

FLEXICON

FLEXIBLE CONDUIT SOLUTIONS

A PART OF **atkore**
INTERNATIONAL



Cable Protection Systems for Rail



2nd Edition

IRISTM
Certification
ISO/TS 22163:2017

WWW.FLEXICON.UK.COM



Group Intro

Atkore delivers a unique portfolio of integrated electrical raceway solutions that deploy, isolate and protect structures or systems electrical circuitry from source to outlet.



Flexicon is 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.

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

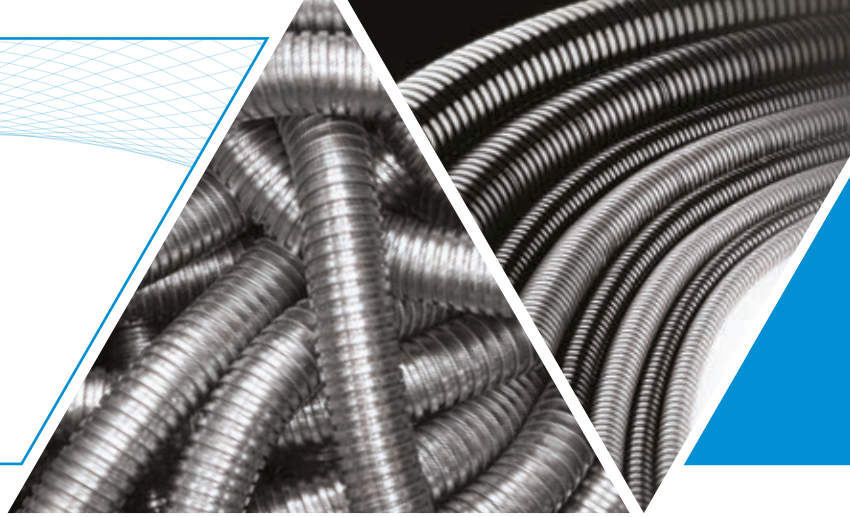
With 3,500 employees and 58 manufacturing and distribution facilities worldwide, Atkore meets customers' needs by providing unmatched quality, delivery and value across a robust product line that includes steel, PVC and aluminium conduit, armoured cable and flexible conduits, metal framing, wire baskets, cable trays and other complementary products including fittings and mechanical pipe.

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



As part of the international Raceway division of Atkore that includes Marco Cable Management and Unistrut, we are market leaders in electrical raceway, with the resources, technology and products in place ready to support you with your next project.

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Flexicon Capabilities

We are focused on bringing customers the best 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.

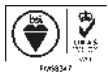
“We specialise in protecting your Cables from hazards for now and for the future”



Quality Assurance, Testing & Manufacturing

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

Flexicon have invested in and committed to extensive independent testing for our Products combined with Quality Audits for our Manufacturing Processes including the International Railway Industry Standard (IRIS), giving you the confidence that our systems do what we say they do.



We extensively test our products to ensure that our product performance is as you would expect from a leading British Manufacturer. We understand the importance and potential consequences of product failure therefore we test our products far beyond the performance requirements of the certifications and approvals we have.



Global Presence

With a Global reach, we work closely with customers to become part of their 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.

Our sister company AFC Cable Systems provide stock and local support in the North American markets.

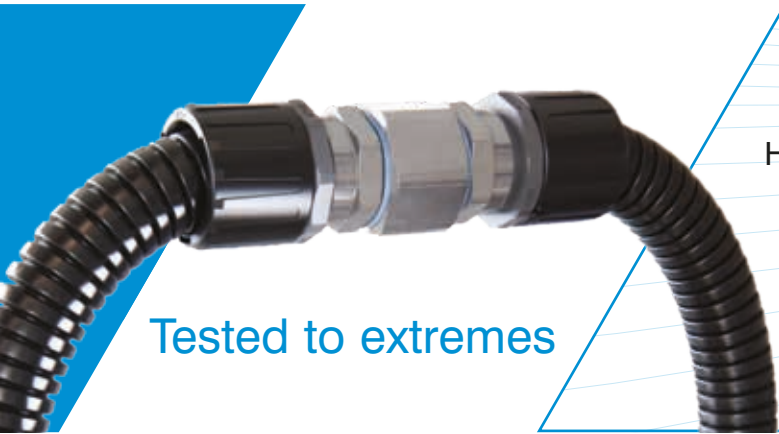
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International & National Conduit Standards

- 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





Tested to extremes

Rail - Ingress Protection

High levels of Ingress Protection is a critical requirement of installations in the Rail Industry. Whether this is from the weather in the form of rain or flooding, or from brake dust in Underground applications.

“Flooding is one of the most extreme forms of hazards for electrical systems. If product is submerged Ingress Protection becomes critical”

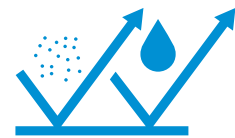
Applications demand “over and above” standard IP tests

Ingress protection is normally tested using EN IEC 60529, with the levels of protection given by a 2 digit code.

IP68 1st digit – protection against solid objects and dust

IP68 2nd digit – protection against water

IP tests to EN IEC 60529, give an indication of system performance but they are very short tests on samples that have been assembled under ideal laboratory conditions, at room temperatures and in straight lengths.



Durations and application of these tests are;

- IPx4, 5 minutes light spray similar to a shower head
- IPx5, 3 minutes medium spray similar to a garden hose
- IPx6, 3 minutes high pressure jet similar to a fire hose
- IPx7, 30 minutes 1 metre immersion under water
- IPx8, immersion at a pressure and time decided by the manufacturer
- IPx9, 2 minutes high pressure hot water similar to a steam cleaner

Other potential Hazards to consider

When it comes to protecting Safety and Performance Critical Cabling, we have listed some of the potential hazards to consider in Rail applications.

Abrasion

- Process of scraping or wearing something away



Chemical resistance

- Reaction to different compounds or substances



Crush / Compression

- Forces applied to cause deformation



Fire

- Destructive burning



Lightning Strike

- Damaged caused by natural electrical discharge



Impact

- Sharp or blunt forces which could cause damage



Tensile Strength

- Resistance to conduit being pulled from the fitting



EMC

- Electromagnetic Compatibility



Integrity • Strength • Assurance

“Flexicon Ultra™ has been tested to IP68, submerged at a depth of 1 metre for a period of 3 days at min bend radius”



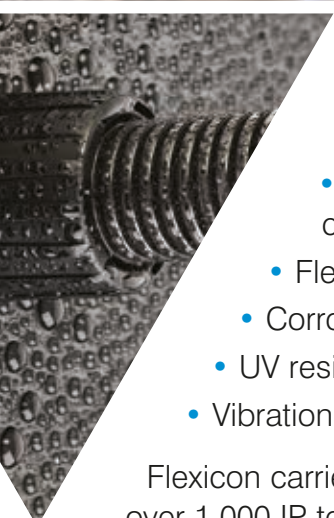
Tested beyond the Standard

Water may be present as rain, condensation, immersion including flooding, spray, jet wash cleaning, ice formation and melting. Suction can be created by rise and fall of temperature although conduit systems are normally vented to atmosphere through at least one end. A vented conduit system has advantages over a sealed enclosure with cable glands as the conduit allows the air inside the enclosure to expand and contract with temperature changes.

In conjunction with some of our major rail customers we have completed more onerous testing than the standard tests required to give the customer confidence that true performance adequately represented real life installations.

- IPx8 carried out at 2 bar for 1 hour at minimum bend radius
- IPx8 carried out at 1 metre under water for 72 hours at minimum bend radius
- IPx8 carried out under water and ice at minimum bend radius for 5 cycles of; 10 hours at -15°C followed by 5 hours at +40°C
- Flexing conduit under water for 5 days (exhibition display)
- Corrosion resistance - 1,000 hour salt spray testing to EN ISO 9227 NSS @ 35°C
- UV resistance - up to 21,000 hours testing using xenon arc
- Vibration and shock-testing to EN 61373 category 2, bogie mounted

Flexicon carries out extensive water ingress testing in house. For the Ultra system, over 1,000 IP tests were conducted to ensure that every conduit in every size, weight and material were checked with every type of fitting to ensure the integrity of the system. External test reports were then commissioned to confirm our in-house test results.



UV

- Resistance to Ultra Violet Radiation



Corrosion

- Damage caused to materials based on chemical reaction



Grazing animals / Vermin or pests

- Livestock
- Sharpening of teeth and searching for food



Vibration & Shock

- Shaking or sudden movement



Theft & Vandalism

- Stealing, unauthorised removal or deliberate damage



Fatigue Life

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



Temperature

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



Salt Water

- Prolonged exposure can cause dezincification (Corrosion)





Rail - 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.

At Flexicon we define a Low Fire Hazard product as having **all** of the following properties:

Highly Flame Retardant

to prevent a fire starting or limit its development if one does start.

Low Smoke

emission in the event of a fire to enable people to see their way to escape.

Low Toxicity

in the event of a fire to ensure people 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.

Rail Industry Standards

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 45545-2 - European Fire Safety
- NFPA 130 - North American Standard
- AS/NZS 1530.3 - Australian Standard
- Russian Fire Safety Certificate - 1374363
- TFL S1085 - UK Underground Standard

EN 45545-2 European Fire Safety Standard

This new European standard is rapidly replacing national standards in Europe and consists of 7 parts.

- **Part 1: General**
- **Part 2: Requirements for fire behaviour of materials and components**

For Part 2, product groups are required to meet a set of performance requirement levels (R1 to R26), conduit performance **R22 is for interior parts** and **R23 is for exterior parts**. There are also 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.

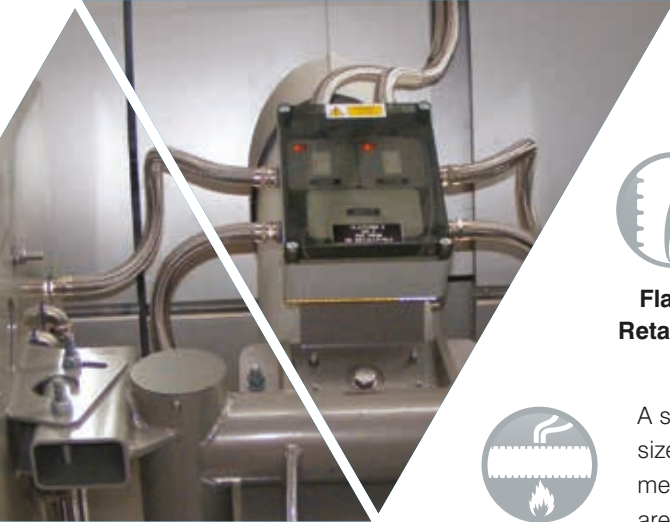
The required HL level is given from a matrix of Operational Category of the track and Design Category of the train.

Flexicon EN 45545-2 conduits meet HL3 for both internal and external use.



				HL1	HL2	HL3
R22 Internal use	T01 EN ISO 4589-2: OI	Oxygen Content %	Minimum	28	28	32
	T10.03 EN ISO 5659-2: 25 kWm-2	Ds max. dimensionless	Maximum	600	300	150
	T12 NF X70-100-1 and -2, 600° C	C/TNLP dimensionless	Maximum	1.2	0.9	0.75
R23 External use	T01 EN ISO 4589-2: OI	Oxygen Content %	Minimum	28	28	32
	T10.03 EN ISO 5659-2: 25 kWm-2	Ds max. dimensionless	Maximum	-	600	300
	T12 NF X70-100-1 and -2, 600° C	C/TNLP dimensionless	Maximum	-	1.8	1.5

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.



Assessing Fire Performance



Flame Retardant

To assess how flame retardant a material is, the defined 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%.



Smoke

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. The lower the smoke density, the more efficient evacuation and safety for fire fighting becomes.



Toxicity

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. If halogens, sulphur or phosphorus are present in a material, it is unlikely to pass the low toxicity tests.



Halogen Free

Halogen based materials give off highly toxic fumes and often 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.

Simple classifications of performance from Flexicon...



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, FUSBS, FTCS, 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.

LOI	Conduits	
35.9%	FPIHR & FPIHRSS	
37.0%	FPR, FPRSS & FPRTC	
48.3%	LFHU, LFHUBRD, LTPLFH, LTBRDLFH & LFHP	



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.

Benefits of using flexible conduit...

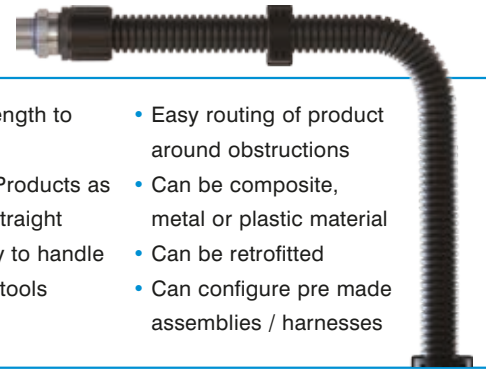
Providing an inherent mechanical barrier for cabling, Flexible Conduit offers more than just protection for Cables and Installations. It allows users and specifiers to do things differently, challenging traditional installation practices and offers unrivalled product performance.



Flexible Conduit vs Rigid Conduit



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



Flexible Conduit vs Cable Glands

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



Flexible Conduit vs Armoured Cables



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

Flexible Conduit vs Trunking

- Coiled Products as opposed to lengths
- Easy routing of product
- Can be retrofitted
- Quicker to install
- No requirement for additional fittings to create a bend
- 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



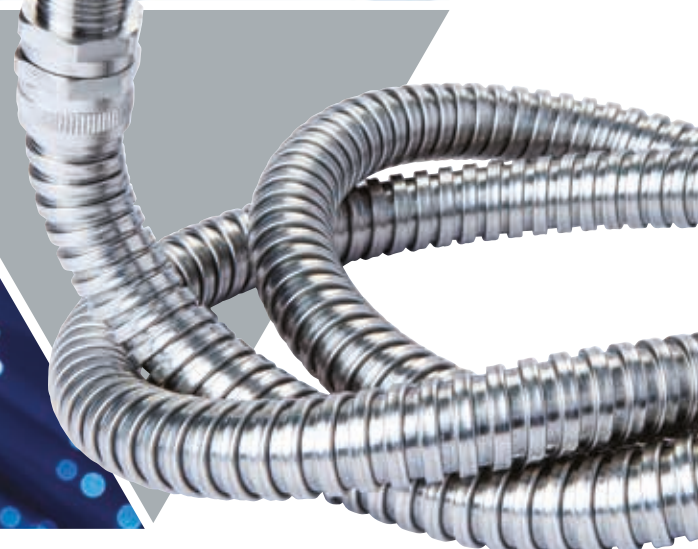
Lifetime Solution

- 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
- Light weight product



Applications in Rail

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



Exterior Vehicle

- FPIHR
- FTCS
- Flexicon ULTRA™ Fittings

CCTV

- LFHUBRD
- FSS
- FSB fittings
- FSSBRD
- LFHU

Passenger Information Systems

- LFHU
- FUSBS
- LFHUBRD
- FSB Fittings

Lighting

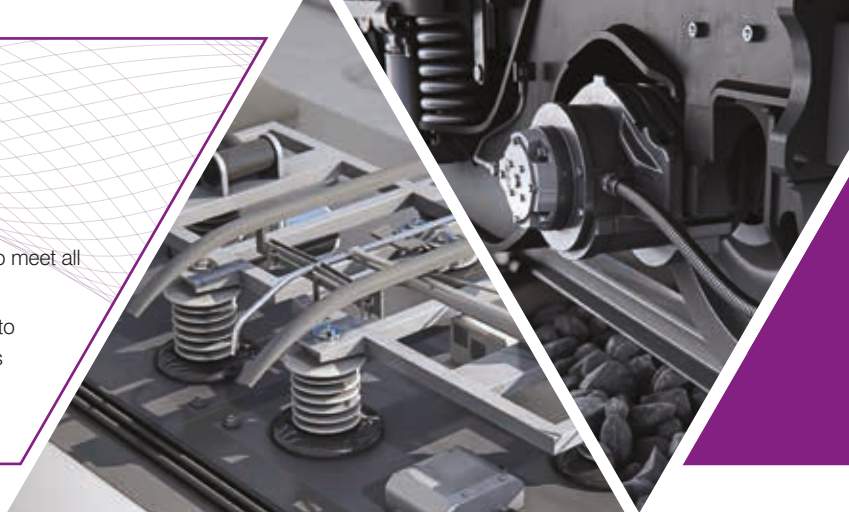
- FUSBS
- LFHUBRD
- FSS and FSSBRD
- FSB Fittings

Tunnels

- LFHU
- FPR
- LTPLFH
- FSSBRD
- FSS

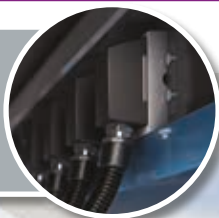
Rolling Stock and Infrastructure

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



Inter Vehicle Jumper Applications

- FPIHR
- Flexicon ULTRA™ Fittings



Interior Vehicle Applications

- FPR
- FPA
- FTCB
- Flexicon ULTRA™ Fittings



Platform Trackside Power & Signalling

- FPAH
- Flexicon ULTRA™ Fittings
- FPIH



Bogies & Control System

- FPIHR
- Flexicon ULTRA™ Fittings
- FTCB



Auto Couplers

- FPIHR
- Flexicon ULTRA™ Fittings





Rolling Stock Product Testing & Approvals

“This technically demanding sector presents numerous challenges when it comes to product performance and compliance to the relevant standards.”

Alstom Worldwide Approval

Flexicon has earned worldwide approval under Alstom global component parts listing. This includes Flexicon's true one piece Ultra™ gland range that gives the quickest and most reliable interconnection when terminating on to Flexicon's non-metallic Flexible Conduits.

Alstom first carried out mechanical tests on our samples to satisfy themselves of the mechanical performance. Alstom then stated that they were not satisfied that the standard IP testing to EN60529 as the tests did not adequately represent their applications. IP67 1m under water for 30 minutes was far too short a time and IP68 (2bar pressure for 1 hour, equivalent to 20m under water) was of little interest - if the train was 20m under water there would be bigger problems than water ingress into the conduit system. Alstom required 1m under water for 72 hours for straight conduit and then again at minimum bend radius, Alstom also insisted on making up the samples and carrying out the tests themselves.



A 1 million reversed cycling test was conducted to confirm the fatigue life of the conduit and the fittings, fully loaded with cables, to represent 35 years service life for inter-carriage jumpers on the most onerous track, line 11 of the Paris Metro. After the test the conduit was taken apart to check for any wear of the conduit or fittings on the cable and cable on the conduit and Flexicon's product showed no signs of failure.



Rolling Stock Reference Projects



Russia - Rail Car Refurbishment

Metal braided conduits with fittings, along with Nylon FPR Conduit with FPAX fittings systems were used on the refurbishment of rail cars.

Dubai - Metro

Nylon FPIHR Conduit and Ultra brass threaded fittings were used on the roof of the carriages for the systems high IP rating and fire performance properties.

China - High Altitude Rail Link

Plastic coated steel conduits was used on vehicles under-frame harness applications that required properties for low temperature and high impact resistance.

United Kingdom - Train Renovations

Stainless Steel braided Nylon 6 FPRSS conduit and fittings were used for the installation of under vehicle harness assemblies requiring EMC screening and high IP ratings.

Indonesia - EMC on Passenger Coaches

LTBRDP liquid tight conduit and LTP fittings were used under the trains for the EMC screening performance. Nylon FPAS Conduits and FPAX fittings were also used where high IP ratings were required.

Australia - New Vehicle Builds

Liquid tight, high temperature, Halogen free conduit systems were used on new rail vehicle builds.

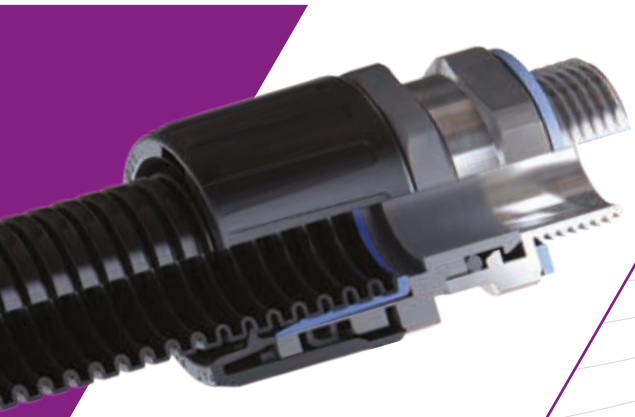
United Kingdom - Refurbishment & Maintenance

Nylon 6 & 12 conduits FPR and FPI with FPA fittings were used within an out of warranty repair and overhaul project.

Czech Republic - Carriage Installations

Nylon 6 & 12 conduit systems for carriage installation both interior and exterior use.





Rolling Stock

Whether it is high speed travel over long distances, regional transit with repeated short journeys or true power solutions such as locomotives to move large masses of material & freight, we have the most reliable Cable Protection solutions to ensure safety and reliability for all types of Rolling Stock.



High Speed



Intercity



Urban & Regional Trains



Metro



Trams & Trolleybuses



Monorail



Locomotives



Key considerations

- Reliability
- Service life
- Ease of maintenance
- Standards & compliance
- Operating environment

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



Typical hazards & product considerations

- Fire Performance
- Ingress Protection
- Vibration & Shock Resistance
- Temperature
- Impact
- UV Resistance



- Strength to Weight ratio
- Flexibility
- Fatigue Life
- Abrasion Resistance
- Chemical resistance
- EMC



Standards



Typical Products



- FPR - PA6 Corrugated



- FPIHR - PA12 Corrugated



- FPRSS - Stainless Steel Overbraided PA6 Corrugated



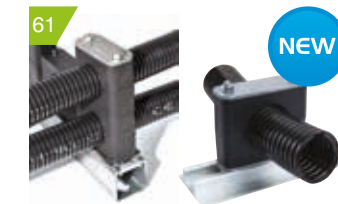
- LFHU - LFH Coated Galvanised Steel



- LTBRDP - Galvanised Steel with Galvanised Steel braid, PVC cover



- FPAU - Range of fittings with or without metal threads



- F-Clamps and Fixing Accessories



Rail - Rolling Stock Applications

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.

Inside Carriages / Passenger Zones



FPR Conduits

- Modified PA6 conduit offering excellent Fire Performance
- Light weight
- High Tensile strength
- Vibration resistant



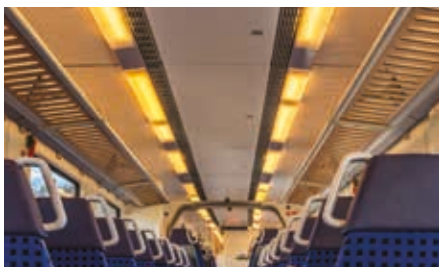
- Flexicon ULTRA™ - nylon thread
- Flexicon FPA - nylon thread



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Carriage Lighting



FPR Conduits

- Modified PA6 conduit offering excellent Fire Performance
- Light weight
- High Tensile strength
- Vibration resistant



- Flexicon ULTRA™ - nylon thread
- Flexicon FPA - nylon thread



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Carriage TV Screens



FPR Conduits

- Modified PA6 conduit offering excellent Fire Performance
- Light weight
- High Tensile strength
- Vibration resistant



- Flexicon ULTRA™ - nylon thread
- Flexicon FPA - nylon thread



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Under Carriages / Bogies



FPIHR Conduits

- Modified Heavy Duty PA12 conduit offering excellent dynamic performance with flexibility & fatigue life combined with Fire Performance.
- Excellent UV resistant & high impact strength even at low temperatures
- Excellent Ingress Protection integrity when used with Flexicon ULTRA™
- High Tensile strength & Vibration resistant



- Flexicon ULTRA™ - metallic thread
- Flexicon ULTRA™ - metallic thread with strain relief



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Above Carriages



FPIHR Conduits

- Modified Heavy Duty PA12 conduit offering excellent dynamic performance with flexibility & fatigue life combined with Fire Performance.
- Excellent UV resistant & high impact strength
- Excellent Ingress Protection integrity when used with Flexicon ULTRA™
- High Tensile strength & Vibration resistant



- Flexicon ULTRA™ - metallic thread
- Flexicon ULTRA™ - metallic thread with strain relief



31



Intercar Jumpers



FPIHR Conduits

- Modified Heavy Duty PA12 conduit offering excellent dynamic performance with flexibility & fatigue life combined with Fire Performance.
- Excellent UV resistant & high impact strength even at low temperatures
- Excellent Ingress Protection integrity when used with Flexicon ULTRA™
- High Tensile strength & Vibration resistant



- Flexicon ULTRA™ - metallic thread
- Flexicon ULTRA™ - metallic thread with strain relief



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Couplings



FPIHR Conduits

- Modified Heavy Duty PA12 conduit offering excellent dynamic performance with flexibility & fatigue life combined with Fire Performance.
- Excellent UV resistant & high impact strength even at low temperatures
- Excellent Ingress Protection integrity when used with Flexicon ULTRA™
- High Tensile strength & Vibration resistant



- Flexicon ULTRA™ - metallic thread
- Flexicon ULTRA™ - metallic thread with strain relief



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Infrastructure Installation Track Record



TRANSPORT
FOR LONDON
EVERY JOURNEY MATTERS



“Flexicon have the most LUL approved products of any Flexible Conduit Manufacturer”

Redevelopment of London's Blackfriars Tube Station

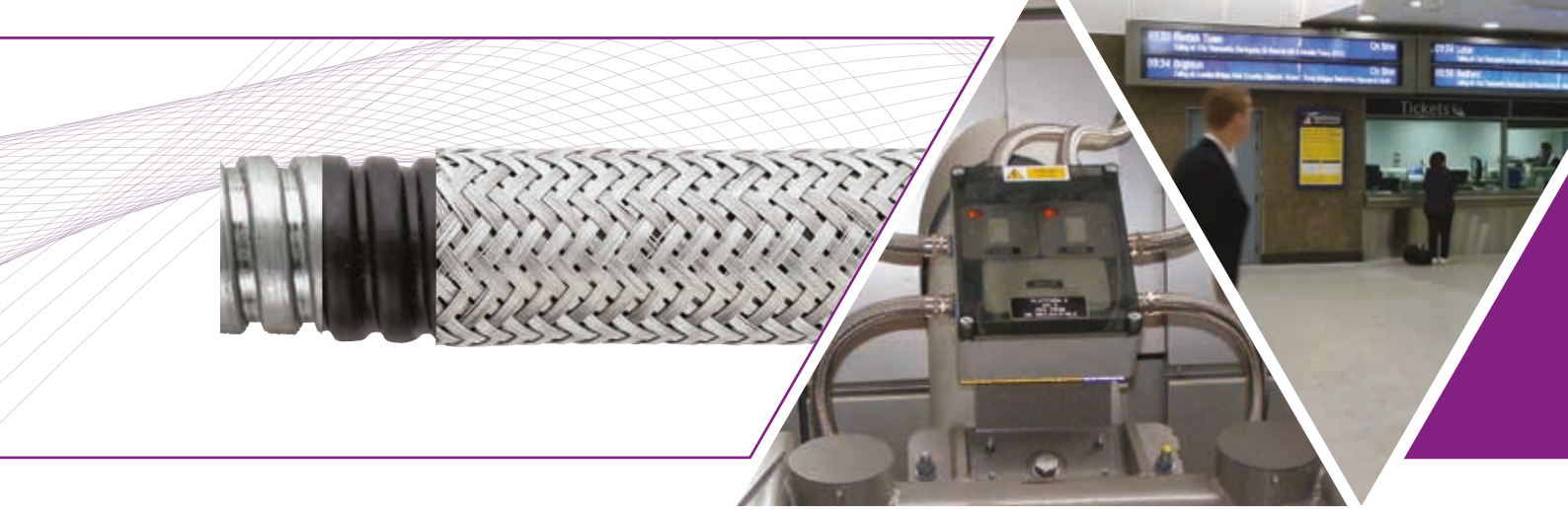
Balfour Beatty used Flexicon's flexible conduit to protect all of the cabling for lighting, power, signalling and communications for the major redevelopment of Blackfriars station.

