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**FLEXICON**  
FLEXIBLE CONDUIT SOLUTIONS

11<sup>TH</sup>  
edition



product &  
solutions guide

THE POWER IN CABLE MANAGEMENT



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THE POWER IN CABLE MANAGEMENT

PRODUCTS & SOLUTIONS GUIDE - 11<sup>th</sup> Edition

# Foreword



## Welcome to the 11<sup>th</sup> edition of our product and selection guide.

Since our last publication, the Flexicon Group has expanded in a number of areas. Our already comprehensive product range has now increased to 52 metallic and non-metallic systems. Growth in markets such as Hazardous areas, the Food and Beverage sector along with Renewable Energy, and further expansion in existing markets has seen the Group continue to achieve its strategic growth objectives.

The Flexicon Group is proud of its British Manufacturing heritage. Over 98% of our products are manufactured in our centre of excellence in Birmingham, UK. Continuous investment in our facilities, research and development and people have contributed to the Group's market leading position in Cable Protection Systems.

Aligning with our business growth, we continue to invest in developing new and innovative products to further satisfy our Customers' expectations. Utilising world-class technological know-how we continue to develop Flexible Conduit solutions, providing new products for some of the most demanding markets for Cable Protection, including Rail, Transport, Renewables, Utilities, Petrochemical and Food and Beverage sectors.

Expansion of our international network of Distribution continues, offering a truly global reach but we are not stopping there. We have plans to add more representation in the coming years to achieve our strategic goals and further strengthen the Flexicon brand. With the capability to service our customers' needs on a worldwide basis, we understand the value of delivering excellent Customer service.

With superior Technical support we are the experts you can rely on for your Cable protection needs. Our Customers are central to everything we do and our mission is to constantly exceed their expectations. Our ongoing commitment and dedication has seen us become globally recognised as a specialist in Cable Protection and Flexible Conduit Solutions.

***We look forward to further supporting our loyal and new Customers with this 11th edition product and selection guide.***

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# Flexicon Group Introduction



Utilising the latest technologies in production and automation, our manufacturing expertise and efficiencies allow us to be competitive in today's Global marketplace. Continuous investment in people, product innovation and engineering excellence is at the centre of everything we do.

From our manufacturing centre of excellence in Birmingham, United Kingdom, our comprehensive stock holding and wide distribution network enables us to deliver service excellence to meet our customers' demands faster, ensuring you can count on us.



## Flexicon offers...



- Independently tested products that comply with and exceed relevant global standards
- User friendly solutions offering time saving innovations
- Precision engineered quality products from the global experts
- Custom made solutions capability - bespoke or made to order assemblies
- Global distribution serving our worldwide customer base
- Continuous product development and investment in products for the future

## Flexicon PTY



With a dedicated Sales and Distribution operation in Australia, located in Sydney and Melbourne along with distribution centres throughout the country, we are well placed to serve the Australian market. With some of the most highly demanding environmental conditions, our product range has become well established as the Market Leader and the trade's choice when it comes to performance and reliability.



## Griflex



Griflex, our sister company is a leading manufacturer providing hose & ducting solutions for the UK and overseas. Our products are available in a range of sizes from ¼" to 10" internal diameter and are intended for use in a diverse range of applications. These include the suction and delivery of water, oil, sewage, slurries, powders and the conveyance of liquids and gasses in factory air lines, pneumatic equipment & general workshop use.

For further information on the Griflex range of hose, tube & ducting please call +44 (0)1675 464803 or email [sales@griflex.com](mailto:sales@griflex.com)



# Flexicon a Global Presence



- Excellence through engineering
- Progression through innovation
- Assurance through competence



[www.flexicon.us.com](http://www.flexicon.us.com) | [www.flexicon.uk.com](http://www.flexicon.uk.com) | [www.flexicon.eu.com](http://www.flexicon.eu.com) | [www.flexiconaustralia.com](http://www.flexiconaustralia.com)

## Flexicon - when quality, safety and value counts

Our product offering has been developed and tested to the most demanding quality standards and has been awarded quality approvals and compliance worldwide;



We offer you peace of mind when it comes to your supply chain for flexible conduit and accessories.  
Are you confident your current solution has been independently tested and offers compliance to local and global standards?

# What's New?

NEW

As a progressive company we are continually investing in new product development to expand our range hence offering you more choice. Some of our recent product developments are highlighted below;

## Anti-static Liquid Tight Conduits – PVC and PU variants

- Compliant with Clause 7.4 of EN 60079-0 offering anti-static performance properties
- Suitable for use with Flexicon EXD and EXE glands
- Size range of 16mm up to 63mm



Page 64 & 66

## EXE – Conduit Fittings

- Suitable for use with any of Flexicon's Liquid Tight Range of conduits
- IP66 performance
- Tested and compliant with



Page 71

## EXD elbows 45° and 90°

- Ideal for use in Hazardous Area Applications when Bending radius of conduit is restricted
- Tested and compliant with



Page 69

## Low Fire Hazard Liquid Tight Conduits

- Liquid Tight performance combined with Low Fire Hazard coating
- Approved for use by London Underground – Product Registration Certificates 658 & 2020
- Size range of 16mm up to 32mm available



Page 64 & 66

## F-Clamps – Heavy Duty clamps

- Heavy duty fixing solution for corrugated conduit in Dynamic Applications
- Internal rib prevents conduit from being pulled through
- Size range of 16mm up to 80mm available



Page 45

## 4 tooth Flexilok™ derivative (42 and 54mm)

- Additional teeth provide 4 fixing points around 360° on conduit for added system security
- Available with Metric and PG thread options
- Dedicated removal tool allows easy removal if necessary



Page 38

## LPC Food Grade Conduit

- Smooth cover non-metallic flexible conduit
- Manufactured from material listed in European food regulation EU 10/2011
- IP66, IP67, IP68 and IP69 performance



Page 48

## Food Grade – Stainless Steel Fitting

- Designed in accordance with EN 1672-2 and EN ISO 14159. Manufactured from Stainless Steel (316L)
- Suitable for use with our LPCG food grade conduit range.
- IP66, IP67, IP68 and IP69 performance



Page 51

# Product Focus - The Ultimate Fitting



## FPA & FPAX

the *ultimate* range of nylon PA66 fittings



- **Very fast fit** less than 3 seconds
- **Ultra high tensile strength** 70kg
- **High IP rating** IP66 + IP67 + IP68 (2 bar) + IP69

### 1 The *Ultimate* Security

#### Safest fitting

All round teeth provide anti vibration protection together with a high pull off strength, i.e. 40kg with FPAS21 conduit and 70kg with FPAH21 conduit

### 2 The *Ultimate* Connection

#### Performance you can rely on

Ingress Protection

- FPA IP66
- FPAX IP66 + IP67+ IP68 (2 bar)+IP69

### 3 The *Ultimate* Simplicity & Speed

#### Fast fit

Push fit connection suitable for fine & coarse pitch Nylon and Polypropylene Conduits. Can be fitted in less than 3 seconds.

### 4 The *Ultimate* Range

#### 10mm up to 67mm in black or grey

13 conduit sizes with Metric, PG, NPT and UNEF thread variants available as well as Nickel plated brass threads

### 5 The *Ultimate* in Convenience

#### Ready to install

Nylon metric threads supplied with glass reinforced nylon locknuts. FPAX fittings supplied with face sealing washers

### 6 The *Ultimate* Removal facility

#### Reduce whole life costs

Can be removed using a screwdriver if required

## The *Ultimate* Choice!



3D / 2D CAD Drawings available:

- Multiple CAD drawing format
- Product data sheets
- Technical support and guidance on suitability
- Customised product development



Available through our website



# Solutions for . . .



## Defence & Marine

Flexicon offer an expanding range of products for this demanding sector. Requiring protection of critical systems this sector demands reliability within the severest of environments.

### Typical products include

-  **ULTRASCREEN®**  
Pliable products and systems
-  **SS**  
Stainless steel products & systems
-  **LT**  
Liquid tight systems
-  **EXD**  
Hazardous area products

## Utilities

Security of supply efficiency and reliability are all critical factors when it comes to this sector. With a growing population the demands on utilities infrastructure is becoming critical.

### Typical products include

-  **LT**  
Liquid tight systems
-  **EXD**  
Hazardous area products
-  **BRD**  
Braided systems
-  **FP**  
Nylon products and systems

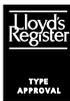
## Renewables

Alternative energy sources are becoming well established and integral to Government energy policies. This has seen the emergence of photovoltaics, wind and tidal power all of which have different cable protection needs. Renewable technologies are also increasing in applications such as electric vehicles.

### Typical products include

-  **LTBRD**  
Internal braided liquid tight
-  **FPADS**  
Double slit systems
-  **FP**  
Nylon products and systems
-  **Orange Conduit**  
Electric and hybrid vehicles

## Industry Approvals

  
 BS EN IEC 61386 
  
 NATO N:Cage Number U5256

## Industry Approvals

  
 BS EN IEC 61386 

## Industry Approvals


  
 BS EN IEC 61386 

# Flexicon Rolling Stock



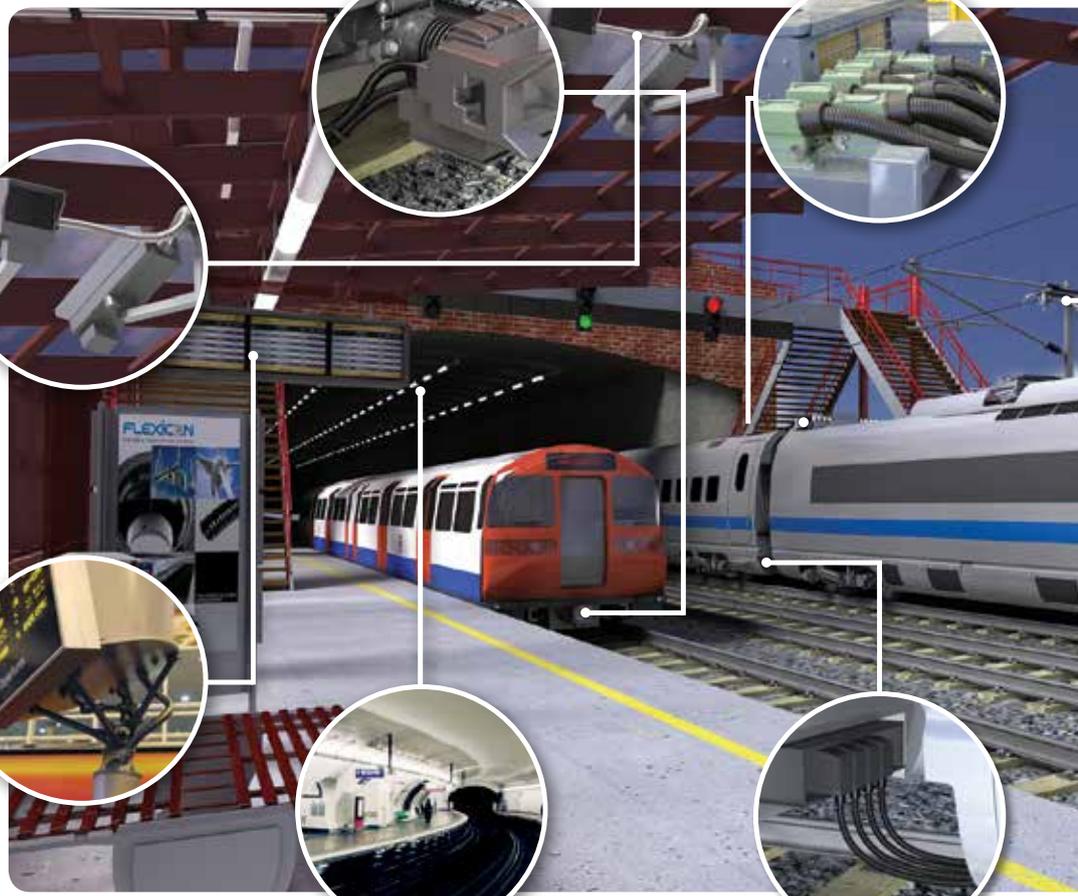
Flexicon offer a range of products for this technically demanding sector. IP ratings, tensile strength characteristics, weight, corrosion resistances, fire performance properties and operating temperature ranges are all factors to consider.

## Station Area Requirements:

- Vandal resistance
- High IP ratings for external and exposed areas
- Aesthetics in passenger facing areas
- Enhanced Low Fire Hazard performance in Metro and heavily enclosed platform and passenger areas



## Industry Approvals



## Fire Performance

Flexicon holds a wide range of Product Registration Certificates issued by Transport for London, London Underground Ltd. For simplicity we identify and classify our product offer using the following symbols to denote their fire performance;



## Tunnel Requirements:

- Enhanced fire protection properties
- Mechanical performance
- Corrosion protection



## Rail Carriage Requirements:

- Fire protection properties
- Low weight
- Range of fittings and accessories
- EMI screening



## Non-Metallic Conduits

|      |  |  |  |
|------|--|--|--|
| FPR  |  | <b>Construction:</b> Standard weight nylon (highly flame retardant PA6) corrugated flexible conduit. Colour black. |  |
| FPI  |  | <b>Construction:</b> Standard weight nylon (PA12) corrugated flexible conduit. Colour black.                       |  |
| FPIH |  | <b>Construction:</b> Heavyweight nylon (PA12) corrugated flexible conduit. Colour black.                           |  |
| FPAH |  | <b>Construction:</b> Heavyweight, flame retardant, nylon (PA6) corrugated flexible conduit. Colour black.          |  |

# Flexicon Infrastructure

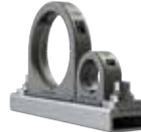
## Exterior Vehicle Requirements:

- High impact resistance to ballast and abrasion
- High tensile strengths
- High vibration resistance
- High resistance to oil and chemicals

- High ingress protection (IP)
- Resistance to UV
- EMI Screening



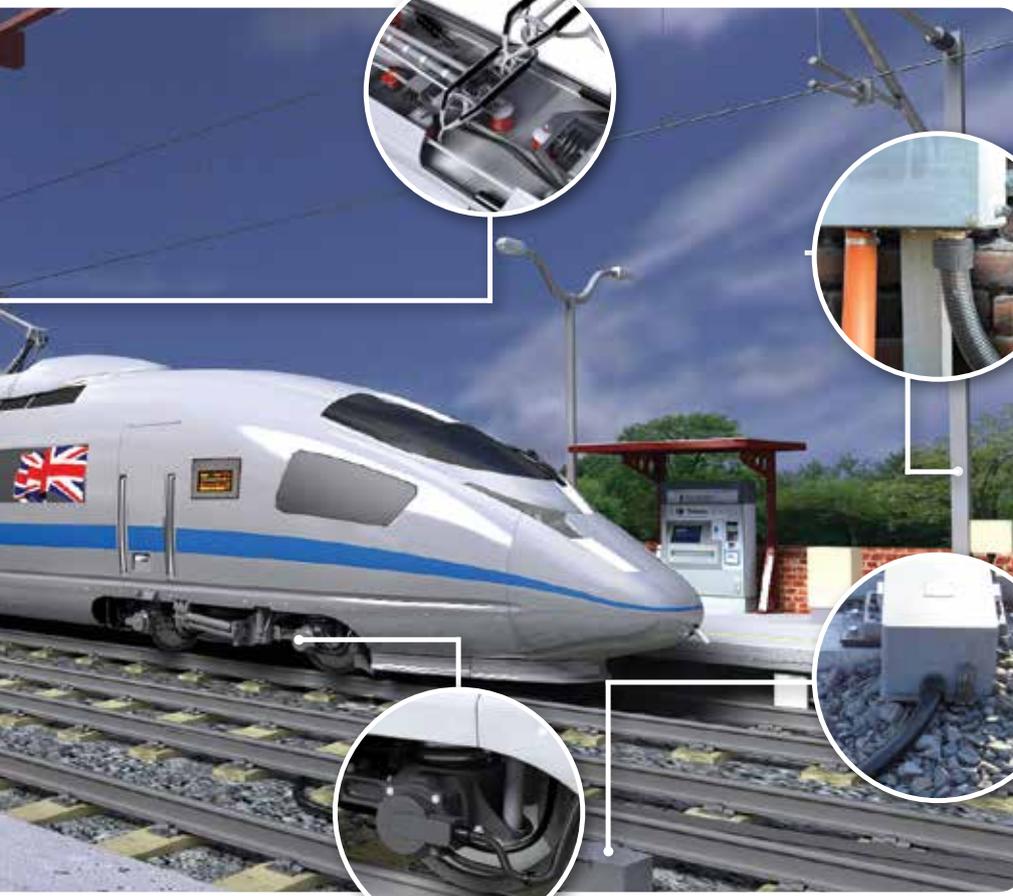
FPIH



Conduit Fixing

## Flexicon Offers...

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



FLEXICON  
VISIBLE SOLUTIONS



## Technical Services & Support

- 3D/2D CAD drawings in multiple formats
- Product data sheets
- Technical support and guidance on suitability
- Customised product development

## Trackside Area Requirements:

- Ballast impact and vibration protection
- Ingress protection - Possible exposure to submersion
- Resistance to oils and chemicals
- UV protection

- Temperature performance
- Corrosion protection



FPAH

## Metallic Conduits

|          |  |   |  |
|----------|--|---|--|
| LFHU     |  | <b>Construction:</b> Galvanised steel, helically wound, flexible steel conduit with Low Fire Hazard (LFH) coating. Colour black.              |  |
| LTPLFH   |  | <b>Construction:</b> Galvanised steel, helically wound, flexible conduit with smooth oil resistant Low Fire Hazard (LFH) cover. Colour black. |  |
| LFHUBRD  |  | <b>Construction:</b> Galvanised steel, helically wound, flexible conduit with extra LFH coating and stainless steel (316) overbraid.          |  |
| LTBRDLFH |  | <b>Construction:</b> Galvanised steel, helically wound, flexible conduit with smooth oil resistant Low Fire Hazard (LFH) cover. Colour black. |  |

# Hazardous Area Applications



In certain sectors of industry, flammable substances such as gases, vapours, mist or dust can escape during manufacture, processing, storage and transport thus potentially creating an explosive atmosphere. Our new range of high performance products have been designed for highly demanding applications and meet the latest relevant ATEX, IECEx and GOST requirements.

## Ideally suited for the following industries:

- Oil & Gas - Upstream, Midstream, Downstream Applications
- Chemical & Pharmaceutical
- Food & Beverage



## Industry Approvals



## Performance

Low Fire Hazard (LFH)



EMC Screening Performance



Anti-Static Performance



## Flammable Mixtures & Ignition Sources

Flammable gases when mixed with air can be explosive. Gases are categorised into 3 groups with Group A being the least explosive and Group C being the most explosive. Equipment is also classified from T1 to T6 according to maximum allowed temperature of the equipment to prevent ignition of the gas/air mixture it is designed to work in.

Certain fine dusts dispersed in air can also be explosive.

Ignition sources include: sparking due to static discharge, electrical arcs, lightning, hot engine exhaust, hot equipment and heat from chemical reactions.

Flexicon's EXD barrier glands range can be used in Zone 1 and Zone 2 areas where Group A, B or C gases are present. As the gland does not add to the temperature of the enclosure, it does not have a temperature classification and so can be used with all temperature classes. Flexicon's EXD barrier glands can also be used in Zone 21 and Zone 22 where explosive dust may be present.

