-M20X4-SS65





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.

Height (mm)

NEW

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

| | | | 2.00.000 () |
|-------|---------------------|----|-------------|
| 2 Way | FB0X75X60-M20X2-NPB | 65 | 75 |
| 4 Way | FBOX75X60-M20X4-NPB | 65 | 75 |
| | | | |

Part Number

For non-metallic Round Connection Boxes visit our website





| | | 10, 10, | | 1 | |
|-----------------|------------------------------|-------------------------------|----------------------------------|--------------------------|------------------------------------|
| | 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 | |
| oondunts | LPCWFG20 | LTPWFG20 | LTBRDPWFG20 | | |
| TREE | LPCBUFG20 | LTPBUFG20 | LTBRDPBUFG20 | LTPSSBUFG20 | |
| | Part Number | Part Number | Part Number | Part Number | Blanking Plugs (SS) Part Number |
| Fittings | 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 | |



| o | LPC Type See page 80 | | Liquid Tight See pages 98 | | | |
|------------|---|--|--|------------------------|-------------------------|-------------------------------------|
| Conduits | Part Number LPC20B LPC20G LPC200 LPC20GN LPC20BU | LTP20 LTPAS20 LTPHC20 LTPUL20 | Part Number LTPLFH20 LTPPU20 LTPPUAS20 LTPSS20 | LTBRDP20 LTBRDLFH20 | | |
| | Part Number | | Part Number | | Cable Gland Part Number | Blanking Plugs (NPB) Part Number |
| Fittings | LPC20-M20ST-C | I | LTP20-M20ST- | C | B-M20ST-CG | SP-M20-NPB |
| alle barre | See page 81 | | See page 102 | | See page 129 | See page 128 |

For non-metallic Round Connection Boxes visit our website



Accessories

| met | ric lo | cknı | ıts | | PG locknuts nickel plated brass, Zinc, nylon black or grey | | ocknuts NPT TOCKNUTS ickel plated rass, Zinc, ylon black | | stop plug | | |
|---------------------------------------|-------------------------------------|-----------------------------|--------------------------------|----------------------|---|----------------------|---|----------------------|-----------------------|--------------------|--|
| | plated bra ss steel, n | | | ∍y | | | | | nylon metric black | nylon PG (grey) | |
| 0 | 0 | Q | Q | | 0 | | | | | | |
| nickel plated brass part number | nickel plated EMC part number | plated steel part number | stainless steel part number | nylon part number | nickel plated brass part number | nylon part number | zinc part number | nylon part number | metric part number | PG part number | |
| B-M12 | | | | LM12-N# | B-PG7 | PG7-N# | | | SP-M12* | SP-PG7* | |
| B-M16 | | S-M16 | SS-M16 | LM16-N# | B-PG9 | PG9-N# | | | SP-M16 | SP-PG9 | |
| B-M20 | B-M20-EMC | S-M20 | SS-M20 | LM20-N# | B-PG11 | PG11-N# | Z-050 | 050-NB | SP-M20 | SP-PG11 | |
| B-M25 | B-M25-EMC | S-M25 | SS-M25 | LM25-N# | B-PG13 | PG13-N# | Z-075 | 075-NB | SP-M25 | SP-PG13 | |
| B-M32 | B-M32-EMC | S-M32 | SS-M32 | LM32-N# | B-PG16 | PG16-N# | Z-100 | 100-NB | SP-M32 | SP-PG16 | |
| B-M40 B-M50 | B-M40-EMC | S-M40 S-M50 | SS-M40 SS-M50 | LM40-N# LM50-N# | B-PG21 B-PG29 | PG21-N# PG29-N# | Z-125 Z-150 | | SP-M40* | SP-PG21 SP-PG29 | |
| B-M63 | | S-M63 | SS-M63* | LM63-N# | B-PG36 | PG36-N# | Z-130 | | | 01-1 029 | |
| B-M75 | | 0 1100 | 00 1100 | 2 | B-PG42 | PG42-N# | 2 200 | | | | |
| | | | | | B-PG48 | PG48-N# | | | | | |

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 Fibre Metric Neoprene PG Fibre PG Fibre metric thread part number metric thread part number metric thread part number PG thread part number thread t number NPT thread part number PG 1 part SW12 SWPG7 FW12 FWPG7 RSW16 SW16 SWPG9 FW16 FWPG9 RSW20 SW20 SWPG11 FW20 FWPG11 FW050 RSW25 SW25 SWPG13 FW25 FWPG13 FW075 SWPG16 RSW32 SW32 FW32 FWPG16 FW100 FW40 RSW40 SW40 SWPG21 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 |
|------------------------------|------------------------------|
| \bigcirc | 9 |
| metric thread part number | metric thread part number |
| 07944.0 | |
| SPW16 SPW20 | ET-M20 |
| SPW20 SPW25 | ET-M20 |
| SPW32 | L1-11120 |
| | |
| | |
| | |
| | |
| | |
| | |

| fixing | clips | | cond | uit clip | | EC | REC | ; | NEW |
|---|----------------|------------------------------|--------------------------------|------------------------------------|---|--|--|---|--|
| plated stee black pvc li stainless st LFH liner av on request | ner or eel. | | with inte black or | grey | non-metallic, heavy duty conduit clamp Nylon PA66, Nylon conduit fixing clamp for corrugated conduit. | 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 | rubber Thermopl cap used conduit. (size depe cable. Ca secured u (not supp | astic elas to seal e Can be cu nding or n be add using cab | stomer end of ut to size of litionally |
| | | | V | 2 | 0 | are used. | | | H H |
| part number | part number | 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 |
| FCC10 | FCC10-SS* | 10 | FCL10 | | | | REC10 | 10 | 0-7 |
| FCC12 | FCC12-SS | 13 | FCL13 | | | | REC13 | 13 | 0-7 |
| FCC16 | FCC16-SS | 16 | FCL16 | FCL16B-P | FCLAMP- 3-16 | EC16B | REC16 | 16 | 0-11 |
| FCC20 | FCC20-SS | 18 | FCL18 | FCL18B-P | | | | | |
| FCC25 | FCC25-SS | 20 | FCL20 | FCL20B-P | | | | | |
| FCC32 | FCC32-SS | 21 | FCL21 | FCL21B-P | FCLAMP- 3-21 | EC21B | REC21 | 21 | 0-15 |
| FCC40 | FCC40-SS | 25 | FCL25 | FCL25B-P | | | | | |
| FCC50 | FCC50-SS | 28 | FCL28 | | FCLAMP- 4-28 | EC28B | REC28 | 28 | 0-21 |
| FCC63 | FCC63-SS* | 32 | FCL32 | | | | | | |
| FCC75 | | 34 | FCL34 | FCL33B-P | FCLAMP- 5-34 | EC34B | REC34 | 34 | 0-25 |
| FCC80 | | 42 | FCL42 | | FCLAMP- 6-42 | EC42B | REC42 | 42 | 0-34 |
| FCC106 | | 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 |