The project included the creation of a common entrance at the north end of the rail bridge spanning the River Thames, increasing the length of the platforms to accommodate 50 percent longer trains, the refurbishment of the underground station and the construction of a new station on the South Bank of the Thames. The station was the first one to span the entire width of the River Thames and features 4,400 of photovoltaic panels producing over 1MW of electricity.

All of the services had been left visible as part of the design, so Flexicon's LFHUBRD flexible conduit had been specified since its grade 316 stainless steel overbraid provides both protection and aesthetic appeal. The system has high abrasion resistance and high mechanical strength, is highly flexible and has an ingress protection rating of up to IP65.

In addition, the flexible conduit meets all of Transport for London's fire requirements, with details listed on LUL product registration certificate no. 297. As a low fire hazard product, it is highly flame retardant, has low smoke emissions, low toxicity and is halogen free. It also provides EMC screening, which is vital for communications and signaling.





Thameslink - Infrastructure Improvements

Linbrooke Services had specified and installed a flexible conduit system from Flexicon to protect power and data cabling for a passenger signage system as part of the Thameslink high capacity infrastructure improvements. The aim of the new system was to facilitate swift movement of passengers off and onto trains to minimise dwell time. It is vital in ensuring that people are on the right platform, at the right time and are standing in the right position.

There is signage in every area of the station to direct passengers to the correct platform and then screens right along the length of the platform to help spread passengers out for a 12 carriage train. It is part of a real time prediction system that uses data from a number of sources to accurately predict the arrival of trains, which is used to analyse what this means to the overall train service at a station and then communicate this to passengers so that they can plan their journey.

The company selected Flexicon's LFHUBRD metallic conduit, which has a galvanised steel core, extra low fire hazard coating and a stainless steel overbraid. It provides EMC screening for data cabling and with its high tensile strength, crush and abrasion resistance will resist any potential vandalism. Its stainless steel overbraid also makes the conduit visually attractive to the viewing public.

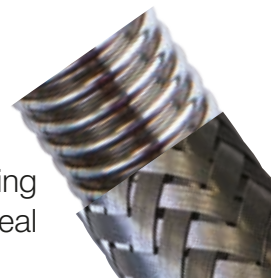
Europe's Largest Infrastructure Project - Crossrail

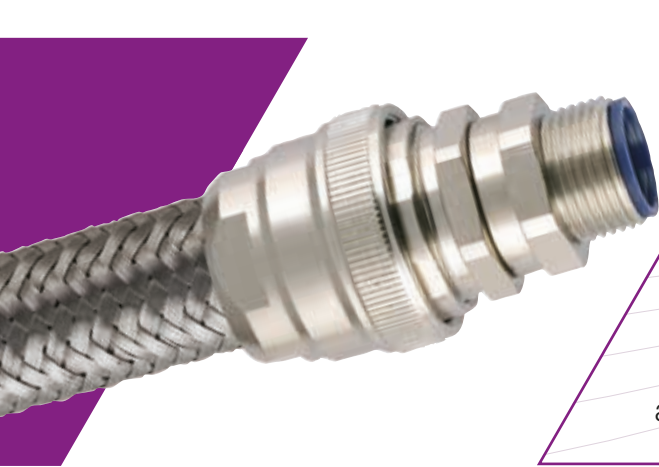
The £14.8 billion Crossrail project is Europe's largest infrastructure project and brings an extra 1.5 million people to within 45 minutes of central London. Power and data is vital for operational efficiency and critical safety systems. With so many people using the new Elizabeth line, it is vital that the cabling is protected not just from day one but for the lifetime of the installation.

Cable protection from Flexicon is used for all lighting, small power, CCTV and audio systems in both the general public and back office areas and for the Platform Edge Screen (PES) that separates the station from the track area.

The main requirements for the cable protection system were to protect cabling from vandalism, provide ingress protection of up to IP68 and meet the stringent fire safety standards for sub-surface rail installations. For public facing areas the conduit had to also meet the aesthetic requirements of the installation.

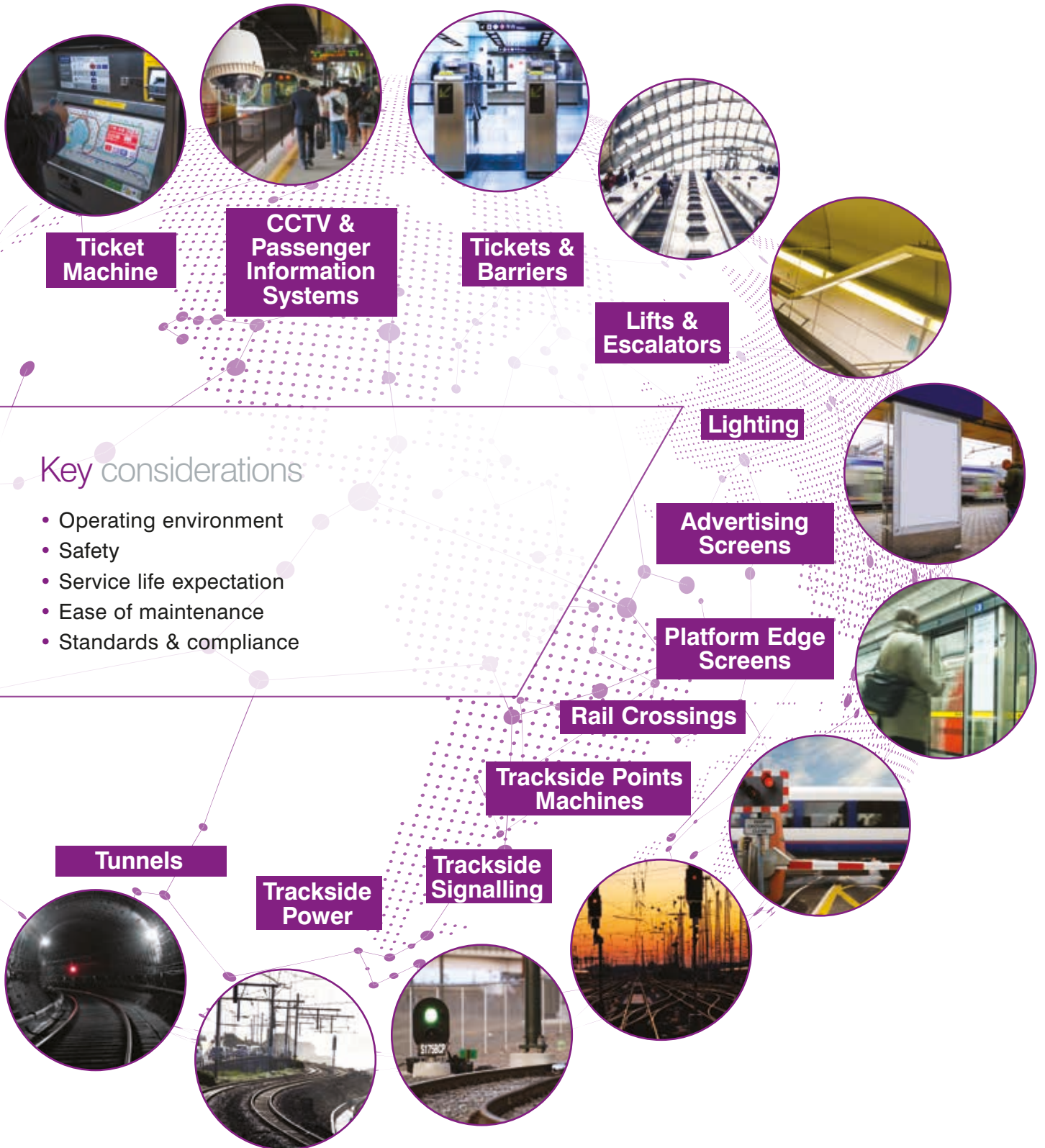
Back office areas used Flexicon's new FSS stainless steel corrugated conduit. Public facing areas use either FSSBRD, which has a stainless steel over braid for added aesthetic appeal or the specially developed all metallic black stainless-steel conduit called FSS black.





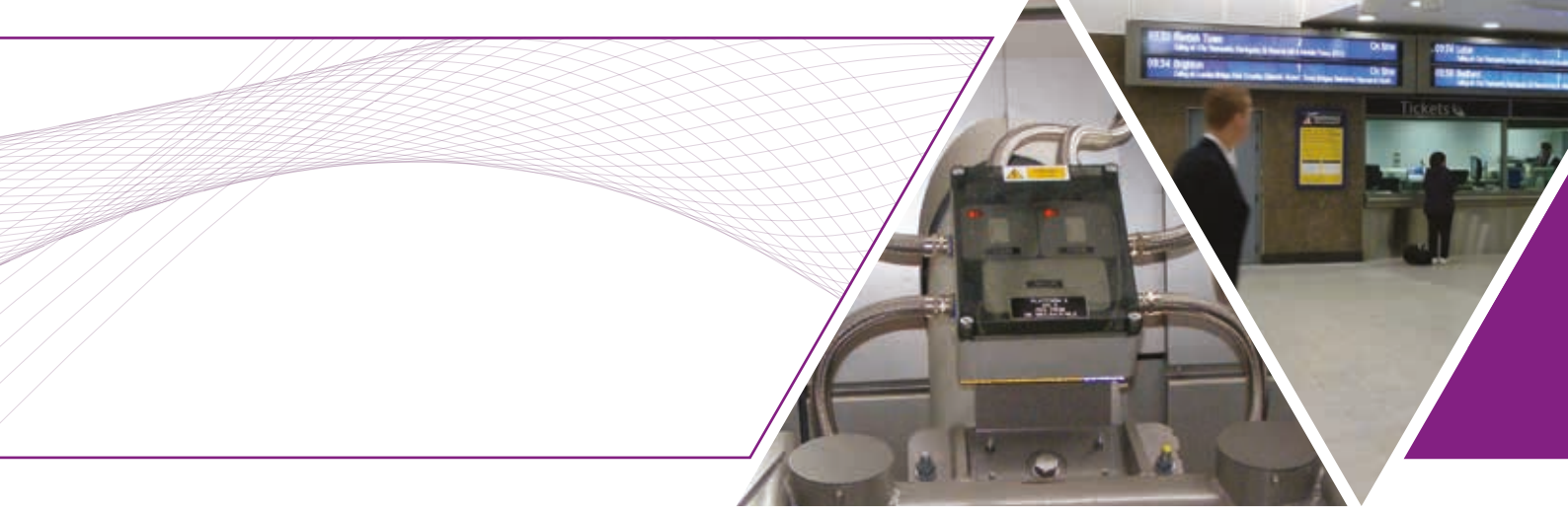
Infrastructure

Whether it is Passenger Information systems, Station Lighting, CCTV and Passenger Safety, Trackside power & signalling, train monitoring & information systems or tunnels, our products provide ideal Cable Protection for infrastructure and track related installations to ensure safety and reliability.



Key considerations

- Operating environment
- Safety
- Service life expectation
- Ease of maintenance
- Standards & compliance



Typical hazards & product considerations

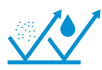
• Fire Performance



• Strength to Weight ratio



• Ingress Protection



• Flexibility



• Vibration & Shock Resistance



• Fatigue Life



• Temperature



• Abrasion Resistance



• Impact



• Chemical resistance



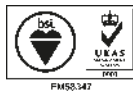
• UV Resistance



• EMC



Standards



Typical Products



• LTPLFH - LFH Coated Liquid Tight



• LFHU - LFH Coated Galvanised Steel



• FSS - Stainless Steel Corrugated



• FSSBRD - SS Corrugated with SS overbraid



• LFHUBRD - LFH Coated Galvanised Steel with SS Overbraid



• FPRSS - Stainless Steel Overbraid PA6 Coated



• LTPPU - Polyurethane Coated Liquid Tight



• FPR - PA6 Corrugated



Infrastructure Applications

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.

Security Systems (CCTV) & Lighting



LFHUBRD Conduits

- Galvanised Steel Conduit with Low Fire Hazard coating and a Stainless Steel overbraid offering excellent mechanical strength, EMC screening, Aesthetic appearance and good Ingress Protection.



Lifts and People Movers (escalators)



LFHU Conduits

- Galvanised Steel Conduit with Low Fire Hazard coating offering excellent mechanical strength and good Ingress Protection.



Passenger Information Systems



LFHU Conduits

- Galvanised Steel Conduit with Low Fire Hazard coating offering excellent mechanical strength and good Ingress Protection.





Passenger Information



FSS & FSSBRD Conduits

- Stainless Steel Conduit offering inherent Fire Performance, high Ingress Protection and corrosion. Braided option also available for enhanced EMC screening.



Trackside Signalling



FPIH Conduits

- Heavy duty PA12 conduit offering excellent UV resistance and high impact strength. Suitable for outdoor areas offering superior Ingress Protection, corrosion resistance and anti-vibration performance. Can be combined with FTCB to achieve EMC performance.
- For Network Rail approved Conduits and Fittings, see page 56

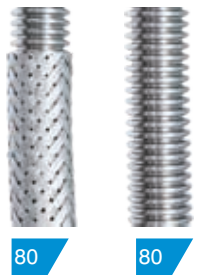


Tunnels



FSS & FSSBRD Conduits

- Stainless Steel Conduit offering inherent Fire Performance, high Ingress Protection and corrosion. Braided option also available for enhanced EMC screening.



Ticketing



LFHU Conduits

- Galvanised Steel Conduit with Low Fire Hazard coating offering excellent mechanical strength and good Ingress Protection.



Rail Infrastructure - Signalling Power Distribution Systems



“Use in new and upgraded Signalling Power Distribution Systems in accordance with NR/L2/SIGELP/27410”

Benefits of Flexicon's unique offering for SIN 119

Safety and reliability of the Rail Infrastructure network is paramount. Network Rail's ongoing challenge to achieve SIN 119 compliance has created the need for new solutions and techniques to remove potential dangers for the maintenance and management of 650V Signalling Power Distribution Systems in accordance with NR/L2/SIGELP/27410.

Flexible Conduit provides an ideal solution for new and existing equipment identified for upgrade and is fully compliant to NR/L2/SIGELP/27421 and NR/L2/SIGELP/27422 for use in Class II Based Signalling Power Distribution Systems.

NetworkRail

PA05/06589

Flexible Conduit Systems

- Flexible Insulating Conduits with a dielectric withstand of 3.5kV in accordance with NR/L2/SIGELP/27421

Conduit Glands

- Conduit Glands in accordance with NR/L2/SIGELP/27422
- Universal End of Line Gland
- True one piece

Accessories

- Range of fixing accessories and mounting equipment for Flexible Conduits





Compliant Conduit



56



• NRFPAS

56



• NRFPAH

56



• NRFPFR

57



• NRFPPIH

57



• NRFPPIHR

57



• NRFPADS

Compliant Fittings and Accessories



58



• NRFPAU

58



• NRFP4U45

58



• NRFP4U

59



• NRFPAX-FPAX

60



• NRFP4U EOL

60



• NRFCCL

59



• NRDLMP

59



• NRDLMP90

61



• NRFCCLAMP

61



• NR FCCLAMP KIT

60



• NRREC

61



• NRCC01

Flexicon warrant resistance to UV degradation

Our range of Network Rail PADS approved products have been extensively tested to warrant that the product performance will not suffer from significant mechanical deterioration from ultra violet exposure for a period of 35 years in the UK from the purchase date of the product.



Non-metallic conduit selection guide

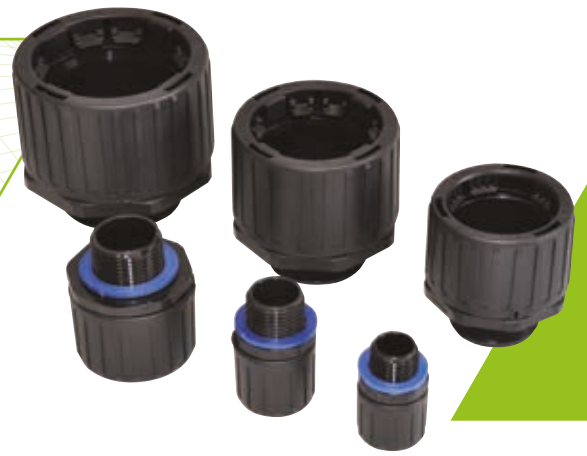
Conduit System

	FPAS	FPASC	FPR	FPAH	FPI	FPIH	FPIHR	FPADS
		NEW 					NEW 	NEW

IP Rating	IP40								●
	IP66	●	●	●	●	●	●	●	
	IP67	●	●	●	●	●	●	●	
	IP68	●	●	●	●	●	●	●	
	IP69	●	●	●	●	●	●	●	
Compression Strength (kg / 100mm)		75	95	75	120	45	60	60	60
Pull Off Strength (kg) for 21/20mm size		40	40	40	70	30	50	35	15
High Fatigue Life		●	●			●	●	●	
Temp	Max	120 °C	120 °C	120 °C	120 °C	110 °C	110 °C	110 °C	120 °C
	Min	-40 °C	-40 °C	-40 °C	-40 °C	-50 °C	-50 °C	-50 °C	-40 °C
Low Fire Hazard	** Extra Standard								
	Halogen Free	●	●	●	●	●	●	●	●
	Self Extinguishing	●	●	●	●	●	●	●	●
Fire Tests	EN 45545-2			●				●	
	NFPA-130			●				●	
	AS/NZS 1530.3	●		●	●				
Approvals	Network Rail NR/L2/SIGELP/27421								
	TfL London Underground			●					
	UL Approved	●	●	●	●	●	●		
	Lloyds	●		●					
Network Rail	UV Resistance (35 years UK)								
	Suitable for areas prone to flood or immersion								
	Suitable for Class II installations								
	Dielectric strength 3.5kV								
	Abrasion Resistance	●	●	●	●	●	●	●	●
Resistance to Solvents	●	●	●	●	●	●	●	●	
EMC Performance									
Page Number	30	30	30	30	31	31	31	31	

FPA / FPAX / ULTRA™

Our range of non-metallic conduits below have been designed and engineered for use with our FPA, FPAX and ULTRA™ ranges of fittings.



FPI	FPIH	FPIHR	FPADS
<p>Construction: Standard weight nylon (PA12) corrugated flexible conduit.</p> <p>Colour: Black.</p> <p>Typical Applications: Where continual movement or flexing is required, ideal for applications requiring a basic level of fire performance such as external CCTV.</p> <ul style="list-style-type: none"> Highly flexible Exceptional fatigue life High impact resistance even at very low temperatures UV resistant Displays self recovery if crushed Temperature range -50°C to +110°C UL recognised Highly resistant to solvents and oils Self extinguishing Low fire hazard Halogen, sulphur and phosphorus free 	<p>Construction: Heavy weight nylon (PA12) corrugated flexible conduit.</p> <p>Colour: Black.</p> <p>Typical Applications: Where continual movement or flexing is required, with a higher mechanical strength even at very low temperatures. Ideal for applications requiring a basic level of fire performance.</p> <ul style="list-style-type: none"> Highly flexible and high fatigue life High mechanical strength High impact resistance even at very low temperatures Excellent UV resistance Displays self recovery if crushed Temperature range -50°C to +110°C UL recognised Highly resistant to solvents and oils Self extinguishing Low fire hazard Halogen, sulphur and phosphorus freeand oils Self extinguishing Low fire hazard Halogen, sulphur and phosphorus free 	<p>Construction: Heavy weight nylon (PA12) corrugated flexible conduit.</p> <p>Colour: Black.</p> <p>Typical Applications: Where continual movement or flexing is required, with a higher mechanical strength even at very low temperatures such as on Bogies or Inter-car Jumper assemblies. Rolling Stock applications requiring a superior level of fire performance.</p> <ul style="list-style-type: none"> Highly flexible and high fatigue life High mechanical strength High impact resistance even at very low temperatures Excellent UV resistance Displays self recovery if crushed Temperature range -50°C to +110°C UL recognised Highly resistant to solvents and oils Self extinguishing Low fire hazard Halogen, sulphur and phosphorus free EN45545-HL3 	<p>Construction: Double slit nylon (PA6) corrugated conduit.</p> <p>Colour: Black.</p> <p>Typical Applications: Retrofit and cable assemblies with pre-terminated plugs. Ideal to enhance personal protection against electric shock and protect vulnerable cabling within enclosures and Power Distribution Units.</p> <ul style="list-style-type: none"> Made from 2 interlocking slit corrugated conduits Temperature range -40°C to +120°C Cables can be inserted laterally Provides abrasion resistance and routing of cables for static applications Self extinguishing Halogen, sulphur and phosphorus free UV resistant



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

For larger diameter conduit see page 64



FPA system nylon

Construction: Nylon (PA66) moulded fittings.

IP66





FPA system brass threaded

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

Colour: Black or Grey.