Liquid tight conduit range

NEW

AS ANTI-STATIC

NEW

EXTRA LOW FIRE HAZARD \*\*

Conduit

LTP/LTPAS

LTPHC

LTPLFH

LTPUL



## Why Use Conduit Over Cable?

In summary, using a Flexicon conduit system with our EXD barrier glands or EXE fittings can provide the following benefits over cable:

-  Simplified termination and greater enclosure integrity
-  Reduced installation time - less terminations
-  Cable is mechanically protected
-  No need for specialist cables
-  Can provide EMC screening (braided versions)
-  No need for use of SWA cables
-  Flameproof integrity with EXD glands
-  Future proofing the installation - easier to upgrade
-  Increased safety and Dust ignition protection with EXE fittings

## Anti-Static Applications



Clause 7.4 of EN60079-0 refers to the avoidance of a build-up of electrostatic charge on Group I or Group II electrical equipment. Electrical equipment shall be so designed that under normal conditions of use, maintenance and cleaning, danger of ignition due to electrostatic charges shall be avoided. This requirement is satisfied by suitable selection of the material so that surface resistance complies with either

of the limits given below when measured in accordance with 26.13;  $10^9\Omega$  measured at  $(50 \pm 5)\%$  relative humidity; or  $10^{10}\Omega$  measured at  $(30 \pm 5)\%$  relative humidity.

**Flexicon have two ranges of anti-static performance coated liquid tight systems.**

## Hazardous Area Approvals - EXD now featuring Group 1 approvals

The following table provides further information and details on our ATEX, IECEx and GOST approvals for our straight EXD glands.

|          |  |                             |                           |  |
|----------|--|-----------------------------|---------------------------|--|
| Group I  | <b>ATEX APPROVAL to EN60079-0 2009</b>   | <b>Sira Certificate no:</b> | <b>Sira 10ATEX1172X</b>   |  |
|          | Ex d Flameproof                          | Ex d I Mb                   | EN 60079-1 2007           |  |
|          | Ex e Increased Safety                    | Ex e I Mb                   | EN 60079-7 2007           |  |
| Group II | <b>IECEx APPROVAL to IEC60079-0 2007</b> | <b>Sira Certificate no:</b> | <b>IECEx SIR 10.0094X</b> |  |
|          | Ex d Flameproof                          | Ex d I Mb                   | IEC 60079-1 2007          |  |
|          | Ex e Increased Safety                    | Ex e I Mb                   | IEC 60079-7 2006-7        |  |
| Group II | <b>ATEX APPROVAL to EN60079-0 2009</b>   | <b>Sira Certificate no:</b> | <b>Sira 10ATEX1172X</b>   |  |
|          | Ex d Flameproof                          | Ex d II C Gb                | EN 60079-1 2007           |  |
|          | Ex e Increased Safety                    | Ex e II C Gb                | EN 60079-7 2007           |  |
| Group II | <b>IECEx APPROVAL to IEC60079-0 2007</b> | <b>Sira Certificate no:</b> | <b>IECEx SIR 10.0094X</b> |  |
|          | Ex d Flameproof                          | Ex d II C Gb                | IEC 60079-1 2007          |  |
|          | Ex e Increased Safety                    | Ex e II C Gb                | IEC 60079-7 2006-7        |  |
|          | <b>GOST APPROVAL no.</b>                 | <b>POCC GB.HO06.B00207</b>  |                           |  |

See page 71 for information on EXE gland approvals

## EXD Barrier Glands



See Pg 68, 69 & 70

## EXE Fittings



See Pg 71

## EXD Accessories



See Pg 72 & 73



LTPPU/LTPPUAS      LTPSS      LTBRDP      LTBRDLFH      LTPBRD



With over 24 different non-metallic conduit systems to choose from we are sure to have a system to meet your application. Systems are available in a wide variety of sizes, ranging from 7mm up to 106mm, manufactured from a range of materials offering different properties.



#### KEY FEATURES

- Wide range of sizes
- Light weight
- Easy to cut
- High fatigue life
- Superior IP ratings - up to IP69
- Slit versions available
- Non corrosive
- Highly flexible

#### KEY BENEFITS

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

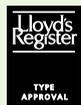




# non- metallic conduit & fittings



BS EN IEC 61386



# non-metallic conduit application guide

| Page number | conduit system  | IP rating available    | compression strength kg/100mm 21/20mm nominal size | pull-off strength kg 21/20mm nominal size | Colours            |
|-------------|---|------------------------|--|---|--------------------|
| 20          | <b>FPAS</b><br>nylon LFH PA6 corrugated, std weight   | IP66, IP67, IP68, IP69 | 75   | 40  | Black, Grey        |
| 20          | <b>FPAL</b><br>nylon PA6 corrugated, light weight   | IP66, IP67, IP68, IP69 | 60   | 30  | Black, Grey        |
| 20          | <b>FPAH</b><br>nylon LFH PA6 corrugated, heavy weight   | IP66, IP67, IP68, IP69 | 120  | 70  | Black              |
| 21          | <b>FPR</b><br>nylon extra LFH PA6 corrugated, std weight  | IP66, IP67, IP68, IP69 | 75   | 40  | Black              |
| 21          | <b>FPI</b><br>nylon PA12 corrugated, standard weight  | IP66, IP67, IP68, IP69 | 45   | 30  | Black              |
| 21          | <b>FPIH</b><br>nylon PA12 corrugated, heavy weight  | IP66, IP67, IP68, IP69 | 60   | 50  | Black              |
| 21          | <b>FPADS</b><br>nylon PA6 double slit corrugated  | IP40                   | 60   | 15  | Black              |
| 22          | <b>FPP</b><br>polypropylene corrugated, std weight  | IP40, IP66, IP67, IP68 | 35   | 25  | Black, Grey, White |
| 22          | <b>FPP-NFR</b><br>polypropylene corrugated non flame retarded <span style="background-color: #007bff; color: white; padding: 2px;">NEW</span> | IP40, IP66, IP67, IP68 | 35   | 25  | Black, Grey        |
| 22          | <b>FPPH</b><br>polypropylene corrugated heavy weight <span style="background-color: #007bff; color: white; padding: 2px;">NEW</span>          | IP40, IP66, IP67, IP68 | 100  | 40  | Black, Grey        |
| 40          | <b>FPL</b><br>upvc corrugated   | IP40, IP66, IP67       | 150  | 30  | Black, Grey, White |
| 42          | <b>FPY</b><br>nylon PA6 corrugated  | IP40, IP67             | 60   | 25  | Black              |
| 42          | <b>FPYS</b><br>slit nylon PA6 corrugated  | N/A                    | N/A  | N/A                                       | Black              |
| 42          | <b>FPYL</b><br>nylon PA6 corrugated, light weight   | IP40, IP67             | 45   | 15  | Black              |
| 42          | <b>FPYLS</b><br>slit nylon PA6 corrugated, light weight   | N/A                    | N/A  | N/A                                       | Black              |
| 44          | <b>FPY</b><br>nylon PA6, large diameter   | IP40, IP65             | N/A  | N/A                                       | Black, Grey        |
| 46          | <b>FPCB</b><br>pvc spiral reinforced black  | IP65                   | 60   | 25  | Black              |
| 46          | <b>FPCG</b><br>pvc spiral reinforced grey   | IP65                   | 60   | 25  | Light Grey         |
| 46          | <b>FPCGN</b><br>pvc spiral reinforced green oil resistant   | IP65                   | 60   | 25  | Green              |
| 46          | <b>FPCBU</b><br>pvc spiral reinforced blue high temperature   | IP65                   | 60   | 25  | Blue               |
| 48          | <b>LPC</b><br>smooth, pvc spiral reinforced   | IP66, IP67, IP68, IP69 | 120  | 70  | Black, Light Grey  |
| 48          | <b>LPCO</b><br>smooth pvc spiral orange ultra flexible  | IP66, IP67, IP68, IP69 | 120  | 45  | Orange             |
| 48          | <b>LPCGN</b><br>smooth pvc spiral green oil resistant   | IP66, IP67, IP68, IP69 | 120  | 60  | Green              |
| 48          | <b>LPCBU</b><br>smooth pvc spiral blue high temperature   | IP66, IP67, IP68, IP69 | 120  | 60  | Blue               |

For Nylon / FPP ranges: Grey RAL 7031

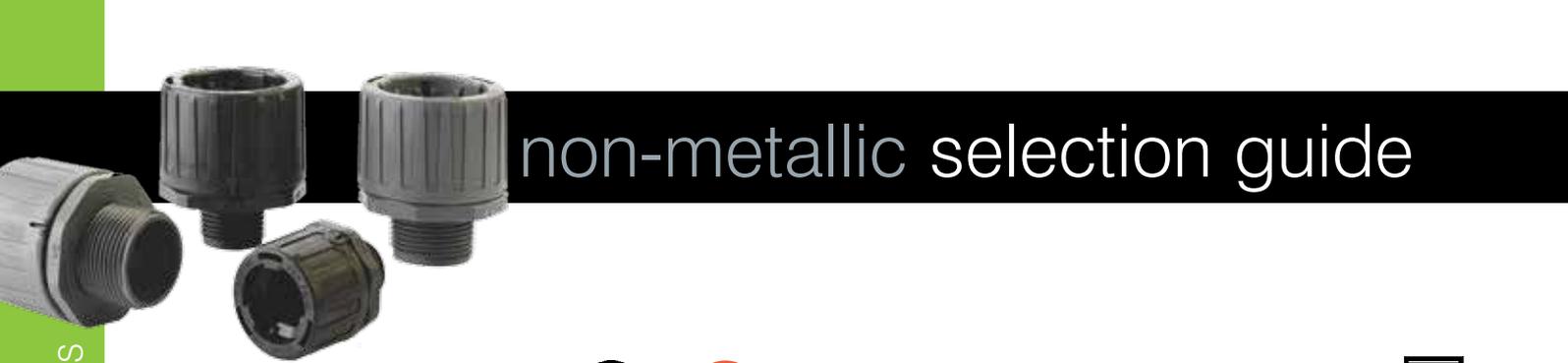
For FPC and LPC ranges: Light Grey RAL 7001, Blue RAL 5012 Green RAL 6001, Orange RAL 2008



# non-metallic conduit and fittings

| high fatigue life | temperature range | flexible | pliable | low fire hazard | halogen free | self extinguishing | high abrasion resistance | high UV outdoor use |   |
|-------------------|-------------------|----------|---------|-----------------|--------------|--------------------|--------------------------|---------------------|---|
| ●                 | -40°C to +120°C   | ●        |         | ●               | ●            | ●                  | ●                        | ●                   | <b>FPAS</b><br>nylon LFH PA6 corrugated, std weight           |
| ●                 | -40°C to +120°C   | ●        |         |                 | ●            | ●                  |                          |                     | <b>FPAL</b><br>nylon PA6 corrugated, light weight             |
|                   | -40°C to +120°C   | ●        |         | ●               | ●            | ●                  | ●                        | ●                   | <b>FPAH</b><br>nylon LFH PA6 corrugated, heavy weight         |
|                   | -40°C to +120°C   | ●        |         | ●               | ●            | ●                  | ●                        | ●                   | <b>FPR</b><br>nylon extra LFH PA6 corrugated, std weight      |
| ●                 | -50°C to +110°C   | ●        |         | ●               | ●            | ●                  |                          | ●                   | <b>FPI</b><br>nylon PA12 corrugated, standard weight          |
| ●                 | -50°C to +110°C   | ●        |         | ●               | ●            | ●                  |                          | ●                   | <b>FPIH</b><br>nylon PA12 corrugated, heavy weight            |
|                   | -40°C to +120°C   |          | ●       |                 | ●            | ●                  | ●                        | ●                   | <b>FPADS</b><br>nylon PA6 double slit corrugated              |
|                   | -20°C to +90°C    | ●        |         |                 |              | ●                  |                          |                     | <b>FPP</b><br>polypropylene corrugated, std weight            |
|                   | -20°C to +90°C    | ●        |         |                 | ●            |                    |                          |                     | <b>FPP-NFR</b><br>polypropylene corrugated non flame retarded |
|                   | -20°C to +90°C    | ●        |         |                 |              | ●                  |                          |                     | <b>FPPH</b><br>polypropylene corrugated heavy weight          |
|                   | -5°C to +70°C     |          | ●       |                 |              | ●                  |                          | ●                   | <b>FPL</b><br>upvc corrugated                                 |
| ●                 | -40°C to +120°C   | ●        |         |                 | ●            | ●                  |                          |                     | <b>FPY</b><br>nylon PA6 corrugated                            |
|                   | -40°C to +120°C   | ●        |         |                 | ●            | ●                  |                          |                     | <b>FPYS</b><br>slit nylon PA6 corrugated                      |
|                   | -40°C to +120°C   | ●        |         |                 | ●            |                    |                          |                     | <b>FPYL</b><br>nylon PA6 corrugated, light weight             |
|                   | -40°C to +120°C   | ●        |         |                 | ●            |                    |                          |                     | <b>FPYLS</b><br>slit nylon PA6 corrugated, light weight       |
|                   | -40°C to +120°C   | ●        |         |                 | ●            | ●                  |                          | ●                   | <b>FPY</b><br>nylon PA6, large diameter                       |
|                   | -5°C to +70°C     | ●        |         |                 |              | ●                  |                          | ●                   | <b>FPCB</b><br>pvc spiral reinforced black                    |
|                   | -20°C to +70°C    | ●        |         |                 |              | ●                  |                          |                     | <b>FPCG</b><br>pvc spiral reinforced grey                     |
|                   | -20°C to +70°C    | ●        |         |                 |              | ●                  |                          |                     | <b>FPCGN</b><br>pvc spiral reinforced green oil resistant     |
|                   | -20°C to +90°C    | ●        |         |                 |              | ●                  |                          |                     | <b>FPCBU</b><br>pvc spiral reinforced blue high temperature   |
|                   | -5°C to +70°C     | ●        |         |                 |              | ●                  |                          | ●                   | <b>LPC</b><br>smooth, pvc spiral reinforced                   |
|                   | -20°C to +70°C    | ●        |         |                 |              | ●                  |                          |                     | <b>LPCO</b><br>smooth pvc spiral orange ultra flexible        |
|                   | -20°C to +70°C    | ●        |         |                 |              | ●                  |                          |                     | <b>LPCGN</b><br>smooth pvc spiral green oil resistant         |
|                   | -20°C to +90°C    | ●        |         |                 |              | ●                  |                          |                     | <b>LPCBU</b><br>smooth pvc spiral blue high temperature       |





# non-metallic selection guide



- UK manufactured products to the highest standards
- Highest IP performance as standard
- Highest tensile strength performance fittings - FPA and FPAX due to all round teeth design
- Simple construction for ease of installation - Fixed and Swivel versions
- Multiple thread variations available - Metric, PG, NPT, UNEF, external threads, internal threads, integral strain relief versions
- Tested and approved to the latest National and International Standards
- Vibration tested for secure installations
- Widest choice whatever your application

| FLEXILOK™ Fittings  | Compression Fittings  | Flange   |
|---|---|--|
| <p data-bbox="399 1523 446 1556">IP66</p> <p data-bbox="303 1579 542 1601">See Pg 38, 39, 40 &amp; 41</p> | <p data-bbox="981 1523 1029 1556">IP40</p> <p data-bbox="1037 1523 1085 1556">IP67</p> <p data-bbox="909 1579 1149 1601">See Pg 43, 46, 47 &amp; 49</p> | <p data-bbox="1396 1523 1444 1556">IP40</p> <p data-bbox="1452 1523 1500 1556">IP65</p> <p data-bbox="1388 1579 1500 1601">See Pg 44</p> |

| Accessories   | Stopping Plugs | Clips/Clamp |
|---|----------------|-------------|
| <p data-bbox="710 2150 981 2172">See Pg 22, 45, 86, 87 &amp; 88</p> |                |             |



IP66

# FPA

Straight Fittings - 10mm to 67mm



IP66

See Pg 24 & 27

90° Elbow - 10mm to 67mm



IP66

See Pg 24, 25, 27 & 28

45° Elbow - 16mm To 54mm



IP66

See Pg 25, 26 & 28

Coupler    Coupler - Flexible to Rigid Conduit    T-Pieces    Reducer    Reducing Divider



IP66

See Pg 26

See Pg 36

Fittings with Integral Strain Relief



IP66

See Pg 29

IP66

IP67

IP68

IP69

# FPAX

Straight Fittings - 13mm to 54mm



IP66

IP67

IP68

IP69

See Pg 30 & 33

90° Elbow - 13mm to 54mm



IP66

IP67

IP68

IP69

See Pg 31, 33 & 34

45° Elbow - 16mm To 54mm



IP66

IP67

IP68

IP69

See Pg 32 & 34

T-Pieces    Reducer    Reducing Divider



IP66

IP67

IP68

IP69

See Pg 37

Fittings with Integral Strain Relief



IP66

IP67

IP68

IP69

See Pg 35

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

## non-metallic conduit and fittings

### FPAS

**Construction:** Standard weight, flame retardant nylon (PA6) corrugated flexible conduit. Colour black or grey (RAL 7031). Orange available on request.\*

**Typical Applications:** All types of machinery, public buildings.

- Highly flexible and high fatigue life
- High impact strength and recovers if crushed
- Temperature range -40°C to +120°C (-20°C to +100°C for moving applications)
- Lloyd's Register Type Approval
- UL listed / UL recognised
- Low Fire Hazard (LFH), see page 102
- UL 94 V2 flame retardancy
- Halogen, sulphur and phosphorus free
- UV resistant (black)
- Abrasion resistant
- Highly resistant to solvents and oils
- Slit version also available FPAS-S please contact us