cable glands

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



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



| 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: Nickel plated brass

NEW

- 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

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

Accessories

90° elbow

internal and external threaded nickel plated brass 90° elbow

| 1.00 | threads |
|--|---------|
| | PG7 |
| | M16 |
| and the particular of the part | M20 |
| | M25 |
| | M32 |
| | M40 |
| | MEO |

| 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 |
|----------|---------|---------------------------|
| Δ | M16 | B-M16-C |
| 1 | M20 | B-M20-C |
| | M25 | B-M25-C |
| 9 | 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



| | d nal | d d | | | | | | |
|-----------------|--------------------|--------------------|------------|------------|------------|------------|------------|-----------|
| | external thread | internal thread | M16 | M20 | M25 | M32 | M40 | M50 |
| | M16 | | | B-M16-M20 | | | | |
| | M20 | | B-M20-M16 | | B-M20-M25 | | | |
| Metric - Metric | M25 | | | B-M25-M20 | | B-M25-M32 | | |
| D | M32 | | | B-M32-M20 | B-M32-M25 | | B-M32-M40 | |
| letri | M40 | | | | | B-M40-M32 | | |
| 2 | M50 | | | | | B-M50-M32 | B-M50-M40 | |
| | M63 | | | | | | B-M63-M40 | B-M63-M50 |
| | 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 | | | | |
| PG - Metric | PG16 | | B-PG16-M16 | B-PG16-M20 | B-PG16-M25 | | | |
| 5 | PG21 | | | B-PG21-M20 | B-PG21-M25 | B-PG21-M32 | | |
| P | 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 | |
| ji. | 3/8" NPT | | B-038-M16 | | | | | |
| NPT - Metric | 1⁄2" NPT | | | B-050-M20 | | | | |
| ÷ | 3⁄4" NPT | | | B-075-M20 | B-075-M25 | | | |
| NF | 1" NPT | | | | | B-100-M32 | | |

PG Internal Threads

| | external thread | internal thread | PG7 | PG9 | PG11 | PG13.5 | PG16 | PG21 | PG29 | PG36 |
|----------|--------------------|--------------------|------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | M16 | | B-M16-PG7 | B-M16-PG9 | B-M16-PG11 | | | | | |
| PG | M20 | | B-M20-PG7 | B-M20-PG9 | B-M20-PG11 | B-M20-PG13 | B-M20-PG16 | B-M20-PG21 | | |
| | M25 | | | | | | | B-M25-PG21 | | |
| Metric - | M32 | | | | | | | B-M32-PG21 | | |
| Σ | M40 | | | | | | | | B-M40-PG29 | |
| | M50 | | | | | | | | | B-M50-PG36 |
| | PG7 | | | B-PG7-PG9 | | | | | | |
| | PG9 | | B-PG9-PG7 | | B-PG9-PG11 | | | | | |
| | PG11 | | B-PG11-PG7 | B-PG11-PG9 | | B-PG11-PG13 | | | | |
| | PG13.5 | | | B-PG13-PG9 | B-PG13-PG11 | | B-PG13-PG16 | | | |
| - PG | PG16 | | | B-PG16-PG9 | B-PG16-PG11 | B-PG16-PG13 | | B-PG16-PG21 | | |
| - 9d | 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.

fine tooth (32 TPI) blade for standard

hacksaw blade

hacksaw.

Part Number

HACKSAWBLADE

slitting tool

clamp

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



Part Number
BSB clamp

conduit cutter

for any non metallic flexible and rigid conduits.



Part Number CC01 up to 34mm conduits CC02 up to 67mm conduits can be used to slit all corrugated conduits down to 13mm.

Part Number
CS01 slitting tool

bandsaw

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



Part Number
BANDSAW
BANDSAWBLADE (spare blades)

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)





www.flexicon.uk.com

| TEEL /c coating - B | lack | | |
|-------------------------------|--------------------------|--|---|
| U-CP20B M | 20 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 | ARD ARD | |
| | M20 thread M25 thread | 10 metres of standard weight nylon PA6 FPAS21 or FPAS25 Low fire hazard Halogen free Self extinguishing Low smoke and Low toxicity High flexibility and fatigue life High impact strength Oil and solvent resistant UV resistant | Temperature range -40°C to +120°C 10 FPA fittings and locknuts FPA21-M20B or FPA25-M25B One part, fast fit Removable using a screwdriver High pull-off strength Anti-vibration IP66 UV resistant |
| PVC SPIF | RAL IP65 | | |
| | M20 thread M25 thread | 10 metres of spiral reinforced pvc FPC20 or FPC25 Highly flexible Accepts torsional movement Self extinguishing UV resistant Temperature range -5°C to +70°C | 10 MPC fittings and locknuts IP65 UV resistant Smooth bore |
| NYLON Black | IP66 | | |
| | A20 thread A25 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 |
| POLYPRC Black or Grey | | | |
| | A20 thread A25 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 |
| Standarc | ls | Don't forget | 00 |
| € <u>Ro</u> H | S & REACh | See page 76 | 0110 |