Fittings





			FPA	FPA	FPA	FPA90					
			straight external thread	straight UNEF swivel internal thread	flange	90° elbow external thread					
			One piece, fast fit, external threaded fitting. Suitable for knockouts or threaded entries.	One piece, fast fit fitting with nickel plated brass swivel UNEF internal thread for attachment to circular connectors.	One piece, fast fit fitting with nylon swivel flange with 'O' ring.	One piece, fast fit, external threaded 90 degree elbow fitting. Suitable for knockouts.					
			IP66	IP66	IP66	IP66					
											
european (NW) sizes	nominal size (mm)	OD mm	Ext Metric	Ext PG	Ext NPT	Ext UNEF	Thread	Ext Flange	90 Degree Metric	90 Degree PG	90 Degree NPT
7	10	10.0	FPA10-M12	FPA10-PG7					FPA10-M12-90	FPA10-PG7-90	
7	10		FPA10-M16	FPA10-PG9							
8	11	11.5	FPA11-M12	FPA11-PG7					FPA11-M12-90		
10	13	13.0	FPA13-M12	FPA13-PG7		FPA13-BU063	(5/8")		FPA13-M16-90	FPA13-PG9-90	
10	13		FPA13-M16	FPA13-PG9		FPA13-BU075	(3/4")				
10	13		FPA13-M20	FPA13-PG11		FPA13-BU088	(7/8")				
12	16	15.8	FPA16-M16	FPA16-PG9	FPA16-038	FPA16-BU075	(3/4")	FPA16-FL	FPA16-M16-90	FPA16-PG9-90	FPA16-050-90
12	16		FPA16-M20	FPA16-PG11	FPA16-050	FPA16-BU088	(7/8")		FPA16-M20-90	FPA16-PG11-90	
12	16			FPA16-PG13		FPA16-BU100	(1")			FPA16-PG13-90	
12	16			FPA16-PG16		FPA16-BU119	(1 1/8")				
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 1/8")				
17	21					FPA21-BU125	(1 1/4")				
	25	25.0	FPA25-M25						FPA25-M25-90		
23	28	28.5	FPA28-M25	FPA28-PG21	FPA28-075	FPA28-BU138	(1 1/8")	FPA28-FL	FPA28-M25-90	FPA28-PG21-90	FPA28-075-90
23	28		FPA28-M32	FPA28-PG29		FPA28-BU144	(1 1/4")				
29	34	34.5	FPA34-M32	FPA34-PG29	FPA34-100	FPA34-BU144	(1 1/4")	FPA34-FL	FPA34-M32-90	FPA34-PG29-90	FPA34-100-90
29	34		FPA34-M40			FPA34-BU175	(1 3/4")				
36	42	42.5	FPA42-M40	FPA42-PG36	FPA42-125	FPA42-BU200	(2")	FPA42-FL	FPA42-M40-90	FPA42-PG36-90	FPA42-125-90
36	42		FPA42-M50		FPA42-150	FPA42-BU225	(2 1/4")		FPA42-M50-90		FPA42-150-90
48	54	54.5	FPA54-M50	FPA54-PG42	FPA54-150	FPA54-BU200	(2")		FPA54-M50-90	FPA54-PG48-90	FPA54-150-90
48	54		FPA54-M63	FPA54-PG48	FPA54-200	FPA54-BU225	(2 1/4")		FPA54-M63-90		FPA54-200-90
56	67	67.0	FPA67-M63	FPA67-PG48	FPA67-200				FPA67-M63-90	FPA67-PG48-90	FPA67-200-90

Ordering Notes

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

properties

- 1 part fast fit
- IP rating: IP66
- Vibration & shock tested to EN61373 Cat 2
- Tamper resistant
- Can be removed using a screwdriver
- Both 90° & 45° elbows incorporate swept bore to facilitate cable installation & protect cables when installed
- All round teeth give high pull off strength 70kg with FPAH21
- Suitable for fine and coarse pitch conduits
- Temperature range -50°C to +135°C
- Low Fire Hazard (LFH), see page 149
- Halogen, sulphur and phosphorus free
- Available in Black or Grey (RAL 7031)
- EN 45545 HL3 and NFPA compliant
- Nylon metric threads supplied with glass reinforced nylon locknut
- Face seal washers available on request - see page 84

FPA90		FPA90		FPA45			FPA45		nominal size (mm)	OD mm	european (NW) sizes
90° elbow UNEF swivel internal thread		flange		45° elbow external thread			45° elbow UNEF swivel internal thread				
One piece, fast fit, 90 degree elbow fitting with nickel plated brass swivel UNEF internal thread for attachment to circular connectors.		One piece, fast fit 90 degree elbow fitting with nylon swivel flange with 'O' ring face seal.		One piece, fast fit, external threaded 45 degree elbow fitting. Suitable for knockouts.			One piece, fast fit, 45 degree elbow fitting with nickel plated brass swivel UNEF internal thread for attachment to circular connectors.				
IP66		IP66		IP66			IP66				
											
90 Degree UNEF	Thread	90 Degree Flange		45 Degree Metric	45 Degree PG	45 Degree NPT	45 Degree UNEF	Thread			
FPA13-BU063-90	(5/8")								10	10.0	7
FPA13-BU075-90	(3/4")								10	7	
FPA13-BU088-90	(7/8")								11	11.5	8
FPA16-BU075-90	(3/4")	FPA16-FL-90		FPA16-M20-45	FPA16-PG13-45	FPA16-050-45	FPA16-BU075-45	(3/4")	13	13.0	10
FPA16-BU088-90	(7/8")						FPA16-BU088-45	(7/8")	13	10	10
FPA16-BU100-90	(1")						FPA16-BU100-45	(1")	13	10	10
FPA16-BU119-90	(1 1/16")						FPA16-BU119-45	(1 1/16")	16	15.8	12
									16	12	12
									16	12	12
									16	12	12
									18	18.5	14
									18	14	14
									20	20.0	
FPA21-BU100-90	(1")	FPA21-FL-90		FPA21-M20-45	FPA21-PG13-45	FPA21-050-45	FPA21-BU100-45	(1")	21	21.2	17
FPA21-BU119-90	(1 1/16")				FPA21-PG16-45		FPA21-BU119-45	(1 1/16")	21	17	17
FPA21-BU125-90	(1 1/4")						FPA21-BU125-45	(1 1/4")	21	17	17
									25	25.0	
FPA28-BU138-90	(1 3/8")	FPA28-FL-90		FPA28-M25-45	FPA28-PG21-45	FPA28-075-45	FPA28-BU138-45	(1 3/8")	28	28.5	23
FPA28-BU144-90	(1 7/16")						FPA28-BU144-45	(1 7/16")	28	23	23
FPA34-BU144-90	(1 7/16")	FPA34-FL-90		FPA34-M32-45	FPA34-PG29-45	FPA34-100-45	FPA34-BU144-45	(1 7/16")	34	34.5	29
FPA34-BU175-90	(1 3/4")						FPA34-BU175-45	(1 3/4")	34	29	29
FPA42-BU200-90	(2")	FPA42-FL-90		FPA42-M50-45	FPA42-PG36-45	FPA42-150-45	FPA42-BU200-45	(2")	42	42.5	36
FPA42-BU225-90	(2 1/4")						FPA42-BU225-45	(2 1/4")	42	36	36
FPA54-BU200-90	(2")	FPA54-FL-90*		FPA54-M50-45		FPA54-150-45	FPA54-BU200-45	(2")	54	54.5	48
FPA54-BU225-90	(2 1/4")						FPA54-BU225-45	(2 1/4")	54	48	48
									67	67.0	56

Standards & Approvals





FPA system nylon

Construction: Nylon (PA66) moulded fittings.

FPA system brass threaded

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

Colour: Black or Grey.



IP66

Fittings

			FPA45	FPA-FPA	FPA-MPC
			flange	coupler	coupler
			One piece, fast fit 45 degree elbow fitting with nylon swivel flange with 'O' ring face seal.	One piece, fast fit, coupler to join corrugated conduits. Also available in FPAX and FPAU versions.	One piece, fast fit, coupler to join corrugated conduit to rigid conduit.
					
					
			45 Degree Flange	Coupler	Rigid Conduit Coupler
7	10	10.0			
7	10				
8	11	11.5			
10	13	13.0			
10	13				
10	13				
12	16	15.8	FPA16-FL-45	FPA16-FPA16	FPA16-MPC16
12	16				
12	16				
12	16				
14	18	18.5			
14	18				
	20	20.0		FPA20-FPA20	
17	21	21.2	FPA21-FL-45	FPA21-FPA21	FPA21-MPC20
17	21				
17	21				
	25	25.0		FPA25-FPA25	
23	28	28.5	FPA28-FL-45	FPA28-FPA28	FPA28-MPC25
23	28				
29	34	34.5	FPA34-FL-45	FPA34-FPA34	FPA34-MPC32
29	34				
36	42	42.5	FPA42-FL-45	FPA42-FPA42	FPA42-MPC40
36	42				
48	54	54.5	FPA54-FL-45	FPA54-FPA54	
48	54				
56	67	67.0			

European (NW) sizes
nominal size (mm)
OD mm

7	10	10.0
7	10	
8	11	11.5
10	13	13.0
10	13	
10	13	
12	16	15.8
12	16	
12	16	
12	16	
14	18	18.5
14	18	
	20	20.0
17	21	21.2
17	21	
17	21	
	25	25.0
23	28	28.5
23	28	
29	34	34.5
29	34	
36	42	42.5
36	42	
48	54	54.5
48	54	
56	67	67.0

Ordering Notes

- * Indicates parts made to order on request
- NPB = Nickel Plated Brass

- **Available on request:**
 - colour Grey, other threads
 - for brass locknuts and sealing washers see accessories, page 84
 - EMC braid clamp version see page 55



properties

- 1 part fast fit
- IP rating: IP66
- Vibration & shock tested to EN61373 Cat 2
- Tamper resistant
- Can be removed using a screwdriver
- Both 90° & 45° elbows incorporate swept bore to facilitate cable installation & protect cables when installed
- All round teeth give high pull off strength 70kg with FPAH21
- Suitable for fine and coarse pitch conduits
- Temperature range -50°C to +135°C
- Low Fire Hazard (LFH), see page 8
- Halogen, sulphur and phosphorus free
- Available in Black or Grey (RAL 7031)
- EN 45545 HL3 and NFPA compliant



FPA		FPA		FPA90				
straight swivel brass external thread		straight swivel brass internal thread		90° elbow swivel brass external thread				
One piece, fast fit, swivel, nickel plated brass external threaded fitting. Suitable for knockouts or threaded entries.		One piece, fast fit, swivel, nickel plated brass internal threaded fitting.		One piece, fast fit, swivel, 90 degree elbow, nickel plated brass external threaded fitting. Suitable for knockouts or threaded entries.				
IP66		IP66		IP66				
								
NPB Ext Metric	NPB Ext PG	NPB Int Metric		NPB Ext Metric	NPB Ext PG	nominal size (mm)	OD mm	European (NW) sizes
FPA13-BM16	FPA13-BPG9	FPA13-BFM16		FPA13-BM16-90	FPA13-BPG9-90	10	10.0	7
						10		7
						11	11.5	8
						13	13.0	10
						13		10
						13		10
FPA16-BM16	FPA16-BPG9	FPA16-BFM16		FPA16-BM16-90	FPA16-BPG9-90	16	15.8	12
FPA16-BM20	FPA16-BPG11	FPA16-BFM20		FPA16-BM20-90	FPA16-BPG11-90	16		12
						16		12
						16		12
						16		12
						18	18.5	14
						18		14
						20	20.0	
FPA21-BM20	FPA21-BPG13	FPA21-BFM20		FPA21-BM20-90	FPA21-BPG13-90	21	21.2	17
	FPA21-BPG16				FPA21-BPG16-90	21		17
						21		17
						25	25.0	
FPA28-BM25	FPA28-BPG21	FPA28-BFM25		FPA28-BM25-90	FPA28-BPG21-90	28	28.5	23
						28		23
FPA34-BM32	FPA34-BPG29	FPA34-BFM32		FPA34-BM32-90	FPA34-BPG29-90	34	34.5	29
						34		29
FPA42-BM40	FPA42-BPG36	FPA42-BFM40		FPA42-BM40-90	FPA42-BPG36-90	42	42.5	36
FPA42-BM50				FPA42-BM50-90		42		36
FPA54-BM50	FPA54-BPG48*	FPA54-BFM50		FPA54-BM50-90	FPA54-BPG48-90*	54	54.5	48
FPA54-BM63				FPA54-BM63-90		54		48
FPA67-BM63						67	67.0	56

Standards & Approvals





FPA system brass threaded

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

Colour: Black or Grey.



Fittings

			FPA90	FPA45		FPA45
			90° elbow swivel brass internal thread	45° elbow swivel brass external thread		45° elbow swivel brass internal thread
			One piece, fast fit, swivel, 90 degree elbow, nickel plated brass internal threaded fitting.	One piece, fast fit, swivel, 45 degree elbow, nickel plated brass external threaded fitting. Suitable for knockouts or threaded entries.		One piece, fast fit, swivel, 45 degree elbow, nickel plated brass internal threaded fitting.
			IP66	IP66	IP66	IP66
						
			NPB Int Metric	NPB Ext Metric	NPB Ext PG	NPB Int Metric
European (NW) sizes	nominal size (mm)	OD mm				
7	10	10.0				
7	10					
8	11	11.5				
10	13	13.0	FPA13-BFM16-90			
10	13					
10	13					
12	16	15.8	FPA16-BFM16-90 FPA16-BFM20-90	FPA16-BM16-45 FPA16-BM20-45	FPA16-BPG13-45 FPA16-BPG16-45	FPA16-BFM20-45
12	16					
12	16					
12	16					
14	18	18.5				
14	18					
	20	20.0				
17	21	21.2	FPA21-BFM20-90	FPA21-BM20-45	FPA21-BPG13-45 FPA21-BPG16-45	FPA21-BFM20-45
17	21					
17	21					
	25	25.0				
23	28	28.5	FPA28-BFM25-90	FPA28-BM25-45	FPA28-BPG21-45	FPA28-BFM25-45
23	28					
29	34	34.5	FPA34-BFM32-90	FPA34-BM32-45	FPA34-BPG29-45	FPA34-BFM32-45
29	34					
36	42	42.5	FPA42-BFM50-90	FPA42-BM40-45 FPA42-BM50-45	FPA42-BPG36-45	FPA42-BFM50-45
36	42					
48	54	54.5	FPA54-BFM50-90	FPA54-BM50-45 FPA54-BM63-45	FPA54-BPG48-45*	FPA54-BFM50-45
48	54					
56	67	67.0				

Ordering Notes

* Indicates parts made to order on request

• NPB = Nickel Plated Brass

• Available on request:




- colour Grey, other threads
- for brass locknuts and sealing washers see accessories, page 84
- EMC braid clamp version, see page 55



properties

- 1 part fast fit
- IP rating: **of conduit & fitting: IP66**
of cable gland: IP68 (10 bar) +IP69
- Vibration & shock tested to EN61373 Cat 2
- Tamper resistant
- Can be removed using a screwdriver
- All round teeth give high pull off strength 70kg with FPAH21
- Both 90° and 45° elbows incorporate swept bore to facilitate cable installation and protect cables when installed
- Suitable for fine and coarse pitch conduits
- Temperature range:
conduit fitting: -50°C to +135°C
cable gland: -40°C to +100°C static
-20°C to +100°C dynamic
- Low Fire Hazard (LFH), see page 8
- Halogen, sulphur and phosphorus free
- **Refer to accessories for clamping range page 85**

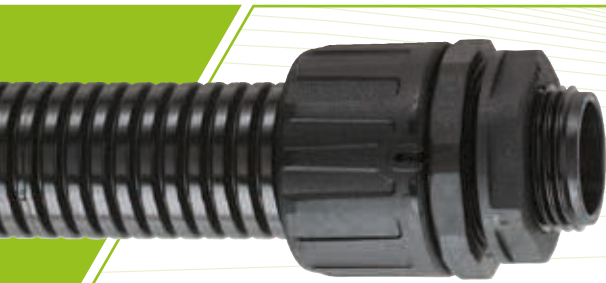


FPA	FPA90	FPA45			
<p>cable gland</p> <p>One piece, fast fit, swivel, nickel plated brass external threaded cable gland fitting. Suitable for knockouts or threaded entries.</p> <p>IP66</p>  <p>NPB Metric</p>	<p>cable gland</p> <p>One piece, fast fit, swivel, 90 degree elbow, nickel plated brass external threaded cable gland fitting. Suitable for knockouts or threaded entries.</p> <p>IP66</p>  <p>NPB Metric</p>	<p>cable gland</p> <p>One piece, fast fit, swivel, 45 degree elbow, nickel plated brass external threaded cable gland fitting. Suitable for knockouts or threaded entries.</p> <p>IP66</p>  <p>NPB Metric</p>	nominal size (mm)	OD mm	European (NW) sizes
			10	10.0	7
			10		7
			11	11.5	8
			13	13.0	10
			13		10
			13		10
			16	15.8	12
			16		12
			16		12
			16		12
			18	18.5	14
			18		14
			20	20.0	
			21	21.2	17
			21		17
			21		17
			25	25.0	
			28	28.5	23
			28		23
			34	34.5	29
			34		29
			42	42.5	36
			42		36
			54	54.5	48
			54		48
			67	67.0	56

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

Standards & Approvals





FPAX system nylon

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

Colour: Black or Grey* on request



Fittings

			FPAX	FPAX - FPAX	FPAX	FPAX		
			straight external thread	coupler	straight UNEF swivel internal thread	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 nickel plated brass swivel UNEF internal thread for attachment to circular connectors with additional conduit seal.	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		
european (NW) sizes	nominal size (mm)	OD mm						
			Ext Metric	Ext PG	Ext NPT	Int UNEF	Thread	Flange
7	10	10.0						
7	10							
8	11	11.5						
10	13	13.0	FPAX13-M16	FPAX13-PG9				
10	13							
10	13							
12	16	15.8	FPAX16-M16	FPAX16-PG9	FPAX16-038		FPAX16-FL	
12	16		FPAX16-M20	FPAX16-PG11	FPAX16-050			
12	16			FPAX16-PG13				
12	16			FPAX16-PG16				
14	18	18.5						
14	18							
	20	20.0						
17	21	21.2	FPAX21-M20	FPAX21-PG13	FPAX21-050		FPAX21-FL	
17	21			FPAX21-PG16				
17	21							
	25	25.0						
23	28	28.5	FPAX28-M25	FPAX28-PG21	FPAX28-075		FPAX28-FL	
23	28		FPAX28-M32	FPAX28-PG29				
29	34	34.5	FPAX34-M32	FPAX34-PG29	FPAX34-100		FPAX34-FL	
29	34		FPAX34-M40					
36	42	42.5	FPAX42-M40	FPAX42-PG36	FPAX42-125		FPAX42-FL	
36	42		FPAX42-M50		FPAX42-150			
48	54	54.5	FPAX54-M50	FPAX54-PG42	FPAX54-150			
48	54		FPAX54-M63	FPAX54-PG48	FPAX54-200			
56	67	67.0	FPAX67-M63		FPAX67-200			

Ordering Notes

- * Indicates parts made to order on request
- NPB = Nickel Plated Brass

- Available on request:
 - other threads
 - for brass locknuts and sealing washers see accessories, page 84
 - EMC braid clamp version see page 55



properties

- Fast fit
- IP rating: IP66 + IP67 + IP68 (2 bar) + IP69
- Supplied with additional conduit seal and face seal
- Face seal details:
 - Metric Nylon threads supplied with retained Polyester Elastomer Washer
 - NPT and PG Nylon threads supplied with Neoprene Washer
- Brass threads supplied with Fibre Washer
- UNEF, Flange and Cable Glands supplied with O-ring
- Vibration and shock tested to EN61373 Cat 2
- Tamper resistant
- Can be removed using a screwdriver
- All round teeth give high pull off strength 70kg with FPAH21
- Both 90° and 45° elbows incorporate swept bore to facilitate cable installation and protect cables when installed
- Suitable for fine and coarse pitch conduits
- Temperature range -50°C to +135°C
- Metric nylon threads supplied complete with glass reinforced nylon locknuts
- Swivel UNEF threads allow assembly to military style electrical connectors without twisting of cables and includes sealing 'O' ring face seal
- Low Fire Hazard (LFH), see page 8
- Halogen, sulphur and phosphorus free
- EN 45545 HL3 and NFPA130 compliant

FPAX90			FPAX90			FPAX90								
90° elbow external thread			90° elbow UNEF swivel internal thread			flange								
Fast fit, external threaded 90 degree elbow fitting with additional conduit seal. Suitable for knockouts.			Fast fit, 90 degree elbow fitting with nickel plated brass swivel UNEF internal thread for attachment to circular connectors with additional conduit seal.			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	IP66	IP67	IP68	IP69			
Ext Metric	Ext PG	Ext NPT	Int UNEF	Thread	Thread	Thread	Thread	Flange	Flange	Flange	Flange	nominal size (mm)	OD mm	European (NW) sizes
FPAX13-M16-90	FPAX13-PG9-90											10	10.0	7
												10		7
												11	11.5	8
												13	13.0	10
												13		10
												13		10
FPAX16-M16-90	FPAX16-PG9-90	FPAX16-050-90	FPAX16-BU075-90	(3/4")				FPAX16-FL-90				16	15.8	12
FPAX16-M20-90	FPAX16-PG11-90		FPAX16-BU088-90	(7/8")								16		12
	FPAX16-PG13-90		FPAX16-BU100-90	(1")								16		12
			FPAX16-BU119-90	(1 1/8")								16		12
												18	18.5	14
												18		14
												20	20.0	
FPAX21-M20-90	FPAX21-PG13-90	FPAX21-050-90	FPAX21-BU100-90	(1")				FPAX21-FL-90				21	21.2	17
	FPAX21-PG16-90		FPAX21-BU119-90	(1 1/8")								21		17
			FPAX21-BU125-90	(1 1/4")								21		17
												25	25.0	
FPAX28-M25-90	FPAX28-PG21-90	FPAX28-075-90	FPAX28-BU138-90	(1 3/8")				FPAX28-FL-90				28	28.5	23
			FPAX28-BU144-90	(1 1/2")								28		23
			FPAX34-M32-90	FPAX34-PG29-90	FPAX34-100-90	FPAX34-BU144-90	(1 1/2")	FPAX34-FL-90				34	34.5	29
												34		29
FPAX42-M40-90	FPAX42-PG36-90	FPAX42-125-90	FPAX42-BU200-90	(2")				FPAX42-FL-90				42	42.5	36
FPAX42-M50-90		FPAX42-150-90	FPAX42-BU225-90	(2 1/4")								42		36
FPAX54-M50-90	FPAX54-PG48-90	FPAX54-150-90	FPAX54-BU200-90	(2")								54	54.5	48
FPAX54-M63-90		FPAX54-200-90	FPAX54-BU225-90	(2 1/4")								54		48
												67	67.0	56

Standards & Approvals





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

FPAX45			FPAX45			FPAX45					
45° elbow external thread			45° elbow UNEF swivel internal thread			flange					
Fast fit, external threaded 45 degree elbow fitting with additional conduit seal. Suitable for knockouts.			Fast fit, 45 degree elbow fitting with nickel plated brass swivel UNEF internal thread for attachment to circular connectors with additional conduit seal.			Fast fit 45 degree elbow fitting with nylon swivel flange with additional conduit seal and 'O' ring face seal.					
IP66	IP67	IP68	IP69	IP66	IP67	IP68	IP69	IP66	IP67	IP68	IP69
Ext Metric	Ext PG	Ext NPT	Int UNEF	Thread	Flange						
7	10	10.0									
7	10										
8	11	11.5									
10	13	13.0									
10	13										
10	13										
12	16	15.8	FPAX16-M20-45	FPAX16-PG13-45	FPAX16-050-45	FPAX16-BU075-45	(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	18.5									
14	18										
	20	20.0									
17	21	21.2	FPAX21-M20-45	FPAX21-PG13-45	FPAX21-050-45	FPAX21-BU100-45	(1")	FPAX21-FL-45			
17	21					FPAX21-BU119-45	(1 3/16")				
17	21					FPAX21-BU125-45	(1 1/4")				
	25	25.0									
23	28	28.5	FPAX28-M25-45	FPAX28-PG21-45	FPAX28-075-45	FPAX28-BU138-45	(1 3/8")	FPAX28-FL-45			
23	28					FPAX28-BU144-45	(1 7/16")				
29	34	34.5	FPAX34-M32-45	FPAX34-PG29-45	FPAX34-100-45	FPAX34-BU144-45	(1 7/16")	FPAX34-FL-45			
29	34										
36	42	42.5	FPAX42-M50-45	FPAX42-PG36-45	FPAX42-150-45	FPAX42-BU200-45	(2")	FPAX42-FL-45			
36	42					FPAX42-BU225-45	(2 1/4")				
48	54	54.5	FPAX54-M50-45	FPAX54-150-45		FPAX54-BU200-45	(2")				
48	54					FPAX54-BU225-45	(2 1/4")				
56	67	67.0									

Ordering Notes

- Specify Black or Grey (B=Black, G=Grey)
eg: FPAX16-M20-45B
- NPB = Nickel Plated Brass
- Available on request:
 - other threads
 - for brass locknuts and sealing washers see accessories, page 84
 - EMC braid clamp version, see page 55



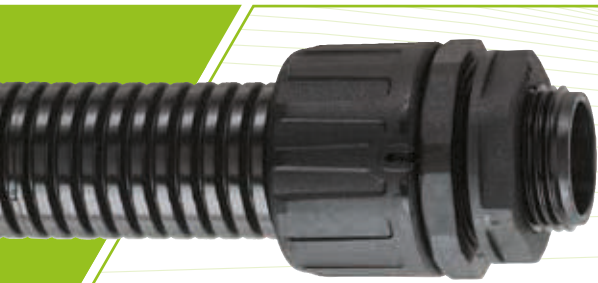
properties

- Fast fit
- IP rating: IP66 + IP67 + IP68 (2 bar) + IP69
- Supplied with additional conduit seal and face seal
- Face seal details:
 - Metric Nylon threads supplied with retained Polyester Elastomer Washer
 - NPT and PG Nylon threads supplied with Neoprene Washer
 - Brass threads supplied with Fibre Washer
 - UNEF, Flange and Cable Glands supplied with O-ring
- Vibration and shock tested to EN61373 Cat 2
- Tamper resistant
- Can be removed using a screwdriver
- All round teeth give high pull off strength 70kg with FPAH21
- Both 90° and 45° elbows incorporate swept bore to facilitate cable installation and protect cables when installed
- Suitable for fine and coarse pitch conduits
- Temperature range -50°C to +135°C
- Metric nylon threads supplied complete with glass reinforced nylon locknuts
- Swivel UNEF threads allow assembly to military style electrical connectors without twisting of cables and includes sealing 'O' ring face seal
- Low Fire Hazard (LFH), see page 8
- Halogen, sulphur and phosphorus free
- EN 45545 HL3 and NFPA130 compliant

FPAX		FPAX		FPAX90										
straight swivel brass external thread		straight swivel brass internal thread		90° elbow swivel brass external thread										
Fast fit, swivel, nickel plated brass external threaded fitting. Suitable for knockouts or threaded entries.		Fast fit, swivel, nickel plated brass internal threaded fitting with additional conduit seal.		Fast fit, swivel, 90 degree elbow, nickel plated brass external threaded fitting with additional conduit seal. Suitable for knockouts or threaded entries.										
IP66	IP67	IP68	IP69	IP66	IP67	IP68	IP69	IP66	IP67	IP68	IP69			
														
NPB Ext Metric	NPB Ext PG	NPB Int Metric	NPB Int Metric	NPB Ext Metric	NPB Ext PG	nominal size (mm)	OD mm	European (NW) sizes						
FPAX13-BM16	FPAX13-BPG9	FPAX13-BFM16	FPAX13-BFM16	FPAX13-BM16-90	FPAX13-BPG9-90	10	10.0	7						
						10		7						
						11	11.5	8						
						13	13.0	10						
						13		10						
						13		10						
FPAX16-BM16	FPAX16-BPG9	FPAX16-BFM16	FPAX16-BFM16	FPAX16-BM16-90	FPAX16-BPG9-90	16	15.8	12						
FPAX16-BM20	FPAX16-BPG11	FPAX16-BFM20	FPAX16-BFM20	FPAX16-BM20-90	FPAX16-BPG11-90	16		12						
						16		12						
						16		12						
						16		12						
						18	18.5	14						
						18		14						
						20	20.0							
FPAX21-BM20	FPAX21-BPG13	FPAX21-BFM20	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-BFM25	FPAX28-BM25-90	FPAX28-BPG21-90	28	28.5	23						
						28		23						
FPAX34-BM32	FPAX34-BPG29	FPAX34-BFM32	FPAX34-BFM32	FPAX34-BM32-90	FPAX34-BPG29-90	34	34.5	29						
						34		29						
FPAX42-BM40	FPAX42-BPG36	FPAX42-BFM40	FPAX42-BFM40	FPAX42-BM40-90	FPAX42-BPG36-90	42	42.5	36						
FPAX42-BM50				FPAX42-BM50-90		42		36						
FPAX54-BM50	FPAX54-BPG48*	FPAX54-BFM50	FPAX54-BFM50	FPAX54-BM50-90	FPAX54-BPG48-90*	54	54.5	48						
FPAX54-BM63				FPAX54-BM63-90		54		48						
						67	67.0	56						

Standards & Approvals








FPAX system brass threaded

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

Colour: Black.