### FPAL

**Construction:** Light weight nylon (PA6) corrugated flexible conduit. Colour black or grey (RAL 7031).

**Typical Applications:** Machines where lower mechanical protection is required and buildings.

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

### FPAH

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

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

- High mechanical strength
- High impact resistance
- Temperature range -40°C to +120°C
- UL recognised
- Low Fire Hazard (LFH), see page 102
- UL 94 V2 flame retardancy
- Halogen, sulphur and phosphorus free
- UV resistant
- Abrasion resistant
- Highly resistant to solvents and oils

| european (NW) sizes | nominal size (mm) | pitch | FPAS        |                 |                  |                 | FPAL                        |             |                 |                  | FPAH            |                             |             |                 |                  |                 |                             |  |
|---------------------|-------------------|-------|-------------|-----------------|------------------|-----------------|-----------------------------|-------------|-----------------|------------------|-----------------|-----------------------------|-------------|-----------------|------------------|-----------------|-----------------------------|--|
|                     |                   |       | 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) |  |
| 7                   | 10                | F     | FPAS10      | 50              | 10.0             | 6.3             | 15                          | FPAL10      | 50              | 10.0             | 6.5             | 15                          |             |                 |                  |                 |                             |  |
| 8                   | 11                | F     | FPAS11      | 50              | 11.5             | 8.2             | 20                          | FPAL11      | 50              | 11.5             | 8.4             | 20                          |             |                 |                  |                 |                             |  |
| 10                  | 13                | F     | FPAS13      | 25, 50          | 13.0             | 9.8             | 25                          | FPAL13      | 50              | 13.0             | 10.0            | 25                          | FPAH13      | 50              | 13.0             | 9.0             | 35                          |  |
| 12                  | 16                | F     | FPAS16      | 25, 50          | 15.8             | 11.8            | 35                          | FPAL16      | 50              | 15.8             | 12.0            | 35                          | FPAH16      | 50              | 15.8             | 11.5            | 45                          |  |
| 14                  | 18                | F     | FPAS18      | 50              | 18.5             | 14.2            | 40                          | FPAL18      | 50              | 18.5             | 14.2            | 35                          |             |                 |                  |                 |                             |  |
|                     | 20                | C     | FPAS20      | 10, 25, 50      | 20.0             | 14.8            | 45                          | FPAL20      | 50              | 20.0             | 15.0            | 40                          |             |                 |                  |                 |                             |  |
| 17                  | 21                | F     | FPAS21      | 10, 25, 50      | 21.2             | 16.7            | 45                          | FPAL21      | 50              | 21.2             | 16.9            | 40                          |             |                 |                  |                 |                             |  |
|                     | 21                | C     |             |                 |                  |                 |                             |             |                 |                  |                 |                             | FPAH21      | 50              | 21.2             | 15.5            | 55                          |  |
|                     | 25                | C     | FPAS25      | 10, 25, 50      | 25.0             | 19.1            | 50                          | FPAL25      | 50              | 25.0             | 19.3            | 45                          |             |                 |                  |                 |                             |  |
| 23                  | 28                | F     | FPAS28      | 10, 25, 50      | 28.5             | 22.8            | 50                          | FPAL28      | 50              | 28.5             | 23.0            | 45                          |             |                 |                  |                 |                             |  |
|                     | 28                | C     | FPAS28C*    | 50              | 28.5             | 21.6            | 50                          |             |                 |                  |                 |                             | FPAH28      | 50              | 28.5             | 21.3            | 60                          |  |
| 29                  | 34                | C     | FPAS34      | 25, 50          | 34.5             | 28.1            | 60                          | FPAL34      | 25, 50          | 34.5             | 28.3            | 55                          | FPAH34      | 25              | 34.5             | 27.6            | 70                          |  |
| 29                  | 34                | F     | FPAS34F     | 50              | 34.5             | 28.8            | 60                          |             |                 |                  |                 |                             |             |                 |                  |                 |                             |  |
| 36                  | 42                | C     | FPAS42      | 10, 25, 50      | 42.5             | 35.5            | 70                          | FPAL42      | 25              | 42.5             | 35.7            | 65                          | FPAH42      | 25              | 42.5             | 34.6            | 80                          |  |
| 48                  | 54                | C     | FPAS54      | 10, 25, 50      | 54.5             | 47.2            | 80                          | FPAL54      | 25              | 54.5             | 47.4            | 80                          | FPAH54      | 25              | 54.5             | 46.0            | 90                          |  |
| 56                  | 67                | C     | FPAS67      | 10              | 67.2             | 56.3            | 130                         | FPAL67      | 10              | 67.2             | 56.5            | 110                         |             |                 |                  |                 |                             |  |

F = fine pitch C = coarse pitch

NOTE: Other reel lengths are available upon request

### Ordering Notes

- Specify black or grey (B = Black, G = Grey) and reel length eg: FPAS21B-50M for a Black 50m reel
- Some reel lengths are MTO in grey
- See cutting tool page 89

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

- **Available on request:**
  - longer lengths and bulk packaging
  - cut lengths and assemblies
  - other colours
  - full copies of independent test results confirming LFH properties

- conduit with pre-installed draw wire
- fine pitch 34mm sizes
- Contractor Packs available see page 90 & 91





## FPP

**Construction:** Standard weight polypropylene, flexible conduit. Colour black, grey (RAL 7031) or white (see page 41)

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

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

**Other options available:**

## FPP-NFR

LSOH conduit for data cabling applications.

## FPPH

Heavy weight conduit for buried underground applications.

## FCL

**nylon corrugated conduit clip with integral lid**

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

## FCLAMP

**non-metallic, heavy duty conduit clamp**

Nylon PA66, conduit fixing clamp for corrugated conduit. Suitable for use with fine or coarse pitch conduits. Can be used with a range of accessories including cover plates and weld plates (available separately - see page 45).

## EC

**end cap**

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

## REC

**rubber end cap**

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



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

F = fine pitch C = coarse pitch

FCLAMP- 8-80 for use with 80mm conduit

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

## Ordering Notes

- Specify colour (B = Black, G = Grey) and reel length eg: FPY16B-50M for a Black 50m reel
- Some lengths are MTO in grey
- **Available on request:**
  - longer lengths and bulk packaging
  - cut lengths and assemblies
  - additional sizes
  - other colours
- conduit with pre-installed draw wire
- FPADS in Polypropylene (PP)



# non-metallic conduit and fittings

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

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

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



Using this fold out page will illustrate the wide range of non-metallic corrugated conduits we offer. There are nine different non-metallic conduit families listed in this spread and these are detailed across Pages 20 - 22.

## Ordering Notes

Once you have chosen your conduit from our wide range of products listed on Pages 20, 21 and 22, simply use this fold out page as a guide to see which fittings correspond with your selected conduit.

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

| european (NW) sizes | pitch | nominal size (mm) | FPAS        |             | FPAL        |             | FPAH        |             | FPR         |             | FPADS       |             | FPI         |             | FPIH        |  | FPP   |  |
|---------------------|-------|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--|-------|--|
|                     |       |                   | part number |  |       |  |
| 7                   | F     | 10                | FPAS10      | FPAL10      |             |             |             | FPR10       |             |             |             |             |             |             |             |  |       |  |
| 7                   | F     | 10                |             |             |             |             |             |             |             |             |             |             |             |             |             |  |       |  |
| 8                   | F     | 11                | FPAS11      | FPAL11      |             |             |             |             |             | FPADS11     |             |             |             |             |             |  |       |  |
| 10                  | F     | 13                | FPAS13      | FPAL13      | FPAH13      |             | FPR13       |             | FPADS13     | FPI13       | FPIH13      | FPP13       |             |             |             |  |       |  |
| 10                  | F     | 13                |             |             |             |             |             |             |             |             |             |             |             |             |             |  |       |  |
| 10                  | F     | 13                |             |             |             |             |             |             |             |             |             |             |             |             |             |  |       |  |
| 12                  | F     | 16                | FPAS16      | FPAL16      | FPAH16      |             | FPR16       |             | FPADS16     | FPI16       | FPIH16      | FPP16       |             |             |             |  |       |  |
| 12                  | F     | 16                |             |             |             |             |             |             |             |             |             |             |             |             |             |  |       |  |
| 12                  | F     | 16                |             |             |             |             |             |             |             |             |             |             |             |             |             |  |       |  |
| 12                  | F     | 16                |             |             |             |             |             |             |             |             |             |             |             |             |             |  |       |  |
| 14                  | F     | 18                | FPAS18      | FPAL18      |             |             |             |             |             |             |             |             |             |             |             |  |       |  |
| 14                  | C     | 18                |             |             |             |             |             |             |             |             |             |             |             |             |             |  |       |  |
|                     | C     | 20                | FPAS20      |             |             |             | FPR20       |             |             |             |             |             |             |             |             |  | FPP20 |  |
| 17                  | F     | 21                | FPAS21      | FPAL21      |             |             | FPR21       |             | FPADS21     | FPI21       | FPIH21      | FPP21       |             |             |             |  |       |  |
|                     | C     | 21                |             |             | FPAH21      |             |             |             |             |             |             |             |             |             |             |  |       |  |
|                     | C     | 21                |             |             |             |             |             |             |             |             |             |             |             |             |             |  |       |  |
|                     | C     | 25                | FPAS25      | FPAL25      |             |             | FPR25       |             |             |             |             | FPP25       |             |             |             |  |       |  |
| 23                  | F     | 28                | FPAS28      | FPAL28      |             |             | FPR28       |             | FPADS28     | FPI28       | FPIH28      | FPP28       |             |             |             |  |       |  |
|                     | C     | 28                | FPAS28C     |             | FPAH28      |             |             |             |             |             |             |             |             |             |             |  |       |  |
| 29                  | C     | 34                | FPAS34      | FPAL34      | FPAH34      |             | FPR34       |             | FPADS34     | FPI34       | FPIH34      | FPP34       |             |             |             |  |       |  |
| 29                  | F     | 34                | FPAS34F     |             |             |             |             |             |             |             |             |             |             |             |             |  |       |  |
| 36                  | C     | 42                | FPAS42      | FPAL42      | FPAH42      |             | FPR42       |             | FPADS42     | FPI42       | FPIH42      | FPP42       |             |             |             |  |       |  |
| 36                  | C     | 42                |             |             |             |             |             |             |             |             |             |             |             |             |             |  |       |  |
| 48                  | C     | 54                | FPAS54      | FPAL54      | FPAH54      |             | FPR54       |             | FPADS54     | FPI54       | FPIH54      | FPP54       |             |             |             |  |       |  |
| 48                  | C     | 54                |             |             |             |             |             |             |             |             |             |             |             |             |             |  |       |  |
| 56                  | C     | 67                | FPAS67      | FPAL67      |             |             |             |             |             | FPI67       |             | FPP67       |             |             |             |  |       |  |

## Standards



IEC EN 61386



# FPA system nylon

**Construction:** Nylon (PA66) moulded fitting.



IP66



## Fittings

### FPA

#### straight external thread

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

IP66



### FPA

#### straight UNEF swivel internal thread

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

IP66



### FPA

#### flange

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

IP66



### FPA90

#### 90° elbow external thread

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

IP66



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

|            | Ext Metric | Ext PG     | Ext NPT   | Ext UNEF    | Thread   | Ext Flange | 90 Degree Metric | 90 Degree PG  | 90 Degree NPT |
|------------|------------|------------|-----------|-------------|----------|------------|------------------|---------------|---------------|
| 7 10 10.0  | FPA10-M12  | FPA10-PG7  |           |             |          |            | FPA10-M12-90     | FPA10-PG7-90  |               |
| 7 10       | FPA10-M16  | FPA10-PG9  |           |             |          |            |                  |               |               |
| 8 11 11.5  | FPA11-M12  | FPA11-PG7  |           |             |          |            | FPA11-M12-90     |               |               |
| 10 13 13.0 | FPA13-M12  | FPA13-PG7  |           | FPA13-BU075 | (3/4")   |            | FPA13-M16-90     | FPA13-PG9-90  |               |
| 10 13      | FPA13-M16  | FPA13-PG9  |           |             |          |            |                  |               |               |
| 10 13      | FPA13-M20  | FPA13-PG11 |           |             |          |            |                  |               |               |
| 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-BU100 | (1")     |            | FPA16-M16-90     | FPA16-PG11-90 |               |
| 12 16      |            | FPA16-PG13 |           | FPA16-BU119 | (1 1/8") |            |                  | FPA16-PG13-90 |               |
| 12 16      |            | FPA16-PG16 |           |             |          |            |                  |               |               |
| 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  |
| 21         |            | FPA21-PG16 |           | FPA21-BU119 | (1 1/8") |            |                  |               |               |
| 21         |            |            |           | FPA21-BU138 | (1 3/8") |            |                  |               |               |
| 25 25.0    | FPA25-M25  |            |           |             |          |            | FPA25-M25-90     |               |               |
| 23 28 28.5 | FPA28-M25  | FPA28-PG21 | FPA28-075 | FPA28-BU138 | (1 3/8") | FPA28-FL   | FPA28-M25-90     | FPA28-PG21-90 | FPA28-075-90  |
| 28         | FPA28-M32  | FPA28-PG29 |           | FPA28-BU144 | (1 7/8") |            |                  |               |               |
| 29 34 34.5 | FPA34-M32  | FPA34-PG29 | FPA34-100 | FPA34-BU144 | (1 7/8") | FPA34-FL   | FPA34-M32-90     | FPA34-PG29-90 | FPA34-100-90  |
| 29 34      | FPA34-M40  |            |           | FPA34-BU175 | (1 3/4") |            |                  |               |               |
| 36 42 42.5 | FPA42-M40  | FPA42-PG36 | FPA42-125 | FPA42-BU200 | (2")     | FPA42-FL   | FPA42-M40-90     | FPA42-PG36-90 | FPA42-125-90  |
| 36 42      | FPA42-M50  |            | FPA42-150 | FPA42-BU225 | (2 1/4") |            | FPA42-M50-90     |               | FPA42-150-90  |
| 48 54 54.5 | FPA54-M50  | FPA54-PG42 | FPA54-150 | FPA54-BU200 | (2")     |            | FPA54-M50-90     | FPA54-PG48-90 | FPA54-150-90  |
| 48 54      | FPA54-M63  | FPA54-PG48 | FPA54-200 | FPA54-BU225 | (2 1/4") |            | FPA54-M63-90     |               | FPA54-200-90  |
| 56 67 67.0 | FPA67-M63  | FPA67-PG48 | FPA67-200 |             |          |            | FPA67-M63-90     | FPA67-PG48-90 | FPA67-200-90  |

## Ordering Notes

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

• The IP rating onto a UNEF threaded connector may be dependent on the design of the connector

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

• **Available on request:**

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

# properties

- 1 part fast fit
- IP rating: IP66
- Vibration and shock tested to EN61373 Cat 2
- Tamper resistant
- All round teeth give high pull off strength 70kg with FPAH21

- Can be removed using a screwdriver
- 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 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 102
- Halogen, sulphur and phosphorus free
- Available in black or grey (RAL 7031)

| FPA90  |   | FPA90   |   | FPA45   |   |                | FPA45  |    | nominal size (mm) | OD mm |
|--|---|---|---|---|---|----------------|--|----|-------------------|-------|
| 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   |    |                   |       |
|  |   |   |   |   |   |                |  | 10 | 10.0              |       |
|  |   |   |   |   |   |                |  | 10 |                   |       |
|  |   |   |   |   |   |                |  | 11 | 11.5              |       |
| FPA13-BU075-90   | (3/4")  |   |   |   |   |                |  | 13 | 13.0              |       |
|  |   |   |   |   |   |                |  | 13 |                   |       |
|  |   |   |   |   |   |                |  | 13 |                   |       |
| FPA16-BU075-90   | (3/4")  | FPA16-FL-90   | FPA16-M20-45  | FPA16-PG13-45   | FPA16-050-45  | FPA16-BU100-45 | (1")   | 16 | 15.8              |       |
| FPA16-BU100-90   | (1")  |   |   |   |   | FPA16-BU119-45 | (1 1/16")  | 16 |                   |       |
| FPA16-BU119-90   | (1 1/16")   |   |   |   |   |                |  | 16 |                   |       |
|  |   |   |   |   |   |                |  | 16 |                   |       |
|  |   |   |   |   |   |                |  | 18 | 18.5              |       |
|  |   |   |   |   |   |                |  | 18 |                   |       |
|  |   |   |   |   |   |                |  | 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              |       |
| FPA21-BU119-90   | (1 1/16")   |   |   | FPA21-PG16-45   |   | FPA21-BU119-45 | (1 1/16")  | 21 |                   |       |
| FPA21-BU138-90   | (1 3/8")  |   |   |   |   | FPA21-BU138-45 | (1 3/8")   | 21 |                   |       |
|  |   |   |   |   |   |                |  | 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              |       |
| FPA28-BU144-90   | (1 7/16")   |   |   |   |   | FPA28-BU144-45 | (1 7/16")  | 28 |                   |       |
| 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              |       |
| FPA34-BU175-90   | (1 3/4")  |   |   |   |   | FPA34-BU175-45 | (1 3/4")   | 34 |                   |       |
| FPA42-BU200-90   | (2")  | FPA42-FL-90   | FPA42-M50-45  | FPA42-PG36-45   | FPA42-150-45  | FPA42-BU200-45 | (2")   | 42 | 42.5              |       |
| FPA42-BU225-90   | (2 1/4")  |   |   |   |   | FPA42-BU225-45 | (2 1/4")   | 42 |                   |       |
| FPA54-BU200-90   | (2")  | FPA54-FL-90*  | FPA54-M50-45  |   | FPA54-150-45  | FPA54-BU200-45 | (2")   | 54 | 54.5              |       |
| FPA54-BU225-90   | (2 1/4")  |   |   |   |   | FPA54-BU225-45 | (2 1/4")   | 54 |                   |       |
|  |   |   |   |   |   |                |  | 67 | 67.0              |       |

## Standards



BS EN IEC 61386





# properties

- 1 part fast fit
- IP rating: IP66
- 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
- Low Fire Hazard (LFH), see page 102
- Halogen, sulphur and phosphorus free
- Available in black or grey (RAL 7031)



## FPA

### straight swivel brass external thread

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

IP66



NPB Ext Metric

NPB Ext PG

## FPA

### straight swivel brass internal thread

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

IP66



NPB Int Metric

NPB Int PG

## FPA90

### 90° elbow swivel brass external thread

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

IP66



NPB Ext Metric

NPB Ext PG

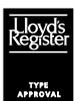
nominal size (mm)

OD mm

European (NW) sizes

| FPA        |                            | FPA         |               | FPA90         |                                  | nominal size (mm) | OD mm | European (NW) sizes |
|------------|----------------------------|-------------|---------------|---------------|----------------------------------|-------------------|-------|---------------------|
| FPA13-BM16 | FPA13-BPG9                 | FPA13-BFM16 | FPA13-BFPG9*  | 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-BFPG11* | FPA16-BM16-90 | FPA16-BPG9-90                    | 16                | 15.8  | 12                  |
| FPA16-BM20 | FPA16-BPG11                | FPA16-BFM20 | FPA16-BFPG16* | 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<br>FPA21-BPG16 | FPA21-BFM20 | FPA21-BFPG16* | FPA21-BM20-90 | FPA21-BPG13-90<br>FPA21-BPG16-90 | 21                | 21.2  | 17                  |
|            |                            |             |               |               |                                  | 21                |       | 17                  |
|            |                            |             |               |               |                                  | 21                |       | 17                  |
|            |                            |             |               |               |                                  | 25                | 25.0  |                     |
| FPA28-BM25 | FPA28-BPG21                | FPA28-BFM25 | FPA28-BFPG21* | FPA28-BM25-90 | FPA28-BPG21-90                   | 28                | 28.5  | 23                  |
|            |                            |             |               |               |                                  | 28                |       | 23                  |
| FPA34-BM32 | FPA34-BPG29                | FPA34-BFM32 | FPA34-BFPG29* | FPA34-BM32-90 | FPA34-BPG29-90                   | 34                | 34.5  | 29                  |
|            |                            |             |               |               |                                  | 34                |       | 29                  |
| FPA42-BM40 | FPA42-BPG36                | FPA42-BFM40 | FPA42-BFPG36* | FPA42-BM40-90 | FPA42-BPG36-90                   | 42                | 42.5  | 36                  |
| FPA42-BM50 |                            |             |               | FPA42-BM50-90 |                                  | 42                |       | 36                  |
| FPA54-BM50 | FPA54-BPG48*               | FPA54-BFM50 |               | FPA54-BM50-90 | FPA54-BPG48-90*                  | 54                | 54.5  | 48                  |
| FPA54-BM63 |                            |             |               | FPA54-BM63-90 |                                  | 54                |       | 48                  |
| FPA67-BM63 |                            |             |               |               |                                  | 67                | 67.0  | 56                  |