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 | 1 | 1 | 1 | L | 1 | X | ~ | 1 | X | 1 | L | × | 1 | 1 | 1 | 1 | ~ | 1 | 1 | × | × |
| 44 | FPAL | nylon PA6 corrugated, light weight | 1 | 1 | 1 | L | 1 | × | 1 | 1 | × | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | × | × |
| 44 | FPAH | nylon LFH PA6 corrugated, heavy weight | 1 | 1 | 1 | L | 1 | × | 1 | 1 | X | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | × | × |
| 44 | FPASC | nylon LFH PA6 corrugated, std weight | 1 | 1 | 1 | L | 1 | × | 1 | 1 | × | 1 | L | × | 1 | 1 | 1 | ~ | 1 | 1 | 1 | × | × |
| 45 | FPR | nylon extra LFH PA6 corrugated, std weight | 1 | 1 | 1 | L | 1 | × | 1 | 1 | × | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | × | × |
| 45 | FPADS | nylon PA6 double slit corrugated | 1 | 1 | 1 | L | 1 | × | 1 | 1 | × | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | × | × |
| 45 | FPI | nylon PA12 corrugated, standard weight | 1 | 1 | 1 | L | 1 | L | 1 | 1 | × | 1 | L | × | 1 | L | L | 1 | L | 1 | 1 | × | × |
| 45 | FPIH | nylon PA12 corrugated, heavy weight | 1 | 1 | 1 | L | 1 | L | 1 | 1 | × | 1 | L | × | 1 | L | L | 1 | L | 1 | 1 | × | × |
| 45 | FPIHR | nylon PA12 corrugated, heavy weight | 1 | 1 | 1 | L | 1 | L | 1 | 1 | X | 1 | L | × | 1 | L | L | 1 | L | 1 | 1 | × | × |
| 46 | FPP | polypropylene corrugated, std weight | 1 | 1 | L | PP | 1 | L | L | L | L | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | PP | PP |
| 46 | FPP-NFR | polypropylene corrugated non flame retarded | 1 | 1 | L | PP | 1 | L | L | L | L | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | PP | PP |
| 46 | FPP-H | polypropylene corrugated heavy weight | 1 | 1 | L | PP | 1 | L | L | L | L | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | PP | PP |
| 70 | FPL | upvc corrugated | 1 | 1 | 1 | L | × | L | × | L | X | 1 | L | × | 1 | L | 1 | 1 | L | 1 | L | × | × |
| 72 | FPY | nylon PA6 corrugated | 1 | 1 | 1 | L | 1 | × | 1 | 1 | × | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | × | × |
| 72 | FPYS | slit nylon PA6 corrugated, std weight | 1 | 1 | 1 | L | 1 | × | 1 | 1 | × | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | × | × |
| 72 | FPYL | nylon PA6 corrugated, light weight | 1 | 1 | 1 | L | 1 | × | 1 | 1 | × | 1 | L | × | 1 | 1 | 1 | ~ | 1 | 1 | 1 | × | × |
| 72 | FPYLS | slit nylon PA6 corrugated, light weight | 1 | 1 | 1 | L | 1 | × | 1 | 1 | × | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | × | × |
| 78 | FPCB | pvc spiral reinforced black | × | × | × | L | × | L | × | L | X | 1 | L | × | L | L | × | L | L | L | L | × | × |
| 78 | FPCG | pvc spiral reinforced grey | × | × | × | L | × | L | × | L | × | 1 | L | × | L | L | × | L | L | L | L | × | × |
| 78 | FPCGN | pvc spiral reinforced green oil resistant | 1 | ~ | 1 | 1 | × | × | × | L | × | ~ | 1 | L | 1 | L | × | L | L | L | L | L | × |
| 78 | FPCBU | pvc spiral reinforced blue high temperature | × | × | × | L | × | L | × | L | × | 1 | L | × | L | L | × | L | L | L | L | × | × |
| 80 | LPCB | smooth, pvc spiral reinforced | 1 | 1 | 1 | 1 | × | × | × | L | × | 1 | 1 | L | 1 | L | × | L | L | L | L | L | × |
| 80 | LPCO | smooth pvc spiral orange ultra flexible | 1 | 1 | 1 | 1 | × | × | × | L | × | 1 | 1 | L | 1 | L | × | L | L | L | L | L | × |
| 80 | LPCBU | smooth pvc spiral blue high temperature | 1 | 1 | 1 | 1 | × | × | × | L | × | 1 | 1 | L | 1 | L | × | L | L | L | L | L | × |
| 80 | LPCGN | smooth pvc spiral green oil resistant | 1 | 1 | 1 | 1 | × | × | × | L | × | 1 | 1 | L | 1 | L | × | L | L | L | L | L | × |
| 84 | LPC-FG | smooth, pvc spiral reinforced | ~ | 1 | 1 | 1 | × | × | × | L | × | 1 | 1 | L | 1 | L | × | L | L | L | L | L | × |
| | key | | l resis ed res | | | | | | uitab uitab | | | | | | | | Х | poor | resist | ance | | | |

Non-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 | |