Fittings

			FPAX90	FPAX45	FPAX45
			90° elbow swivel brass internal thread	45° elbow swivel brass external thread	45° elbow swivel brass internal thread
			Fast fit, swivel, 90 degree elbow, nickel plated brass internal threaded fitting with additional conduit seal.	Fast fit, swivel, 45 degree elbow, nickel plated brass external threaded fitting with additional conduit seal. Suitable for knockouts or threaded entries.	Fast fit, swivel, 45 degree elbow, nickel plated brass internal threaded fitting with additional conduit seal.
			IP66 IP67 IP68 IP69	IP66 IP67 IP68 IP69	IP66 IP67 IP68 IP69
european (NW) sizes nominal size (mm) OD mm					
			NPB Int Metric	NPB Ext Metric NPB Ext PG	NPB Int Metric
7	10	10.0			
7	10				
8	11	11.5			
10	13	13.0	FPAX13-BFM16-90		
10	13				
10	13				
12	16	15.8	FPAX16-BFM16-90 FPAX16-BFM20-90	FPAX16-BM16-45 FPAX16-BM20-45	FPAX16-BPG13-45 FPAX16-BPG16-45
12	16				FPAX16-BFM20-45
12	16				
12	16				
14	18	18.5			
14	18				
	20	20.0			
17	21	21.2	FPAX21-BFM20-90	FPAX21-BM20-45	FPAX21-BPG13-45 FPAX21-BPG16-45
17	21				FPAX21-BFM20-45
17	21				
	25	25.0			
23	28	28.5	FPAX28-BFM25-90	FPAX28-BM25-45	FPAX28-BPG21-45
23	28				FPAX28-BFM25-45
29	34	34.5	FPAX34-BFM32-90	FPAX34-BM32-45	FPAX34-BPG29-45
29	34				FPAX34-BFM32-45
36	42	42.5	FPAX42-BFM50-90	FPAX42-BM40-45 FPAX42-BM50-45	FPAX42-BPG36-45
36	42				FPAX42-BFM50-45
48	54	54.5	FPAX54-BFM50-90	FPAX54-BM50-45 FPAX54-BM63-45	FPAX54-BPG48-45*
48	54				FPAX54-BFM50-45
56	67	67.0			

Ordering Notes

* Indicates parts made to order on request

• NPB = Nickel Plated Brass

• Available on request:

- other threads
- for brass locknuts and sealing washers see accessories, page 84
- EMC braid clamp version, see page 55

properties

- Fast fit
- IP rating: **for conduit & fitting IP66 + IP67 + IP68 (2 bar) + IP69 for cable gland: IP68 (10 bar) + IP69**
- Supplied with additional conduit seal & face seal
- Face seal details:
 - **Metric Nylon threads supplied with retained Polyester Elastomer Washer**
 - **NPT and PG Nylon threads supplied with Neoprene Washer**
 - **Brass threads supplied with Fibre Washer**

- **UNEF, Flange and Cable Glands supplied with O-ring**
- Vibration and shock tested to EN61373 Cat 2
- Tamper resistant
- Both 90° and 45° elbows incorporate swept bore to facilitate cable installation and protect cables when installed
- Can be removed using a screwdriver
- All round teeth give high pull off strength 70kg with FPAH21
- Both 90° and 45° elbows incorporate swept bore to facilitate cable installation and protect cables when installed

- Suitable for fine and coarse pitch conduits
- Temperature range:
 - conduit fitting: -50°C to +135°C**
 - cable gland: -40°C to +100°C static**
 - 20°C to +100°C dynamic**
- Low Fire Hazard (LFH), see page 8
- Halogen, sulphur and phosphorus free
- Refer to accessories for clamping range page 85
- EN 45545 HL3 and NFPA compliant

FPAX	NEW	FPAX90	NEW	FPAX45	NEW
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.	
					
NPB Metric	NPB Metric	NPB Metric			

			nominal size (mm)	OD mm	European (NW) sizes
			10	10.0	7
			10		7
			11	11.5	8
			13	13.0	10
			13		10
			13		10
			16	15.8	12
			16		12
			16		12
			16		12
			18	18.5	14
			18		14
			20	20.0	
			21	21.2	17
			21		17
			21		17
			25	25.0	
			28	28.5	23
			28		23
			34	34.5	29
			34		29
			42	42.5	36
			42		36
			54	54.5	48
			54		48
			67	67.0	56

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

Standards & Approvals



Technical Drawing





ULTRA™ system

The World's Best Conduit Fitting

NEW

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

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

Colour: 2 Tone Colour - Black and Grey.

Integrated Sealing Technology

EXTRA LOW FIRE HAZARD **

IP66 IP67 IP68 IP69

Fittings ULTRA™ system straight

FPAU	FPAU	FPAU
<p>straight external thread</p> <p>One piece fast fit, external threaded fitting with integrated conduit seal. Suitable for knockouts or threaded entries.</p> <p>IP66 IP67 IP68 IP69</p>	<p>straight UNEF swivel internal thread</p> <p>One piece fast fit fitting with nickel plated brass swivel UNEF internal thread for attachment to circular connectors with integrated conduit seal.</p> <p>IP66 IP67 IP68 IP69</p>	<p>straight swivel brass external thread</p> <p>One piece fast fit, swivel, nickel plated brass external threaded fitting with integrated conduit seal. Suitable for knockouts or threaded entries.</p> <p>IP66 IP67 IP68 IP69</p>

European (NW) sizes
nominal size (mm)
OD mm



European (NW) sizes	nominal size (mm)	OD mm	Ext Metric	Ext NPT	Int UNEF	Thread	NPB Ext Metric	NPB Ext PG	NPB Ext NPT
7	10	10.0	FPAU13-M16				FPAU13-BM16	FPAU13-BPG9	
7	10								
8	11	11.5							
10	13	13.0							
10	13								
10	13								
12	16	15.8	FPAU16-M16	FPAU16-038	FPAU16-BU075	(3/4")	FPAU16-BM16	FPAU16-BPG9	FPAU16-B038*
12	16		FPAU16-M20	FPAU16-050	FPAU16-BU088	(7/8")	FPAU16-BM20	FPAU16-BPG11	FPAU16-B050*
12	16				FPAU16-BU100	(1")			
12	16				FPAU16-BU119	(1 3/16")			
14	18	18.5							
14	18								
	20	20.0							
17	21	21.2	FPAU21-M20	FPAU21-050	FPAU21-BU100	(1")	FPAU21-BM20	FPAU21-BPG13	FPAU21-B050*
17	21		FPAU21-M25		FPAU21-BU119	(1 3/16")	FPAU21-BPG16		
17	21				FPAU21-BU125	(1 1/4")			
	25	25.0							
23	28	28.5	FPAU28-M25	FPAU28-075	FPAU28-BU138	(1 3/8")	FPAU28-BM25	FPAU28-BPG21	FPAU28-B075*
23	28		FPAU28-M32						
29	34	34.5	FPAU34-M32	FPAU34-100	FPAU34-BU144	(1 7/16")	FPAU34-BM32	FPAU34-BPG29	FPAU34-B100*
29	34		FPAU34-M40						
36	42	42.5	FPAU42-M40	FPAU42-125	FPAU42-BU200	(2")	FPAU42-BM40	FPAU42-BPG36	FPAU42-B125*
36	42		FPAU42-M50	FPAU42-150	FPAU42-BU225	(2 1/4")	FPAU42-BM50		FPAU42-B150*
48	54	54.5	FPAU54-M50	FPAU54-150	FPAU54-BU200	(2")	FPAU54-BM50		FPAU54-B150*
48	54		FPAU54-M63	FPAU54-200	FPAU54-BU225	(2 1/4")	FPAU54-BM63	FPAU54-BPG48*	FPAU54-B200*
56	67	67.0							

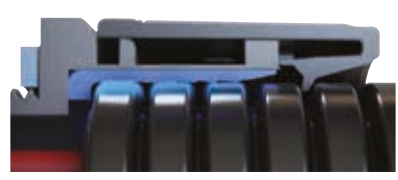
Ordering Notes

- * Indicates parts made to order on request
- NPB = Nickel Plated Brass
- Available on request:
 - other threads
 - for brass locknuts and sealing washers see accessories, page 84
 - EMC braid clamp version see page 55

Fine Pitch



Coarse Pitch









properties

- Fast fit - True one piece component
- IP rating: for conduit & fitting
- **IP66 + IP67 + IP68 (2 bar) + IP68 (72hrs @ 1m) + IP69**
- PA66 Nylon moulded fitting
- Nylon threads supplied complete with glass reinforced nylon locknut
- Metallic threads made from Nickel Plated Brass
- Face seal details:

- **Metric Nylon threads supplied with retained Polyester Elastomer Washer**
- **Metric Brass threads supplied with retained Fibre Washer**

- **NPT threads supplied with a Neoprene Washer**
- **PG Brass threads supplied with Fibre Washer**
- **UNEF, Flange and Cable Glands supplied with O-ring**
- Vibration and shock tested to EN61373 Cat 2
- Tamper resistant
- Both 90° and 45° elbows incorporate swept bore to facilitate cable installation and protect cables when installed
- Can be removed using a screwdriver
- All round teeth give high pull off strength

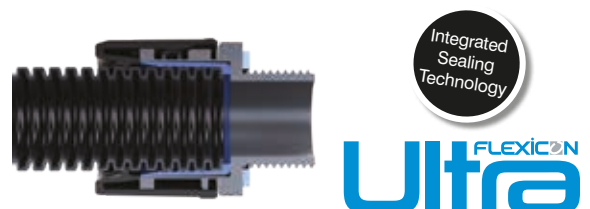
- 75kg with FPAH21
- Suitable for fine and coarse pitch conduits
- Temperature range: **conduit fitting: -50°C to +135°C**
- Low Fire Hazard (LFH) see page 8
- Halogen, sulphur and phosphorus free
- UV resistant
- Swivel threads allow assembly without twisting of cables
- EN 45545 HL3 and NFPA 130 compliant

FPAU 	FPAU 	FPAU - FPAU 																																																																																																																																																															
straight swivel brass internal thread One piece fast fit, swivel, nickel plated brass internal threaded fitting with integrated conduit seal and threaded entries.	flange One piece fast fit fitting with nylon swivel flange with integrated conduit seal and with 'O' ring face seal.	coupler One piece fast fit coupler to join corrugated conduits.																																																																																																																																																															
IP66 IP67 IP68 IP69	IP66 IP67 IP68 IP69	IP66 IP67 IP68 IP69																																																																																																																																																															
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Standards & Approvals



Technical Drawing





ULTRA™ system

The World's Best Conduit Fitting

NEW

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

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

Colour: 2 Tone Colour - Black and Grey.

Integrated Sealing Technology

EXTRA LOW FIRE HAZARD **

IP66 IP67 IP68 IP69

Fittings ULTRA™ system 90° and 45°

FPAU 90			FPAU 90			FPAU 90			FPAU 90		
90° external thread			90° UNEF swivel internal thread			90° swivel brass external thread			90° swivel brass internal thread		
One piece fast fit, external threaded 90 degree elbow fitting with integrated conduit for knockouts.			One piece fast fit, 90 degree elbow fitting with nickel plated brass swivel UNEF internal thread for attachment to circular connectors with integrated conduit seal.			One piece fast fit, swivel, 90 degree elbow, nickel plated brass external threaded fitting with integrated conduit seal. Suitable for knockouts or threaded entries.			One piece fast fit, swivel, 90 degree elbow, nickel plated brass internal threaded fitting with integrated conduit seal.		
IP66	IP67	IP68	IP66	IP67	IP68	IP66	IP67	IP68	IP66	IP67	IP68
european (NW) sizes nominal size (mm) OD mm	7	10	10.0								
	7	10									
	8	11	11.5								
	10	13	13.0	FPAU13-M16-90		FPAU13-BM16-90 FPAU13-BPG9-90				FPAU13-BFM16-90	
	10	13									
	10	13									
	12	16	15.8	FPAU16-M16-90 FPAU16-M20-90	FPAU16-050-90B	FPAU16-BU075-90 (3/4") FPAU16-BU088-90 (7/8") FPAU16-BU100-90 (1") FPAU16-BU119-90 (1 1/16")	FPAU16-BM16-90 FPAU16-BM20-90	FPAU16-BPG9-90 FPAU16-BPG11-90	FPAU16-B050-90*	FPAU16-BFM16-90 FPAU16-BFM20-90	
	12	16									
	12	16									
	12	16									
	14	18	18.5								
	14	18									
		20	20.0	FPAU21-M20-90 FPAU21-050-90B		FPAU21-BU100-90 (1") FPAU21-BU119-90 (1 1/16") FPAU21-BU125-90 (1 1/4")	FPAU21-BM20-90	FPAU21-BPG13-90 FPAU21-BPG16-90	FPAU21-B050-90*	FPAU21-BFM20-90	
	17	21	21.2								
	17	21									
	17	21									
	25	25.0									
23	28	28.5	FPAU28-M25-90	FPAU28-075-90B	FPAU28-BU133-90 (1 3/8") FPAU28-BU144-90 (1 7/16")	FPAU28-BM25-90	FPAU28-BPG21-90	FPAU28-B075-90*	FPAU28-BFM25-90		
23	28										
29	34	34.5	FPAU34-M32-90	FPAU34-100-90B	FPAU34-BU144-90 (1 7/16") FPAU34-BU175-90 (1 3/4")	FPAU34-BM32-90	FPAU34-BPG29-90	FPAU34-B100-90*	FPAU34-BFM32-90		
29	34										
36	42	42.5	FPAU42-M40-90	FPAU42-125-90B	FPAU42-BU200-90 (2")	FPAU42-BM40-90	FPAU42-BPG36-90	FPAU42-B125-90*	FPAU42-BFM50-90		
36	42		FPAU42-M50-90	FPAU42-150-90B	FPAU42-BU225-90 (2 1/4")	FPAU42-BM50-90		FPAU42-B150-90*			
48	54	54.5	FPAU54-M50-90	FPAU54-150-90B	FPAU54-BU200-90 (2")	FPAU54-BM50-90	FPAU54-BPG48-90*	FPAU54-B150-90*	FPAU54-BFM50-90		
48	54		FPAU54-M63-90	FPAU54-200-90B	FPAU54-BU225-90 (2 1/4")	FPAU54-BM63-90		FPAU54-B200-90*			
56	67	67.0									

Ordering Notes

- * Indicates parts made to order on request
- NPB = Nickel Plated Brass
- **Available on request:**
 - other threads
 - for brass locknuts and sealing washers see accessories, page 84
 - EMC braid clamp version see page 55

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


Ultra FLEXICON

properties

- Fast fit - True one piece component
- IP rating: for conduit & fitting
IP66 + IP67 + IP68 (2 bar) + IP68 (72hrs @ 1m) + IP69
- PA66 Nylon moulded fitting
- Metallic threads made from Nickel Plated Brass
- Nylon threads supplied complete with glass reinforced nylon locknut
- Face seal details:
 - **Metric Nylon threads supplied with retained Polyester Elastomer Washer**
 - **Metric Brass threads supplied with retained Fibre Washer**

- **NPT threads supplied with a Neoprene Washer**
- **PG Brass threads supplied with Fibre Washer**
- **UNEf, Flange and Cable Glands supplied with O-ring**
- Vibration and shock tested to EN61373 Cat 2
- Tamper resistant
- Both 90° and 45° elbows incorporate swept bore to facilitate cable installation and protect cables when installed
- Can be removed using a screwdriver
- All round teeth give high pull off strength

- 75kg with FPAH21
- Suitable for fine and coarse pitch conduits
- Temperature range:
conduit fitting: -50°C to +135°C
- Low Fire Hazard (LFH) see page 8
- Halogen, sulphur and phosphorus free
- UV resistant
- Swivel threads allow assembly without twisting of cables
- EN 45545 HL3 and NFPA130 compliant

FPAU 90		FPAU 45		FPAU 45		nominal size (mm)	OD mm	european (NW) sizes
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	
								
Flange		Flange		Int UNEF				
FPAU16-FL-90		FPAU16-FL-45		FPAU16-BU075-45 (3/4")		10	10.0	7
				FPAU16-BU088-45 (7/8")		10		7
				FPAU16-BU100-45 (1")		11	11.5	8
				FPAU16-BU119-45 (1 1/16")		13	13.0	10
						13		10
						13		10
						16	15.8	12
						16		12
						16		12
						16		12
						18	18.5	14
						18		14
						20	20.0	
FPAU21-FL-90		FPAU21-FL-45		FPAU21-BU100-45 (1")		21	21.2	17
				FPAU21-BU119-45 (1 1/16")		21		17
				FPAU21-BU125-45 (1 1/4")		21		17
						25	25.0	
FPAU28-FL-90		FPAU28-FL-45		FPAU28-BU133-45 (1 1/8")		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 (1 3/4")		34		29
FPAU42-FL-90		FPAU42-FL-45		FPAU42-BU200-45 (2")		42	42.5	36
				FPAU42-BU225-45 (2 1/4")		42		36
FPAU54-FL-90		FPAU54-FL-45		FPAU54-BU200-45 (2")		54	54.5	48
				FPAU54-BU225-45 (2 1/4")		54		48
						67	67.0	56

Standards & Approvals



Benefits of Barb Construction

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



ULTRA™ system

The World's Best Conduit Fitting

NEW

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

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

Colour: 2 Tone Colour - Black and Grey.

Integrated Sealing Technology

EXTRA LOW FIRE HAZARD **

IP66 IP67 IP68 IP69

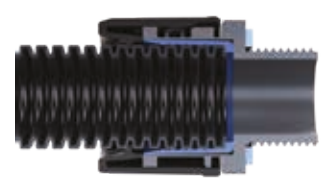
Fittings ULTRA™ system 45°

			FPAU 45		FPAU 45		FPAU 45	
			Integrated Sealing Technology		Integrated Sealing Technology		Integrated Sealing Technology	
			45° external thread		45° swivel brass external thread		45° swivel brass internal thread	
			One piece fast fit, external threaded 45 degree elbow fitting with integrated conduit seal. Suitable for knockouts.		One piece fast fit, swivel, 45 degree elbow, nickel plated brass external threaded fitting with integrated conduit seal. Suitable for knockouts or threaded entries.		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 IP68 IP69		IP66 IP67 IP68 IP69	
								
European (NW) sizes	nominal size (mm)	OD mm	Ext Metric	Ext NPT	NPB Ext Metric	NPB Ext PG	NPB Ext NPT	NPB Int Metric
7	10	10.0						
7	10							
8	11	11.5						
10	13	13.0						
10	13							
10	13							
12	16	15.8	FPAU16-M20-45	FPAU16-050-45	FPAU16-BM16-45 FPAU16-BM20-45	FPAU16-BPG13-45 FPAU16-BPG16-45	FPAU16-B050-45*	FPAU16-BFM20-45
12	16							
12	16							
12	16							
14	18	18.5						
14	18							
	20	20.0						
17	21	21.2	FPAU21-M20-45	FPAU21-050-45	FPAU21-BM20-45	FPAU21-BPG13-45 FPAU21-BPG16-45	FPAU21-B050-45*	FPAU21-BFM20-45
17	21							
17	21							
	25	25.0						
23	28	28.5	FPAU28-M25-45	FPAU28-075-45	FPAU28-BM25-45	FPAU28-BPG21-45	FPAU28-B075-45*	FPAU28-BFM25-45
23	28							
29	34	34.5	FPAU34-M32-45	FPAU34-100-45	FPAU34-BM32-45	FPAU34-BPG29-45	FPAU34-B100-45*	FPAU34-BFM32-45
29	34							
36	42	42.5	FPAU42-M50-45	FPAU42-150-45	FPAU42-BM40-45 FPAU42-BM50-45	FPAU42-BPG36-45	FPAU42-B125-45* FPAU42-B150-45*	FPAU42-BFM50-45
36	42							
48	54	54.5	FPAU54-M50-45	FPAU54-150-45	FPAU54-BM50-45 FPAU54-BM63-45	FPAU54-BPG48-45*	FPAU54-B150-45* FPAU54-B200-45*	FPAU54-BFM50-45
48	54							
56	67	67.0						

Ordering Notes

- * Indicates parts made to order on request
- Available on request:
 - other threads
 - for brass locknuts and sealing washers see accessories, page 84
 - EMC braid clamp version see page 55
- NPB = Nickel Plated Brass

Technical Drawing



properties

- Fast fit - True one piece component
- IP rating: **for conduit & fitting - IP66 + IP67 + IP68 (2 bar) + IP68 (72hrs @ 1m) + IP69 for cable gland - IP68 (10 bar)**
- Nylon threads supplied complete with glass reinforced nylon locknut
- PA66 Nylon moulded fitting
- Metallic threads made from Nickel Plated Brass
- Face seal details:
 - **Metric Nylon threads supplied with retained Polyester Elastomer Washer**
 - **Metric Brass threads supplied with retained Fibre Washer**

- **NPT threads supplied with a Neoprene Washer**
- **PG Brass threads supplied with Fibre Washer**
- **UNEF, Flange and Cable Glands supplied with O-ring**
- Vibration and shock tested to EN61373 Cat 2
- Tamper resistant
- Both 90° and 45° elbows incorporate swept bore to facilitate cable installation and protect cables when installed
- Can be removed using a screwdriver
- All round teeth give high pull off strength 75kg with FPAH21

- Suitable for fine and coarse pitch conduits
- Temperature range: conduit fitting: -50°C to +135°C
- Low Fire Hazard (LFH) see page 8
- Halogen, sulphur and phosphorus free
- UV resistant
- Swivel threads allow assembly without twisting of cables
- EN 45545 HL3 and NFPA130 compliant
- Refer to tables below for clamping range (Cable Range)

ULTRA™ system R Type Cable Strain Relief

STRAIGHT		90° ELBOW		45° ELBOW		nominal size (mm)	OD mm	european (NW) sizes
Integrated Sealing Technology		Integrated Sealing Technology		Integrated Sealing Technology				
cable gland One piece fast fit, swivel, nickel plated brass external threaded cable gland fitting with integrated conduit seal. Suitable for knockouts or threaded entries.		cable gland One piece fast fit, swivel, 90 degree elbow, nickel plated brass external threaded cable gland fitting with integrated conduit seal. Suitable for knockouts or threaded entries.		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	
NPB metric	Cable Range (mm)	NPB metric	Cable Range (mm)	NPB metric	Cable Range (mm)	NPB metric	Cable Range (mm)	
FPAU13-BM16-CG-R1	4.0 - 6.5	FPAU13-BM16-CG-R1-90	4.0 - 6.5	FPAU13-BM16-CG-R1-45	4.0 - 6.5			10
FPAU13-BM16-CG-R2	5.0 - 8.0	FPAU13-BM16-CG-R2-90	5.0 - 8.0	FPAU13-BM16-CG-R2-45	5.0 - 8.0			10
FPAU13-BM16-CG-R3	6.5 - 9.5	FPAU13-BM16-CG-R3-90	6.5 - 9.5	FPAU13-BM16-CG-R3-45	6.5 - 9.5			10
FPAU16-BM16-CG-R1	4.0 - 6.5	FPAU16-BM16-CG-R1-90	4.0 - 6.5	FPAU16-BM16-CG-R1-45	4.0 - 6.5			12
FPAU16-BM16-CG-R2	5.0 - 8.0	FPAU16-BM16-CG-R2-90	5.0 - 8.0	FPAU16-BM16-CG-R2-45	5.0 - 8.0			12
FPAU16-BM16-CG-R3	6.5 - 9.5	FPAU16-BM16-CG-R3-90	6.5 - 9.5	FPAU16-BM16-CG-R3-45	6.5 - 9.5			12
		FPAU16-BM20-CG-R4	7.0 - 10.5	FPAU16-BM20-CG-R4-45	7.0 - 10.5			12
								14
								14
								17
FPAU21-BM20-CG-R1	4.0 - 6.5	FPAU21-BM20-CG-R1-90	4.0 - 6.5	FPAU21-BM20-CG-R1-45	4.0 - 6.5			17
FPAU21-BM20-CG-R2	5.0 - 8.0	FPAU21-BM20-CG-R2-90	5.0 - 8.0	FPAU21-BM20-CG-R2-45	5.0 - 8.0			17
FPAU21-BM20-CG-R3	6.5 - 9.5	FPAU21-BM20-CG-R3-90	6.5 - 9.5	FPAU21-BM20-CG-R3-45	6.5 - 9.5			17
								23
FPAU28-BM25-CG-R1	9.0 - 13.0	FPAU28-BM25-CG-R1-90	9.0 - 13.0	FPAU28-BM25-CG-R1-45	9.0 - 13.0			23
FPAU28-BM25-CG-R2	11.0 - 15.5	FPAU28-BM25-CG-R2-90	11.0 - 15.5	FPAU28-BM25-CG-R2-45	11.0 - 15.5			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			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			29
FPAU42-BM40-CG-R1	17.0 - 20.5	FPAU42-BM40-CG-R1-90	17.0 - 20.5	FPAU42-BM40-CG-R1-45	17.0 - 20.5			36
FPAU42-BM40-CG-R2	20.0 - 25.0	FPAU42-BM40-CG-R2-90	20.0 - 25.0	FPAU42-BM40-CG-R2-45	20.0 - 25.0			36
FPAU54-BM50-CG-R1	32.0 - 36.0	FPAU54-BM50-CG-R1-90	32.0 - 36.0	FPAU54-BM50-CG-R1-45	32.0 - 36.0			48
FPAU54-BM50-CG-R2	36.0 - 40.0	FPAU54-BM50-CG-R2-90	36.0 - 40.0	FPAU54-BM50-CG-R2-45	36.0 - 40.0			48
								56