## Standards



BS EN IEC 61386





# FPA system brass threaded

**Construction:** Nylon (PA66) moulded fitting with nickel plated brass swivel thread. Colour black or grey.



## Fittings

### FPA90

**90° elbow swivel brass internal thread**

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



NPB Int Metric

NPB Int PG

### FPA45

**45° elbow swivel brass external thread**

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



NPB Ext Metric

NPB Ext PG

### FPA45

**45° elbow swivel brass internal thread**

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



NPB Int Metric

NPB Int PG

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 | FPA13-BFPG9-90*  |               |                |                |                  |  |
| 10 | 13 |      |                |                  |               |                |                |                  |  |
| 10 | 13 |      |                |                  |               |                |                |                  |  |
| 12 | 16 | 15.8 | FPA16-BFM16-90 | FPA16-BFPG11-90* | FPA16-BM16-45 | FPA16-BPG13-45 | FPA16-BFM20-45 | FPA16-BFPG16-45* |  |
| 12 | 16 |      | FPA16-BFM20-90 | FPA16-BFPG16-90* | FPA16-BM20-45 | FPA16-BPG16-45 |                |                  |  |
| 12 | 16 |      |                |                  |               |                |                |                  |  |
| 12 | 16 |      |                |                  |               |                |                |                  |  |
| 14 | 18 | 18.5 |                |                  |               |                |                |                  |  |
| 14 | 18 |      |                |                  |               |                |                |                  |  |
|    | 20 | 20.0 |                |                  |               |                |                |                  |  |
| 17 | 21 | 21.2 | FPA21-BFM20-90 | FPA21-BFPG16-90* | FPA21-BM20-45 | FPA21-BPG13-45 | FPA21-BFM20-45 | FPA21-BFPG16-45* |  |
| 17 | 21 |      |                |                  |               | FPA21-BPG16-45 |                |                  |  |
| 17 | 21 |      |                |                  |               |                |                |                  |  |
|    | 25 | 25.0 |                |                  |               |                |                |                  |  |
| 23 | 28 | 28.5 | FPA28-BFM25-90 | FPA28-BFPG21-90* | FPA28-BM25-45 | FPA28-BPG21-45 | FPA28-BFM25-45 | FPA28-BFPG21-45* |  |
| 23 | 28 |      |                |                  |               |                |                |                  |  |
| 29 | 34 | 34.5 | FPA34-BFM32-90 | FPA34-BFPG29-90* | FPA34-BM32-45 | FPA34-BPG29-45 | FPA34-BFM32-45 | FPA34-BFPG29-45* |  |
| 29 | 34 |      |                |                  |               |                |                |                  |  |
| 36 | 42 | 42.5 | FPA42-BFM50-90 | FPA42-BFPG36-90* | FPA42-BM40-45 | FPA42-BPG36-45 | FPA42-BFM50-45 | FPA42-BFPG36-45* |  |
| 36 | 42 |      |                |                  | FPA42-BM50-45 |                |                |                  |  |
| 48 | 54 | 54.5 | FPA54-BFM50-90 |                  | FPA54-BM50-45 | FPA54-BPG48-45 | FPA54-BFM50-45 |                  |  |
| 48 | 54 |      |                |                  | FPA54-BM63-45 |                |                |                  |  |
| 56 | 67 | 67.0 |                |                  |               |                |                |                  |  |

## Ordering Notes

\* Indicates parts made to order on request

• NPB = Nickel Plated Brass

• Available on request:

- colour grey, other threads
- for brass locknuts and sealing washers see accessories, page 86
- EMC braid clamp version, see page 85

# properties

- 1 part fast fit
- IP rating: of conduit & fitting: IP66  
of cable gland: IP68 (10 bar) + IP69
- 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: 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 102
- Halogen, sulphur and phosphorus free
- Refer to accessories for clamping range page 87



## FPA NEW

### cable gland

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

IP66



NPB Metric

NPB PG

## FPA90 NEW

### cable gland

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

IP66



NPB Metric

## FPA45 NEW

### cable gland

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

IP66



NPB Metric

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

|                |                 |                   |                   |    |      |    |
|----------------|-----------------|-------------------|-------------------|----|------|----|
|                |                 |                   |                   | 10 | 10.0 | 7  |
|                |                 |                   |                   | 10 |      | 7  |
|                |                 |                   |                   | 11 | 11.5 | 8  |
| FPA13-BM16-CG  |                 | FPA13-BM16-CG-90  |                   | 13 | 13.0 | 10 |
|                |                 |                   |                   | 13 |      | 10 |
|                |                 |                   |                   | 13 |      | 10 |
| FPA16-BM16-CG  | FPA16-BPG11-CG* | FPA16-BM16-CG-90  | FPA16-BM20-CG-45  | 16 | 15.8 | 12 |
| FPA16-BM20-CG  | FPA16-BPG16-CG* | FPA16-BM20-CG-90  |                   | 16 |      | 12 |
|                |                 |                   |                   | 16 |      | 12 |
|                |                 |                   |                   | 16 |      | 12 |
|                |                 |                   |                   | 18 | 18.5 | 14 |
|                |                 |                   |                   | 18 |      | 14 |
|                |                 |                   |                   | 20 | 20.0 |    |
| FPA21-BM20-CG  | FPA21-BPG16-CG* | FPA21-BM20-CG-90  | FPA21-BM20-CG-45  | 21 | 21.2 | 17 |
|                |                 |                   |                   | 21 |      | 17 |
|                |                 |                   |                   | 21 |      | 17 |
|                |                 |                   |                   | 25 | 25.0 |    |
| FPA28-BM25-CG  | FPA28-BPG21-CG* | FPA28-BM25-CG-90  | FPA28-BM25-CG-45  | 28 | 28.5 | 23 |
|                |                 |                   |                   | 28 |      | 23 |
| FPA34-BM32-CG  | FPA34-BPG29-CG* | FPA34-BM32-CG-90  | FPA34-BM32-CG-45  | 34 | 34.5 | 29 |
|                |                 |                   |                   | 34 |      | 29 |
| FPA42-BM40-CG  | FPA42-BPG36-CG* | FPA42-BM40-CG-90  | FPA42-BM40-CG-45  | 42 | 42.5 | 36 |
|                |                 |                   |                   | 42 |      | 36 |
| FPA54-BM50-CG* |                 | FPA54-BM50-CG-90* | FPA54-BM50-CG-45* | 54 | 54.5 | 48 |
|                |                 |                   |                   | 54 |      | 48 |
|                |                 |                   |                   | 67 | 67.0 | 56 |

## Standards



BS EN IEC 61386





# FPAX system nylon

**Construction:** Nylon (PA66) moulded fitting incorporating internal elastomeric seal. Colour black or grey on request\*.



## Fittings

### FPAX

#### straight external thread

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



Ext Metric      Ext PG      Ext NPT

### FPAX

#### straight UNEF swivel internal thread

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



Int UNEF      Thread

### FPAX

#### flange

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



Flange

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

| 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-BU075 | (3/4")    | FPAX16-FL |
| 12                  | 16                |       | FPAX16-M20 | FPAX16-PG11 | FPAX16-050 | FPAX16-BU100 | (1")      |           |
| 12                  | 16                |       |            | FPAX16-PG13 |            | FPAX16-BU119 | (1 3/16") |           |
| 12                  | 16                |       |            | FPAX16-PG16 |            |              |           |           |
| 14                  | 18                | 18.5  |            |             |            |              |           |           |
| 14                  | 18                |       |            |             |            |              |           |           |
|                     | 20                | 20.0  |            |             |            |              |           |           |
| 17                  | 21                | 21.2  | FPAX21-M20 | FPAX21-PG13 | FPAX21-050 | FPAX21-BU100 | (1")      | FPAX21-FL |
| 17                  | 21                |       |            | FPAX21-PG16 |            | FPAX21-BU119 | (1 3/16") |           |
| 17                  | 21                |       |            |             |            | FPAX21-BU138 | (1 3/8")  |           |
|                     | 25                | 25.0  |            |             |            |              |           |           |
| 23                  | 28                | 28.5  | FPAX28-M25 | FPAX28-PG21 | FPAX28-075 | FPAX28-BU138 | (1 3/8")  | FPAX28-FL |
| 23                  | 28                |       | FPAX28-M32 | FPAX28-PG29 |            | FPAX28-BU144 | (1 7/16") |           |
| 29                  | 34                | 34.5  | FPAX34-M32 | FPAX34-PG29 | FPAX34-100 | FPAX34-BU144 | (1 7/16") | FPAX34-FL |
| 29                  | 34                |       | FPAX34-M40 |             |            |              |           |           |
| 36                  | 42                | 42.5  | FPAX42-M40 | FPAX42-PG36 | FPAX42-125 | FPAX42-BU200 | (2")      | FPAX42-FL |
| 36                  | 42                |       | FPAX42-M50 |             | FPAX42-150 | FPAX42-BU225 | (2 1/4")  |           |
| 48                  | 54                | 54.5  | FPAX54-M50 | FPAX54-PG42 | FPAX54-150 | FPAX54-BU200 | (2")      |           |
| 48                  | 54                |       | FPAX54-M63 | FPAX54-PG48 | FPAX54-200 | FPAX54-BU225 | (2 1/4")  |           |
| 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 86
- EMC braid clamp version, see page 85

# properties

- Fast fit
- Supplied with additional conduit seal and retained face seal
- Face seal details:
  - Nylon and Brass external threads supplied with Polyester elastomer washer
  - UNEF and Flange supplied with O-ring
- IP rating: IP66 + IP67 + IP68 (2 bar) + IP69
- 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 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 102
- Halogen, sulphur and phosphorus free



## FPAX90

### 90° elbow external thread

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

IP66 IP67 IP68 IP69



Ext Metric

Ext PG

Ext NPT

## FPAX90

### 90° elbow UNEF swivel internal thread

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

IP66 IP67 IP68 IP69



Int UNEF

Thread

## FPAX90

### flange

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

IP66 IP67 IP68 IP69



Flange

nominal size (mm)

OD mm

European (NWX) 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 |  | 16 | 15.8 | 12 |
| FPAX16-M20-90 |  | FPAX16-PG11-90 |  |               |  | FPAX16-BU100-90 |  | 16 |      | 12 |
|               |  | FPAX16-PG13-90 |  |               |  | FPAX16-BU119-90 |  | 16 |      | 12 |
|               |  |                |  |               |  |                 |  | 16 |      | 12 |
|               |  |                |  |               |  |                 |  | 16 |      | 12 |
|               |  |                |  |               |  |                 |  | 18 | 18.5 | 14 |
|               |  |                |  |               |  |                 |  | 18 |      | 14 |
|               |  |                |  |               |  |                 |  | 20 | 20.0 |    |
| FPAX21-M20-90 |  | FPAX21-PG13-90 |  | FPAX21-050-90 |  | FPAX21-BU100-90 |  | 21 | 21.2 | 17 |
|               |  | FPAX21-PG16-90 |  |               |  | FPAX21-BU119-90 |  | 21 |      | 17 |
|               |  |                |  |               |  | FPAX21-BU138-90 |  | 21 |      | 17 |
|               |  |                |  |               |  |                 |  | 25 | 25.0 |    |
| FPAX28-M25-90 |  | FPAX28-PG21-90 |  | FPAX28-075-90 |  | FPAX28-BU138-90 |  | 28 | 28.5 | 23 |
|               |  |                |  |               |  | FPAX28-BU144-90 |  | 28 |      | 23 |
|               |  |                |  |               |  | FPAX34-BU144-90 |  | 28 |      | 23 |
| FPAX34-M32-90 |  | FPAX34-PG29-90 |  | FPAX34-100-90 |  |                 |  | 34 | 34.5 | 29 |
|               |  |                |  |               |  |                 |  | 34 |      | 29 |
|               |  |                |  |               |  |                 |  | 34 |      | 29 |
| FPAX42-M40-90 |  | FPAX42-PG36-90 |  | FPAX42-125-90 |  | FPAX42-BU200-90 |  | 42 | 42.5 | 36 |
| FPAX42-M50-90 |  |                |  | FPAX42-150-90 |  | FPAX42-BU225-90 |  | 42 |      | 36 |
| FPAX54-M50-90 |  | FPAX54-PG48-90 |  | FPAX54-150-90 |  | FPAX54-BU200-90 |  | 54 | 54.5 | 48 |
| FPAX54-M63-90 |  |                |  | FPAX54-200-90 |  | FPAX54-BU225-90 |  | 54 |      | 48 |
|               |  |                |  |               |  |                 |  | 67 | 67.0 | 56 |

## Standards



BS EN IEC 61386





# 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, 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. |  |  |
|                     |                   |       |   |                |               |  |          |              |  |  |  |
|                     |                   |       |   |                |               |  |          |              |  |  |  |
| European (NW) sizes | nominal size (mm) | OD mm | Ext Metric  | Ext PG         | Ext NPT       | Int UNEF   | Thread   | Flange       |  |  |  |
| 7                   | 10                | 10.0  |   |                |               |  |          |              |  |  |  |
| 7                   | 10                |       |   |                |               |  |          |              |  |  |  |
| 8                   | 11                | 11.5  |   |                |               |  |          |              |  |  |  |
| 10                  | 13                | 13.0  |   |                |               |  |          |              |  |  |  |
| 10                  | 13                |       |   |                |               |  |          |              |  |  |  |
| 10                  | 13                |       |   |                |               |  |          |              |  |  |  |
| 12                  | 16                | 15.8  | FPAX16-M20-45   | FPAX16-PG13-45 | FPAX16-050-45 | FPAX16-BU100-45  | (1")     | FPAX16-FL-45 |  |  |  |
| 12                  | 16                |       |   |                |               | FPAX16-BU119-45  | (1 1/8") |              |  |  |  |
| 12                  | 16                |       |   |                |               |  |          |              |  |  |  |
| 12                  | 16                |       |   |                |               |  |          |              |  |  |  |
| 14                  | 18                | 18.5  |   |                |               |  |          |              |  |  |  |
| 14                  | 18                |       |   |                |               |  |          |              |  |  |  |
|                     | 20                | 20.0  |   |                |               |  |          |              |  |  |  |
| 17                  | 21                | 21.2  | FPAX21-M20-45   | FPAX21-PG13-45 | FPAX21-050-45 | FPAX21-BU100-45  | (1")     | FPAX21-FL-45 |  |  |  |
| 17                  | 21                |       |   | FPAX21-PG16-45 |               | FPAX21-BU119-45  | (1 1/8") |              |  |  |  |
| 17                  | 21                |       |   |                |               | FPAX21-BU138-45  | (1 3/8") |              |  |  |  |
|                     | 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 7/8") |              |  |  |  |
| 29                  | 34                | 34.5  | FPAX34-M32-45   | FPAX34-PG29-45 | FPAX34-100-45 | FPAX34-BU144-45  | (1 7/8") | 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:
  - colour grey, other threads
  - for brass locknuts and sealing washers see accessories, page 86
  - EMC braid clamp version, see page 85

# properties

- Fast fit
- Supplied with additional conduit seal and retained face seal
- Face seal details:
  - Nylon and Brass external threads supplied with Polyester elastomer washer
  - UNEF and Flange supplied with O-ring
- IP rating: IP66 + IP67 + IP68 (2 bar) + IP69
- 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 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 102
- Halogen, sulphur and phosphorus free

## FPAX

### straight swivel brass external thread

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

IP66 IP67 IP68 IP69



NPB Ext Metric NPB Ext PG

## FPAX

### straight swivel brass internal thread

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

IP66 IP67 IP68 IP69



NPB Int Metric NPB Int PG

## FPAX90

### 90° elbow swivel brass external thread

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

IP66 IP67 IP68 IP69



NPB Ext Metric NPB Ext PG

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

| FPAX        |                              | FPAX         |                | FPAX90         |                                    | nominal size (mm) | OD mm | european (NW) sizes |
|-------------|------------------------------|--------------|----------------|----------------|------------------------------------|-------------------|-------|---------------------|
|             |                              |              |                |                |                                    | 10                | 10.0  | 7                   |
|             |                              |              |                |                |                                    | 10                |       | 7                   |
|             |                              |              |                |                |                                    | 11                | 11.5  | 8                   |
| FPAX13-BM16 | FPAX13-BPG9                  | FPAX13-BFM16 | FPAX13-BFPG9*  | FPAX13-BM16-90 | FPAX13-BPG9-90                     | 13                | 13.0  | 10                  |
|             |                              |              |                |                |                                    | 13                |       | 10                  |
|             |                              |              |                |                |                                    | 13                |       | 10                  |
| FPAX16-BM16 | FPAX16-BPG9                  | FPAX16-BFM16 | FPAX16-BFPG11* | FPAX16-BM16-90 | FPAX16-BPG9-90                     | 16                | 15.8  | 12                  |
| FPAX16-BM20 | FPAX16-BPG11                 | FPAX16-BFM20 | FPAX16-BFPG16* | FPAX16-BM20-90 | FPAX16-BPG11-90                    | 16                |       | 12                  |
|             |                              |              |                |                |                                    | 16                |       | 12                  |
|             |                              |              |                |                |                                    | 16                |       | 12                  |
|             |                              |              |                |                |                                    | 18                | 18.5  | 14                  |
|             |                              |              |                |                |                                    | 18                |       | 14                  |
|             |                              |              |                |                |                                    | 20                | 20.0  |                     |
| FPAX21-BM20 | FPAX21-BPG13<br>FPAX21-BPG16 | FPAX21-BFM20 | FPAX21-BFPG16* | FPAX21-BM20-90 | FPAX21-BPG13-90<br>FPAX21-BPG16-90 | 21                | 21.2  | 17                  |
|             |                              |              |                |                |                                    | 21                |       | 17                  |
|             |                              |              |                |                |                                    | 21                |       | 17                  |
|             |                              |              |                |                |                                    | 25                | 25.0  |                     |
| FPAX28-BM25 | FPAX28-BPG21                 | FPAX28-BFM25 | FPAX28-BFPG21* | FPAX28-BM25-90 | FPAX28-BPG21-90                    | 28                | 28.5  | 23                  |
|             |                              |              |                |                |                                    | 28                |       | 23                  |
| FPAX34-BM32 | FPAX34-BPG29                 | FPAX34-BFM32 | FPAX34-BFPG29* | FPAX34-BM32-90 | FPAX34-BPG29-90                    | 34                | 34.5  | 29                  |
|             |                              |              |                |                |                                    | 34                |       | 29                  |
| FPAX42-BM40 | FPAX42-BPG36                 | FPAX42-BFM40 | FPAX42-BFPG36* | FPAX42-BM40-90 | FPAX42-BPG36-90                    | 42                | 42.5  | 36                  |
| FPAX42-BM50 |                              |              |                | FPAX42-BM50-90 |                                    | 42                |       | 36                  |
| FPAX54-BM50 | FPAX54-BPG48*                | FPAX54-BFM50 |                | FPAX54-BM50-90 | FPAX54-BPG48-90*                   | 54                | 54.5  | 48                  |
| FPAX54-BM63 |                              |              |                | FPAX54-BM63-90 |                                    | 54                |       | 48                  |
|             |                              |              |                |                |                                    | 67                | 67.0  | 56                  |

## Standards



BS EN IEC 61386





# FPAX system brass threaded

**Construction:** Nylon (PA66) moulded fitting with swivel metal thread. External and internal metallic threads are made from nickel plated brass and incorporate an internal elastomeric seal. Colour black, grey on request\*.