|-------------------------|-------------------------|-------------|-----------------|----------|----------------|-----|-------------------|-------------------|-------------|-------------|--------------|--------|--------|-----------|----------------|---------|-----------------|------------------------|------------------------|-----------------------|----------------------|---------|-----------------|-----------------------|-------------------|------------|---------------|---------------|-------|--------------|---------------|---------|
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | × | × | 1 | 1 | 1 | L | 1 | 1 | L | 1 | 1 | × | FPAS |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | × | × | 1 | 1 | 1 | L | 1 | 1 | L | 1 | 1 | × | FPAL |
| × | × | L | ✓ | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | × | × | 1 | 1 | 1 | L | 1 | 1 | L | 1 | 1 | × | FPAH |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | × | × | 1 | 1 | 1 | L | 1 | 1 | L | 1 | 1 | × | FPASC |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | × | × | 1 | 1 | 1 | L | 1 | 1 | L | 1 | 1 | × | FPR |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | × | × | 1 | 1 | 1 | L | 1 | 1 | L | 1 | 1 | × | FPADS |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | L | × | × | 1 | 1 | 1 | × | 1 | 1 | L | 1 | 1 | × | FPI |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | L | × | × | 1 | 1 | 1 | × | 1 | 1 | L | 1 | 1 | × | FPIH |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | L | × | × | 1 | 1 | 1 | × | 1 | 1 | L | 1 | 1 | × | FPIHR |
| × | × | PP | ✓ | L | × | 1 | PP | PP | PP | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | PP | PP | 1 | 1 | L | L | × | ✓ | L | 1 | 1 | × | FPP |
| × | × | PP | 1 | L | × | 1 | PP | PP | PP | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | PP | PP | 1 | 1 | L | L | × | 1 | L | 1 | 1 | × | FPP-NFR |
| × | × | PP | 1 | L | × | 1 | PP | PP | PP | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | PP | PP | 1 | 1 | L | L | × | 1 | L | 1 | 1 | × | FPP-H |
| × | × | L | 1 | L | × | × | × | × | L | × | 1 | 1 | × | 1 | 1 | × | 1 | 1 | 1 | × | × | × | 1 | × | × | 1 | 1 | × | 1 | 1 | × | FPL |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | × | × | 1 | 1 | 1 | L | 1 | 1 | L | 1 | 1 | × | FPY |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | × | × | 1 | 1 | 1 | L | 1 | 1 | L | 1 | 1 | × | FPYS |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | × | × | 1 | 1 | 1 | L | 1 | 1 | L | 1 | 1 | × | FPYL |
| × | × | L | 1 | L | × | 1 | × | × | L | × | 1 | 1 | × | 1 | 1 | 1 | 1 | 1 | 1 | × | × | 1 | 1 | 1 | L | 1 | 1 | L | 1 | 1 | × | FPYLS |
| L | × | L | L | × | × | × | × | × | L | × | L | × | × | 1 | 1 | × | 1 | 1 | L | × | × | × | L | × | L | L | L | × | 1 | L | × | FPCB |
| L | × | L | L | × | × | × | × | × | L | × | L | × | × | 1 | 1 | × | 1 | 1 | L | × | × | × | L | × | L | L | L | × | 1 | L | × | FPCG |
| L | × | L | 1 | × | × | × | L | × | 1 | L | 1 | 1 | L | 1 | 1 | × | 1 | 1 | 1 | × | × | × | L | × | L | L | 1 | × | 1 | L | × | FPCGN |
| L | × | L | L | × | × | × | × | × | L | × | L | × | × | 1 | 1 | × | 1 | 1 | L | × | × | × | L | × | L | L | L | × | 1 | L | × | FPCBU |
| L | × | L | 1 | × | × | × | L | × | 1 | L | 1 | 1 | L | 1 | 1 | × | 1 | 1 | 1 | × | SS | × | L | × | L | L | 1 | × | 1 | L | × | LPCB |
| L | × | L | 1 | × | × | × | L | × | 1 | L | 1 | 1 | L | 1 | 1 | × | 1 | 1 | 1 | × | SS | × | L | × | L | L | 1 | × | 1 | L | × | LPCO |
| L | × | L | 1 | × | × | × | L | × | 1 | L | 1 | 1 | L | 1 | 1 | × | 1 | 1 | 1 | × | SS | × | L | × | L | L | 1 | × | 1 | L | × | LPCBU |
| L | × | L | ~ | × | × | × | L | × | ~ | L | ~ | 1 | L | 1 | 1 | × | 1 | 1 | 1 | × | SS | × | L | × | L | L | 1 | × | 1 | L | × | LPCGN |
| L | × | L | 1 | × | × | × | L | × | 1 | L | 1 | 1 | L | 1 | 1 | × | 1 | 1 | ~ | × | SS | × | L | × | L | L | 1 | × | 1 | L | × | 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.