Standards & Approvals



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



Abrasion Rings 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

			ARB NEW	FPA	FPA	Reducer/Stop Plug
			Nylon abrasion ring For Corrugated Conduit	T piece with inspection lid Fast fit T piece with inspection lid.	Reducing divider Fast fit reducing divider	Fitting to reduce or blank off any outlets.
				IP66	IP66	IP66
						
12	16	13		FPA16T FPA20T	FPA16-13-13	FPA13-R16 SP-R16
17	21	16		FPA21T	FPA21-16-16	FPA16-R21 FPA13-R21 SP-R21
23	28	21		FPA28T	FPA28-21-21	FPA25-R28 FPA21-R28 FPA20-R28 FPA16-R28 FPA13-R28 SP-R28
29	34	28		FPA34T	FPA34-28-28	FPA28-R34 FPA21-R34 FPA16-R34 SP-R34
36	42		AR42B	FPA42T		FPA34-R42 FPA28-R42
48	54		AR54B			FPA21-R42

European (NW) sizes

Conduit In (mm)

Conduit Out x 2 for divider

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



properties

- Fast fit
- IP rating: **FPA: IP66**
FPAX: IP66 + IP67 + IP68 (2 bar)
FPAX Divider: IP66 + IP67 + IP68 (2 bar) + IP69
- Maintains all the benefits of FPA and FPAX fittings
- Vibration and shock tested to EN61373 Cat 2
- Tamper resistant
- All round teeth give high pull off strength
- Low Fire Hazard (LFH), see page 8
- Halogen, sulphur & phosphorous free
- Inspection lid facilitates pull through of cables easing installation on the T-piece
- Rounded internal corners protect cable insulation during installation and use
- Incorporates mounting lugs to aid secure fixing
- EN 45545 HL3 and NFPA130 compliant



FPAX			FPAX NEW			Reducer / Stop Plug														
T piece with inspection lid Fast fit T piece with inspection lid and additional seals for enhanced IP rating.			Divider Fast fit reducing divider with additional seals for enhanced IP ratings			Fitting to reduce or blank off any outlets.														
<div style="display: flex; justify-content: space-around;"> <div style="background-color: #0070C0; color: white; padding: 2px;">IP66</div> <div style="background-color: #0070C0; color: white; padding: 2px;">IP67</div> <div style="background-color: #0070C0; color: white; padding: 2px;">IP68</div> </div>			<div style="display: flex; justify-content: space-around;"> <div style="background-color: #0070C0; color: white; padding: 2px;">IP66</div> <div style="background-color: #0070C0; color: white; padding: 2px;">IP67</div> <div style="background-color: #0070C0; color: white; padding: 2px;">IP68</div> <div style="background-color: #0070C0; color: white; padding: 2px;">IP69</div> </div>			<div style="display: flex; justify-content: space-around;"> <div style="background-color: #0070C0; color: white; padding: 2px;">IP66</div> <div style="background-color: #0070C0; color: white; padding: 2px;">IP67</div> <div style="background-color: #0070C0; color: white; padding: 2px;">IP68</div> </div>														
																				
European (NW) sizes	Conduit In (mm)	Conduit Out x 2 for divider	12	16	13	17	21	16	23	28	21	29	34	28	36	42	48	54	42	
			FPAX16T			FPAX16-13-13			FPAX13-R16			FPAX16-R21			FPAX13-R21			FPAX21-R28		
			FPAX20T						SP-R16			FPAX16-R21			FPAX13-R21					
			FPAX21T			FPAX21-16-16			SP-R21			FPAX13-R21			SP-R21					
			FPAX28T			FPAX28-21-21						FPAX21-R28								
												FPAX16-R28			FPAX13-R28					
												SP-R28								
			FPAX34T			FPAX34-28-28			FPAX28-R34			FPAX21-R34			FPAX16-R34					
									SP-R34			FPAX34-R42			FPAX28-R42					
			FPAX42T			FPAX42-34-34			FPAX21-R42			FPAX34-R42			FPAX28-R42					
									FPAX34-R42											
						FPAX54-42-42														



Standards & Approvals





FPRSS system
corrugated nylon, (PA6)
stainless steel overbraid

FPRTC system
corrugated nylon, (PA6)
tinned copper overbraid



Conduit

<p>FPRSS</p> <p>Construction: Standard weight, extra low fire hazard, corrugated nylon (PA6), with stainless steel (316L) overbraid.</p> <p>Typical Applications: Metro rail stations for anti-vandal.</p> <p>EN 45545-2 M3 HFLPA 130</p>	<p>FPRTC</p> <p>Construction: Standard weight, extra low fire hazard, corrugated nylon (PA6), with tinned copper overbraid.</p> <p>Typical Applications: Inside railway carriages where screening is required.</p> <p>EN 45545-2 M3 HFLPA 130</p>
<p>FPISS</p> <p>Construction: Standard weight, corrugated nylon (PA12), with stainless steel (316L) overbraid.</p> <p>Typical Applications: Moving machinery where low temperatures, abrasion and impacts occur.</p>	<p>FPIHSS</p> <p>Construction: Heavy weight, corrugated nylon (PA12), with stainless steel (316L) overbraid.</p> <p>Typical Applications: Under railway carriages where low temperatures, abrasion, impact and regular movement occurs.</p>
<p>FPIHRSS</p> <p>Construction: Heavy weight, extra low fire hazard, corrugated nylon (PA12), with stainless steel (316L) overbraid.</p> <p>Typical Applications: Under railway carriages where extra low fire hazard, low temperatures, abrasion, impact and regular movement occurs.</p> <p>NEW EN 45545-2 M3 HFLPA 130</p>	

Fittings

<p>C</p> <p>fixed external thread nickel plated brass</p> <p>Multipart compression fitting including conduit retention clip and elastomeric seal. Can be used with knockouts. Braid is locked between inner and outer compression nuts.</p> <p>IP67</p>	<p>C-S</p> <p>swivel external thread nickel plated brass</p> <p>Multipart compression fitting including conduit retention clip and elastomeric seal. Can be used for knockouts and threaded entries. Braid is locked between inner and outer compression nuts.</p> <p>IP67</p>
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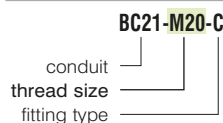
nominal size (mm)	FPRSS part number	FPRTC part number	FPISS part number	FPIHSS part number	FPIHRSS part number	outside dia (mm)	min inside dia (mm)	min inside bend radius (mm)
16	FPRSS16-50M	FPRTC16-50M*	FPISS16-50M*	FPIHSS16-50M*	FPIHRSS16-50M*	17.3	11.5	35
21	FPRSS21-50M	FPRTC21-50M*	FPISS21-50M*	FPIHSS21-50M*	FPIHRSS21-50M*	22.7	15.0	45
28	FPRSS28-50M	FPRTC28-50M*	FPISS28-50M*	FPIHSS28-50M*	FPIHRSS28-50M*	30.0	21.3	50
34	FPRSS34-50M	FPRTC34-50M*	FPISS34-25M*	FPIHSS34-25M*	FPIHRSS34-25M*	36.0	27.6	60
42	FPRSS42-25M*	FPRTC42-25M*	FPISS42-25M*	FPIHSS42-25M*	FPIHRSS42-25M*	44.0	35.5	70
54	FPRSS54-25M*	FPRTC54-25M*	FPISS54-25M*	FPIHSS54-25M*	FPIHRSS54-25M*	56.0	47.2	80

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

Ordering Notes

- * Indicates parts made to order on request and may be subject to MOQ and lead time
- Available on request:
 - longer lengths
 - cut lengths and assemblies
 - additional sizes
 - full copies of independent test report confirming screening effectiveness

How to read the fittings code



Standards & Approvals

UNDERGROUND CE RoHS REACH IRIS Certification ISO/TS 22163:2017

BS EN IEC 61386

EN 45545-2 M3 HFLPA 130

Note: refer to conduit properties for applicable standards

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

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



properties

FPRSS & FPRTC

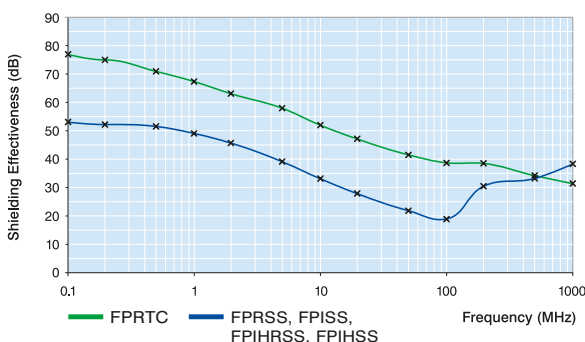
- Highly flexible and high fatigue life
- High impact strength
- Temperature range -40°C to +120°C
- Extra low fire hazard see page 8
- Provides EMC screening 49dB@1MHz (FPRSS) 67dB@1MHz (FPRTC)
- FPRSS provides high tensile strength and resistance to abrasion, corrosion and vandals
- Vibration and shock tested to EN61373 Cat 2
- LUL Std S1085 Cert No. 298

FPISS, FPIHRSS & FPIHSS

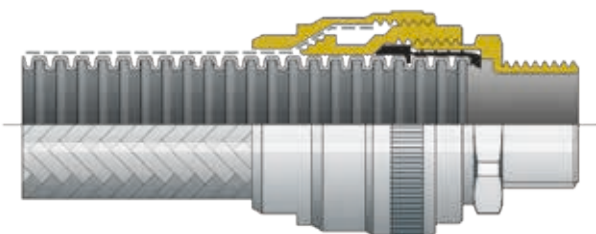
- Highly flexible
- Exceptional fatigue life
- Very high impact resistance even at low temperatures
- Temperature range -50°C to +110°C
- Low fire hazard
- Provides EMC screening 49dB@1MHz
- Provides high tensile strength and resistance to abrasion, corrosion and vandals
- Vibration and shock tested to EN61373 Cat 2
- FPIHRSS EN 45545-2 to HL3 and NFPA130

C-90	90° elbow	FW	sealing washers	locknuts	FCC	
external thread elbow nickel plated brass Multipart 90° compression fitting including conduit retention clip and elastomeric seal. Can be used with knockouts. Braid is locked between inner and outer compression nuts.	internal and external threaded nickel plated brass elbow 90° elbow which can be screwed onto external threaded fittings.	fibre retained face sealing washers Retained sealing washer to maintain IP rating of fitting to adjacent equipment.	fibre face sealing washers Sealing washer to maintain IP rating of fitting to adjacent equipment.	galvanised steel and nickel plated brass locknuts Hexagonal locknut to secure fitting. EMC locknuts have raised corners to ensure good continuity.	plated steel P clip with pvc liner, stainless steel P clips P clip to support conduit.	
metric thread part number	metric thread part number	metric thread part number	part number	metric thread steel part number metric thread EMC part number metric thread brass part number	plated steel part number stainless steel part number	nominal size (mm)
BC21-M20-C90	BM90-16M BM90-20M BM90-25M BM90-32M BM90-40M BM90-50M	FW16 FW20 FW25 FW32 FW40 FW50	FWPG11 FWPG16 FWPG21 FWPG29	S-M16 S-M20 B-M20-EMC S-M25 B-M25-EMC S-M32 B-M32-EMC S-M40 B-M40-EMC S-M50 B-M50	FCC16 FCC16-SS FCC20 FCC20-SS FCC25 FCC25-SS FCC32 FCC32-SS FCC40 FCC40-SS FCC50 FCC50-SS	16 20 25 32 40 50

EMC Screening Performance



Technical Drawing





FTCB Braided sleeving

tinned copper braid system
for EMC screening



Braid

FTCB

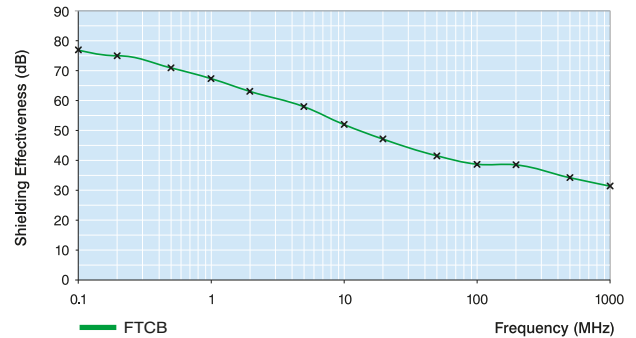
Construction: Tinned copper braided sleeving.

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.

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

EMC Screening Performance



FTCB part number	Reel length (m)	Nominal I/D (mm)	Usable ϕ mm min	Usable ϕ 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

Note

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

Ordering Notes

- 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

Standards

BS EN IEC 61386



SBCA System

swivel braid clamp adaptor



Fittings

FPA	FPAX	FPAU NEW	FTCB
<p>Construction: Nylon PA66 & Nickel Plated Brass.</p> <p>Colour: Black.</p> <p>Typical Applications: Straight fitting with internal braid clamp assembly for use with braided sleeving inside corrugated conduit.</p>			See page 54 for details.
IP66	IP66 IP67 IP68 IP69	IP66 IP67 IP68 IP69	

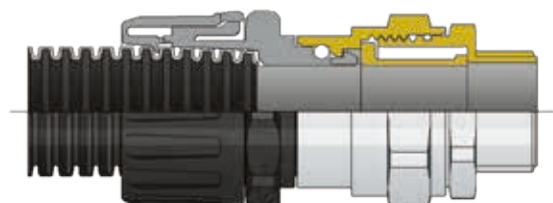


nominal size (mm)	FPA	part number	FPAX	part number	FPAU	part number	Use with Braided sleeving
	16	FPA21-M20-SBCA		FPAX21-M20-SBCA		FPAU21-M20-SBCA	
21	FPA28-M25-SBCA		FPAX28-M25-SBCA		FPAU28-M25-SBCA		FTCB15, FTCB20, FTCB25
28	FPA34-M32-SBCA		FPAX34-M32-SBCA		FPAU34-M32-SBCA		FTCB20, FTCB25, FTCB30
34	FPA42-M40-SBCA		FPAX42-M40-SBCA		FPAU42-M40-SBCA		FTCB25, FTCB30, FTCB35
42							
54							

Ordering Notes

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

Technical Drawing





NRFPAS, NRFPAH & NRFPFR conduit

nylon corrugated flexible conduit

In accordance with **NR/L2/SIGELP/27421**

NetworkRail

PA05/06589

Non-Metallic Conduits

NRFPAS	NRFPAH	NRFPFR
<p>Construction: Standard weight, flame retardant nylon (PA6) corrugated flexible conduit.</p> <p>Colour: Black.</p> <p>Typical Applications: Providing mechanical protection and supplementary insulation to existing legacy cabling in accordance with NR/L2/SIGELP/27421.</p> <ul style="list-style-type: none"> 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 8 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 	<p>Construction: Heavy weight, flame retardant, nylon (PA6) corrugated flexible conduit.</p> <p>Colour: Black.</p> <p>Typical Applications: Providing mechanical protection and supplementary insulation to existing legacy cabling in accordance with NR/L2/SIGELP/27421. Conduit offers higher mechanical strength than NRFPAS.</p> <ul style="list-style-type: none"> High mechanical strength High impact resistance Temperature range -40°C to +120°C UL recognised Low Fire Hazard (LFH), see page 8 UL 94 V2 flame retardancy Halogen, sulphur and phosphorus free UV resistant Abrasion resistant Highly resistant to solvents and oils 	<p>Construction: Standard weight nylon (highly flame retardant PA6) corrugated flexible conduit.</p> <p>Colour: Black.</p> <p>Typical Applications: Providing mechanical protection and supplementary insulation to existing legacy cabling in accordance with NR/L2/SIGELP/27421. Conduit offers enhanced fire performance properties than NRFPAS.</p> <ul style="list-style-type: none"> Highly flexible and high fatigue life High impact strength and recovers if crushed Temperature range -40°C to +120°C (-20°C to +100°C for moving applications) UL recognised Lloyd's Register Type Approval Extra Low Fire Hazard (LFH) Compliant to LUL Std 1-085 - APR 298 UL 94 V0 flame retardancy Halogen, sulphur and phosphorus free UV resistant Abrasion resistant Highly resistant to solvents and oils EN45545-HL3

european (NW) sizes	nominal size (mm)	pitch	NRFPAS					NRFPAH					NRFPFR				
			part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)
17	21	F	0086/008738	50	21.2	16.7	45	0086/008754	50	21.2	15.5	55	0086/008746	50	21.2	16.7	45
	21	C															
23	28	F	0086/008739	50	28.5	22.8	50	0086/008755	50	28.5	21.3	60	0086/008747	50	28.5	21.7	50
23	28	C						0086/008756	25	34.5	27.6	70	0086/008748	50	34.5	28.1	60
29	34	C	0086/008740	25	34.5	28.1	60	0086/008757	25	42.5	34.6	80	0086/008749	25	42.5	35.5	70
36	42	C	0086/008741	25	42.5	35.5	70	0086/008758	25	54.5	46.0	90	0086/008750	25	54.5	47.2	80
48	54	C	0086/008742	25	54.5	47.2	80					0086/008751	10	67.2	56.3	130	
56	67	C	0086/008743	10	67.2	56.3	130					0086/008752	10	80.0	67.0	160	
70	80	C	0086/008744	10	80.0	67.0	160					0086/008753	10	106.0	91.5	210	
90	106	C	0086/008745	10	106.0	91.5	210										

NRFPIH, NRFPIHR & NRFPADS conduit

nylon corrugated flexible conduit

In accordance with NR/L2/SIGELP/27421

NetworkRail

PA05/06589



NRFPIH

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

Colour: Black.

Typical Applications: Suitable for flood areas.

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

NRFPIHR

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

Colour: Black.

Typical Applications: Suitable for flood areas and offers enhanced fire performance properties over NRFPIH.

- Highly flexible and high fatigue life
- High mechanical strength
- High impact resistance even at very low temperatures
- UV resistant
- Displays self recovery if crushed
- Temperature range -50°C to +110°C
- UL recognised
- Highly resistant to solvents and oils
- Self extinguishing
- Low fire hazard
- Halogen, sulphur and phosphorus free
- EN45545-HL3

NRFPADS

Construction: Double slit nylon (PA6) corrugated conduit.

Colour: Black.

Typical Applications: Suitable for retrofit.

- Made from 2 interlocking slit corrugated conduits
- Temperature range -40°C to +120°C
- Cables can be inserted laterally
- Provides abrasion resistance and routing of cables for static applications
- Self extinguishing
- Halogen, sulphur and phosphorus free
- UV resistant

NRFPIH					NRFPIHR					NRFPADS					european (NW) sizes		
part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	nominal size (mm)	pitch	
0086/008764	50	21.2	15.0	45	0086/008770	50	21.2	15.0	45	0086/008759	50	21.2	13.9	120	17	F	
0086/008765	50	28.5	21.3	50	0086/008771	50	28.5	21.3	50	0086/008760	50	28.5	20.5	170	21	C	
0086/008766	25	34.5	27.6	60	0086/008772	25	34.5	27.6	60	0086/008761	25	34.5	26.6	180	23	F	
0086/008767	25	42.5	34.6	70	0086/008773	25	42.5	34.6	70	0086/008762	25	42.5	32.0	200	23	C	
0086/008768	25	54.5	46.0	80	0086/008774	25	54.5	46.0	80	0086/008763	25	54.5	43.0	240	29	C	
0086/008769	10	67.2	56.0	130											36	42	
															48	54	
															56	67	
															70	80	
															90	106	

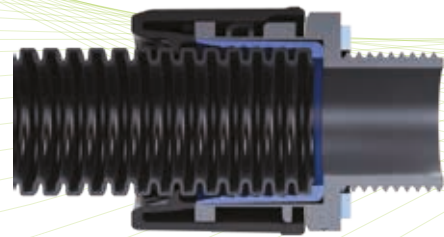
Connectors & Approved Fittings & Glands

In accordance with NR/L2/SIGELP/27422

IP66 IP67 IP68 IP69

PA05/06589

NetworkRail



Fittings

		NRFPAU		NRFPAU 90		NRFPAU 45	
		<p>NRFPAU</p> <p>One piece fast fit, external threaded fitting with integrated conduit seal. Suitable for knockouts or threaded entries. Supplied with locknut.</p> <p>IP66 IP67 IP68 IP69</p> 		<p>NRFPAU 90</p> <p>One piece fast fit, external threaded 90 degree elbow fitting with integrated conduit seal. Suitable for knockouts. Supplied with locknut.</p> <p>IP66 IP67 IP68 IP69</p> 		<p>NRFPAU 45</p> <p>One piece fast fit, external threaded with 45 degree elbow fitting with integrated conduit seal. Suitable for knockouts.</p> <p>IP66 IP67 IP68 IP69</p> 	
nominal size (mm)	21	Ext Metric	Thread Size	Ext Metric	Thread Size	Ext Metric	Thread Size
	21	0086/008782	M20	0086/008795	M20	0086/008790	M20
	28	0086/008783	M25	0086/008796	M25	0086/008791	M25
	28	0086/008784	M32	0086/008797	M32	0086/008792	M32
	34	0086/008785	M40	0086/008798	M40	0086/008793	M50
	42	0086/008787	M50	0086/008800	M50	0086/008794	M50
	54	0086/008789*	M63				
	67						
	80						
	106						
European (NW) sizes	17						

* FPAX fitting type

Fine Pitch



Coarse Pitch



Technical Drawing



Ultra FLEXICON

properties

NRFAU

- Fast fit - True one piece component
- IP rating: for conduit & fitting
IP66 + IP67 + IP68 (2 bar) + IP69
- **IP68 (72hrs @ 1m) + IP69**
- PA66 Nylon moulded fitting
- Nylon threads supplied complete with glass reinforced nylon locknut
- Vibration and shock tested to EN61373 Cat 2
- Tamper resistant
- Low Fire Hazard (LFH) see page 8
- Halogen, sulphur and phosphorus free
- NR/L2/SIGELP/27422

NetworkRail

PA05/06589



EN 45545-2 **ML3** **HFPA 130**

LARGE DIAMETER CLAMP FITTING

Straight flanged nylon clamp fitting with seals.

IP65



90° LARGE DIAMETER CLAMP FITTING

90° flanged nylon clamp fitting with seals.

IP65



COUPLER

Fast fit coupler to join two corrugated conduits of the same nominal size.

IP66 IP67 IP68 IP69



			European (NW) sizes	Nominal size (mm)
		0086/008775	17	21
		0086/008776	23	28
		0086/008777	23	28
		0086/008777	29	34
		0086/008778	36	42
		0086/008779	48	54
0086/008802	0086/008804		56	67
0086/008803	0086/008805		70	80
			95	106

Standards & Approvals



End of Line Connectors and Approved Fittings & Accessories

In accordance with NR/L2/SIGELP/27422

IP66 IP67 IP68 IP69

NetworkRail

PA05/06589

Fittings

NRFPAU EOL



End of Line
Straight conduit fitting combined with nylon cable gland for strain relief and secondary sealing. EOL glands have long metric threads.

IP66 IP67 IP68

(2 bar)



NRREC

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).



CLIPS



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



nominal size (mm)
european (NW) sizes

		Clamp Range (mm)			
21	17	0086/008832	7 - 12		0086/008806
21				0086/008824	0086/008807
28	23	0086/008833	13 - 18	0086/008825	0086/008808
28	23			0086/008826	0086/008809
34	29	0086/008834	18 - 25	0086/008827	0086/008810
42	36	0086/008835	22 - 32	0086/008828	
54	48	0086/008836	30 - 38	0086/008829	
67	56	0086/008837	34 - 44		
80	70				
106	95				

Standards & Approvals



properties

NRFAU

- Fast fit - True one piece component
- IP rating: for conduit & fitting
IP66 + IP67 + IP68 (2 bar)
- PA66 Nylon moulded fitting
- Nylon threads supplied complete with glass reinforced nylon locknut
- Vibration and shock tested to EN61373 Cat 2
- Low Fire Hazard (LFH) see page 8
- Halogen, sulphur and phosphorus free
- NR/L2/SIGELP/27422

NetworkRail

PA05/06589



EN 45545-2
HPPB 130

NR FCLAMP

Nylon PA66, conduit fixing clamp for corrugated conduit. Suitable for use with with fine or coarse pitch conduits.



EN 45545-2
HPPB 130

NR FCLAMP KIT

Nylon PA66, conduit fixing clamp for corrugated conduit, complete with two fixing bolts, two 1/2 zebedees (PNS06) and one plate.



CONDUIT CUTTER

For any non-metallic flexible and rigid conduits.



			European (NW) sizes	nominal size (mm)
0086/008811	NRFLAMP-KIT21	0086/008830	17	21
0086/008812	NRFLAMP-KIT28	0086/008830	23	28
0086/008813	NRFLAMP-KIT34	0086/008830	29	34
0086/008814	NRFLAMP-KIT42	0086/008831	36	42
0086/008815	NRFLAMP-KIT54	0086/008831	48	54
0086/008816	NRFLAMP-KIT67	0086/008831	56	67
0086/008817			70	80
			95	106



Round Connection Boxes

Innovation is at the centre of everything we do.

NEW

Simple and reliable connection boxes for specialist applications

Flexicon can offer connection box solutions, engineered to provide unrivalled performance with a variety of both fine and coarse pitch conduits.