## 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 Int PG        | NPB Ext Metric   | NPB Ext PG       | NPB Int Metric   | NPB Int PG        |
| 7                   | 10                | 10.0  |  |                   |  |                  |  |                   |
| 7                   | 10                |       |  |                   |  |                  |  |                   |
| 8                   | 11                | 11.5  |  |                   |  |                  |  |                   |
| 10                  | 13                | 13.0  | FPAX13-BFM16-90  | FPAX13-BFPG9-90*  |  |                  |  |                   |
| 10                  | 13                |       |  |                   |  |                  |  |                   |
| 10                  | 13                |       |  |                   |  |                  |  |                   |
| 12                  | 16                | 15.8  | FPAX16-BFM16-90  | FPAX16-BFPG11-90* | FPAX16-BM16-45   | FPAX16-BPG13-45  | FPAX16-BFM20-45  | FPAX16-BFPG16-45* |
| 12                  | 16                |       | FPAX16-BFM20-90  | FPAX16-BFPG16-90* | FPAX16-BM20-45   | FPAX16-BPG16-45  |  |                   |
| 12                  | 16                |       |  |                   |  |                  |  |                   |
| 12                  | 16                |       |  |                   |  |                  |  |                   |
| 14                  | 18                | 18.5  |  |                   |  |                  |  |                   |
| 14                  | 18                |       |  |                   |  |                  |  |                   |
|                     | 20                | 20.0  |  |                   |  |                  |  |                   |
| 17                  | 21                | 21.2  | FPAX21-BFM20-90  | FPAX21-BFPG16-90* | FPAX21-BM20-45   | FPAX21-BPG13-45  | FPAX21-BFM20-45  | FPAX21-BFPG16-45* |
| 17                  | 21                |       |  |                   |  | FPAX21-BPG16-45  |  |                   |
| 17                  | 21                |       |  |                   |  |                  |  |                   |
|                     | 25                | 25.0  |  |                   |  |                  |  |                   |
| 23                  | 28                | 28.5  | FPAX28-BFM25-90  | FPAX28-BFPG21-90* | FPAX28-BM25-45   | FPAX28-BPG21-45  | FPAX28-BFM25-45  | FPAX28-BFPG21-45* |
| 23                  | 28                |       |  |                   |  |                  |  |                   |
| 29                  | 34                | 34.5  | FPAX34-BFM32-90  | FPAX34-BFPG29-90* | FPAX34-BM32-45   | FPAX34-BPG29-45  | FPAX34-BFM32-45  | FPAX34-BFPG29-45* |
| 29                  | 34                |       |  |                   |  |                  |  |                   |
| 36                  | 42                | 42.5  | FPAX42-BFM50-90  | FPAX42-BFPG36-90* | FPAX42-BM40-45   | FPAX42-BPG36-45  | FPAX42-BFM50-45  | FPAX42-BFPG36-45* |
| 36                  | 42                |       |  |                   | FPAX42-BM50-45   |                  |  |                   |
| 48                  | 54                | 54.5  | FPAX54-BFM50-90  |                   | FPAX54-BM50-45   | FPAX54-BPG48-45* | FPAX54-BFM50-45  |                   |
| 48                  | 54                |       |  |                   | FPAX54-BM63-45   |                  |  |                   |
| 56                  | 67                | 67.0  |  |                   |  |                  |  |                   |

## Ordering Notes

- NPB = Nickel Plated Brass
  - Available on request:
    - colour grey, other threads
    - for brass locknuts and sealing washers see accessories, page 86
    - EMC braid clamp version, see page 85
- \* Indicates parts made to order on request

# properties

- Fast fit
- Supplied with additional conduit seal & retained face seal
- Face seal details:
  - Nylon and Brass external threads supplied with Polyester elastomer washer
  - UNEF and Flange supplied with O-ring
- IP rating: for conduit & fitting IP66 + IP67 + IP68 (2 bar) + IP69 + IP69 for cable gland: IP68 (10 bar)+IP69
- 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 102
- Halogen, sulphur and phosphorus free
- Refer to accessories for clamping range page 87

## FPAX

NEW

### cable gland

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

IP66 IP67 IP68 IP69



NPB Metric

NPB PG

## FPAX90

NEW

### cable gland

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

IP66 IP67  
IP68 IP69



NPB Metric

## FPAX45

NEW

### cable gland

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

IP66 IP67 IP68 IP69



NPB Metric

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

| FPAX            |                  | FPAX90             |  | FPAX45             |  | nominal size (mm) | OD mm | european (NW) sizes |
|-----------------|------------------|--------------------|--|--------------------|--|-------------------|-------|---------------------|
|                 |                  |                    |  |                    |  | 10                | 10.0  | 7                   |
|                 |                  |                    |  |                    |  | 10                |       | 7                   |
|                 |                  |                    |  |                    |  | 11                | 11.5  | 8                   |
| FPAX13-BM16-CG  |                  | FPAX13-BM16-CG-90  |  |                    |  | 13                | 13.0  | 10                  |
|                 |                  |                    |  |                    |  | 13                |       | 10                  |
|                 |                  |                    |  |                    |  | 13                |       | 10                  |
| FPAX16-BM16-CG  | FPAX16-BPG11-CG* | FPAX16-BM16-CG-90  |  | FPAX16-BM20-CG-45  |  | 16                | 15.8  | 12                  |
| FPAX16-BM20-CG  | FPAX16-BPG16-CG* | FPAX16-BM20-CG-90  |  |                    |  | 16                |       | 12                  |
|                 |                  |                    |  |                    |  | 16                |       | 12                  |
|                 |                  |                    |  |                    |  | 16                |       | 12                  |
|                 |                  |                    |  |                    |  | 18                | 18.5  | 14                  |
|                 |                  |                    |  |                    |  | 18                |       | 14                  |
|                 |                  |                    |  |                    |  | 20                | 20.0  |                     |
| FPAX21-BM20-CG  | FPAX21-BPG16-CG* | FPAX21-BM20-CG-90  |  | FPAX21-BM20-CG-45  |  | 21                | 21.2  | 17                  |
|                 |                  |                    |  |                    |  | 21                |       | 17                  |
|                 |                  |                    |  |                    |  | 21                |       | 17                  |
|                 |                  |                    |  |                    |  | 25                | 25.0  |                     |
| FPAX28-BM25-CG  | FPAX28-BPG21-CG* | FPAX28-BM25-CG-90  |  | FPAX28-BM25-CG-45  |  | 28                | 28.5  | 23                  |
|                 |                  |                    |  |                    |  | 28                |       | 23                  |
| FPAX34-BM32-CG  | FPAX34-BPG29-CG* | FPAX34-BM32-CG-90  |  | FPAX34-BM32-CG-45  |  | 34                | 34.5  | 29                  |
|                 |                  |                    |  |                    |  | 34                |       | 29                  |
| FPAX42-BM40-CG  | FPAX42-BPG36-CG* | FPAX42-BM40-CG-90  |  | FPAX42-BM40-CG-45  |  | 42                | 42.5  | 36                  |
|                 |                  |                    |  |                    |  | 42                |       | 36                  |
| FPAX54-BM50-CG* |                  | FPAX54-BM50-CG-90* |  | FPAX54-BM50-CG-45* |  | 54                | 54.5  | 48                  |
|                 |                  |                    |  |                    |  | 54                |       | 48                  |
|                 |                  |                    |  |                    |  | 67                | 67.0  | 56                  |

## Standards

## Technical Drawing



BS EN IEC 61386





# FPA & FPAX T Pieces and Dividers

NEW

**Construction:** Nylon (PA66) moulded fitting. FPA colour black or grey as standard. FPAX incorporate internal elastomeric seal(s). Colour black, grey on request.\*



## Fittings

### FPA

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

IP66



### FPA

NEW

**Reducing divider**  
Fast fit reducing divider

IP66



### Reducer/ Stop Plug

Fitting to reduce or blank off any outlets.

IP66



R



SP

European (NW) sizes  
Conduit In (mm)  
Conduit Out x 2 for divider

|    |    |    |        |             |   |
|----|----|----|--------|-------------|---|
| 12 | 16 | 13 | FPA16T | FPA16-13-13 | FPA13-R16<br>SP-R16   |
|    |    |    | FPA20T |             |   |
| 17 | 21 | 16 | FPA21T | FPA21-16-16 | FPA16-R21<br>FPA13-R21<br>SP-R21  |
| 23 | 28 | 21 | FPA28T | FPA28-21-21 | FPA25-R28<br>FPA21-R28<br>FPA20-R28<br>FPA16-R28<br>FPA13-R28<br>SP-R28 |
| 29 | 34 | 28 | FPA34T | FPA34-28-28 | FPA28-R34<br>FPA21-R34<br>FPA16-R34<br>SP-R34                           |
| 36 |    |    | FPA42T |             | FPA34-R42<br>FPA28-R42<br>FPA21-R42                                     |

## Ordering Notes

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

- Available on request:
- other colours

### How to read the fittings code

**FPAX21-R28**

Conduit Size ———  
T-piece or Reducer Size ———

# properties

- Fast fit
- IP rating: FPA IP66
  - FPAX IP66 + IP67 + IP68 (2 bar)
  - FPAX Divider IP66 + IP67 + IP68 (2 bar) +IP69
- Maintains all the benefits of FPA and FPAX fittings
- Vibration and shock tested to EN61373 Cat 2
- Tamper resistant
- All round teeth give high pull off strength
- Low Fire Hazard (LFH), see page 102
- 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



## FPAX

### T piece with inspection lid

Fast fit T piece with inspection lid and additional seals for enhanced IP rating.

IP66 IP67 IP68



European (NW) sizes  
Conduit In  
Conduit Out x 2 for divider

## FPAX

NEW

### Divider

Fast fit reducing divider with additional seals for enhanced IP ratings

IP66 IP67 IP68 IP69



## Reducer/ Stop Plug

Fitting to reduce or blank off any outlets.

IP66 IP67 IP68



|    |    |    |         |              |  |
|----|----|----|---------|--------------|--|
| 12 | 16 | 13 | FPAX16T | FPAX16-13-13 | FPAX13-R16                             |
| 17 | 21 | 16 | FPAX21T | FPAX21-16-16 | FPAX16-R21<br>SP-R21                   |
| 23 | 28 | 21 | FPAX28T | FPAX28-21-21 | FPAX21-R28<br>FPAX16-R28<br>SP-R28     |
| 29 | 34 | 28 | FPAX34T | FPAX34-28-28 | FPAX28-R34<br>FPAX21-R34<br>FPAX16-R34 |
| 36 |    |    | FPAX42T |              | FPAX34-R42<br>FPAX28-R42<br>FPAX21-R42 |

## Standards



BS EN IEC 61386





# Flexilok® system

**Construction:** Nylon (PA66) moulded fitting.

- One piece fast fit
- Slim design
- IP rating: IP66
- Anti-vibration and tamper resistant
- Pull off strength with:
  - (FLK21 - FPAS21 25kg)
  - (FLK21 - FPAL21 20kg)
- Can be removed using a screwdriver
- Suitable for fine and coarse pitch conduits
- Temperature range -40°C to +120°C
- **Metric threads supplied complete with locknuts**
- Low Fire Hazard (LFH), see page 102
- Halogen, sulphur and phosphorus free
- Available in black, grey (RAL 7031) and white, see page 41
- 42mm and 54mm feature 4 teeth for added strength



IP66

## Fittings

|                     |                   |       | FLK   | FLK            | FLK-FLK        |
|---------------------|-------------------|-------|---|----------------|----------------|
|                     |                   |       | NEW   | NEW            |                |
|                     |                   |       | <b>straight external thread</b>   | <b>Push in</b> | <b>coupler</b> |
|                     |                   |       | <p>Nylon, one piece, slim, fast fit, external threaded fitting suitable for knockouts or threaded entries.</p> <p>Simple, one piece, push in fitting suitable for knockouts with no need for locknuts. Ideal for use when enclosure access is restricted.</p> <p>One piece, slim, fast fit coupler for joining 2 conduits together.</p> |                |                |
|                     |                   |       | IP66  |                |                |
|                     |                   |       |   |                |                |
| European (NW) sizes | nominal size (mm) | OD mm | Ext Metric  | Ext PG         | Coupler        |
| 7                   | 10                | 10.0  | FLK10-M12   | FLK10-PG7      |                |
| 7                   | 10                |       |   |                |                |
| 8                   | 11                | 11.5  |   |                |                |
| 10                  | 13                | 13.0  | FLK13-M16   | FLK13-PG9      |                |
| 10                  | 13                |       |   |                |                |
| 10                  | 13                |       |   |                |                |
| 12                  | 16                | 15.8  | FLK16-M16   | FLK16-PG11     | FLK16-PL20     |
| 12                  | 16                |       | FLK16-M20   | FLK16-PG13     | FLK16-FLK16    |
| 12                  | 16                |       |   |                |                |
| 12                  | 16                |       |   |                |                |
| 14                  | 18                | 18.5  |   |                |                |
| 14                  | 18                |       |   |                |                |
|                     | 20                | 20.0  | FLK20-M20   |                | FLK20-PL20     |
| 17                  | 21                | 21.2  | FLK21-M20   | FLK21-PG16     | FLK21-PL20     |
| 17                  | 21                |       |   |                | FLK20-FLK20    |
| 17                  | 21                |       |   |                | FLK21-FLK21    |
| 17                  | 21                |       |   |                |                |
|                     | 25                | 25.0  | FLK25-M25   |                | FLK25-PL25     |
| 23                  | 28                | 28.5  | FLK28-M25   | FLK28-PG21     | FLK28-PL25     |
| 23                  | 28                |       |   |                | FLK25-FLK25    |
| 23                  | 28                |       |   |                | FLK28-FLK28    |
| 29                  | 34                | 34.5  | FLK34-M32   | FLK34-PG29     | FLK34-PL32     |
| 29                  | 34                |       |   |                | FLK34-FLK34    |
| 36                  | 42                | 42.5  | FLK42-M40   | FLK42-PG36     |                |
| 36                  | 42                |       | FLK42-M50   |                |                |
| 48                  | 54                | 54.5  | FLK54-M50   | FLK54-PG48     |                |
| 48                  | 54                |       | FLK54-M63   |                |                |
| 56                  | 67                | 67.0  |   |                |                |

### Ordering Notes

- Specify black or grey (B=Black, G=Grey) eg. FLK20-M20B
- For white version see page 69
- Details for removal tools can be found on page 89

### Also Available

- Push in fitting removal tool - see accessories page 89
- Brass threaded versions
- Two teeth version of 42mm and 54mm available on request

### Removal Tool



NOTE: 42mm and 54mm require a removal tool to aid removal if necessary see page 89.

# properties

- One piece fast fit
- Slim design
- IP rating: IP66
- Anti-vibration and tamper resistant
- Pull off strength with:
  - (FLK21 - FPAS21 25kg)
  - (FLK21 - FPAL21 20kg)
  - (FLK20-PP - FPP20 13kg)
- Can be removed using a screwdriver
- Suitable for fine and coarse pitch conduits
- Temperature range -40°C to +120°C
- **Metric threads supplied complete with locknuts**
- Halogen, sulphur and phosphorus free
- Available in black, grey (RAL 7031) and white, see page 41



## FLK90

### 90° elbow external thread

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

IP66



Ext Metric

Ext PG

## FLK45

NEW

### 45° elbow external thread

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

IP66



Ext Metric

## FLK-PP

### straight external thread

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

IP66



Ext Metric (PP)

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

| FLK90        |               | FLK45        |  | FLK-PP       |  | nominal size (mm) | OD mm | european (NW) sizes |
|--------------|---------------|--------------|--|--------------|--|-------------------|-------|---------------------|
|              |               |              |  |              |  | 10                | 10.0  | 7                   |
|              |               |              |  |              |  | 10                | 7     | 7                   |
|              |               |              |  |              |  | 11                | 11.5  | 8                   |
|              |               |              |  |              |  | 13                | 13.0  | 10                  |
|              |               |              |  |              |  | 13                |       | 10                  |
|              |               |              |  |              |  | 13                |       | 10                  |
| FLK16-M16-90 | FLK16-PG11-90 | FLK16-M16-45 |  | FLK16-M16-PP |  | 16                | 15.8  | 12                  |
| FLK16-M20-90 |               | FLK16-M20-45 |  |              |  | 16                |       | 12                  |
|              |               |              |  |              |  | 16                |       | 12                  |
|              |               |              |  |              |  | 16                |       | 12                  |
|              |               |              |  |              |  | 18                | 18.5  | 14                  |
|              |               |              |  |              |  | 18                |       | 14                  |
| FLK20-M20-90 |               | FLK20-M20-45 |  | FLK20-M20-PP |  | 20                | 20.0  |                     |
| FLK21-M20-90 | FLK21-PG16-90 | FLK21-M20-45 |  |              |  | 21                | 21.2  | 17                  |
|              |               |              |  |              |  | 21                |       | 17                  |
|              |               |              |  |              |  | 21                |       | 17                  |
| FLK25-M25-90 |               | FLK25-M25-45 |  | FLK25-M25-PP |  | 25                | 25.0  |                     |
| FLK28-M25-90 | FLK28-PG21-90 | FLK28-M25-45 |  |              |  | 28                | 28.5  | 23                  |
|              |               |              |  |              |  | 28                |       | 23                  |
| FLK34-M32-90 | FLK34-PG29-90 | FLK34-M32-45 |  | FLK34-M32-PP |  | 34                | 34.5  | 29                  |
|              |               |              |  |              |  | 34                |       | 29                  |
|              |               |              |  |              |  | 42                | 42.5  | 36                  |
|              |               |              |  |              |  | 42                |       | 36                  |
|              |               |              |  |              |  | 54                | 54.5  | 48                  |
|              |               |              |  |              |  | 54                |       | 48                  |
|              |               |              |  |              |  | 67                | 67.0  | 56                  |

## Standards





# FPL system

## upvc corrugated pliable conduit

IP40

IP66

IP67

### Conduit

### Fittings

#### FPL

**Construction:** Standard weight, upvc, corrugated pliable conduit. Colour black, grey (RAL 7045) or white. (see page 41 in certain sizes.)

**Typical Applications:** Static connections in buildings.

- High compression strength
- Bends to a small radius
- IP rating:
  - IP40 with MP and T fittings
  - IP66 with FLK fittings
  - IP67 with MPS fittings
- Temperature range
  - 5°C to +70°C
- Self extinguishing
- UV resistant (black)
- Tensile strength:
  - FLK20 25kg
  - MP20 20kg
  - MPS20 15kg

#### FLK

**straight external thread**

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

IP66

#### FLK90

**90° elbow external thread**

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

IP66

#### MP

**straight external thread**

Straight nylon compression fitting external thread including locknut.

IP40

#### MPS

**straight external thread**

Straight nylon compression fitting with seal external thread including locknut.