Technical Data - Resistance to Chemicals

| Page number | Conduit S | 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 | 1 | 1 | 1 | X | 1 | Х | 1 | 1 | 1 | 1 | 1 | 1 | ✓ | ✓ | ✓ | ✓ | 1 | X | X | X | × |
| 92 | SSU | stainless steel, grade 316 | 1 | 1 | 1 | 1 | 1 | Х | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | Х | × |
| 94 | FSU | galvanised steel, pvc coated | Х | Х | Х | L | Х | Х | Х | X | Х | 1 | 1 | L | L | X | Х | Х | Х | L | L | 1 | × |
| 94 | FNU | galvanised steel, nylon coated | 1 | 1 | 1 | L | 1 | Х | L | 1 | Х | 1 | L | Х | 1 | 1 | 1 | 1 | 1 | 1 | 1 | Х | × |
| 96 | LFHU | galvanised steel, LFH coated | L | L | L | 1 | Х | Х | Х | X | Х | 1 | 1 | Х | Х | 1 | Х | Х | Х | 1 | Х | X | × |
| 96 | FPU | galvanised steel, polyurethane coated | 1 | 1 | 1 | Х | L | L | L | L | Х | 1 | 1 | Х | 1 | L | 1 | L | Х | 1 | Х | Х | × |
| 98 | LTP | galv steel, pvc coated, liquid tight | L | L | L | 1 | Х | Х | Х | L | Х | 1 | 1 | L | L | L | Х | L | L | L | L | L | × |
| 98 | LTPAS | galv steel, pvc coated, liquid tight | L | L | L | 1 | Х | Х | Х | L | Х | 1 | 1 | L | L | L | Х | L | L | L | L | L | × |
| 98 | LTPHC | galv steel, thermoplastic rubber, liquid tight | 1 | L | L | 1 | 1 | Х | Х | L | L | 1 | 1 | 1 | 1 | 1 | 1 | 1 | L | 1 | Х | 1 | 1 |
| 98 | LTPLFH | galv steel, LFH coated, liquid tight | 1 | 1 | 1 | 1 | Х | Х | Х | L | Х | 1 | 1 | L | L | L | Х | L | L | L | L | L | × |
| 99 | LTPUL | galv steel, PVC coated, liquid tight | 1 | 1 | 1 | 1 | Х | Х | Х | L | Х | 1 | 1 | L | L | L | Х | L | L | L | L | L | × |
| 99 | LTPPU | galv steel, polyurethane coated, liquid tight | 1 | 1 | 1 | Х | L | L | L | L | Х | 1 | 1 | Х | 1 | L | 1 | L | Х | 1 | Х | Х | × |
| 99 | LTPPUAS | galv steel, polyurethane coated, liquid tight | 1 | 1 | 1 | Х | L | L | L | L | Х | 1 | 1 | Х | 1 | L | 1 | L | Х | 1 | Х | Х | × |
| 99 | LTPSS | stainless steel, pvc coated, liquid tight | 1 | 1 | 1 | 1 | Х | Х | Х | L | Х | 1 | 1 | L | L | L | Х | L | L | L | L | L | × |
| 100 | LTBRDP | galv steel, braided core, pvc coated, liquid tight | 1 | 1 | 1 | 1 | Х | Х | Х | L | Х | 1 | 1 | L | L | L | Х | L | L | L | L | L | × |
| 100 | LTBRDLFH | galv steel, braided core, LFH coated, liquid tight | L | L | L | 1 | Х | Х | Х | Х | Х | 1 | 1 | Х | L | 1 | Х | Х | Х | 1 | Х | Х | × |
| 110 | LTPBRD | galv steel, rubber coat- ed, SS316 overbraid | 1 | L | L | 1 | 1 | Х | Х | L | L | 1 | 1 | 1 | 1 | 1 | 1 | 1 | L | 1 | Х | 1 | 1 |
| 112 | LTP-FG | galv steel, pvc coated, liquid tight | L | L | L | 1 | Х | Х | Х | L | Х | 1 | 1 | L | L | L | Х | L | L | L | L | L | × |
| 112 | LTBRDP-FG | galv steel, pvc coated, liquid tight | L | L | L | 1 | Х | Х | Х | L | Х | 1 | 1 | L | L | L | Х | L | L | L | L | L | × |
| 112 | LTPSS-FG | stainless steel, pvc coated, liquid tight | 1 | 1 | 1 | 1 | Х | Х | Х | L | Х | 1 | 1 | L | 1 | L | Х | L | L | L | L | L | × |
| 114 | FL | galvanised steel, pliable | 1 | 1 | 1 | Х | 1 | Х | 1 | ✓ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | Х | Х | Х | × |
| 115 | FLP | galvanised steel, pvc coated, pliable | Х | Х | Х | L | Х | Х | Х | L | Х | 1 | 1 | L | L | L | Х | L | L | L | L | 1 | L |
| 116 | LFHP | galvanised steel, LFH coated, pliable | L | L | L | 1 | Х | Х | Х | Х | Х | 1 | 1 | Х | Х | 1 | Х | Х | Х | 1 | Х | Х | × |
| 116 | FB | galvanised steel, galv steel overbraid | 1 | 1 | 1 | Х | 1 | Х | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | Х | Х | Х | × |
| 118 | FUSSB | galvanised steel, SS316 overbraid | 1 | 1 | 1 | Х | 1 | Х | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | Х | Х | Х | × |
| 118 | FSB | galv steel, pvc, galv steel overbraid | Х | Х | Х | L | Х | Х | Х | Х | Х | 1 | 1 | L | L | Х | Х | Х | Х | L | L | 1 | × |
| 120 | LFHUBRD | galv steel, LFH coated, SS316 overbraid | L | L | L | 1 | Х | Х | Х | X | Х | 1 | 1 | Х | Х | 1 | Х | Х | Х | 1 | Х | Х | × |
| 120 | FSS | stainless steel corrugated | 1 | 1 | 1 | 1 | 1 | Х | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | Х | × |
| 122 | FSSBRD | stainless steel corrugated, overbraid | 1 | 1 | 1 | 1 | 1 | Х | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | Х | × |
| 122 | FPRSS | PA6 corrugated, SS316 overbraid | 1 | 1 | 1 | L | 1 | Х | 1 | 1 | Х | 1 | L | Х | 1 | 1 | 1 | 1 | 1 | 1 | 1 | Х | × |
| 122 | FPRTC | PA6 corrugated, tinned copper overbraid | 1 | 1 | 1 | L | 1 | Х | 1 | ✓ | Х | 1 | L | Х | 1 | 1 | 1 | 1 | 1 | Х | Х | Х | × |
| 122 | FPISS | PA12 corrugated, SS316 overbraid | 1 | 1 | 1 | L | 1 | L | 1 | 1 | Х | 1 | L | × | 1 | L | L | 1 | L | 1 | 1 | × | × |
| 122 | FPIHSS | PA12 corrugated, SS316 overbraid | 1 | 1 | 1 | L | 1 | L | 1 | 1 | Х | 1 | L | × | 1 | L | L | 1 | L | 1 | 1 | × | × |
| 122 | FPIHRSS | PA12 corrugated, SS316 overbraid | 1 | 1 | 1 | L | 1 | L | 1 | 1 | Х | 1 | L | × | 1 | L | L | 1 | L | 1 | 1 | × | × |
| | key | | resista d resis | | | | | | uitable uitable | | | | | | | | Х | 000r r | esista | nce | | | |