With a removable lid the box provides access to your connections when necessary and maintains the integrity of your system throughout. Offering 4 way connection, the round box provides any combination of 16, 21, 28 and 34mm conduit connections.

The box can be configured for use in multiple ways, for example used as a through box or connected to provide a 90 degree solution. Further entries can be made via the lid or the base.

Features and Benefits

Offering design flexibility, combined with the unrivalled benefits offered by Flexible Conduit, our Round Connection boxes are ideal for Performance & Safety Critical applications.

Flexibility.

- 4 outlets - enables desired circuit configuration with maximum wiring space
- Suitable for 16, 21, 28 and 34mm entries - compatible with different cable sizes
- Compatible with a wide range of non-metallic Flexible Conduits

Reliability and Performance.

- IP68 performance - offers Ingress Protection and System Integrity
- Conduit Connections have all round teeth - secures conduits in place
- Anti-tamper, Dynamic & Vibration performance

Simplicity.

- Removable lid - can add circuits with easy access to wiring
- External Fixing positions - easy installation and mounting
- Speed of installation - Quick push fit connection



The Ultimate in Flexibility

Several variants of sizes and connections to achieve specific requirements. Please contact us for selection.

NEW

IP67 IP68



Different Conduit Connections -

- This range will accept different conduit types and sizes offering a flexible way of combining systems.



Clear Lid Option

- If you are looking for visibility within the box then there is the option of a clear lid. This could be beneficial if you have status indicators or monitoring equipment connected.

Different Terminations

- Suitable for use with a range of equipment and terminations other than just conduit.



Maximum Wiring Space

- Suitable for mounting terminals or DIN Rail for wiring connections.

Lid mounting options

- Can be used to mount sensors or equipment allowing the ultimate in flexibility, i.e. PIR detectors or Dusk / Dawn Sensors.



Configurable Outlets

- Suitable for use as a through connection box or as a 90 degree. Simply blank off any unused outlets to maintain the Ingress Protection.



Large diameter systems nylon



- IP40
- IP65
- IP67⁺
- IP68⁺

Conduit

LDFPAL	LDFPAS	LDFPIH	LDFPR	LDFPIHR
				
<p>Construction: Light weight nylon (PA6) corrugated flexible conduit.</p> <p>Colour: Black or Grey (RAL 7031).</p> <p>Typical Applications: Machines where lower mechanical protection is required and buildings.</p> <ul style="list-style-type: none"> 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 	<p>Construction: Standard weight, flame retardant nylon (PA6) corrugated flexible conduit.</p> <p>Colour: Black or Grey (RAL 7031). Orange available on request.*</p> <p>Typical Applications: All types of machinery, public buildings.</p> <ul style="list-style-type: none"> Highly flexible and high fatigue life High impact strength and recovers if crushed Temperature range -40°C to +120°C (-20°C to +100°C for moving applications) Lloyd's Register Type Approval Low Fire Hazard (LFH), see page 8 UL 94 V2 flame retardancy Halogen, sulphur and phosphorus free UV resistant (black) Abrasion resistant Highly resistant to solvents and oils 	<p>Construction: Heavy weight nylon (PA12) corrugated flexible conduit.</p> <p>Colour: Black.</p> <p>Typical Applications: Robots and continual flexing where higher mechanical strength required.</p> <ul style="list-style-type: none"> 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 8 	<p>Construction: Standard weight nylon (highly flame retardant PA6) corrugated flexible conduit.</p> <p>Colour: Black.</p> <p>Typical Applications: Railways, underground and public buildings.</p> <ul style="list-style-type: none"> Highly flexible and high fatigue life High impact strength and recovers if crushed Temperature range -40°C to +120°C (-20°C to +100°C for moving applications) Lloyd's Register Type Approval Extra Low Fire Hazard (LFH) Compliant to LUL Std S1085 UL 94 V0 flame retardancy Halogen, sulphur and phosphorus free UV resistant Abrasion resistant Highly resistant to solvents and oils 	<p>Construction: Heavy weight nylon (PA12) corrugated flexible conduit.</p> <p>Colour: Black.</p> <p>Typical Applications: Where continual movement or flexing is required, with a higher mechanical strength even at very low temperatures such as on Bogies or Inter-car Jumper assemblies. Rolling Stock applications requiring a superior level of fire performance.</p> <ul style="list-style-type: none"> Highly flexible and high fatigue life High mechanical strength High impact resistance even at very low temperatures Excellent UV resistance Displays self recovery if crushed Temperature range -50°C to +110°C UL recognised Highly resistant to solvents and oils Self extinguishing Low fire hazard Halogen, sulphur and phosphorus free EN45545-HL3

european (NW) sizes nominal size (mm)	LDFPAL					LDFPAS					LDFPIH					LDFPR					LDFPIHR				
	part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)
70	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	LDFPIHR80	10	80.0	66.5	170
80	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	LDFPIHR106*	10	106.0	91.0	250

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 85
- * Indicates parts made to order on request and may be subject to MOQ and lead time

Standards & Approvals

BS EN IEC 61386



properties

- Suitable for use with Large Diameter conduits
- Material
 - LDMP and LDMPs: nylon PA6
 - FCLAMP: nylon PA66
 - REC: thermoplastic elastomer
- Temperature Range
 - LDMP & LDMPs fittings: -40° to 120°
 - FCLAMP: -50° to 135°
 - REC: -50° to 120°
- UV resistant
- Fire Performance
 - **LDMP and LDMPs:**
 - Halogen, Sulphur & Phosphorous Free
 - Self extinguishing
 - **REC:**
 - Halogen, Sulphur & Phosphorous Free
 - **FCLAMP:**
 - Extra Low Fire Hazard see page 8
 - Halogen, Sulphur & Phosphorous Free
 - Self extinguishing
 - EN45545-HL3 and NFPA 130 compliant

Fittings

LDMP	LDMPs	LDMP90	LDMPs90	FCLAMP	REC	FCC CLIPS
straight flanged nylon clamp fitting Flanged body with 2 clamps.	straight flanged nylon clamp fitting with seals Flanged body with 2 clamps and seals.	90° flanged nylon clamp fitting Flanged 90° body with 2 clamps.	90° flanged nylon clamp fitting with seals Flanged 90° body with 2 clamps and seals.	non-metallic, heavy duty conduit clamp Nylon PA66, conduit fixing clamp for corrugated conduit. Suitable for use with with fine or coarse pitch conduits. Can be used with a range of accessories including cover plates and weld plates (available contact Flexicon for more details).	rubber end cap Thermoplastic elastomer cap used to seal end of conduit. Can be cut to size depending on size of cable. Can be additionally secured using cable tie (not supplied).	plated steel P clip with pvc liner P clip to support and secure conduit.
IP40	IP65, IP67+, IP68+	IP40	IP65			



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



- Also available:
 - FPA80-M85 (2mm Pitch thread)



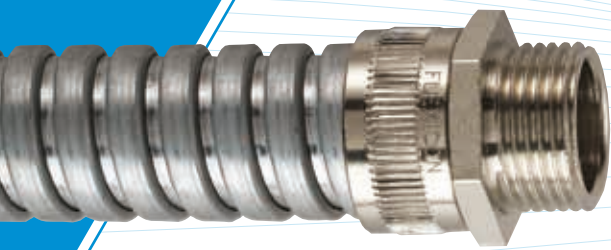
Metallic conduit selection guide

Conduit System

FU	SSU	FSU	LFHU	FPU	LTP	LTPHC	LTPLFH
----	-----	-----	------	-----	-----	-------	--------



IP Rating	IP40	●	●						
	IP54			●	●	●			
	IP65			●	●	●			
	IP66						●	●	●
	IP67						●	●	●
	IP68						●	●	●
	IP69						●	●	●
		IP69						●	●
Compression Strength (kg/100mm)		350	400	350	350	350	400	400	400
Pull Off Strength (kg) for 20mm size		120	170	120	120	120	130	130	130
Min Bend Radius (mm) for 20mm size		45	45	45	45	45	65	65	100
Colours		zinc	stainless steel	black, grey, orange	black	black, blue	black, grey, orange	black	black
High Fatigue Life				●		●			
Temp	Max	300°C	600°C	70°C	90°C	100°C	105°C	150°C	90°C
	Min	-100°C	-100°C	-15°C	-25°C	-40°C	-20°C	-60°C	-25°C
Category	Flexible	●	●	●	●	●	●	●	●
	Pliable								
Low Fire Hazard	*** Inert								
	** Extra								
	* Standard								
Fire Tests	Halogen Free	●	●		●	●		●	●
	Self Extinguishing	●	●	●	●	●	●	●	●
	EN 45545-2	●	●		●				●
	NFPA-130	●	●		●				●
Abrasion Resistance		●	●			●			
Resistance to solvents		●	●			●		●	
UV Resistance		●	●	●			●	●	●
EMC Performance									
Anti-Static									
Approvals	Lloyds				●		●		
	TFL London Underground	●	●		●				●
ROHS		●	●	●	●	●	●	●	●
REACH		●	●	●	●	●	●	●	●
Page Number		68	68	70	70	70	72	72	72



FU & SSU system galvanised steel and stainless steel



Conduit

FU



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.



SSU



Construction: Stainless steel (grade 316L), helically wound, flexible conduit.
Colour: Stainless steel, self colour.
Typical Applications: Instrumentation and security or where enhanced corrosion performance is required.



Fittings

M

fixed external thread nickel plated brass

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

IP40

M-SS

fixed external thread stainless steel

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

IP40

S

swivel external thread nickel plated brass

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

IP40



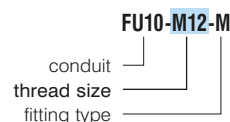
nominal size (mm)	FU			SSU				
	part number	reel length (m)		part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)
10	FU10+	25, 50		SSU10+	10, 25, 50	9.0	6.8	25
12	FU12	25, 50		SSU12+	10, 25, 50	13.0	10.2	30†
16	FU16	10, 25, 50		SSU16	10, 25, 50	16.0	13.0	40
16				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

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

Ordering Notes

- Add reel length eg: FU20-25M for 25m reel
- Available on request:
 - longer lengths and bulk packaging
 - cut lengths and assemblies
 - alternative threads
- * 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

How to read the fittings code



properties

- High mechanical strength
- Highly flexible
- Inherently Low Fire Hazard (LFH) see page 148
- Fully compliant to LUL Std S1085 (Cert No. 296)
- Temperature range
 - 100°C to +300°C (FU)
 - 100°C to +600°C (SSU + SS fittings)
 - 100°C to +400°C (SSU + NPB fittings)
- IP rating: IP40
- SSU is highly corrosion resistant
- Nickel plated brass fittings
- Stainless steel (316L) fittings
- EN 45545 HL3 and NFPA130 compliant



S-SS	P	F	FCC	90° elbow
<p>swivel external thread stainless steel</p> <p>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.</p> <p>IP40</p>	<p>plain hole connector nickel plated brass</p> <p>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.</p> <p>IP40</p>	<p>fixed internal thread nickel plated brass</p> <p>Two part fitting comprising shell and body with internal thread which can be used to connect with an external thread.</p> <p>IP40</p>	<p>plated steel P clip with pvc liner and secure stainless steel P clips</p> <p>P clip to support and secure conduit.</p>	<p>internal and external threaded nickel plated brass elbow</p> <p>90° elbow which can be screwed onto external threaded fittings to create a 90° elbow termination.</p>



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*		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

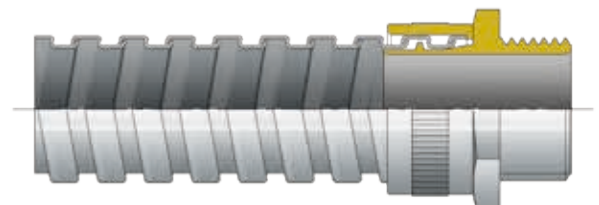
Standards & Approvals



BS EN IEC 61386



Technical Drawing



Note: refer to conduit properties for applicable standards



FSU system
galvanised steel pvc or nylon coated

LFHU system
galvanised steel LFH coated

FPU system
galvanised steel polyurethane 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.

LFHU

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

Colour: Black.

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



FPU

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

Colour: Black and Metallic Blue.

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

Fittings

M

fixed external thread nickel plated brass

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

IP54

S

swivel external thread nickel plated brass

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

IP54

P

plain hole connector nickel plated brass

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

IP54



nominal size (mm)	FSU		LFHU		FPU					
	part number	part number	part number	part number	reel length (m)	part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)
12	FSU12B	LFHU12B*	10†, 25, 50	FPU12B*	25	14.0	10.2	30		
16	FSU16B	LFHU16B	10, 25, 50	FPU16B	25	17.0	13.0	40		
20	FSU20B	LFHU20B	10, 25, 50	FPU20B	25, 50	21.5	16.9	45		
25	FSU25B	LFHU25B	10, 25, 50	FPU25B	25, 50	26.0	21.1	55		
32	FSU32B	LFHU32B	10, 25	FPU32B	25	34.0	28.1	80		
40	FSU40B	LFHU40B	10, 25	FPU40B*	10	44.5	37.6	90		
50	FSU50B	LFHU50B	10, 25	FPU50B*	10	55.0	48.4	100		
63	FSU63B	LFHU63B	10	FPU63B*	10	64.5	57.5	115		
75	FSU75B	LFHU75B	10	FPU75B*	10	79.0	70.0	150		

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

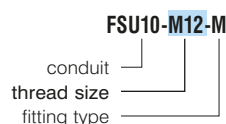
* Indicates parts made to order on request and may be subject to MOQ and lead time

† 10m length for FSU ONLY



- **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



properties

- High mechanical strength
- Highly flexible
- IP rating: IP54 with standard fittings, IP65 with type C compression fittings
- **Extra low Fire Hazard UL94 V0, for LFH see page 8**
- **High fatigue life and high abrasion resistant (FPU)**
- Halogen, sulphur and phosphorus free
- **Compliant to LUL Std S1085 (LFHU) (Cert No. 297)**
- EN45545-2 HL3 for LFHU and NFPA 130
- Temperature range:
 - 25°C to +90°C (LFHU)
 - 40°C to +100°C (FPU)
- Nickel plated brass fittings
- Vibration and shock tested to EN61373 Cat 2



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



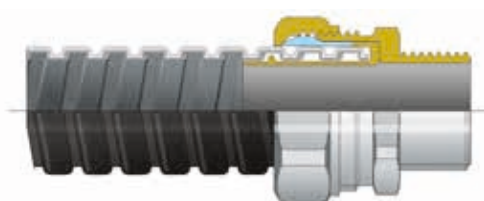
	metric thread part number	metric thread part number	PG thread part number	NPT thread part number	metric thread part number	metric thread part number	part number	part number	nominal size (mm)
		FSU12-M16-C	FSU12-PG9-C		FSU12-M16-C-S	FSU12-M16-C90		FSU12-E	12
FSU16-M16-F		FSU16-M16-C	FSU16-PG11-C	FSU16-050-C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

Standards



Note: refer to conduit properties for applicable standards

Technical Drawing



Liquid Tight Conduits range

Metallic Conduits

LTP	LTPLFH	LTPHC
<p>Construction: Galvanised steel, helically wound, flexible conduit with smooth oil resistant and high temperature PVC cover.</p> <p>Colour: Black. Grey or Orange on request</p> <p>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.</p> <p>Special Characteristics: Oil resistant and self extinguishing.</p> <ul style="list-style-type: none"> • 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 	<p>Construction: Galvanised steel, helically wound, flexible conduit with smooth oil resistant Low Fire Hazard (LFH) cover.</p> <p>Colour: Black</p> <p>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.</p> <p>Special Characteristics: As per LTP but where Extra Low Fire Hazard performance is required.</p> <ul style="list-style-type: none"> • High mechanical strength • IP rating: IP66 + IP67 + IP68 (5 bar) + IP69 • Smooth, wipe clean outer cover • Cover does not wrinkle when bent • Temperature range -25 °C to +90 °C (LTPLFH) • Good flexibility • UV resistant (black) and suitable for external use • Resistant to oils and greases • EXTRA Low Fire Hazard UL94 V0 (for LFH see page 148) • Compliant to LUL Std S1085 (LTPLFH) Cert No. 2020 • EN 45545 to HL3 and NFPA130 compliant • Vibration and shock tested to EN61373 Cat 2 	<p>Construction: Galvanised steel, helically wound, flexible conduit with smooth thermoplastic elastomer (TPE) cover.</p> <p>Colour: Black</p> <p>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.</p> <p>Special Characteristics: Wide temperature range performance. Good flexibility at low and high temperatures.</p> <ul style="list-style-type: none"> • High mechanical strength • IP rating: IP66 + IP67 + IP68 (5 bar) + IP69 • Smooth, wipe clean outer cover • Cover does not wrinkle when bent • Temperature range -60 °C to +150 °C • Good flexibility • UV resistant (black) and suitable for external use • Resistant to oils and greases • Vibration and shock tested to EN61373 Cat 2

nominal size (mm)	US trade size (")	outside dia (mm)	inside dia (mm)	LTP	part number	reel length (m)	min inside bend radius (mm)	LTPLFH	part number	reel length (m)	min inside bend radius (mm)	LTPHC	part number	reel length (m)	min inside bend radius (mm)
10	¼	11.8	7.0	LTP10B*		50	35								
10				LTP12B		25, 50	40					LTPHC12B*		25	40
12	⅜	14.2	10.0	LTP16B		10, 25, 50	45	LTPLFH16B		25	60	LTPHC16B		25	45
16		17.8	12.6												
16				LTP20B		10, 25, 50	65	LTPLFH20B		25	100	LTPHC20B		25	65
20	½	21.1	16.0	LTP25B		10, 25, 50	100	LTPLFH25B		25	130	LTPHC25B		25	100
25	⅝	26.4	21.0	LTP32B		10, 25, 50	135	LTPLFH32B		10	180	LTPHC32B		25	135
32	1	33.1	26.5	LTP40B		10, 25	175					LTPHC40B		10	175
40	1¼	41.8	35.4	LTP50B*		10, 25	230					LTPHC50B*		10	230
50	1½	47.9	40.4	LTP63B*		10, 25	280					LTPHC63B**		10	280
63	2	59.7	51.6												

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

EN 45545-2
NFPA 130

LTPPU

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

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

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

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

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

LTBRDP

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

Colour: Black

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

Special Characteristics: Good flexibility and EMC screening.

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

LTBRDLFH

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

Colour: Black

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

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

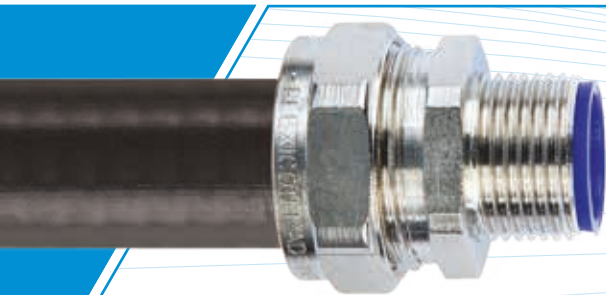
- High mechanical strength
- Good flexibility
- IP rating: IP66 + IP67 + IP68 (5 bar) + IP69
- Smooth, wipe clean outer cover
- Cover does not wrinkle when bent
- Resistant to oils & greases
- Temperature range: -20°C to +90°C
- UV resistant and suitable for external use
- Vibration and shock tested to EN61373 Cat 2
- Provides EMC screening
- Extra Low Fire Hazard UL94 V0 (for LFH see page 8)
- Compliant to LUL Std S1085 (Cert No. 658)
- EN 45545 to HL3 and NFPA 130 compliant

LTPPU	part number	inside dia (mm)	min inside bend radius (mm)	LTBRDP	part number	inside dia (mm)	min inside bend radius (mm)	LTBRDLFH	part number	reel length (m)	min inside bend radius (mm)	nominal size (mm)
	LTPPU10*	25	35									10
	LTPPU12*	25	40									10
	LTPPU16*	25	45									12
	LTPPU20*	25	65	LTBRDP20B	25	65		LTBRDLFH20B	25	130		16
	LTPPU25*	25	100	LTBRDP25B	25	100		LTBRDLFH25B	25	200		16
	LTPPU32*	25	135	LTBRDP32B	25	120		LTBRDLFH32B*	25	270		20
	LTPPU40*	10	175	LTBRDP40B	10	140						25
	LTPPU50**	10	230	LTBRDP50B*	10	180						32
	LTPPU63**	10	280	LTBRDP63B*	10	270						40
												50
												63

Standards



Note: refer to conduit properties for applicable standards



Liquid Tight Conduit fittings

nickel plated brass fittings

- IP66
- IP67
- IP68
- IP69

Fittings

C	C-S	C-F NEW	C-SF NEW
<p>external thread nickel plated brass</p> <p>Multipart compression fitting including elastomeric seal. Can be used for knockout or threaded entries as fitting rotates until tightened.</p>	<p>swivel external thread nickel plated brass</p> <p>Compression fitting for knockout or threaded entries.</p> <p>Multipart compression fitting including elastomeric seal. The external thread swivels about the main body even after tightening.</p>	<p>internal thread nickel plated brass</p> <p>Multi part compression fitting including elastomeric seal to connect with an external thread.</p>	<p>swivel internal thread nickel plated brass</p> <p>Multi part compression fitting including elastomeric seal. Swivel internal thread makes it suitable for connection to male threads. Internal thread swivels about the main body even after tightening.</p>
<ul style="list-style-type: none"> <li style="background-color: #0070C0; color: white; padding: 2px;">IP66 <li style="background-color: #0070C0; color: white; padding: 2px;">IP67 <li style="background-color: #0070C0; color: white; padding: 2px;">IP68 <li style="background-color: #0070C0; color: white; padding: 2px;">IP69 	<ul style="list-style-type: none"> <li style="background-color: #0070C0; color: white; padding: 2px;">IP66 <li style="background-color: #0070C0; color: white; padding: 2px;">IP67 <li style="background-color: #0070C0; color: white; padding: 2px;">IP68 <li style="background-color: #0070C0; color: white; padding: 2px;">IP69 	<ul style="list-style-type: none"> <li style="background-color: #0070C0; color: white; padding: 2px;">IP66 <li style="background-color: #0070C0; color: white; padding: 2px;">IP67 <li style="background-color: #0070C0; color: white; padding: 2px;">IP68 <li style="background-color: #0070C0; color: white; padding: 2px;">IP69 	<ul style="list-style-type: none"> <li style="background-color: #0070C0; color: white; padding: 2px;">IP66 <li style="background-color: #0070C0; color: white; padding: 2px;">IP67 <li style="background-color: #0070C0; color: white; padding: 2px;">IP68 <li style="background-color: #0070C0; color: white; padding: 2px;">IP69



nominal size (mm)	US trade size (")	outside dia (mm)	inside dia (mm)	metric thread part number	for PG thread size	for NPT thread size	metric thread part number	metric thread part number
10	¼	11.8	7.0	LTP10-M12-C	PG7			
10				LTP10-M16-C				
12	⅝	14.2	10.0	LTP12-M16-C	PG9		LTP12-M16-S	
16	¾	17.8	12.6	LTP16-M16-C	PG11	050 (½")	LTP16-M16-S	
16				LTP16-M20-C	PG13	050 (½")	LTP16-M20-S	LTP16-M20-SF
20	½	21.1	16.0	LTP20-M20-C	PG16	050 (½")	LTP20-M20-S	LTP20-M20-SF
25	¾	26.4	21.0	LTP25-M25-C	PG21	075 (¾")	LTP25-M25-S	LTP25-M25-SF
32	1	33.1	26.5	LTP32-M32-C	PG29	100 (1")	LTP32-M32-S	
40	1¼	41.8	35.4	LTP40-M40-C	PG36	125 (1¼")	LTP40-M40-S	
50	1½	47.9	40.4	LTP50-M50-C	PG42	150 (1½")	LTP50-M50-S	
63	2	59.7	51.6	LTP63-M63-C	PG48	200 (2")		

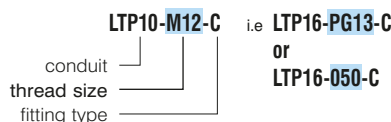
When ordering PG or NPT please see below.

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



properties

- High mechanical strength
- IP rating: IP66 + IP67 + IP68 (5 bar) + IP69
- Temperature range
-50°C to +135°C
- Oil resistant
- UV resistant
- Nickel Plated Brass Fittings
- Earthing ferrule is manufactured in machined Nickel Plated Brass to facilitate easy assembly and re-use
- Stainless steel fittings also available
- 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
- Vibration and shock tested to EN61373 Cat 2
- Conforms to EN 61386
- Interchangeable with all Liquidtight conduits made to American (UL360) sizes.

C90	C45	Coupler	FW	E
external thread nickel plated brass 90° multipart compression fitting including elastomeric seal. Can be used for knockouts.	external thread nickel plated brass 45° multipart compression fitting including elastomeric seal. Can be used for knockouts.	nickel plated brass Multi part compression coupler including elastomeric seals to connect with an external thread.	fibre, retained face sealing washers Retained sealing washer to maintain IP rating of fitting to adjacent equipment.	insert nickel plated brass Single part, machined insert to cap end of conduit.
IP66 IP67 IP68 IP69	IP66 IP67 IP68 IP69	IP66 IP67 IP68 IP69	IP66 IP67 IP68 IP69	



metric thread part number



metric thread part number



part number



metric thread part number



part number

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

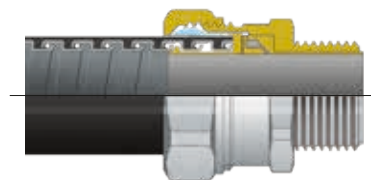
Standards & Approvals



BS EN IEC 61386



Technical Drawing





FB system

galvanised steel core
galvanised steel overbraid

FUSSB system

galvanised steel core
stainless steel overbraid



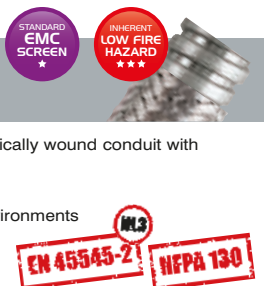
Conduit

FB

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

Colour: Zinc, self colour.