IP67



MP shown

| nominal size (mm) | FPL part number | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) |
|-------------------|-----------------|-----------------|------------------|-----------------|-----------------------------|
| 16                | FPL16           | 100             | 16.0             | 12.0            | 25                          |
| 20                | FPL20           | 50, 100         | 20.0             | 15.0            | 30                          |
| 25                | FPL25           | 50              | 25.0             | 19.5            | 40                          |
| 34                | FPL34           | 25              | 34.5             | 27.9            | 50                          |

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

\* Push in fittings available on page 38

### Ordering Notes

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

### Don't Forget



See page 45

### Standards

BS EN IEC 61386



# White Products

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



NEW

## Conduit

## Fittings

### FPP

For details see page 22

IP66

### FPL

For details see page 40

IP66

| nominal size (mm) | OD mm | FPP<br>50m coil |             | FPL<br>50m & 100m coil |     |
|-------------------|-------|-----------------|-------------|------------------------|-----|
|                   |       | FPP             | FPL         | FPL                    | FPL |
| 20                | 20.0  | FPP20W-50M      | FPL20W-100M |                        |     |
| 25                | 25.0  | FPP25W-50M      | FPL25W-50M  |                        |     |
| 34                | 34.5  | FPP34W-50M      |             |                        |     |

### FLK

#### straight external thread

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

IP66

### FLK-90

#### 90° elbow external thread

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

IP66

### FLK-FLK

#### 90° elbow external thread

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

IP66

### FCL

#### nylon corrugated conduit clip with integral lid

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

### FCL-P

#### nylon plain conduit clip with integral lid

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



| Ext Metric | Ext Metric    |              |        |          |
|------------|---------------|--------------|--------|----------|
| FLK20-M20W | FLK20-M20-90W | FLK20-FLK20W | FCL20W | FCL20W-P |
| FLK25-M25W | FLK25-M25-90W | FLK25-FLK25W | FCL25W | FCL25W-P |
| FLK34-M32W |               |              |        |          |

## PVC - Contractor pack

white

NEW

|           |            |
|-----------|------------|
| FPL-CP20W | M20 thread |
| FPL-CP25W | M25 thread |



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

## Cable Glands

white

IP68



| Thread No. | White Part No. | Thread Length (mm) | Cable Dia (min) (mm) | Cable Dia (max) (mm) | Spanner Size (mm) | Pack Quantity |
|------------|----------------|--------------------|----------------------|----------------------|-------------------|---------------|
| M16        | CGM16W         | 11                 | 5                    | 10                   | 22                | 100           |
| M20        | CGM20SW        | 11                 | 6                    | 12                   | 24                | 100           |
| M20        | CGM20W         | 11                 | 10                   | 14                   | 27                | 100           |
| M25        | CGM25W         | 11                 | 13                   | 18                   | 33                | 50            |

supplied with locknut  
For other colours see page 87

## Standards





# FPY, FPYS, FPYL, FPYLS system

## corrugated flexible conduit properties

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

### Conduit

| FPY   | FPYS  | FPYL   | FPYLS   |
|---|---|--|---|
| <p><b>Construction:</b> Nylon (PA6) corrugated flexible conduit. Colour black.</p> <p><b>Typical Applications:</b> Automotive</p> | <p><b>Construction:</b> Slit nylon (PA6) corrugated flexible conduit. Colour black.</p> <p><b>Typical Applications:</b> Automotive looms, harnesses and retrofit.</p> | <p><b>Construction:</b> Nylon (PA6) corrugated flexible conduit. Colour black.</p> <p><b>Typical Applications:</b> Lightweight automotive.</p> | <p><b>Construction:</b> Slit, light weight nylon (PA6) corrugated flexible conduit. Colour black.</p> <p><b>Typical Applications:</b> Lightweight automotive looms, harnesses and retrofit.</p> |

| european (NW) sizes | nominal size (mm) | pitch | FPY         |                 |                  |                 | FPYS                         |             |                 |                  | FPYL            |                              |             |                 | FPYLS            |                 |                              |             |                 |                  |                 |                              |
|---------------------|-------------------|-------|-------------|-----------------|------------------|-----------------|------------------------------|-------------|-----------------|------------------|-----------------|------------------------------|-------------|-----------------|------------------|-----------------|------------------------------|-------------|-----------------|------------------|-----------------|------------------------------|
|                     |                   |       | 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) |
| 7                   | 7                 | F     | FPY6B       | 100             | 7.1              | 4.8             | 10                           | FPY6B       | 100             | 7.1              | 4.8             | 10                           | FPY6B*      | 100             | 7.1              | 4.8             | 10                           | FPY6B*      | 100             | 7.1              | 4.8             | 10                           |
| 7                   | 10                | F     | FPY8B       | 50              | 10.0             | 6.5             | 15                           | FPY8B       | 50              | 10.0             | 6.5             | 15                           | FPY8B*      | 50              | 10.0             | 6.5             | 15                           | FPY8B*      | 50              | 10.0             | 6.5             | 15                           |
| 8                   | 11                | F     | FPY10B      | 50              | 11.5             | 8.5             | 20                           | FPY10B      | 50              | 11.5             | 8.5             | 20                           | FPY10B*     | 50              | 11.5             | 8.5             | 20                           | FPY10B*     | 50              | 11.5             | 8.5             | 20                           |
| 10                  | 13                | F     | FPY12B      | 50              | 13.0             | 10.0            | 25                           | FPY12B      | 50              | 13.0             | 10.0            | 25                           | FPY12B*     | 50              | 13.0             | 10.0            | 25                           | FPY12B*     | 50              | 13.0             | 10.0            | 25                           |
| 12                  | 16                | F     | FPY16B      | 50              | 16.1             | 12.8            | 35                           | FPY16B      | 50              | 16.1             | 12.8            | 35                           | FPY16B*     | 50              | 16.1             | 12.8            | 35                           | FPY16B*     | 50              | 16.1             | 12.8            | 35                           |
| 12                  | 16                | F     |             |                 |                  |                 |                              |             |                 |                  |                 |                              |             |                 |                  |                 |                              |             |                 |                  |                 |                              |
| 14                  | 18                | F     | FPY18B      | 50              | 18.5             | 14.2            | 35                           | FPY18B      | 50              | 18.5             | 14.2            | 35                           | FPY18B*     | 50              | 18.5             | 14.2            | 35                           | FPY18B*     | 50              | 18.5             | 14.2            | 35                           |
| 17                  | 21                | F     | FPY20B      | 50              | 21.2             | 16.9            | 40                           | FPY20B      | 50              | 21.2             | 16.9            | 40                           | FPY20B*     | 50              | 21.2             | 16.9            | 40                           | FPY20B*     | 50              | 21.2             | 16.9            | 40                           |
| 22                  | 25.4              | F     | FPY25B      | 50              | 25.4             | 21.4            | 45                           | FPY25B      | 50              | 25.4             | 21.4            | 45                           | FPY25B*     | 50              | 25.4             | 21.4            | 45                           | FPY25B*     | 50              | 25.4             | 21.4            | 45                           |
| 23                  | 28                | F     | FPY28B      | 50              | 28.5             | 23.0            | 45                           | FPY28B      | 50              | 28.5             | 23.0            | 45                           | FPY28B*     | 50              | 28.5             | 23.0            | 45                           | FPY28B*     | 50              | 28.5             | 23.0            | 45                           |
| 29                  | 34                | C     | FPY32B      | 25              | 34.5             | 28.3            | 55                           | FPY32B      | 25              | 34.5             | 28.3            | 55                           | FPY32B*     | 25              | 34.5             | 28.3            | 55                           | FPY32B*     | 25              | 34.5             | 28.3            | 55                           |
| 36                  | 42                | C     | FPY40B      | 25              | 42.5             | 35.7            | 65                           | FPY40B      | 25              | 42.5             | 35.7            | 65                           | FPY40B*     | 25              | 42.5             | 35.7            | 65                           | FPY40B*     | 25              | 42.5             | 35.7            | 65                           |
| 48                  | 54                | C     | FPY50B      | 25              | 54.5             | 47.4            | 80                           | FPY50B      | 25              | 54.5             | 47.4            | 80                           | FPY50B*     | 25              | 54.5             | 47.4            | 80                           | FPY50B*     | 25              | 54.5             | 47.4            | 80                           |

F = fine pitch C = coarse pitch

### Ordering Notes

- Metric threads supplied complete with locknuts
  - Available on request:
    - reduced outlet T pieces
    - other colours
    - PG threads
- \* FPYL & FPYLS are made to order on request and maybe subject to MOQ and lead times.



# MP, MP90 & T system

IP40

IP67

**Construction:** Nylon compression fittings. Colour - black.

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

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



## Fittings

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



MP shown



MP shown



IP40  
T shown

Ext Metric

Ext Metric

Ext Metric

Ext Metric

T Piece

T Piece

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

|           |            |             |              |           |            | 7  | 10 | 10.0 |
|-----------|------------|-------------|--------------|-----------|------------|----|----|------|
|           |            |             |              |           |            | 8  | 11 | 11.5 |
| MP-12-M16 | MPS-12-M16 |             |              | T12X12X12 | TS12X12X12 | 10 | 13 | 13.0 |
| MP-16-M16 | MPS-16-M16 | MP90-16-M16 | MPS90-16-M16 | T16X16X16 | TS16X16X16 | 12 | 16 | 15.8 |
| MP-16-M20 | MPS-16-M20 | MP90-16-M20 | MPS90-16-M20 |           |            | 12 | 16 |      |
|           |            |             |              |           |            | 14 | 18 | 18.5 |
| MP-20-M20 | MPS-20-M20 | MP90-20-M20 | MPS90-20-M20 | T20X20X20 | TS20X20X20 | 17 | 21 | 21.2 |
| MP-25-M25 | MPS-25-M25 | MP90-25-M25 | MPS90-25-M25 | T25X25X25 | TS25X25X25 | 22 | 25 | 25.4 |
| MP-28-M25 | MPS-28-M25 | MP90-28-M25 | MPS90-28-M25 |           |            | 23 | 28 | 28.5 |
| MP-32-M32 | MPS-32-M32 | MP90-32-M32 | MPS90-32-M32 |           |            | 29 | 34 | 34.5 |
| MP-40-M40 |            | MP90-40-M40 |              |           |            | 36 | 42 | 42.5 |
| MP-50-M50 |            |             |              |           |            | 48 | 54 | 54.5 |

## Standards



BS EN IEC 61386





# FPY system large diameter nylon

IP40

IP65

## Conduit

### FPY

**Construction:**

Nylon (PA6) corrugated flexible conduit.  
Colour black or grey.

**Typical Applications:** Machines and large control cabinets.

- Highly flexible
- High impact strength and recovers if crushed
- IP rating: IP40 or IP65
- Temperature range -40°C to +120°C
- Highly resistant to solvents and oils
- Self extinguishing
- Halogen, sulphur and phosphorus free
- UV resistant (black)

## Fittings

### MP

**straight flanged nylon clamp fitting**

Flanged body with 2 clamps.

IP40

### MPS

**straight flanged nylon clamp fitting with seals**

Flanged body with 2 clamps and seals.

IP65

### MP90

**90° flanged nylon clamp fitting**

Flanged 90° body with 2 clamps.

IP40

### MPS90

**90° flanged nylon clamp fitting with seals**

Flanged 90° body with 2 clamps and seals.

IP65



European (NW) sizes  
nominal size (mm)

| FPY |     | part number | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) |
|-----|-----|-------------|-----------------|------------------|-----------------|-----------------------------|
| 70  | 80  | FPY80       | 10              | 80.0             | 67.0            | 160                         |
| 95  | 106 | FPY106      | 10              | 106.0            | 91.5            | 210                         |

| termination | part number  |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| FL          | MP-80-FL    | FL          | MPS-80-FL   | FL          | MP90-80-FL  | FL          | MPS90-80-FL  |
| FL          | MP-106-FL   | FL          | MPS-106-FL  | FL          | MP90-106-FL | FL          | MPS90-106-FL |

## Ordering Notes

- Specify black or grey (B = Black, G = Grey)  
eg: FPY80B-10M for Black 10m reel
- Available on request:
  - longer lengths and bulk packaging
  - cut lengths and assemblies
  - alternative conduit material
- FCC75 and FCC106 PVC lined plated steel P-clips
- 80mm can be used with F-Clamps - see page 45

## Standards

BS EN IEC 61386



# Conduit Fixing Accessories

## properties

- Suitable for use with flexible and pliable conduits
- Clips and F-Clamps manufactured from nylon PA66
- Temperature Range -50° to 135°
- UV resistant
- Low Fire Hazard see page 102
- Halogen, Sulphur & Phosphorous Free
- Self extinguishing
- For installation instructions see page 100



## Fittings

### conduit clips

nylon conduit clip with integral lid - black or grey



Conduit size (mm)

conduit clip for corrugated

conduit clip for plain or rigid

### FCLAMP

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



part number

### FCLAMP-CP

plated steel cover plate for use with FCLAMP



part number

### FCLAMP-WP

plated steel weld plate to fix FCLAMP



part number

### FCLAMP-EWP

plated steel elongated weld plate to fix FCLAMP



part number

### FCLAMP-BOLT

fixing bolts to secure FCLAMPS  
For information on stacking bolts consult our website.



part number

|    |       |          |             |            |            |             |              |
|----|-------|----------|-------------|------------|------------|-------------|--------------|
| 10 | FCL10 |          |             |            |            |             |              |
| 13 | FCL13 |          |             |            |            |             |              |
| 16 | FCL16 | FCL16B-P | FCLAMP-3-16 | FCLAMP-CP3 | FCLAMP-WP3 | FCLAMP-EWP3 | FCLAMP-BOLT3 |
| 18 | FCL18 | FCL18B-P |             |            |            |             |              |
| 20 | FCL20 | FCL20B-P |             |            |            |             |              |
| 21 | FCL21 | FCL21B-P | FCLAMP-3-21 | FCLAMP-CP3 | FCLAMP-WP3 | FCLAMP-EWP3 | FCLAMP-BOLT3 |
| 25 | FCL25 | FCL25B-P |             |            |            |             |              |
| 26 |       | FCL26B-P |             |            |            |             |              |
| 28 | FCL28 |          | FCLAMP-4-28 | FCLAMP-CP4 | FCLAMP-WP4 | FCLAMP-EWP4 | FCLAMP-BOLT4 |
| 32 |       | FCL33B-P |             |            |            |             |              |
| 34 | FCL34 |          | FCLAMP-5-34 | FCLAMP-CP5 | FCLAMP-WP5 | FCLAMP-EWP5 | FCLAMP-BOLT5 |
| 42 | FCL42 |          | FCLAMP-6-42 | FCLAMP-CP6 | FCLAMP-WP6 | FCLAMP-EWP6 | FCLAMP-BOLT6 |
| 54 | FCL54 |          | FCLAMP-7-54 | FCLAMP-CP7 | FCLAMP-WP7 | FCLAMP-EWP7 | FCLAMP-BOLT7 |
| 67 |       |          | FCLAMP-7-67 | FCLAMP-CP7 | FCLAMP-WP7 | FCLAMP-EWP7 | FCLAMP-BOLT7 |
| 80 |       |          | FCLAMP-8-80 | FCLAMP-CP8 | FCLAMP-WP8 | FCLAMP-EWP8 | FCLAMP-BOLT8 |

## mounting rail

NEW

suitable for mounting FCL & FCL-P conduit clips and F-CLAMPS.  
Supplied in 0.6m, 1.2m or 2.4m lengths.  
For rail dimensions or for other lengths consult us or visit our website.



| size | stainless steel | aluminium | galv steel | plastic |
|------|-----------------|-----------|------------|---------|
| a    | MRSSA-#         | MRAA-#    | MRGSA-#    | MRPA-#  |
| b    | MRSSB-#         | MRAB-#    | MRGSB-#    | MRPB-#  |
| c    | MRSSC-#         | MRAC-#    | MRGSB-#    | MRPC-#  |

# - enter desired length e.g 1.2m # = 1.2M

For stacking arrangements of our F-Clamps visit our website for further details

## mounting rail fixing accessories

NEW

used to fix positions of FCL clips and F-Clamps on mounting rail and prevent movement.

Universal channel rail adaptor - suitable for mounting F-Clamps when used with channel rails such as Unistrut®, Halfen and Hilti.



|                     | MRFAL    | MRFAM    | MRFAM    | UNIVERSAL |
|---------------------|----------|----------|----------|-----------|
|                     |          |          |          |           |
| material            |          |          |          |           |
| stainless steel     | MRFALSS  | MRFAMSS  | MRFAMSS  |           |
| aluminium           | MRFALA   | MRFAMA   | MRFAMA   |           |
| nickel plated brass | MRFALNPB | MRFAMNPB | MRFAMNPB |           |
| nickel plated steel |          |          |          | MRFAU     |

See page 100 for installation instructions



# FPCB system

## spiral reinforced pvc

# FPCG, FPCGN & FPCBU system

## spiral reinforced pvc with special properties



IP65

### Conduit

### Fittings

#### FPCB



**Construction:** Smooth bore, helically formed pvc, flexible conduit with spiral upvc reinforcement and flexible pvc jacket. Colour black.  
**Typical Applications:** Routing of cables within machines.

NEW

#### FPCGN



**Construction:** Smooth bore, helically formed pvc, flexible conduit with spiral upvc reinforcement and flexible pvc jacket. Colour green.  
**Typical Applications:** As FPCB but where oil resistance is required. UL recognised.

NEW

#### FPCG



**Construction:** As FPCB except colour grey.  
**Typical Applications:** As FPCB. UL recognised.

NEW

#### FPCBU



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

#### MPC

NEW

#### straight nylon compression fitting external thread

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

IP65



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



### Ordering Notes

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



# properties

- Highly flexible
- Accepts torsional movement
- Vibration and shock tested to EN61373 Cat 2
- IP rating: IP65
- Temperature range
  - 5°C to +70°C (FPCB - black)
  - 20°C to +70°C (FPCG - grey)
  - 20°C to +70°C (FPCGN - green)
  - 20°C to +90°C (FPCBU - blue)
  - 5°C to +70°C (LTS - silver grey)
- FPCB (black) is UV resistant
- FPCGN (green) is oil resistant
- FPCBU (blue) is high temperature
- Self extinguishing
- Metric threads supplied complete with locknuts
- FPCG, FPCGN, FPCBU and FPCURB are UL recognised to UL1696 for use in US and Canada
- LTS (silver grey) is smooth outer and smooth bore



## MPC90

**NEW**

**90° elbow nylon compression fitting external thread**

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

IP65

## MPC45

**NEW**

**45° elbow nylon compression fitting external thread**

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

IP65

## LTS

**NEW**

**smooth bore liquid tight sheathing**

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



| metric thread part number | PG thread part number | NPT part number | metric thread part number | NPT part number | part number | reel length (m) | outside dia (mm) | inside dia (mm) | nominal size (mm) |
|---------------------------|-----------------------|-----------------|---------------------------|-----------------|-------------|-----------------|------------------|-----------------|-------------------|
| MPC90-16-M16              | MPC90-16-PG11         |                 |                           |                 |             |                 |                  |                 | 12                |
| MPC90-16-M20              | MPC90-16-PG13         | MPC90-16-050    | MPC45-16-M20              | MPC45-16-050    | LTS16SG-50M | 50              | 16.5             | 12              | 16                |
| MPC90-20-M20              | MPC90-20-PG16         | MPC90-20-050    | MPC45-20-M20              | MPC45-20-050    | LTS20SG-50M | 50              | 21.0             | 16              | 20                |
| MPC90-25-M25              | MPC90-25-PG21         | MPC90-25-075    | MPC45-25-M25              | MPC45-25-075    | LTS25SG-50M | 50              | 27.5             | 22              | 25                |
|                           |                       |                 |                           |                 |             |                 |                  |                 | 30                |
| MPC90-32-M32              | MPC90-32-PG29         | MPC90-32-100    | MPC45-32-M32              | MPC45-32-100    | LTS32SG-50M | 50              | 33.5             | 28              | 32                |
| MPC90-40-M40              | MPC90-40-PG36         | MPC90-40-125    |                           |                 |             |                 |                  |                 | 40                |
| MPC90-50-M50              |                       | MPC90-50-150    |                           |                 |             |                 |                  |                 | 50                |
| MPC90-63-M63              |                       | MPC90-63-200    |                           |                 |             |                 |                  |                 | 63                |

## Standards

## Technical Drawing



BS EN IEC 61386



\* refer to conduit properties for applicable standards

# LPC system

## smooth spiral reinforced pvc

IP66

IP67

IP68

IP69



### Conduit

### Fittings

#### LPC

**Construction:** Smooth bore, smooth cover, helically formed pvc, flexible conduit with spiral upvc reinforcement and flexible pvc jacket. Colour black or grey.