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%) | CID | ING OIL | ٦٢ | BROMIDE | | (10%) (10%) | (%09) OK | CID | AS) | OIL | | | e. | TRATE | | SODIUM CHLORIDE | SODIUM HYDROXIDE (10%) | SODIUM HYDROXIDE (60%) | SULPHUR DIOXIDE (GAS) | SULPHURIC ACID (10%) | | TRANSFORMER OIL | 1,1,1-TRICHLOROETHANE | TRICHLOROETHYLENE | NE | E OIL | ETATE | | IRIT | JRIDE | |
|-------------------------|-------------------------|-------------|-----------------|----------|----------------|-----|-------------------|-------------------|-------------|-------------|--------------|--------|--------|-----------|----------------|---------|-----------------|------------------------|------------------------|-----------------------|----------------------|---------|-----------------|-----------------------|-------------------|------------|---------------|---------------|-------|--------------|---------------|-----------|
| HYDROGE | HYDROGE | 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 (| SODIUM | SODIUM | SULPHUR | SULPHUR | TOLUENE | TRANSFO | 1,1,1-TRI | TRICHLOF | TURPENTINE | VEGETABLE OIL | VINYL ACETATE | WATER | WHITE SPIRIT | ZINC CHLORIDE | |
| × | × | × | ✓ | 1 | ✓ | 1 | × | Х | × | × | 1 | 1 | 1 | × | × | 1 | × | × | × | × | × | 1 | ✓ | × | × | ✓ | ✓ | × | × | 1 | × | FU |
| ✓ | ✓ | ✓ | ✓ | 1 | ✓ | 1 | × | Х | 1 | 1 | ✓ | 1 | 1 | SS | ✓ | 1 | SS | 1 | L | × | 1 | 1 | ✓ | 1 | ✓ | 1 | ✓ | 1 | ✓ | 1 | ✓ | SSU |
| 1 | 1 | L | L | × | × | × | ✓ | 1 | × | L | L | × | X | × | ✓ | × | × | 1 | L | × | × | × | L | × | × | L | L | × | 1 | L | 1 | FSU |
| × | × | L | 1 | L | × | 1 | × | Х | L | × | 1 | 1 | Х | × | 1 | 1 | × | 1 | 1 | Х | × | 1 | 1 | 1 | L | 1 | ✓ | L | ✓ | 1 | × | FNU |
| × | × | ✓ | L | × | × | × | ✓ | Х | 1 | 1 | × | × | Х | Х | 1 | × | 1 | 1 | 1 | Х | × | L | L | L | L | × | L | × | ✓ | × | 1 | LFHU |
| L | × | L | L | L | × | L | × | Х | L | L | L | 1 | Х | × | L | × | 1 | L | × | L | L | × | L | × | × | × | 1 | × | 1 | L | L | FPU |
| L | × | L | 1 | × | Х | L | L | Х | 1 | L | × | L | L | SS | 1 | × | SS | 1 | 1 | × | SS | × | L | × | × | L | 1 | × | 1 | L | × | LTP |
| L | × | L | 1 | × | Х | L | L | Х | 1 | L | × | L | L | SS | 1 | × | SS | 1 | 1 | × | SS | × | L | × | × | L | 1 | × | 1 | L | × | LTPAS |
| L | × | L | L | 1 | L | 1 | 1 | 1 | 1 | L | 1 | 1 | 1 | SS | 1 | 1 | SS | 1 | × | 1 | SS | × | × | L | × | × | 1 | 1 | 1 | Х | 1 | LTPHC |
| L | × | L | L | × | Х | × | L | Х | 1 | L | L | L | L | SS | 1 | × | SS | 1 | 1 | Х | SS | × | L | × | × | L | L | × | 1 | L | × | LTPLFH |
| L | × | L | 1 | × | Х | × | L | Х | 1 | L | 1 | L | L | SS | 1 | × | SS | 1 | 1 | × | SS | × | L | × | × | L | 1 | × | 1 | L | × | LTPUL |
| L | × | L | L | L | Х | L | × | Х | L | L | L | 1 | Х | SS | L | × | 1 | L | × | L | L | × | L | × | × | × | ✓ | × | ✓ | L | L | LTPPU |
| L | × | L | L | L | Х | L | × | Х | L | L | L | 1 | Х | SS | L | × | 1 | L | × | L | L | × | L | × | × | × | 1 | × | ✓ | L | L | LTPPUAS |
| L | × | L | 1 | × | X | Х | L | Х | 1 | L | 1 | L | L | SS | 1 | × | SS | 1 | 1 | Х | SS | × | L | × | × | L | 1 | × | ✓ | L | × | LTPSS |
| L | × | L | 1 | × | X | L | L | Х | 1 | L | 1 | L | L | SS | 1 | × | SS | 1 | 1 | Х | SS | × | L | × | × | L | 1 | × | ✓ | L | × | LTBRDP |
| × | × | 1 | L | × | × | × | 1 | Х | 1 | 1 | × | L | Х | SS | 1 | × | ✓ | 1 | 1 | Х | X | L | L | L | L | × | L | × | 1 | × | 1 | LTBRDLFH |
| L | × | L | L | 1 | L | 1 | 1 | 1 | 1 | L | 1 | 1 | 1 | L | 1 | 1 | SS | 1 | Х | 1 | SS | × | × | L | × | × | 1 | 1 | 1 | Х | ✓ | LTPBRD |
| L | × | L | 1 | × | Х | L | L | Х | 1 | L | × | L | L | SS | 1 | × | SS | 1 | 1 | Х | SS | × | L | × | × | L | 1 | × | 1 | L | × | LTP-FG |
| L | × | L | 1 | Х | Х | L | L | Х | 1 | L | × | L | L | SS | 1 | × | SS | 1 | 1 | Х | SS | × | L | Х | × | L | 1 | × | 1 | L | × | LTBRDP-FG |
| L | × | L | 1 | × | Х | × | L | Х | 1 | L | 1 | 1 | L | SS | 1 | × | SS | 1 | 1 | Х | SS | × | L | × | × | L | 1 | × | 1 | L | × | LTPSS-FG |
| × | × | × | 1 | 1 | 1 | 1 | × | Х | × | × | 1 | 1 | 1 | Х | X | 1 | Х | × | × | Х | X | 1 | 1 | × | × | 1 | 1 | × | Х | 1 | × | FL |
| 1 | 1 | L | L | × | Х | Х | 1 | 1 | L | L | L | × | L | L | 1 | × | L | 1 | L | Х | Х | × | L | × | × | L | L | × | 1 | L | 1 | FLP |
| × | × | 1 | L | × | Х | × | 1 | Х | 1 | 1 | X | Х | Х | L | 1 | × | 1 | 1 | 1 | Х | Х | L | L | L | L | × | L | × | ✓ | Х | 1 | LFHP |
| × | × | × | 1 | 1 | 1 | 1 | × | Х | × | Х | 1 | 1 | 1 | Х | × | 1 | × | × | Х | Х | × | 1 | 1 | × | × | 1 | 1 | × | × | 1 | × | FB |
| × | × | × | 1 | 1 | 1 | 1 | × | Х | × | Х | 1 | 1 | 1 | Х | Х | 1 | Х | × | × | Х | Х | 1 | 1 | × | × | 1 | 1 | × | Х | 1 | × | FUSSB |
| × | × | × | L | × | Х | Х | × | Х | × | Х | L | Х | × | Х | × | × | × | Х | Х | Х | × | × | L | × | × | L | L | × | × | L | × | FSB |
| × | × | 1 | L | × | Х | × | 1 | Х | 1 | 1 | X | × | Х | Х | 1 | × | 1 | 1 | 1 | Х | Х | L | L | L | L | × | L | × | 1 | Х | 1 | LFHUBRD |
| 1 | ✓ | 1 | 1 | 1 | 1 | 1 | × | Х | 1 | 1 | 1 | 1 | 1 | SS | 1 | 1 | SS | 1 | L | × | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ✓ | FSS |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | X | Х | 1 | 1 | 1 | 1 | 1 | SS | 1 | 1 | SS | 1 | L | Х | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | FSSBRD |
| × | × | L | 1 | L | Х | 1 | Х | Х | L | Х | 1 | 1 | Х | L | 1 | 1 | 1 | 1 | 1 | Х | Х | 1 | 1 | 1 | L | 1 | 1 | L | 1 | 1 | × | FPRSS |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | FPRTC |
| × | × | L | 1 | L | Х | 1 | Х | Х | L | Х | 1 | 1 | Х | L | 1 | 1 | 1 | 1 | L | Х | Х | 1 | 1 | 1 | X | 1 | 1 | L | 1 | 1 | × | FPISS |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | FPIHSS |
| X | Х | L | 1 | L | Х | 1 | X | Х | L | Х | 1 | 1 | Х | L | 1 | 1 | 1 | 1 | L | Х | Х | 1 | 1 | 1 | × | 1 | 1 | L | 1 | 1 | Х | 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.