Typical Applications: Industrial environments and high temperatures.



FUSSB

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

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



Fittings

M

fixed external thread nickel plated brass

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

IP40

S

swivel external thread nickel plated brass

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

IP40



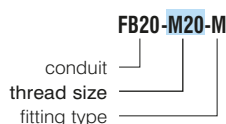
nominal size (mm)	FB		FUSSB			
	part number	part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)
12	FB12	FUSSB12*	25	14.0	10.2	30
16	FB16	FUSSB16*	25	17.5	13.0	40
20	FB20	FUSSB20	25	21.5	16.9	45
25	FB25	FUSSB25	25	26.0	21.1	55
32	FB32	FUSSB32	25	34.0	28.1	70
40	FB40	FUSSB40*	10	43.5	37.6	80
50	FB50	FUSSB50*	10	54.5	48.4	90

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

Ordering Notes

- 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 & Approvals



BS EN IEC 61386



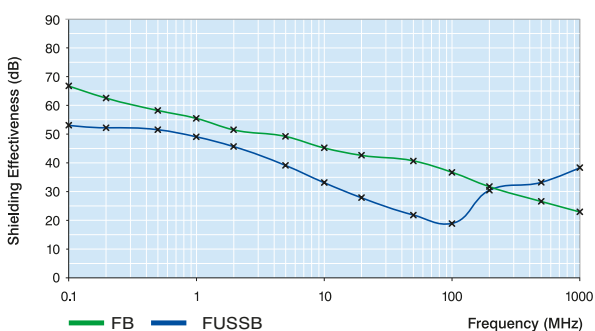
properties

- High mechanical strength
- Highly flexible
- IP rating: IP40
- High abrasion resistance
- Resists hot metal swarf and splashes
- Provides EMC screening
- 55dB@1MHz (FB)
- 49dB@1MHz (FUSSB)
- Temperature range -100°C to +300°C
- Inherently Low Fire Hazard (LFH) see page 8
- Fully compliant to LUL Std S1085. (Cert No. 296)
- Nickel plated brass fittings
- EN45545-2 to HL3 and NFPA130

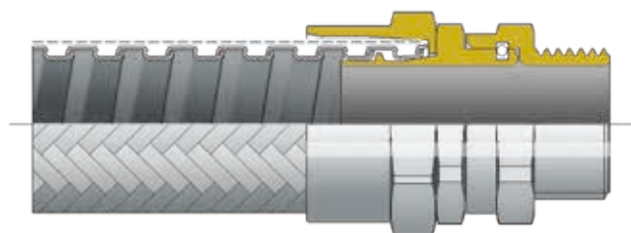


P	90° elbow	C	CS																																																																	
<p>plain hole connector nickel plated brass</p> <p>Two part fitting comprising shell and body without thread. The body is fitted through the opposite side of the entry to the conduit and acts as a locking device also providing a smooth entry bush.</p> <p>IP40</p>	<p>internal and external threaded nickel plated brass elbow</p> <p>90° elbow which can be screwed onto external threaded fittings.</p>	<p>fixed external thread nickel plated brass</p> <p>Multipart compression fitting including elastomeric seal. Can be used for knockouts. Braid is locked between inner and outer compression nuts.</p> <p>IP40</p>	<p>swivel external thread nickel plated brass</p> <p>Multipart compression fitting including elastomeric seal can be used for knockouts or threaded entries. Braid is locked between inner and outer compression nuts.</p> <p>IP40</p>																																																																	
<table border="1"> <thead> <tr> <th>hole size (mm)</th> <th>part number</th> <th>metric thread part number</th> <th>metric thread part number</th> <th>PG thread part number</th> <th>metric thread part number</th> <th>nominal size (mm)</th> </tr> </thead> <tbody> <tr> <td>12</td> <td>FB12-P</td> <td>BM90-16M</td> <td></td> <td></td> <td></td> <td>12</td> </tr> <tr> <td>16</td> <td>FB16-P</td> <td>BM90-16M</td> <td>FSB16-M16-C</td> <td>FSB16-PG11-C</td> <td>FSB16-M16-C-S</td> <td>16</td> </tr> <tr> <td></td> <td></td> <td>BM90-20M</td> <td>FSB16-M20-C</td> <td>FSB16-PG13-C</td> <td>FSB16-M20-C-S</td> <td>16</td> </tr> <tr> <td>20</td> <td>FB20-P</td> <td>BM90-20M</td> <td>FSB20-M20-C</td> <td>FSB20-PG16-C</td> <td>FSB20-M20-C-S</td> <td>20</td> </tr> <tr> <td>25</td> <td>FB25-P</td> <td>BM90-25M</td> <td>FSB25-M25-C</td> <td>FSB25-PG21-C</td> <td>FSB25-M25-C-S</td> <td>25</td> </tr> <tr> <td>32</td> <td>FB32-P</td> <td>BM90-32M</td> <td>FSB32-M32-C</td> <td>FSB32-PG29-C</td> <td>FSB32-M32-C-S</td> <td>32</td> </tr> <tr> <td>40</td> <td>FB40-P</td> <td>BM90-40M</td> <td></td> <td></td> <td></td> <td>40</td> </tr> <tr> <td>51</td> <td>FB50-P</td> <td>BM90-50M</td> <td></td> <td></td> <td></td> <td>50</td> </tr> </tbody> </table>	hole size (mm)	part number	metric thread part number	metric thread part number	PG thread part number	metric thread part number	nominal size (mm)	12	FB12-P	BM90-16M				12	16	FB16-P	BM90-16M	FSB16-M16-C	FSB16-PG11-C	FSB16-M16-C-S	16			BM90-20M	FSB16-M20-C	FSB16-PG13-C	FSB16-M20-C-S	16	20	FB20-P	BM90-20M	FSB20-M20-C	FSB20-PG16-C	FSB20-M20-C-S	20	25	FB25-P	BM90-25M	FSB25-M25-C	FSB25-PG21-C	FSB25-M25-C-S	25	32	FB32-P	BM90-32M	FSB32-M32-C	FSB32-PG29-C	FSB32-M32-C-S	32	40	FB40-P	BM90-40M				40	51	FB50-P	BM90-50M				50					
hole size (mm)	part number	metric thread part number	metric thread part number	PG thread part number	metric thread part number	nominal size (mm)																																																														
12	FB12-P	BM90-16M				12																																																														
16	FB16-P	BM90-16M	FSB16-M16-C	FSB16-PG11-C	FSB16-M16-C-S	16																																																														
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20	FB20-P	BM90-20M	FSB20-M20-C	FSB20-PG16-C	FSB20-M20-C-S	20																																																														
25	FB25-P	BM90-25M	FSB25-M25-C	FSB25-PG21-C	FSB25-M25-C-S	25																																																														
32	FB32-P	BM90-32M	FSB32-M32-C	FSB32-PG29-C	FSB32-M32-C-S	32																																																														
40	FB40-P	BM90-40M				40																																																														
51	FB50-P	BM90-50M				50																																																														

EMC Screening Performance



Technical Drawing





LFHUBRD system galvanised steel core, extra LFH coated, stainless steel overbraid



Conduit

LFHUBRD



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

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



Fittings

M

fixed external thread nickel plated brass

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

IP54

S

swivel external thread nickel plated brass

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

IP54



nominal size (mm)

LFHUBRD

	part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)
20	LFHUBRD20	25	22.7	16.9	45
25	LFHUBRD25	25	27.2	21.1	55
32	LFHUBRD32	25	35.2	28.1	70
40	LFHUBRD40	10	45.7	37.6	80
50	LFHUBRD50*	10	57.7	48.4	90

metric thread part number

PG thread part number

metric thread part number

PG thread part number

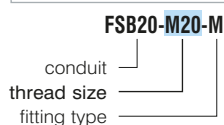
FSB20-M20-M	FSB20-PG16-M	FSB20-M20-S	FSB20-PG16-S
FSB25-M25-M	FSB25-PG21-M	FSB25-M25-S	FSB25-PG21-S
FSB32-M32-M	FSB32-PG29-M	FSB32-M32-S	FSB32-PG29-S
FSB40-M40-M	FSB40-PG36-M	FSB40-M40-S	FSB40-PG36-S
FSB50-M50-M	FSB50-PG48-M	FSB50-M50-S	FSB50-PG42-S

* Indicates parts made to order on request and maybe subject to MOQ and lead time.

Ordering Notes

- Add reel length eg: LFHUBRD20-25M for 25m reel
- Available on request:**
 - longer lengths, cut lengths and assemblies
 - additional sizes, stainless steel overbraided
 - PG threads, female threaded fittings
 - full copies of independent test report confirming screening effectiveness

How to read the fittings code



Standards



BS EN IEC 61386



Note: refer to conduit properties for applicable standards

properties

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

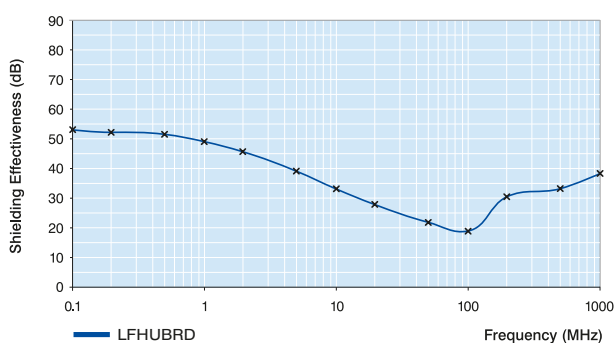


P	C	CS	C90
<p>plain hole connector nickel plated brass</p> <p>Two part fitting comprising shell and body without thread. The body is fitted through the opposite side of the entry to the conduit and acts as a locking device also providing a smooth entry bush.</p> <p>IP54</p>	<p>fixed external thread nickel plated brass</p> <p>Multipart compression fitting including elastomeric seal. Can be used for knockouts. Braid is locked between inner and outer compression nuts.</p> <p>IP65</p>	<p>swivel external thread nickel plated brass</p> <p>Multipart compression fitting including elastomeric seal can be used for knockouts or threaded entries. Braid is locked between inner and outer compression nuts.</p> <p>IP65</p>	<p>external thread elbow nickel plated brass</p> <p>Multipart 90° compression fitting including elastomeric seal. Braid is locked between inner and outer compression nuts.</p> <p>IP65</p>

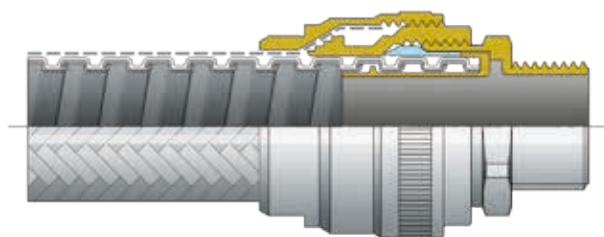


hole size (mm)	part number	metric thread part number	PG thread part number	metric thread part number	metric thread part number	nominal size (mm)
20	FSB20-P	FSB20-M20-C	FSB20-PG16-C	FSB20-M20-C-S	FSB20-M20-C90	20
25	FSB25-P	FSB25-M25-C	FSB25-PG21-C	FSB25-M25-C-S	FSB25-M25-C90	25
32	FSB32-P	FSB32-M32-C	FSB32-PG29-C	FSB32-M32-C-S	FSB32-M32-C90	32
40	FSB40-P					40
50	FSB50-P					50

EMC Screening Performance



Technical Drawing





FSS system stainless steel corrugated conduit

FSSBRD system stainless steel corrugated conduit with overbraid



Conduit

Fittings

FSS NEW INHERENT LOW FIRE HAZARD ***

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

Typical Applications: Metro rail stations and tunnels.

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

- IP rating: IP68
- Temperature range -100°C to +400°C
- High Mechanical Strength
- Pull off strength: 100kg (20mm)
- High compression strength 1000kg/100mm
- Inherent low fire hazard
- Compliant to LUL Std S1085 (Pending)
- EN 45545-2 to HL3 and NPFA 130 compliant
- Excellent Corrosion resistance
- Oil resistant
- UV resistant
- Provides EMC screening
- Offers Antistatic properties

FSSBRD NEW INHERENT LOW FIRE HAZARD *** STANDARD EMC SCREEN *

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

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

Colour: Self colour

- IP rating: IP68
- Temperature range -100°C to +400°C
- High Mechanical Strength
- High Abrasion resistance
- Pull off strength: 150kg (20mm)
- High compression strength 1000kg/100mm
- Inherent low fire hazard
- Compliant to LUL Std S1085 (Pending)
- EN 45545-2 to HL3 and NPFA 130 compliant
- Excellent Corrosion resistance
- Oil resistant
- UV resistant
- Provides EMC screening – Standard
- Offers Antistatic properties



C NEW

fixed external thread nickel plated brass

Multipart compression fitting including conduit retention clip and polyester seal. Can be used with knockouts.

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

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

IP68

S-F NEW

swivel internal thread nickel plated brass

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

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

IP68



nominal size (mm)	FSS					FSSBRD				
	part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)	part number	reel length (m)	outside dia (mm)	inside dia (mm)	min inside bend radius (mm)
20	FSS20	25	21.6	16.2	45	FSSBRD20	25	21.6	16.2	60
25	FSS25	25	26.8	20.2	55	FSSBRD25	25	28.3	20.2	70
32	FSS32*	25	32.5	25.4	65	FSSBRD32	25	33.8	25.4	80
40	FSS40*	10	41.3	34.1	105	FSSBRD40*	10	43.0	34.1	120
50	FSS50	10	50.0	40.0	130	FSSBRD50	10	51.2	40.0	145

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

Ordering Notes

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





Standards



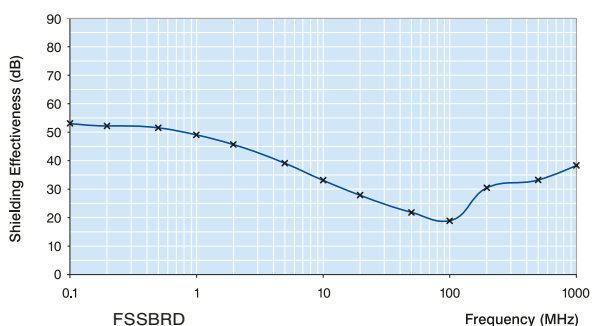
properties

- IP rating: IP68
- Temperature range -50°C to +135°C
- Inherently Low Fire Hazard
- Suitable for knockout or threaded entries
- Nickel Plated Brass Fittings
- Conduit throat supplied with fitting to protect cables from cut end of conduit
- High mechanical strength
- Tensile strength with standard fittings 100kg for 20mm size
- Tensile strength with BRD C type fittings 150kg for 20mm size
- BRD type fittings: Braid is locked between inner and outer compression nuts
- Also available in chemically blackened version for FSS

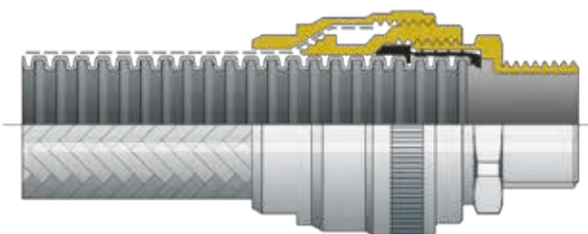


C-S	NEW	C90	NEW	C45	NEW	FCC-SS CLIPS
<p>swivel external thread nickel plated brass</p> <p>Multipart compression fitting including conduit retention clip and polyester seal. Swivel external thread means it can be used for knockouts and / or threaded entries.</p> <p>For BRD version, Braid is locked between inner and outer compression nuts.</p> <p>Colour: Self colour or also available in Black for FSS version.</p>		<p>external thread nickel plated brass</p> <p>90° multipart compression fitting including elastomeric seal. Can be used for knockouts.</p>		<p>external thread nickel plated brass</p> <p>45° multipart compression fitting including elastomeric seal. Can be used for knockouts.</p>		<p>stainless steel (316L) P clips</p> <p>P clip to support conduit.</p>
IP68		IP68		IP68		
						
for use with FSS	for use with FSSBRD	for use with FSS	for use with FSS			nominal size (mm)
FSS20-M20-S	FSSBRD20-M20-S	FSS20-M20-C90	FSS20-M20-C45	FCC20-SS	20	
FSS25-M25-S	FSSBRD25-M25-S	FSS25-M25-C90	FSS25-M25-C45	FCC25-SS	25	
FSS32-M32-S	FSSBRD32-M32-S*	FSS32-M32-C90	FSS32-M32-C45	FCC32-SS	32	
FSS40-M40-S*	FSSBRD40-M40-S*	FSS40-M40-C90*	FSS40-M40-C45*	FCC40-SS	40	
FSS50-M50-S	FSSBRD50-M50-S	FSS50-M50-C90	FSS50-M50-C45	FCC50-SS	50	

EMC Screening Performance



Technical Drawing

















Cable Gland Fittings

cable strain relief and enhanced IP rating for Flexicon conduits

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

properties

- Combined properties of conduit fitting and cable gland
- Cable strain relief
- Additional IP rating on cable inside conduit*
- Nickel plated brass fittings
- Cable gland properties: IP68 (10 bar) + IP69
- Temperature range
 - 40°C to +100°C for static applications
 - 20°C to +100°C for dynamic applications
- EMC cable gland version on request

Suitable for the following conduits	Conduit	Fitting	nominal size (mm)	Part Number	IP rating of conduit system	IP rating of cable gland	Clamping range of cable gland
FU & SSU			16	FSU16-M16-CG	IP40	IP68 (10 bar)+IP69	4.5-10mm
			20	FSU20-M20-CG			7-13mm
			25	FSU25-M25-CG			9-17mm
			32	FSU32-M32-CG			11-21mm
FSU, FNU, LFHU and FPU			16	FNU16-M16-CG	IP65	IP68 (10 bar)+IP69	4.5-10mm
			20	FNU20-M20-CG			7-13mm
			25	FNU25-M25-CG			9-17mm
			32	FNU32-M32-CG			11-21mm
LTP, LTPHC, LTPUL, LTPAS, LTPSS, LTPLFH, LTBRDP, LTBRDLFH, LTPPU and LTPPUAS			16	LTP16-M16-CG	IP66+IP67+	IP68 (10 bar)+IP69	4.5-10mm
			20	LTP20-M20-CG			7-13mm
			25	LTP25-M25-CG	IP68 (5 bar)+IP69		9-17mm
			32	LTP32-M32-CG			11-21mm
FB & FUSB			16	FSB16-M16-CG	IP40	IP68 (10 bar)+IP69	4.5-10mm
			20	FSB20-M20-CG			7-13mm
			25	FSB25-M25-CG			9-17mm
			32	FSB32-M32-CG			11-21mm
FSB & LFHUBRD			16	FSB16-M16-CG	IP65	IP68 (10 bar)+IP69	4.5-10mm
			20	FSB20-M20-CG			7-13mm
			25	FSB25-M25-CG			9-17mm
			32	FSB32-M32-CG			11-21mm
LTPBRD			16	LTPB16-M16-CG	IP66+IP67+	IP68 (10 bar)+IP69	4.5-10mm
			20	LTPB20-M20-CG			7-13mm
			25	LTPB25-M25-CG	IP68 (5 bar)+IP69		9-17mm
			32	LTPB32-M32-CG			11-21mm
LPC, LPCG, LPCO, LPCBU			16	LPC16-M16-CG	IP66+IP67+	IP68 (10 bar)+IP69	4.5-10mm
			20	LPC20-M20-CG			7-13mm
			25	LPC25-M25-CG	IP68 (5 bar)+IP69		9-17mm
			32	LPC32-M32-CG			11-21mm

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

Standards

BS EN IEC 61386



Round Connection boxes

stainless steel
nickel plated brass

NEW



- IP66
- IP67
- IP68
- IP69

Connection Boxes

NEW

HG
HYGIENIC
RANGE

ROUND BOX - STAINLESS STEEL

- IP66
- IP67
- IP68
- IP69



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



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

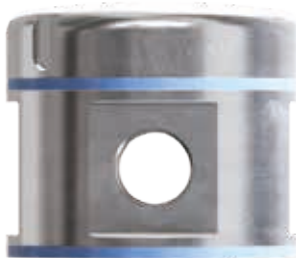
4 Way Box shown
2 mounting holes on base
M20 Thread Entries

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

ROUND BOX - NICKEL PLATED BRASS

NEW

- IP66
- IP67
- IP68
- IP69



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

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












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

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










For non-metallic Round Connection Boxes see page 63



Accessories

metric locknuts					PG locknuts		NPT locknuts		stop plug	
nickel plated brass, plated steel, stainless steel, nylon black or grey					nickel plated brass, Zinc, nylon black or grey		Zinc or nylon (black)		nylon metric black	nylon PG (grey)
										
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-M40-EMC	S-M40	SS-M40	LM40-N#	B-PG21	PG21-N#	Z-125		SP-M40*	SP-PG21
B-M50		S-M50	SS-M50	LM50-N#	B-PG29	PG29-N#	Z-150			SP-PG29
B-M63		S-M63	SS-M63*	LM63-N#	B-PG36	PG36-N#	Z-200			
B-M75					B-PG42	PG42-N#				
					B-PG48	PG48-N#				

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

sealing washers						earthing washers	
Polyester Elastomer, Neoprene and fibre face sealing washers						shake proof washer	earth tag washer
Polyester Elastomer Metric	Neoprene Metric	Neoprene PG	Fibre Metric	Fibre PG			
							
metric thread part number	metric thread part number	PG thread part number	NPT thread part number	metric thread part number	PG thread part number	metric thread part number	metric thread part number
RSW16	SW12	SWPG7		FW12	FWPG7	SPW16	
RSW20	SW16	SWPG9		FW16	FWPG9	SPW20	ET-M20
RSW25	SW20	SWPG11	SW050	FW20	FWPG11	SPW25	ET-M25
RSW32	SW25	SWPG13	SW075	FW25	FWPG13	SPW32	
RSW40	SW32	SWPG16	SW100	FW32	FWPG16		
RSW50	SW40	SWPG21	SW125	FW40	FWPG21		
RSW63	SW50	SWPG29	SW150	FW50	FWPG29		
	SW63	SWPG36	SW200	FW63	FWPG36		
		SWPG42					
		SWPG48			FWPG48		

fixing clips

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



to fit conduit size

part number

part number

conduit clip

nylon conduit clip with integral lid - black or grey

(For fixing rails & accessories contact Flexicon)



to fit nominal conduit sizes

conduit clip for corrugated

conduit clip for plain or rigid



fclamp

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.



end cap

REC

rubber end cap

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



part number

to fit conduit size

outlet ID mm

10	FCC10	FCC10-SS*	10	FCL10			REC10	10	0-7	
12	FCC12	FCC12-SS	13	FCL13			REC13	13	0-7	
16	FCC16	FCC16-SS	16	FCL16	FCL16B-P	FCLAMP- 3-16	EC16B	REC16	16	0-11
20	FCC20	FCC20-SS	18	FCL18	FCL18B-P					
25	FCC25	FCC25-SS	20	FCL20	FCL20B-P					
32	FCC32	FCC32-SS	21	FCL21	FCL21B-P	FCLAMP- 3-21	EC21B	REC21	21	0-15
40	FCC40	FCC40-SS	25	FCL25	FCL25B-P					
50	FCC50	FCC50-SS	28	FCL28		FCLAMP- 4-28	EC28B	REC28	28	0-21
63	FCC63	FCC63-SS*	32	FCL32						
75	FCC75		34	FCL34	FCL33B-P	FCLAMP- 5-34	EC34B	REC34	34	0-25
80	FCC80		42	FCL42		FCLAMP- 6-42	EC42B	REC42	42	0-34
106	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

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

cable glands

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



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



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
- 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