**Typical Applications:** Food processing machines and wash-down installations. LPCG is suitable for food contact.



#### LPCO

**Construction:** As LPC except colour orange.

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

#### LPCGN

**Construction:** As LPC except colour green.

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

#### LPCBU

**Construction:** As LPC except colour blue.

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

#### FCL-P

**non metallic conduit clip**

Nylon conduit fixing clip for smooth conduit. Available in black or grey (RAL 7001).



| nominal size (mm) | LPC part number | Grey (RAL 7001) | Orange (RAL 2008) | Green (RAL 6001) | Blue (RAL 5012) | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) | metric thread part number |
|-------------------|-----------------|-----------------|-------------------|------------------|-----------------|-----------------|------------------|-----------------|-----------------------------|---------------------------|
| 12                | LPC12B          | LPC12G*         | LPC12O*           | LPC12GN*         | LPC12BU*        | 30              | 14.2             | 10.0            | 50                          |                           |
| 16                | LPC16B          | LPC16G          | LPC16O            | LPC16GN*         | LPC16BU*        | 30              | 17.8             | 12.6            | 50                          | FCL18-P                   |
| 20                | LPC20B          | LPC20G          | LPC20O            | LPC20GN*         | LPC20BU*        | 10, 30          | 21.1             | 16.0            | 70                          | FCL21-P                   |
| 25                | LPC25B          | LPC25G          | LPC25O            | LPC25GN*         | LPC25BU*        | 10, 30          | 26.4             | 21.0            | 90                          | FCL26-P                   |
| 32                | LPC32B          | LPC32G          | LPC32O            | LPC32GN*         | LPC32BU*        | 10, 30          | 33.1             | 26.5            | 140                         | FCL33-P                   |
| 40                | LPC40B          | LPC40G*         | LPC40O*           | LPC40GN*         | LPC40BU*        | 10, 30          | 41.8             | 35.4            | 190                         |                           |
| 50                | LPC50B          | LPC50G*         | LPC50O*           | LPC50GN*         | LPC50BU*        | 10, 30          | 47.9             | 40.0            | 240                         |                           |
| 63                | LPC63B          | LPC63G*         | LPC63O*           | LPC63GN*         | LPC63BU*        | 10, 30          | 59.7             | 51.3            | 270                         |                           |



### Ordering Notes

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

• **Available on request:**

- additional sizes
- alternative threads
- alternative materials (eg. PU)

- other colours
- conduit couplers
- 45 degree brass elbow
- combined conduit fitting with cable gland, see page 84

### Alternatives



# properties

- Smooth, wipe clean surface
- Accepts some torsional movement
- IP rating: IP66, IP67 and IP68 with MPC fittings
  - IP66, IP67, IP68 (2 bar) + IP69 with metal C-type compression fittings
- Temperature range -5°C to +70°C (LPC and LPCG)
  - 20°C to +70°C (LPCO and LPCGN)
  - 20°C to +90°C (LPCBU)
- LPCG (grey) is suitable for food contact
- LPCO (orange) is highly flexible
- LPCGN (green) is oil resistant
- LPCB (black) is UV resistant
- Self extinguishing
- Metric nylon fittings supplied complete with locknut
- Vibration and shock tested to EN 61373 Cat 2



## MPC

NEW

### straight nylon compression fitting external thread including locknut

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

IP66 IP67 IP68

## MPC90

NEW

### 90° elbow nylon compression fitting external thread

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

IP66 IP67 IP68

## MPC45

NEW

### 45° elbow nylon fitting external thread

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

IP66 IP67 IP68



| metric thread part number | PG thread part number | NPT thread part number | metric thread part number | PG thread part number | NPT thread part number | metric thread part number | NPT thread part number | nominal size (mm) |
|---------------------------|-----------------------|------------------------|---------------------------|-----------------------|------------------------|---------------------------|------------------------|-------------------|
| MPC-12-M16                | MPC-12-PG9            |                        |                           |                       |                        |                           |                        | 12                |
| MPC-16-M16                | MPC-16-PG11           |                        | MPC90-16-M16              | MPC90-16-PG11         |                        |                           |                        | 16                |
| MPC-16-M20                | MPC-16-PG13           | MPC-16-050             | MPC90-16-M20              | MPC90-16-PG13         | MPC90-16-050           | MPC45-16-M20              | MPC45-16-050           | 16                |
| MPC-20-M20                | MPC-20-PG16           | MPC-20-050             | MPC90-20-M20              | MPC90-20-PG16         | MPC90-20-050           | MPC45-20-M20              | MPC45-20-050           | 20                |
| MPC-25-M25                | MPC-25-PG21           | MPC-25-075             | MPC90-25-M25              | MPC90-25-PG21         | MPC90-25-075           | MPC45-25-M25              | MPC45-25-075           | 25                |
| MPC-32-M32                | MPC-32-PG29           | MPC-32-100             | MPC90-32-M32              | MPC90-32-PG29         | MPC90-32-100           | MPC45-32-M32              | MPC45-32-100           | 32                |
| MPC-40-M40                | MPC-40-PG36           | MPC-40-125             | MPC90-40-M40              | MPC90-40-PG36         | MPC90-40-125           |                           |                        | 40                |
| MPC-50-M50                | MPC-50-PG42           | MPC-50-150             | MPC90-50-M50              |                       | MPC90-50-150           |                           |                        | 50                |
| MPC-63-M63                | MPC-63-PG48           | MPC-63-200             | MPC90-63-M63              |                       | MPC90-63-200           |                           |                        | 63                |

## Standards

## Technical Drawing



BS EN IEC 61386





# LPC system

metallic fittings for use with  
LPC conduits

- IP66
- IP67
- IP68
- IP69
- FG**  
FOOD GRADE

## Fittings

| C  | C-S  | C-90   | C45  |
|--|--|--|--|
| <p><b>NEW</b></p> <p><b>external metric thread nickel plated brass</b></p> <p>Multipart compression fitting including elastomeric seal. Can be used for knockout or threaded entries as fitting rotates until tightened.</p>   | <p><b>NEW</b></p> <p><b>swivel external thread nickel plated brass</b></p> <p>Compression fitting for knockout or threaded entries.</p> <p>Multipart compression fitting including elastomeric seal. The external thread swivels even after tightening.</p>  | <p><b>NEW</b></p> <p><b>external thread nickel plated brass</b></p> <p>Multipart compression fitting including elastomeric seal. Can be used for knockouts.</p>  | <p><b>external thread nickel plated brass</b></p> <p>45° multipart compression fitting including elastomeric seal. Can be used for knockouts.</p>  |
| <ul style="list-style-type: none"> <li style="background-color: #4a7c59; color: white; padding: 2px;">IP66</li> <li style="background-color: #4a7c59; color: white; padding: 2px;">IP67</li> <li style="background-color: #4a7c59; color: white; padding: 2px;">IP68</li> <li style="background-color: #4a7c59; color: white; padding: 2px;">IP69</li> </ul> | <ul style="list-style-type: none"> <li style="background-color: #4a7c59; color: white; padding: 2px;">IP66</li> <li style="background-color: #4a7c59; color: white; padding: 2px;">IP67</li> <li style="background-color: #4a7c59; color: white; padding: 2px;">IP68</li> <li style="background-color: #4a7c59; color: white; padding: 2px;">IP69</li> </ul> | <ul style="list-style-type: none"> <li style="background-color: #4a7c59; color: white; padding: 2px;">IP66</li> <li style="background-color: #4a7c59; color: white; padding: 2px;">IP67</li> <li style="background-color: #4a7c59; color: white; padding: 2px;">IP68</li> <li style="background-color: #4a7c59; color: white; padding: 2px;">IP69</li> </ul> | <ul style="list-style-type: none"> <li style="background-color: #4a7c59; color: white; padding: 2px;">IP66</li> <li style="background-color: #4a7c59; color: white; padding: 2px;">IP67</li> <li style="background-color: #4a7c59; color: white; padding: 2px;">IP68</li> <li style="background-color: #4a7c59; color: white; padding: 2px;">IP69</li> </ul> |



| nominal size (mm) | LPC   | conduit see page 48       |                    |                     | thread   | metric thread part number | for PG thread size | for NPT thread size | thread | metric thread part number | metric thread part number | metric thread part number |
|-------------------|-------|---------------------------|--------------------|---------------------|----------|---------------------------|--------------------|---------------------|--------|---------------------------|---------------------------|---------------------------|
|                   |       | metric thread part number | for PG thread size | for NPT thread size |          |                           |                    |                     |        |                           |                           |                           |
| 12                | LPC12 | LPC12-M16-C               | LPC12-PG9-C        |                     |          | LPC12-M16-S               | LPC12-M16-C90      |                     |        |                           |                           |                           |
| 16                | LPC16 | LPC16-M16-C               | LPC16-PG11-C       |                     |          | LPC16-M16-S               | LPC16-M16-C90      |                     |        |                           |                           |                           |
| 16                | LPC16 | LPC16-M20-C               | LPC16-PG13-C       | LPC16-050-C         | (1/2")   | LPC16-M20-S               | LPC16-M20-C90      |                     |        |                           | LTP16-M20-C45             |                           |
| 20                | LPC20 | LPC20-M20-C               | LPC20-PG16-C       | LPC20-050-C         | (1/2")   | LPC20-M20-S               | LPC20-M20-C90      |                     |        |                           | LTP20-M20-C45             |                           |
| 25                | LPC25 | LPC25-M25-C               | LPC25-PG21-C       | LPC25-075-C         | (3/4")   | LPC25-M25-S               | LPC25-M25-C90      |                     |        |                           | LTP25-M25-C45             |                           |
| 32                | LPC32 | LPC32-M32-C               | LPC32-PG29-C       | LPC32-100-C         | (1")     | LPC32-M32-S               | LPC32-M32-C90      |                     |        |                           | LTP32-M32-C45             |                           |
| 40                | LPC40 | LPC40-M40-C               | LPC40-PG36-C       | LPC40-125-C         | (1 1/4") | LPC40-M40-S               | LPC40-M40-C90      |                     |        |                           | LTP40-M40-C45             |                           |
| 50                | LPC50 | LPC50-M50-C               | LPC50-PG42-C       | LPC50-150-C         | (1 1/2") |                           | LPC50-M50-C90      |                     |        |                           | LTP50-M50-C45             |                           |
| 63                | LPC63 | LPC63-M63-C               | LPC63-PG48-C       | LPC63-200-C         | (2")     |                           | LPC63-M63-C90      |                     |        |                           | LTP63-M63-C45             |                           |

\* Please see conduit range information page 48

## Ordering Notes

- \* Indicates parts made to order on request and may be subject to MOQ and lead time
- **Available on request:**
  - additional sizes
  - alternative threads
  - alternative materials (eg. PU)
  - other colours
  - conduit couplers
  - 45 degree brass elbow
  - combined conduit fitting with cable gland, see page 84

## Alternatives



# properties

- Smooth, wipe clean surface
- Accepts some torsional movement
- IP rating: IP66, IP67 and IP68 with MPC fittings  
IP66, IP67, IP68 (2 bar) + IP69 with metal C-type compression fittings
- Temperature range -5°C to +70°C (LPC and LPCG)  
-20°C to +70°C (LPCO and LPCGN)  
-20°C to +90°C (LPCBU)
- LPCG (grey) is suitable for food contact
- C-FG - IP66, IP67, IP68 (2 bar) and IP69
- C-FG fitting designed in accordance with EN1672-2 and EN ISO 14159
- C-FG fitting manufactured from stainless steel grade 316L
- C-FG also suitable for use with LTP liquid tight conduits



## CSS NEW

### external thread stainless steel

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

IP66 IP67 IP68 IP69



metric thread  
part number

## C90-SS NEW

### external thread stainless steel

Multipart compression fitting including elastomeric seal. Can be used for knockouts.

IP66 IP67 IP68 IP69



metric thread  
part number

## C-FG NEW FG FOOD GRADE

### external thread stainless steel food grade

Multipart compression fitting designed using principles given in EN1672-2 and EN ISO 14159. Manufactured from 316L stainless steel, complete with polyester elastomer compression seals to prevent ingress of food or bacteria. Can be used for knockout or threaded entries as fitting rotates until tightend.

IP66 IP67 IP68 IP69



metric thread  
part number

nominal size (mm)

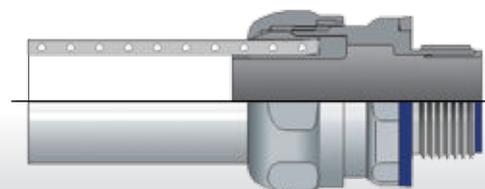
| metric thread part number | metric thread part number | metric thread part number | nominal size (mm) |
|---------------------------|---------------------------|---------------------------|-------------------|
| LPC16-M16-CSS             |                           | LPC16-M16-C-FG            | 12                |
| LPC16-M20-CSS             | LPC16-M20-CSS90           |                           | 16                |
| LPC20-M20-CSS             | LPC20-M20-CSS90           | LPC20-M20-C-FG            | 20                |
| LPC25-M25-CSS             | LPC25-M25-CSS90           | LPC25-M25-C-FG            | 25                |
| LPC32-M32-CSS             | LPC32-M32-CSS90           | LPC32-M32-C-FG            | 32                |
| LPC40-M40-CSS             |                           | LPC40-M40-C-FG*           | 40                |
| LPC50-M50-CSS             |                           | LPC50-M50-C-FG*           | 50                |
|                           |                           |                           | 63                |

## Standards

## Technical Drawing



BS EN IEC 61386





With over 28 different metallic conduit systems to select from there is sure to be a system to meet your application. Choose from conduit systems ranging from 10mm to 75mm in size, manufactured in galvanised steel or stainless steel and with or without a range of coverings/overbraiding.



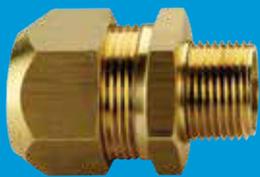
### Key Features

- High compression strength
- High pull off strength
- Wide temperature tolerances
- High impact strength
- EMC screening performance
- High IP rating - up to IP69

### Key Benefits

- Suitable for a range of applications including heavy duty
- Maintains integrity of the system in extreme applications
- Suitable for a diverse range of operating environments
- Can withstand impact forces such as falling objects
- Protection against electromagnetic interference
- No risk of water or dust ingress

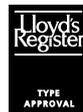




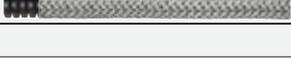
# metallic conduit & fittings

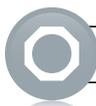


BS EN IEC 61386



# metallic selection application guide

| Page number | conduit system  |   | IP rating available        | compression strength kg/100mm 20mm nominal size | pull-off strength kg 20mm nominal size | minimum bend radius 20mm nominal size | colours             |
|-------------|---|---|----------------------------|---|--|---------------------------------------|---------------------|
| 58          | <b>FU</b><br>galvanised steel   |    | IP40                       | 350   | 120                                    | 45                                    | zinc                |
| 58          | <b>SSU</b><br>stainless steel, grade 316                              |    | IP40                       | 400   | 170                                    | 45                                    | stainless steel     |
| 60          | <b>FSU</b><br>galvanised steel, pvc coated                            |    | IP54, IP65                 | 350   | 120                                    | 45                                    | black, grey, orange |
| 60          | <b>FNU</b><br>galvanised steel, nylon coated                          |    | IP54, IP65                 | 350   | 120                                    | 45                                    | black               |
| 62          | <b>LFHU</b><br>galvanised steel, LFH coated                           |    | IP54, IP65                 | 350   | 120                                    | 45                                    | black               |
| 62          | <b>FPU</b><br>galvanised steel, polyurethane coated                   |    | NEW IP54, IP65             | 350   | 120                                    | 45                                    | black, blue         |
| 64          | <b>LTP/LTPAS</b><br>galv steel, pvc coated, liquid tight              |    | NEW IP66, IP67, IP68, IP69 | 400   | 130                                    | 65                                    | black, grey, orange |
| 64          | <b>LTPHC</b><br>galv steel, thermoplastic elastomer, liquid tight     |    | IP66, IP67, IP68, IP69     | 400   | 130                                    | 65                                    | black               |
| 64          | <b>LTPUL</b><br>galv steel, pvc coated, liquid tight                  |    | IP66, IP67, IP68, IP69     | 500   | 160                                    | 90                                    | black               |
| 66          | <b>LTPLFH</b><br>galv steel, pvc coated, liquid tight                 |    | NEW IP66, IP67, IP68, IP69 | 400   | 130                                    | 60                                    | black               |
| 66          | <b>LTPSS</b><br>stainless steel, pvc coated, liquid tight             |   | IP66, IP67, IP68, IP69     | 400   | 130                                    | 65                                    | black               |
| 66          | <b>LTPPU/LTPPUAS</b><br>galv steel, polyurethane coated, liquid tight |  | NEW IP66, IP67, IP68, IP69 | 400   | 130                                    | 65                                    | black, blue         |
| 66          | <b>LTBRDP</b><br>galv steel, braided core, pvc coated, liquid tight   |  | NEW IP66, IP67, IP68, IP69 | 400   | 130                                    | 65                                    | black               |
| 66          | <b>LTBRDLFH</b><br>galv steel, braided core, LFH coated, liquid tight |  | NEW IP66, IP67, IP68, IP69 | 400   | 130                                    | 130                                   | black               |
| 74          | <b>FL</b><br>galvanised steel, pliable                                |  | IP40                       | 300   | 30                                     | 35                                    | zinc                |
| 74          | <b>FLP</b><br>galvanised steel, pvc coated, pliable                   |  | IP66, IP67, IP68, IP69     | 300   | 50, 100                                | 35                                    | black               |
| 75          | <b>LFHP</b><br>galvanised steel, LFH coated, pliable                  |  | NEW IP66, IP67, IP68, IP69 | 570   | 50, 100                                | 40                                    | black               |
| 76          | <b>FSB</b><br>galv steel, pvc, galv steel overbraid                   |  | IP54, IP65                 | 350   | 120, 300                               | 45                                    | zinc                |
| 76          | <b>LFHUBRD</b><br>galv steel, LFH coated, SS316 overbraid             |  | IP54, IP65                 | 350   | 120, 300                               | 45                                    | stainless steel     |
| 78          | <b>FB</b><br>galvanised steel, galv steel overbraid                   |  | IP40                       | 350   | 120                                    | 45                                    | zinc                |
| 78          | <b>FUSSB</b><br>galvanised steel, SS316 overbraid                     |  | IP40                       | 350   | 120                                    | 45                                    | stainless steel     |
| 80          | <b>LTPBRD</b><br>galv steel, elastomer coated, SS316 overbraid        |  | IP66, IP67, IP68, IP69     | 400   | 350                                    | 65                                    | stainless steel     |
| 82          | <b>FPRSS</b><br>PA6 corrugated, SS316 overbraid                       |  | IP67                       | 75  | 100                                    | 45                                    | stainless steel     |
| 82          | <b>FPRTC</b><br>PA6 corrugated, tinned copper overbraid               |  | IP67                       | 75  | 75                                     | 45                                    | tin                 |
| 82          | <b>FPISS</b><br>PA12 corrugated, SS316 overbraid                      |  | IP67                       | 45  | 100                                    | 45                                    | stainless steel     |
| 82          | <b>FPIHSS</b><br>PA12 corrugated, SS316 overbraid                     |  | IP67                       | 60  | 100                                    | 45                                    | stainless steel     |