Technical Data

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 |
|----------------------|---|-------------|
| 36" | 17.4 | 1.14 |
| ½" | 21.5 | 1.81 |
| 3⁄4" | 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 |
|-------------------------|---------------------------------------|--------------------------------------|-------------|
| 1/2" | 21.0 | 18.6 | 1.81 |
| 3/11 | 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 |
|--|---|---------------------------------------|--------------------------------------|-------------|
| %" - 24 UNEF | 5/8 | 15.9 | 14.7 | 1.06 |
| ¾" - 20 UNEF | 3/4" | 19.1 | 17.7 | 1.27 |
| %" - 20 UNEF | 7∕8 [™] | 22.2 | 20.9 | 1.27 |
| 1" - 20 UNEF | 1" | 25.4 | 24.0 | 1.27 |
| 1¾6" - 18 UNEF | 1 ³ / ₁₆ " | 30.2 | 28.6 | 1.41 |
| 1¼" - 18 UNEF | 1¼" | 31.8 | 30.2 | 1.41 |
| 1%" - 18 UNEF | 1%" | 34.9 | 33.4 | 1.41 |
| 1 ⁷ / ₁₆ " - 18 UNEF | 11%6" | 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 4.0mm² cables?

The total cross sectional area of the conductors is 5 x 14.5mm² = 73mm²

[®] The cross sectional area of LTP20 is 3.142 x $[inside diameter]^{i} = 201 mm^{i}$

% of conduit cross sectional area 73 = 36%

201

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 |
|-----|----------|---|--|
| 24 | 4 | 0 | No protection |
| 6 | 16 | 1 | Protected against objects greater than 50mm |
| - 4 | ē0 | 2 | Protected against objects greater than 12mm |
| | - | 3 | Protected against objects greater than 2.5mm |
| | | 4 | Protected against objects greater than 1.0mm |
| が知識 | Ŵ | 5 | Ingress of dust is not totally prevented but dust does not enter in harmful quantities |
| T | 1 | 6 | No ingress of dust |

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.

4th digit Maximum Temp deg C

60

90

105

120

150

250

400

3rd digit Minimum Temp deg

5

-5

-15

-25

-45

Cable glands are manufactured to EN 50262.

Strength

2nd digi Impact S digit

V. Light (0.5)

Medium (2)

Heavy (6)

Light (1)

-evel

0

1

2

3

4

5

6

7

V. Light (125)

Medium (750)

Heavy (1250)

V. Heavy (4000) V. Heavy (20)

Light (320)

Joules at min temp

Classification of conduit systems to BS EN IEC 61386

5th digit Conduit Type

Rigid

Pliable

Flexible

7th digit P Rating Solids

3

4

5

6

0

1

2

4

5

6

7

None declared

Low in & out

High in & out

Medium in & out

3 Medium in & high out

들을

None declared

Continuous

Insulating

Pliable self recoving Continuous + Insulating

| 0 | 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) |
| | 0 1 2 3 4 5 6 7 |

Steam clean, high pressure high temp jet wash 9

- Compression strength
- Tensile strength
- · Impact strength
- Temperature range
- Flexibility
- Electrical insulation or continuity
- IP rating
- · Chemical resistance

None declared

Light (250)

Medium (500)

Heavy (1000)

V. Heavy (2500)

- Corrosion resistance
- Abrasion resistance UV resistance
- Anti vibration

EMC screening

Dimensions

· Weight

- Fire performance
- Fatigue life

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V. Light (100) Non Flame Propagating V. Light (20)

Flame Propagating

Light (30)

Medium (150)

V. Heavy (850)

Heavy (450)

Technical Data - Installation Instructions

Cutting Conduit



Non-metallic conduits to 34mm can be easily cut with Flexicon Conduit Cutters, part no. CC01. Use CC02 for sizes up to 67mm. Drop the blade into a corrugation and squeeze and twist until conduit is cut 50% through. Cut the remaining 50% without twisting to achieve a square cut.



Metallic conduits should be cut with a fine tooth (32 TPI) hacksaw or bandsaw. Ensure you make a straight vertical cut. Our clamping vice, part no. BSB makes the use of a hacksaw much easier.

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 $^{\otimes}$, 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.



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.



Metallic Fittings



Our fitting's components are supplied part assembled to illustrate how they go together. Our C type fittings consist of a compression nut, an elastomeric seal, an insert and a body.

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







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.

Technical Data

Conduit Mounting Options

Conduit Clips and Mounting Channel

Clip Mounting





Clips can be secured using the fixing hole in the base of the clip.

in from the end of the channel. The FCL clips have been designed to easily fit within the channel.

Clips can be located by sliding into the end

of the channel. To install, slide the FCL clip

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 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.



alternatively from the end of the rail if accessible.

security when tightening.

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

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

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

Spacer / Cable Tie

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



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.

F-Clamp KIT Installation



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.

Step by Step Guide - F-Clamp Kit



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.

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.

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



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Technical Data

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 \pm 5) % relative humidity; or $10^{11}\Omega$ measured at (30 \pm 5) % relative humidity.
Flexicon EXD Conduit Gland

Installation Guide & Instructions Technical data and specification.

5. Conduit Insert

6. Conduit Seal

7. Compression Nut

Conduit Gland Components

- 1. Gland Body
- 2. RSW Washer
- 3. Compound Tube
- **4.** Cap













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 $+85^{\circ}$ 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.



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.
- 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 fitting is only suitable for fixed installations. Ensure the conduit is effectively clamped to prevent twisting and pulling.



Technical Data - Testing & Approvals

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.





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.

Testing & Approvals

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
- ဂျ
- 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

- 泛巌
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- ***
- *****
- Anti-static testing

EMC screening performance

• 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.

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

Fire Performance

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.

Technical Data

Standards and Approvals

CF

RoHS

REACH

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

requirements of the relevant European Directives.

BS EN IEC 61386 is the worldwide standard for conduit systems providing standardised tests and classifications of system performance.

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.

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.

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

Flexicon are marked with the CE mark to show that they comply with the essential

CE

BS EN IEC 61386

<u>RoHS</u>











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.









EHE





FD

EU Regulation 10/2011

EN 1672-2 EN ISO 14159

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)