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%)	HYDROGEN PEROXIDE (30%)	HYDROGEN PEROXIDE (60%)	LACTIC ACID	
30	FPAS	nylon LFH PA6 corrugated, std weight	✓	✓	✓	L	✓	✗	✓	✓	✗	✓	L	✗	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗	✗	L
30	FPAH	nylon LFH PA6 corrugated, heavy weight	✓	✓	✓	L	✓	✗	✓	✓	✗	✓	L	✗	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗	✗	L
30	FPASC	nylon LFH PA6 corrugated, std weight	✓	✓	✓	L	✓	✗	✓	✓	✗	✓	L	✗	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗	✗	L
30	FPR	nylon extra LFH PA6 corrugated, std weight	✓	✓	✓	L	✓	✗	✓	✓	✗	✓	L	✗	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗	✗	L
31	FPADS	nylon PA6 double slit corrugated	✓	✓	✓	L	✓	✗	✓	✓	✗	✓	L	✗	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗	✗	L
31	FPI	nylon PA12 corrugated, standard weight	✓	✓	✓	L	✓	L	✓	✓	✗	✓	L	✗	✓	L	L	✓	L	✓	✓	✓	✗	✗	✗	✗	L
31	FPIH	nylon PA12 corrugated, heavy weight	✓	✓	✓	L	✓	L	✓	✓	✗	✓	L	✗	✓	L	L	✓	L	✓	✓	✓	✗	✗	✗	✗	L
31	FPIHR	nylon PA12 corrugated, heavy weight	✓	✓	✓	L	✓	L	✓	✓	✗	✓	L	✗	✓	L	L	✓	L	✓	✓	✓	✗	✗	✗	✗	L
52	FPRSS	PA6 corrugated, SS316 overbraid	✓	✓	✓	L	✓	✗	✓	✓	✗	✓	L	✗	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗	✗	L
52	FPRTC	PA6 corrugated, tinned copper overbraid	✓	✓	✓	L	✓	✗	✓	✓	✗	✓	L	✗	✓	✓	✓	✓	✓	✓	✗	✗	✗	✗	✗	✗	✗
52	FPISS	PA12 corrugated, SS316 overbraid	✓	✓	✓	L	✓	L	✓	✓	✗	✓	L	✗	✓	L	L	✓	L	✓	✓	✓	✗	✗	✗	✗	L
52	FPIHSS	PA12 corrugated, SS316 overbraid	✓	✓	✓	L	✓	L	✓	✓	✗	✓	L	✗	✓	L	L	✓	L	✓	✓	✓	✗	✗	✗	✗	L
52	FPIHRSS	PA12 corrugated, SS316 overbraid	✓	✓	✓	L	✓	L	✓	✓	✗	✓	L	✗	✓	L	L	✓	L	✓	✓	✓	✗	✗	✗	✗	L
56	NRFPAS	nylon LFH PA6 corrugated, std weight	✓	✓	✓	L	✓	✗	✓	✓	✗	✓	L	✗	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗	✗	L
56	NRFPAH	nylon LFH PA6 corrugated, heavy weight	✓	✓	✓	L	✓	✗	✓	✓	✗	✓	L	✗	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗	✗	L
56	NRFPR	nylon extra LFH PA6 corrugated, std weight	✓	✓	✓	L	✓	✗	✓	✓	✗	✓	L	✗	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗	✗	L
57	NRFPIH	nylon PA12 corrugated, heavy weight	✓	✓	✓	L	✓	L	✓	✓	✗	✓	L	✗	✓	L	L	✓	L	✓	✓	✓	✗	✗	✗	✗	L
57	NRFPIHR	nylon PA12 corrugated, heavy weight	✓	✓	✓	L	✓	L	✓	✓	✗	✓	L	✗	✓	L	L	✓	L	✓	✓	✓	✗	✗	✗	✗	L
57	NRFPADS	nylon PA6 double slit corrugated	✓	✓	✓	L	✓	✗	✓	✓	✗	✓	L	✗	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗	✗	L

key

✓ good resistance
L limited resistance

PP suitable with polypropylene fittings
SS suitable with stainless steel fittings

X poor resistance

Non-Metallic conduit and fittings

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

NEW



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	✗	✓	✗	✗	L	✗	✓	✓	✗	✓	✓	✓	✓	✓	✓	✗	✗	✓	✓	✓	L	✓	✓	L	✓	✓	✗	FPAS	
✓	L	✗	✓	✗	✗	L	✗	✓	✓	✗	✓	✓	✓	✓	✓	✓	✗	✗	✓	✓	✓	L	✓	✓	L	✓	✓	✗	FPAH	
✓	L	✗	✓	✗	✗	L	✗	✓	✓	✗	✓	✓	✓	✓	✓	✓	✗	✗	✓	✓	✓	L	✓	✓	L	✓	✓	✗	FPASC	
✓	L	✗	✓	✗	✗	L	✗	✓	✓	✗	✓	✓	✓	✓	✓	✓	✗	✗	✓	✓	✓	L	✓	✓	L	✓	✓	✗	FPR	
✓	L	✗	✓	✗	✗	L	✗	✓	✓	✗	✓	✓	✓	✓	✓	✓	✗	✗	✓	✓	✓	L	✓	✓	L	✓	✓	✗	FPADS	
✓	L	✗	✓	✗	✗	L	✗	✓	✓	✗	✓	✓	✓	✓	L	✗	✗	✓	✓	✓	✓	✗	✓	✓	L	✓	✓	✗	FPI	
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✓	L	✗	✓	✗	✗	L	✗	✓	✓	✗	L	✓	✓	✓	L	✗	✗	✓	✓	✓	✓	✗	✓	✓	L	✓	✓	✗	FPISS	
✓	L	✗	✓	✗	✗	L	✗	✓	✓	✗	L	✓	✓	✓	L	✗	✗	✓	✓	✓	✓	✗	✓	✓	L	✓	✓	✗	FPIHSS	
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✓	L	✗	✓	✗	✗	L	✗	✓	✓	✗	✓	✓	✓	✓	✓	✓	✗	✗	✓	✓	✓	L	✓	✓	L	✓	✓	✗	NRFPR	
✓	L	✗	✓	✗	✗	L	✗	✓	✓	✗	✓	✓	✓	✓	L	✗	✗	✓	✓	✓	✓	✗	✓	✓	L	✓	✓	✗	NRFPIH	
✓	L	✗	✓	✗	✗	L	✗	✓	✓	✗	✓	✓	✓	✓	L	✗	✗	✓	✓	✓	✓	✗	✓	✓	L	✓	✓	✗	NRFPIHR	
✓	L	✗	✓	✗	✗	L	✗	✓	✓	✗	✓	✓	✓	✓	✓	✓	✗	✗	✓	✓	✓	L	✓	✓	L	✓	✓	✗	NRFPADS	

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 System		ASTM NO. 1	ASTM NO. 2	ASTM NO. 3	ACETIC ACID (10%)	ACETONE	ALUMINIUM CHLORIDE	BENZENE	CARBON TETRACHLORIDE	CHLOROFORM	CITRIC ACID	COPPER SULPHATE	GRESOL	DIESEL OIL	DIETHYLAMINE	ETHANOL	ETHER	ETHYLAMINE	ETHYLENE GLYCOL	FREON 32	HYDROCHLORIC ACID (10%)	HYDROCHLORIC ACID (30%)	HYDROGEN PEROXIDE (30%)	HYDROGEN PEROXIDE (60%)	LACTIC ACID	
68	FU	galvanised steel	✓	✓	✓	✗	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗	✗	✗	✗	✗	
68	SSU	stainless steel, grade 316	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✓	✓	✓	
70	FSU	galvanised steel, pvc coated	✗	✗	✗	L	✗	✗	✗	✗	✓	✓	✓	L	L	✗	✗	✗	✗	L	L	✓	✗	✓	✓	L	
70	LFHU	galvanised steel, LFH coated	L	L	L	✓	✗	✗	✗	✗	✓	✓	✗	✗	✗	✓	✗	✗	✗	✓	✗	✗	✗	✗	✗	✓	
70	FPU	galvanised steel, polyurethane coated	✓	✓	✓	✗	L	L	L	L	✗	✓	✓	✗	✓	L	✓	L	✗	✓	✗	✗	✗	L	✗	L	
72	LTP	galv steel, pvc coated, liquid tight	L	L	L	✓	✗	✗	✗	L	✗	✓	✓	L	L	L	✗	L	L	L	L	L	✗	L	✗	L	
72	LTPHC	galv steel, thermoplastic rubber, liquid tight	✓	L	L	✓	✓	✗	✗	L	L	✓	✓	✓	✓	✓	✓	✓	✓	L	✓	✗	✓	✓	L	✗	L
72	LTPLFH	galv steel, LFH coated, liquid tight	✓	✓	✓	✓	✗	✗	✗	L	✗	✓	✓	L	L	L	✗	L	L	L	L	L	✗	L	✗	L	
73	LTBRDP	galv steel, braided core, pvc coated, liquid tight	✓	✓	✓	✓	✗	✗	✗	L	✗	✓	✓	L	L	L	✗	L	L	L	L	L	✗	L	✗	L	
73	LTPPU	galv steel, polyurethane coated, liquid tight	✓	✓	✓	✗	L	L	L	L	✗	✓	✓	✗	✓	L	✓	✗	✓	✗	✗	✗	✗	L	✗	✗	L
73	LTBRDLFH	galv steel, braided core, LFH coated, liquid tight	L	L	L	✓	✗	✗	✗	✗	✓	✓	✗	L	✓	✗	✗	✗	✗	✓	✗	✗	✗	✗	✗	✓	
76	FB	galvanised steel, galv steel overbraid	✓	✓	✓	✗	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗	✗	✗	✗	✗	
76	FUSSB	galvanised steel, SS316 overbraid	✓	✓	✓	✗	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗	✗	✗	✗	✗	
78	LFHUBRD	galv steel, LFH coated, SS316 overbraid	L	L	L	✓	✗	✗	✗	✗	✓	✓	✗	✗	✗	✓	✗	✗	✗	✓	✗	✗	✗	✗	✗	✓	
80	FSS	stainless steel corrugated	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✓	✓	✓	
80	FSSBRD	stainless steel corrugated, overbraid	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✓	✓	✓	

key

✓ good resistance
L limited resistance

PP suitable with polypropylene fittings
SS suitable with stainless steel fittings

✗ poor resistance



Metallic conduit and fittings

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

NEW



LUBRICATING OIL	METHANOL	METHYL BROMIDE	MEK	NITRIC ACID (10%)	NITRIC ACID (60%)	OXALIC ACID	OZONE (GAS)	PARAFFIN OIL	PETROL	PHENOL	SEA WATER	SILVER NITRATE	SKYDROL	SODIUM CHLORIDE	SODIUM HYDROXIDE (10%)	SODIUM HYDROXIDE (60%)	SULPHUR DIOXIDE (GAS)	SULPHURIC ACID (10%)	TOLUENE	TRANSFORMER OIL	1,1,1-TRICHLOROETHANE	TRICHLOROETHYLENE	TURPENTINE	VEGETABLE OIL	VINYL ACETATE	WATER	WHITE SPIRIT	ZINC CHLORIDE	
✓	✓	✓	✓	✗	✗	✗	✗	✓	✓	✓	✗	✗	✓	✗	✗	✗	✗	✗	✓	✓	✗	✗	✓	✓	✗	✗	✓	✗	FU
✓	✓	✓	✓	✗	✗	✓	✓	✓	✓	✓	SS	✓	✓	SS	✓	L	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	SSU
L	✗	✗	✗	✓	✓	✗	L	L	✗	✗	✗	✓	✗	✗	✓	L	✗	✗	✗	L	✗	✗	L	L	✗	✓	L	✓	FSU
L	✗	✗	✗	✓	✗	✓	✓	✗	✗	✗	✗	✓	✗	✓	✓	✓	✗	✗	L	L	L	L	✗	L	✗	✓	✗	✓	LFHU
L	L	✗	L	✗	✗	L	L	L	✓	✗	✗	L	✗	✓	L	✗	L	L	✗	L	✗	✗	✗	✓	✗	✓	L	L	FPU
✓	✗	✗	L	L	✗	✓	L	✗	L	L	SS	✓	✗	SS	✓	✓	✗	SS	✗	L	✗	✗	L	✓	✗	✓	L	✗	LTP
L	✓	L	✓	✓	✓	✓	L	✓	✓	✓	SS	✓	✓	SS	✓	✗	✓	SS	✗	✗	L	✗	✗	✓	✓	✓	✗	✓	LTPHC
L	✗	✗	✗	L	✗	✓	L	L	L	L	SS	✓	✗	SS	✓	✓	✗	SS	✗	L	✗	✗	L	L	✗	✓	L	✗	LTPLFH
✓	✗	✗	L	L	✗	✓	L	✓	L	L	SS	✓	✗	SS	✓	✓	✗	SS	✗	L	✗	✗	L	✓	✗	✓	L	✗	LTBRDP
L	L	✗	L	✗	✗	L	L	L	✓	✗	SS	L	✗	✓	L	✗	L	L	✗	L	✗	✗	✗	✓	✗	✓	L	L	LTPPU
L	✗	✗	✗	✓	✗	✓	✓	✗	L	✗	SS	✓	✗	✓	✓	✓	✗	✗	L	L	L	L	✗	L	✗	✓	✗	✓	LTBRDLFH
✓	✓	✓	✓	✗	✗	✗	✗	✓	✓	✓	✗	✗	✓	✗	✗	✗	✗	✗	✓	✓	✗	✗	✓	✓	✗	✗	✓	✗	FB
✓	✓	✓	✓	✗	✗	✗	✗	✓	✓	✓	✗	✗	✓	✗	✗	✗	✗	✗	✓	✓	✗	✗	✓	✓	✗	✗	✓	✗	FUSSB
L	✗	✗	✗	✓	✗	✓	✓	✗	✗	✗	✗	✓	✗	✓	✓	✓	✗	✗	L	L	L	L	✗	L	✗	✓	✗	✓	LFHUBRD
✓	✓	✓	✓	✗	✗	✓	✓	✓	✓	✓	SS	✓	✓	SS	✓	L	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	FSS
✓	✓	✓	✓	✗	✗	✓	✓	✓	✓	✓	SS	✓	✓	SS	✓	L	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	FSSBRD

The chart above is based on exposure to single chemicals at room temperature and should be used as a selection guide. For additional chemicals, higher concentrations, elevated temperatures or combinations of chemicals, please call +44 (0)1675 466900 for technical advice.



Thread Data and Cable Carrying Capacity

Metric

standard thread conforming to EN60423

Thread size	External thread outside diameter (mm)	Internal thread inside diameter (mm)	Pitch mm
M12	12.0	10.4	1.5
M16	16.0	14.4	1.5
M20	20.0	18.4	1.5
M25	25.0	23.4	1.5
M32	32.0	30.4	1.5
M40	40.0	38.4	1.5
M50	50.0	48.4	1.5
M63	63.0	61.4	1.5
M75	75.0	73.4	1.5

PG

German standard thread conforming to DIN40430

Thread size	External thread outside diameter (mm)	Internal thread inside diameter (mm)	Pitch mm
PG7	12.5	11.3	1.27
PG9	15.2	13.9	1.41
PG11	18.6	17.3	1.41
PG13.5	20.4	19.1	1.41
PG16	22.5	21.2	1.41
PG21	28.3	26.8	1.59
PG29	37.0	35.5	1.59
PG36	47.0	45.5	1.59
PG42	54.0	52.5	1.59
PG48	59.3	57.8	1.59

NPT

American taper pipe thread conforming to ANS/ASME B1.20.1 - 1983

Thread size (inches)	External thread max outside diameter (mm)	Pitch mm
3/8"	17.4	1.14
1/2"	21.5	1.81
3/4"	27.0	1.81
1"	33.6	2.21
1 1/4"	42.3	2.21
1 1/2"	48.5	2.21
2"	60.6	2.21

PF / gas

Japanese conduit thread conforming to JIS B 0202

Thread size (inches)	External thread outside diameter (mm)	Internal thread inside diameter (mm)	Pitch mm
1/2"	21.0	18.6	1.81
3/4"	26.4	24.1	1.81
1"	33.3	30.3	2.31
1 1/4"	41.9	39.0	2.31
1 1/2"	47.8	44.8	2.31
2"	59.6	56.7	2.31

UNEF / UNS / UN

American unified thread conforming to BS1580 used on circular connectors

UNEF Imperial sizes	Thread size (inches)	External thread outside diameter (mm)	Internal thread inside diameter (mm)	Pitch mm
3/8" - 24 UNEF	3/8"	15.9	14.7	1.06
1/2" - 20 UNEF	1/2"	19.1	17.7	1.27
5/8" - 20 UNEF	5/8"	22.2	20.9	1.27
1" - 20 UNEF	1"	25.4	24.0	1.27
1 1/8" - 18 UNEF	1 1/8"	30.2	28.6	1.41
1 1/4" - 18 UNEF	1 1/4"	31.8	30.2	1.41
1 3/8" - 18 UNEF	1 3/8"	34.9	33.4	1.41
1 1/2" - 18 UNEF	1 1/2"	36.5	35.0	1.41
1 3/4" - 18 UNS	1 3/4"	44.5	42.9	1.41
2" - 18 UNS	2"	50.8	49.3	1.41
2 1/4" - 18 UN	2 1/4"	57.2	55.4	1.41

Cable carrying capacity

UK wiring regulations BS7671, recommend that the total cross sectional area of the sum of the individual cables should not exceed 40% of the cross sectional area of the conduit. The nominal cross sectional area of single-core, stranded, PVC insulated cables is provided as a guide only. Other cables may have different dimensions.

Nominal conductor size (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 $3.142 \times \left(\frac{\text{inside diameter}}{2}\right)^2 = 201\text{mm}^2$
- % of conduit cross sectional area $\frac{73}{201} = 36\%$

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

UK wiring regulations

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

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

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

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

IP Rating and Technical Guidance

IP ratings guide

(Ingress Protection to BS EN IEC 60529)

IP40

1st digit – protection against solid objects

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

IP40

2nd digit – protection against water

	0	No protection
	1	Protected against falling drops
	2	Protected against drops falling at 15°
	3	Low pressure spray – similar to shower head - up to 60° from vertical
	4	Low pressure spray – similar to shower head – from any angle for 5 minutes
	5	Medium pressure jet – similar to garden hose – from any angle for 3 minutes
	6	High pressure jet – similar to fire hose – from any angle for 3 minutes
	7	Submersion at 1 metre for 30 minutes
	8	Higher water pressure eg: 2 bar for 2 hours. Conduits are tested in-house at up to 10 bar. (equivalent to 100m underwater)
	9	Steam clean, high pressure high temp jet wash



Buyer Beware

IP tests are type tests of short duration and do not guarantee long term performance. EN 60529 states that equipment conforming to IP67 or IP68 cannot be assumed to meet IP66 and that the manufacturer shall declare the pressure and duration of the test, for example, FPAX 2 bar for 2 hours.

Technical guidance

Application advice

Flexicon can offer impartial advice on which of our wide range of conduit systems are most suited to your application. Factors which may be important include:-

Standards, performance and approvals

Flexicon conduits and fittings are manufactured by Flexicon to comply with the IEC and European conduit standard BS EN IEC 61386 - see classification table below.

Certain tests are carried out internally by Flexicon, other testing is carried out externally by accredited test laboratories. Specific test reports are available upon request.

Vibration and shock testing to EN61373 Cat 2.

Certain conduit systems have been tested and approved to the relevant parts of the Australian Standard AS/NZS 2053:3 2001. Where product performance data over and above the requirements of BS EN IEC 61386 is provided e.g: Low Fire Hazard testing and EMC screening, other appropriate standards have been used.

Cable glands are manufactured to EN 50262.

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

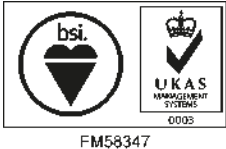
Classification of conduit systems to BS EN IEC 61386

Level	1st digit Compression Strength N/50mm	2nd digit Impact Strength Joules at min temp	3rd digit Minimum Temp deg C	4th digit Maximum Temp deg C	5th digit Conduit Type	6th digit Electrical Properties	7th digit IP Rating Solids	8th digit IP Rating Water	9th digit Corrosion Resistance (water)	10th digit Tensile Strength N	11th digit Flame Propagation	12th digit Suspended Load N/48hr
0						None declared		0	None declared	None declared		
1	V. Light (125)	V. Light (0.5)	5	60	Rigid	Continuous		1	Low in & out	V. Light (100)	Non Flame Propagating	V. Light (20)
2	Light (320)	Light (1)	-5	90	Pliable	Insulating		2	Medium in & out	Light (250)	Flame Propagating	Light (30)
3	Medium (750)	Medium (2)	-15	105	Pliable self recovering	Continuous + Insulating	3	3	Medium in & high out	Medium (500)		Medium (150)
4	Heavy (1250)	Heavy (6)	-25	120	Flexible		4	4	High in & out	Heavy (1000)		Heavy (450)
5	V. Heavy (4000)	V. Heavy (20)	-45	150			5	5		V. Heavy (2500)		V. Heavy (850)
6				250			6	6				
7				400			7	7				

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.



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.



IRIS - Std No. ISO/TS 22163:2017

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: 19 (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.



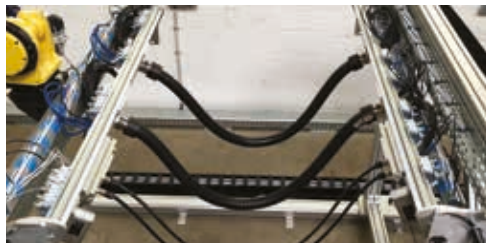
Railway Industry Association (RIA) & Rail Alliance

Flexicon are active members with Railway Industry Association (RIA) the trade association for UK based suppliers to the Railway industry, and also Rail Alliance.

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 Inter-car jumpers. This test was conducted over 1 million cycles with no point of failure so we can clearly demonstrate serviceable 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, up to 21,000 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



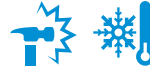
- Electrical insulation testing to EN 61386 and ASTM D 495 and 3638



- Environmental - 2 weeks at 95°C - 90%rh
- 2 weeks at 105°C



- Direct lightning strike of conduit and fixed fittings



- Low temperature impact testing



- EMC screening performance



- Anti-static testing



- Food contact testing to EU 10 2011

International and National Conduit Standards

- BS EN IEC 61386-1 Conduit Systems, generally accepted worldwide other than North America
- BS EN IEC 61386-23 Flexible Conduit Systems
- BS EN IEC 61386-22 Pliable Conduit Systems
- AS/NZS 2053, Australia and New Zealand but based on IEC 61386
- UL 1660, Non-metallic UL listed conduit for North America
- UL 360, Metallic UL listed conduit for North America
- UL 514B, UL listed conduit fittings for North America
- UL 1669, Non-metallic UL recognised conduit systems for North America



Datasheets & Technical Info

We pride ourselves on the rigorous testing and approvals we apply to our products.

To give you confidence and help you select the correct products for your application we can provide Technical datasheets for all our products, documenting performance properties and key specification information.

Our datasheets are available on request and provide supplementary information on;

- Key Dimensions - Line Drawing (Full 3D CAD models also available)
- Construction and Materials
- Product Features & Applications
- Testing and Approvals - Report details and Test Certificate Numbers
- Performance data - e.g. HL Classifications, LOI % etc





UNISTRUT®

A PART OF **atkore**
INTERNATIONAL

Unistrut are the leading supplier of metal framing Systems for over 90 years and specialise in Channel framing, cable managements and Prefabricated framing.

Unistrut® Worldwide Reach from UK Manufacturer

Unistrut has been a leading manufacturer for over 90 years, producing the original Unistrut metal framing system during the 1930's. The Unistrut product portfolio soon expanded and now includes a variety of cable management solutions and advanced metal framing systems, which continue to be used across the globe. Unistrut has a reputation for industry leading quality and innovation, and this is demonstrated through the company's continued ability to provide mechanical products and solutions to meet almost any requirement.

Unistrut® Cable Management Solutions

- Cable Tray
- Cable Ladder
- Metal Trunking
- Modular & Pre-fabricated

Unistrut® For Rail

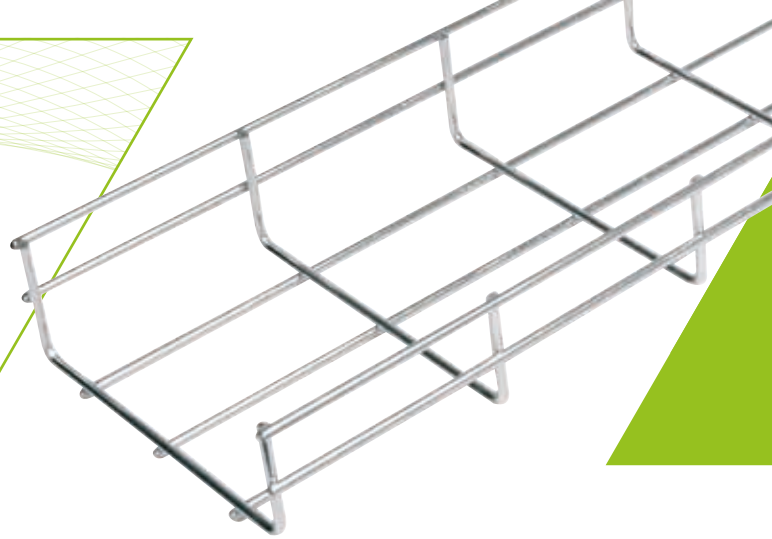
Unistrut products have been specified on major rail projects across the UK and worldwide. Unistrut Channel and cable management systems are approved for use on LUL including section 12 applications. Other approvals include Cross Rail and Network Rail.

The most recent project being the implementation of the new Cross Rail C610 project in London, which saw a the full product offering being supplied delivering 280,000m of cable tray and 110,000m of cable ladder to the project, and benefitted from the use of Unistrut Modular services, having pre-fabricated curved multiarm brackets supplied to carry cable containment through the new tunnel network.

For more information on Unistrut products, and to hear more on how Unistrut products can be used to bring value engineering keeping within budget and to programme in rail projects, contact us on +44 (0)121 580 6300.



Marco is the largest manufacturer of Steel Wire Cable Tray in the UK and known industry-wide for their superb quality and innovative cost-saving solutions.



Marco Cable Management

Marco Cable Management are a leading UK manufacturer of PVC and steel cable management solutions, which includes a wide range of uPVC dado trunking systems, and the UK's largest range of Steel Wire Cable Trays. Marco's products are designed for a wide variety of industrial and commercial installations, with products designed to complement and accommodate all of an installation's cable management requirements.

Marco for Rail

Marco's range of Steel Wire Cable Trays have been given the authorised for use status by London Underground, and since 2014 have been utilised on a number of projects by the organisation.

Marco's products meet and exceed all UK and European standards required by TFL for both power and data cabling.

Marco's steel wire cable tray can be supplied in a hot-dip galvanised finish, ensuring products can be used in harsh environments, where erosion may occur, ensuring Marco's tray can be installed in various installations including tunnels and stations.

Marco's steel wire cable tray systems are commonly seen carrying structured cabling throughout many of the UK's railway stations and facilities.

Marco Safety Rating

Marco's Steel Wire Cable Tray has also been awarded the E90 fire safety rating. Whilst there is currently no UK equivalent, Marco have utilised the German testing method to ensure our cable trays can withstand and continue to perform in temperatures up to 1000°C. Marco's trays can be assigned to functional integrity classes E30, E60 and E90 in accordance with DIN 4102-12.

For more information on the Marco range, and how our range of cable management solutions can help, contact us on +44 (0)1248 725 772.



FLEXICON

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