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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| LTP40B-25M98LTP40-E100LTP40-M40-C102LTP40-M40-C45103LTP40-M40-C90103LTP40-M40-CSS105LTP40-M40-CSS105LTP40-M40-CUL104LTP40-M40-CUL45104LTP40-M40-CUL90104LTP40-M40-CUL90106LTP40-M40-EXD-45107LTP40-M40-EXD-90107LTP40-M40-EXD-90107LTP40-M40-EXD-90108LTP40-M40-EXE108LTP40-M40-SE102LTP40-M40-SE102LTP40-M40-SE102LTP40-M40-SE102LTP40-M40-SE102LTP40-M40-SF102LTP40-M40-SF102LTP40-M40-SF102LTP50-150-EXD106LTP50-150-EXD106LTP50-150-EXD106LTP50-150-EXD106LTP50-M50-C45103LTP50-M50-C45103LTP50-M50-C45103LTP50-M50-C45103LTP50-M50-C45103LTP50-M50-C45107LTP50-M50-C45107LTP50-M50-C45107LTP50-M50-C45107LTP50-M50-C45107LTP50-M50-C45107LTP50-M50-C58106LTP50-M50-C45107LTP50-M50-C45107LTP50-M50-C45107LTP50-M50-C58106LTP50-M50-C45107LTP50-M50-C58106LTP50-M50-C58106LTP50-M50-C | | |
| LTP40-E100LTP40-M40-C102LTP40-M40-C45103LTP40-M40-C90103LTP40-M40-CSS105LTP40-M40-CSS105LTP40-M40-CUL45104LTP40-M40-CUL90104LTP40-M40-CUL90106LTP40-M40-EXD-45107LTP40-M40-EXD-35106LTP40-M40-EXD-35106LTP40-M40-EXD-45108LTP40-M40-EXE-45108LTP40-M40-SE102LTP40-M40-S102LTP40-M40-S102LTP40-M40-S102LTP40-M40-S102LTP40-M40-S102LTP40-M40-S102LTP40-M40-S102LTP40-M40-S102LTP40-M40-S102LTP50-150-CUL104LTP50-150-EXD106LTP50-150-EXD106LTP50-150-EXD106LTP50-M50-C45103LTP50-M50-C45103LTP50-M50-C45103LTP50-M50-C45103LTP50-M50-C45107LTP50-M50-C45107LTP50-M50-C45107LTP50-M50-C45107LTP50-M50-C45107LTP50-M50-C45107LTP50-M50-C58106LTP50-M50-C45107LTP50-M50-C58106LTP50-M50-C45107LTP50-M50-C58106LTP50-M50-C58106LTP50-M50-C58106LTP50-M50-F6102LTP50-M50-F6102LTP50-M50-F6 | LTP40B-10M | 98 |
| LTP40-M40-C102LTP40-M40-C45103LTP40-M40-C90103LTP40-M40-CSS105LTP40-M40-CSS105LTP40-M40-CUL104LTP40-M40-CUL45104LTP40-M40-CUL5106LTP40-M40-CUL5107LTP40-M40-EXD-90107LTP40-M40-EXD-90107LTP40-M40-EXD-90107LTP40-M40-EXD-90107LTP40-M40-EXD-90107LTP40-M40-EXE108LTP40-M40-EXE-45108LTP40-M40-F102LTP40-M40-S102LTP40-M40-S102LTP40-M40-S102LTP40-M40-S102LTP40-M40-S102LTP40-M40-S102LTP50-150-CUL104LTP50-150-EXD106LTP50-150-EXE108LTP50-M50-C45103LTP50-M50-C5S106LTP50-M50-C45103LTP50-M50-C5S105LTP50-M50-C45107LTP50-M50-C45107LTP50-M50-C45107LTP50-M50-C45107LTP50-M50-C45107LTP50-M50-C45107LTP50-M50-C5S106LTP50-M50-C45107LTP50-M50-C5S106LTP50-M50-C5S106LTP50-M50-C5S106LTP50-M50-C5S107LTP50-M50-C5S106LTP50-M50-C5S107LTP50-M50-C5S108LTP50-M50-C5S108LTP50-M50-C5S107LTP | | |
| LTP40-M40-C45103LTP40-M40-C90103LTP40-M40-CSS105LTP40-M40-CSS105LTP40-M40-CSS104LTP40-M40-CUL45104LTP40-M40-CUL90104LTP40-M40-CUL90106LTP40-M40-EXD106LTP40-M40-EXD-45107LTP40-M40-EXD-90107LTP40-M40-EXD-90107LTP40-M40-EXD-90108LTP40-M40-EXE-90108LTP40-M40-EXE-90108LTP40-M40-SE102LTP40-M40-S102LTP40-M40-S102LTP40-M40-S102LTP40-M40-S102LTP40-M40-S102LTP40-M40-S102LTP40-M40-S102LTP50-150-CUL104LTP50-150-EXD106LTP50-150-EXD106LTP50-S0-C102LTP50-M50-C45103LTP50-M50-C5S103LTP50-M50-C5S105LTP50-M50-C45103LTP50-M50-C45103LTP50-M50-C45103LTP50-M50-C45107LTP50-M50-C45107LTP50-M50-C45107LTP50-M50-C5S106LTP50-M50-C45107LTP50-M50-C5S106LTP50-M50-C45107LTP50-M50-C5S106LTP50-M50-C45107LTP50-M50-C5S106LTP50-M50-C5S106LTP50-M50-C5S102LTP50-M50-F44107LTP50-M50-F5102LTP5 | | |
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| LTP40-M40-CUL 104 LTP40-M40-CUL45 104 LTP40-M40-CUL90 104 LTP40-M40-EXD 106 LTP40-M40-EXD-90 107 LTP40-M40-EXD-90 107 LTP40-M40-EXD-90 108 LTP40-M40-EXE 108 LTP40-M40-EXE-45 108 LTP40-M40-EXE-90 108 LTP40-M40-EXE-90 102 LTP40-M40-F 102 LTP40-M40-SF 102 LTP40-M40-SF 102 LTP40-M40-SF 102 LTP40-M40-SF 102 LTP50-M50-CUL 104 LTP50-150-CUL 104 LTP50-150-EXD 106 LTP50-150-EXD 106 LTP50-150-EXE 108 LTP50-150-EXE 103 LTP50-85 103 LTP50-M50-C45 103 LTP50-M50-C45 103 LTP50-M50-C45 103 LTP50-M50-C45 104 LTP50-M50-C45 104 LTP50-M50-C45 | | |
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| LTP40-M40-EXD-SS 106 LTP40-M40-EXE 108 LTP40-M40-EXE-90 108 LTP40-M40-FXE-90 108 LTP40-M40-FXE-90 102 LTP40-M40-S 102 LTP40-M40-SF 102 LTP40-M40-SF 102 LTP40-M40-SF 102 LTP40-M40-SF 102 LTP40-PG36-C 102 LTP40-PG36-EXE 108 LTP50-150-CUL 104 LTP50-150-EXD 106 LTP50-150-EXD 108 LTP50-150-EXD 108 LTP50-150-EXE 108 LTP50-150-EXE 108 LTP50-SE 100 LTP50-B25M 98 LTP50-B25M 98 LTP50-M50-C45 103 LTP50-M50-C45 103 LTP50-M50-C45 103 LTP50-M50-C5S 105 LTP50-M50-C45 104 LTP50-M50-CUL45 104 LTP50-M50-CUL45 104 LTP50-M50-EXD-90 107< | | |
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