86 accessories



91 contractor packs



94 chemical resistance

# metallic conduit and fittings

| high fatigue life | temperature range | flexible | pliable | low fire hazard | halogen free | self extinguishing | EMC screening @1MHz | high abrasion resistance | high UV/ outdoor use |   |
|-------------------|-------------------|----------|---------|-----------------|--------------|--------------------|---------------------|--------------------------|----------------------|---|
|                   | -100°C to +300°C  | •        |         | •               | •            | •                  |                     | •                        |                      | <b>FU</b><br>galvanised steel   |
|                   | -100°C to +600°C  | •        |         | •               | •            | •                  |                     | •                        | •                    | <b>SSU</b><br>stainless steel, grade 316                              |
| •                 | -15°C to +70°C    | •        |         |                 |              | •                  |                     |                          | •                    | <b>FSU</b><br>galvanised steel, pvc coated                            |
|                   | -40°C to +120°C   | •        |         |                 | •            | •                  |                     | •                        |                      | <b>FNU</b><br>galvanised steel, nylon coated                          |
|                   | -25°C to +90°C    | •        |         | •               | •            | •                  |                     |                          |                      | <b>LFHU</b><br>galvanised steel, LFH coated                           |
| •                 | -40°C to +100°C   | •        |         |                 | •            | •                  |                     | •                        |                      | <b>FPU</b><br>galvanised steel, polyurethane coated                   |
|                   | -20°C to +105°C   | •        |         |                 |              | •                  |                     |                          | •                    | <b>LTP/LTPAS</b><br>galv steel, pvc coated, liquid tight              |
|                   | -60°C to +150°C   | •        |         |                 | •            | •                  |                     |                          | •                    | <b>LTPHC</b><br>galv steel, thermoplastic elastomer, liquid tight     |
|                   | -15°C to +75°C    | •        |         |                 |              | •                  |                     |                          | •                    | <b>LTPUL</b><br>galv steel, pvc coated, liquid tight                  |
|                   | -25°C to +90°C    | •        |         | •               |              | •                  |                     |                          | •                    | <b>LTPLFH</b><br>galv steel, pvc coated, liquid tight                 |
|                   | -20°C to +105°C   | •        |         |                 |              | •                  |                     |                          | •                    | <b>LTPSS</b><br>stainless steel, pvc coated, liquid tight             |
| •                 | -40°C to +100°C   | •        |         |                 | •            | •                  |                     | •                        | •                    | <b>LTPPU/LTPPUAS</b><br>galv steel, polyurethane coated, liquid tight |
|                   | -20°C to +105°C   | •        |         |                 |              | •                  | 60dB                |                          | •                    | <b>LTBRDP</b><br>galv steel, braided core, pvc coated, liquid tight   |
|                   | -25°C to +90°C    | •        |         | •               | •            | •                  | 60dB                |                          |                      | <b>LTBRDLFH</b><br>galv steel, braided core, LFH coated, liquid tight |
|                   | -40°C to +120°C   |          | •       | •               | •            | •                  | 70dB                |                          |                      | <b>FL</b><br>galvanised steel, pliable                                |
|                   | -15°C to +70°C    |          | •       |                 |              | •                  | 70dB                |                          | •                    | <b>FLP</b><br>galvanised steel, pvc coated, pliable                   |
|                   | -25°C to +90°C    |          | •       | •               | •            | •                  | 70dB                |                          | •                    | <b>LFHP</b><br>galvanised steel, LFH coated, pliable                  |
|                   | -15°C to +70°C    | •        |         |                 |              | •                  | 55dB                | •                        |                      | <b>FSB</b><br>galv steel, pvc, galv steel overbraid                   |
|                   | -25°C to +90°C    | •        |         | •               | •            | •                  | 49dB                | •                        |                      | <b>LFHUBRD</b><br>galv steel, LFH coated, SS316 overbraid             |
|                   | -100°C to +300°C  | •        |         | •               | •            | •                  | 55dB                | •                        |                      | <b>FB</b><br>galvanised steel, galv steel overbraid                   |
|                   | -100°C to +300°C  | •        |         | •               | •            | •                  | 49dB                | •                        |                      | <b>FUSSB</b><br>galvanised steel, SS316 overbraid                     |
|                   | -60°C to +150°C   | •        |         |                 | •            | •                  | 49dB                | •                        | •                    | <b>LTPBRD</b><br>galv steel, elastomer coated, SS316 overbraid        |
|                   | -40°C to +120°C   | •        |         | •               | •            | •                  | 49dB                | •                        | •                    | <b>FPRSS</b><br>PA6 corrugated, SS316 overbraid                       |
|                   | -40°C to +120°C   | •        |         | •               | •            | •                  | 67dB                |                          |                      | <b>FPRTC</b><br>PA6 corrugated, tinned copper overbraid               |
| •                 | -50°C to +110°C   | •        |         |                 | •            | •                  | 49dB                | •                        | •                    | <b>FPISS</b><br>PA12 corrugated, SS316 overbraid                      |
| •                 | -50°C to +110°C   | •        |         | •               | •            | •                  | 49dB                | •                        | •                    | <b>FPIHSS</b><br>PA12 corrugated, SS316 overbraid                     |



96

thread data



97

technical guidance



102

low fire hazard



# metallic selection guide



- UK manufactured products to the highest standards
- Highest IP performance for liquid tight fittings as standard
- Highest tensile strength performance fittings
- Stainless Steel variants available
- Vibration tested for secure installations
- Simple construction for ease of installation - Fixed and Swivel versions
- Multiple thread variations available - Metric, PG, NPT
- Tested and approved to the latest National and International Standards
- Widest choice whatever your application

Fixed External



IP40 IP54

Swivel



IP40 IP54

Fixed Internal



IP40 IP54

Plain Hole



IP40 IP54

See Pg 58, 59, 60, 61, 62, & 63

Stainless Steel



IP40

See Pg 58 & 59

Insert



Cable Gland



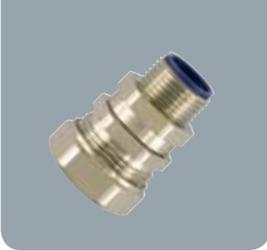
Clips



Locknuts



See Pg 86 & 87



### Liquid Tight



IP66 IP67 IP68 IP69

See Pg 50, 61, 63, 64, 65 & 66

### Liquid Tight Stainless Steel



IP66 IP67 IP68 IP69

See Pg 51 & 67

### EXE



IP66

See Pg 71

### EXD Flameproof Barrier Glands

Straight 90° 45° Braided



IP66 IP67 IP68 IP69 \*

See Pg 68, 69 & 70

\*Straight & braided

### FL

Straight



IP40

### FLP

Straight



IP66 IP67

### ULTRASCREEN®

External



IP66 IP67 IP68 IP69

Internal



See Pg 74 & 75

### Braided



IP40 IP54

See Pg 76, 77, 78 & 79

### Braided Compression



IP65 IP66 IP67 IP68 IP69

See Pg 77, 80, 81, 82 & 83

### LTP with Strain Relief



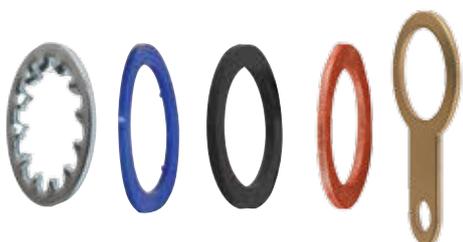
IP66 IP67 IP68 IP69

See Pg 84

### BRAIDED with Strain Relief



### Accessories



See Pg 87 & 88

### Elbows



### Stopping Plugs



### Couplers



### Thread Converters



See Pg 88



# FU & SSU system galvanised steel and stainless steel



## Conduit

## Fittings

### FU



**Construction:** Galvanised steel, helically wound, flexible conduit. Colour zinc, self colour.

**Typical Applications:** Underfloor wiring in office blocks.

### SSU



**Construction:** Stainless steel (grade 316), helically wound, flexible conduit. Colour stainless steel, self colour.

**Typical Applications:** Instrumentation and security.

### 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



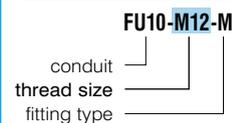
| nominal size (mm) | FU part number    | reel length (m) | SSU part number    | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) | metric thread part number | PG thread part number | metric thread part number | metric thread part number | PG thread part number |
|-------------------|-------------------|-----------------|--------------------|-----------------|------------------|-----------------|-----------------------------|---------------------------|-----------------------|---------------------------|---------------------------|-----------------------|
| 10                | FU10 <sup>+</sup> | 25, 50          | SSU10 <sup>+</sup> | 10, 25, 50      | 9.0              | 6.8             | 25                          | FU10-M12-M                | FU10-PG7-M            | SSU10-M12-M               | FU10-M12-S                | FU10-PG7-S            |
| 12                | FU12              | 25, 50          | SSU12 <sup>+</sup> | 10, 25, 50      | 13.0             | 10.2            | 30                          | FU12-M16-M                | FU12-PG9-M            | SSU12-M16-M               | FU12-M16-S                | FU12-PG9-S            |
| 16                | FU16              | 10, 25, 50      | SSU16              | 10, 25, 50      | 16.0             | 13.0            | 40                          | FU16-M16-M                | FU16-PG11-M           | SSU16-M16-M               | FU16-M16-S                | FU16-PG11-S           |
| 16                |                   |                 |                    |                 |                  |                 |                             | FU16-M20-M                |                       |                           | FU16-M20-S                | FU16-PG13-S           |
| 20                | FU20              | 10, 25, 50      | SSU20              | 10, 25          | 20.5             | 16.9            | 45                          | FU20-M20-M                | FU20-PG16-M           | SSU20-M20-M               | FU20-M20-S                | FU20-PG16-S           |
| 25                | FU25              | 10, 25, 50      | SSU25              | 10, 25          | 25.0             | 21.1            | 55                          | FU25-M25-M                | FU25-PG21-M           | SSU25-M25-M               | FU25-M25-S                | FU25-PG21-S           |
| 32                | FU32              | 10, 25          | SSU32              | 10, 25          | 32.0             | 28.1            | 60                          | FU32-M32-M                | FU32-PG29-M           | SSU32-M32-M               | FU32-M32-S                | FU32-PG29-S           |
| 40                | FU40              | 10, 25          | SSU40              | 10              | 42.5             | 37.6            | 80                          | FU40-M40-M                | FU40-PG36-M           | SSU40-M40-M               | FU40-M40-S                | FU40-PG36-S           |
| 50                | FU50              | 10, 25          | SSU50              | 10              | 53.0             | 48.4            | 90                          | FU50-M50-M                | FU50-PG48-M           | SSU50-M50-M               | FU50-M50-S                | FU50-PG42-S           |
| 63                | FU63              | 10              | SSU63*             | 10              | 62.5             | 57.5            | 115                         | FU63-M63-M                |                       | SSU63-M63-M*              | FU63-M63-S                |                       |
| 75                | FU75              | 10              |                    |                 | 77.0             | 70.0            | 150                         | FU75-M75-M                |                       |                           |                           |                       |

## Ordering Notes

- Add reel length eg: FU20-25M for 25m reel
- \* Indicates parts made to order on request and may be subject to MOQ and lead time
- + Double interlock section

- Available on request:
  - longer lengths and bulk packaging
  - cut lengths and assemblies
  - alternative threads

### How to read the fittings code



# system properties

- High mechanical strength
- Highly flexible
- Inherently Low Fire Hazard (LFH)
- Fully compliant to LUL Std 1-085 (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 (316) fittings



| S-SS   |                | P   |                           | F   |                             | FCC   |    | 90° elbow  |  |
|--|----------------|---|---------------------------|---|-----------------------------|---|----|--|--|
| <b>swivel external thread stainless steel</b><br>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. |                | <b>plain hole connector nickel plated brass</b><br>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. |                           | <b>fixed internal thread nickel plated brass</b><br>Two part fitting comprising shell and body with internal thread which can be used to connect with an external thread. |                             | <b>plated steel P clip with pvc liner and secure stainless steel P clips</b><br>P clip to support and secure conduit. |    | <b>internal and external threaded nickel plated brass elbow</b><br>90° elbow which can be screwed onto external threaded fittings to create a 90° elbow termination. |  |
| IP40   |                | IP40  |                           | IP40  |                             |   |    |  |  |
|  |                |   |                           |   |                             |   |    |  |  |
| metric thread part number  | hole size (mm) | part number   | metric thread part number | plated steel part number  | stainless steel part number | part number   |    |  |  |
| SSU10-M12-S  | 9              | FU10-P  |                           | FCC10   | FCC10-SS*                   | BM90-PG7  | 10 |  |  |
| SSU12-M16-S  | 12             | FU12-P  |                           | FCC12   | FCC12-SS*                   | BM90-16M  | 12 |  |  |
| SSU16-M16-S  | 16             | FU16-P  | FU16-M16-F                | FCC16   | FCC16-SS                    | BM90-16M  | 16 |  |  |
|  |                |   | FU16-M20-F                | FCC16   | FCC16-SS                    | BM90-20M  | 16 |  |  |
| SSU20-M20-S  | 20             | FU20-P  | FU20-M20-F                | FCC20   | FCC20-SS                    | BM90-20M  | 20 |  |  |
| SSU25-M25-S  | 25             | FU25-P  | FU25-M25-F                | FCC25   | FCC25-SS                    | BM90-25M  | 25 |  |  |
| SSU32-M32-S  | 32             | FU32-P  | FU32-M32-F                | FCC32   | FCC32-SS                    | BM90-32M  | 32 |  |  |
|  | 40             | FU40-P  | FU40-M40-F                | FCC40   | FCC40-SS                    | BM90-40M  | 40 |  |  |
|  | 51             | FU50-P  | FU50-M50-F                | FCC50   | FCC50-SS*                   | BM90-50M  | 50 |  |  |
|  | 61             | FU63-P  | FU63-M63-F                | FCC63   |                             |   | 63 |  |  |
|  | 75             | FU75-P  |                           | FCC75   |                             |   | 75 |  |  |

## Standards

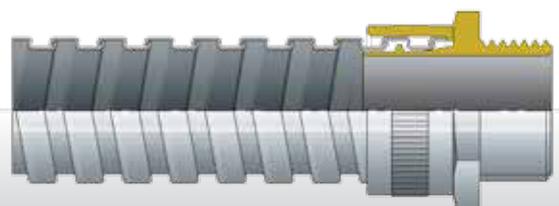


BS EN IEC 61386



Note: refer to conduit properties for applicable standards

## Technical Drawing





# FSU & FNU system

galvanised steel pvc  
or nylon coated

## Conduit

### FSU

**Construction:** Galvanised steel, helically wound, flexible conduit with pvc coating. Colour black. Grey or orange on request.\*

**Typical Applications:** General factory wiring and connections to machines.

### FNU

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

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

## Fittings

### M

#### fixed external thread nickel plated brass

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

IP54

### S

#### swivel external thread nickel plated brass

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

IP54

### P

#### plain hole connector nickel plated brass

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

IP54



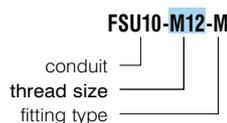
| nominal size (mm) | FSU                 |                 | FNU         |                 | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) | metric thread part number | PG thread part number | metric thread part number | PG thread part number | hole size (mm) | part number |
|-------------------|---------------------|-----------------|-------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

## Ordering Notes

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

- **Available on request:**
  - low temperature (-40°C) version of FSU
  - longer lengths and bulk packaging
  - cut lengths and assemblies
  - other colours
  - stainless steel fittings (grade 316)
  - alternative threads
  - 45° elbows 16 to 32mm
  - UV resistant version of FSU

### How to read the fittings code



# properties

- High mechanical strength
- Highly flexible
- IP rating: IP54 with standard fittings,  
IP65 with type C compression fittings
- Temperature range -15°C to +70°C (FSU)  
-40°C to +120°C (FNU)
- FNU offers high abrasion resistance and solvent resistance
- Low Fire Hazard version available (see type LFHU on page 62)
- Nickel plated brass fittings



| F  | C  | C-S   | C90  | coupler   | E   |
|--|--|---|--|---|---|
| <p><b>fixed internal thread nickel plated brass</b></p> <p>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.</p> <p>IP54</p> | <p><b>external thread nickel plated brass</b></p> <p>Multipart compression fitting including elastomeric seal. Can be used for knockouts or threaded entries as fitting rotates until tightened.</p> <p>IP65</p> | <p><b>external thread nickel plated brass</b></p> <p>Multipart compression fitting including elastomeric seal. The external thread swivels about the main body even after tightening.</p> <p>IP65</p> | <p><b>external thread elbow nickel plated brass</b></p> <p>Multipart 90° compression fitting including elastomeric seal.</p> <p>IP65</p> | <p><b>nickel plated brass</b></p> <p>Multi part compression coupler including elastomeric seals to join 2 conduits.</p> <p>IP65</p> | <p><b>insert nickel plated brass</b></p> <p>Single part, machined insert to cap end of conduit.</p> |



|             | metric thread part number | metric thread part number | PG thread part number | NPT thread part number | metric thread part number | metric thread part number | part number | part number | nominal size (mm) |
|-------------|---------------------------|---------------------------|-----------------------|------------------------|---------------------------|---------------------------|-------------|-------------|-------------------|
|             |                           | FSU10-M12-C               |                       |                        |                           |                           |             | FSU10-E     | 10                |
|             |                           | FSU12-M16-C               | FSU12-PG9-C           |                        | FSU12-M16-C-S             | FSU12-M16-C90             |             | FSU12-E     | 12                |
| FSU16-M16-F | FSU16-M16-C               | FSU16-PG11-C              | FSU16-050-C           |                        | FSU16-M16-C-S             | FSU16-M16-C90             | FSU16-FSU16 | FSU16-E     | 16                |
| FSU16-M20-F | FSU16-M20-C               | FSU16-PG13-C              |                       |                        | FSU16-M20-C-S             | FSU16-M20-C90             |             | FSU16-E     | 16                |
| FSU20-M20-F | FSU20-M20-C               | FSU20-PG16-C              | FSU20-050-C           |                        | FSU20-M20-C-S             | FSU20-M20-C90             | FSU20-FSU20 | FSU20-E     | 20                |
| FSU25-M25-F | FSU25-M25-C               | FSU25-PG21-C              | FSU25-075-C           |                        | FSU25-M25-C-S             | FSU25-M25-C90             | FSU25-FSU25 | FSU25-E     | 25                |
| FSU32-M32-F | FSU32-M32-C               | FSU32-PG29-C              | FSU32-100-C           |                        | FSU32-M32-C-S             | FSU32-M32-C90             | FSU32-FSU32 | FSU32-E     | 32                |
| FSU40-M40-F | FSU40-M40-C               |                           |                       |                        |                           |                           |             | FSU40-E     | 40                |
| FSU50-M50-F | FSU50-M50-C               |                           |                       |                        |                           |                           |             | FSU50-E     | 50                |
| FSU63-M63-F |                           |                           |                       |                        |                           |                           |             | FSU63-E     | 63                |
|             |                           |                           |                       |                        |                           |                           |             | FSU75-E     | 75                |

Also available in a Contractor Pack - see page 91

## Standards

BS EN IEC 61386



## Technical Drawing





# LFHU system

galvanised steel LFH coated



# FPU system

galvanised steel  
polyurethane coated

NEW

## Conduit

### LFHU

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

**Typical Applications:** Public and commercial buildings and tunnels.

### FPU

**Construction:** Galvanised steel, helically wound, flexible steel conduit with low temperature, high abrasion, high fatigue life halogen free polyurethane coating. Colour black and metallic blue.

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

## Fittings

### M

#### fixed external thread nickel plated brass

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

IP54

### S

#### swivel external thread nickel plated brass

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

IP54

### P

#### plain hole connector nickel plated brass

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

IP54



| nominal size (mm) | LFHU part number | reel length (m) | FPU part number | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) |
|-------------------|------------------|-----------------|-----------------|-----------------|------------------|-----------------|-----------------------------|
| 12                | LFHU12B*         | 25              | FPU12B*         | 25              | 14.0             | 10.2            | 30                          |
| 16                | LFHU16B          | 25, 50          | FPU16B          | 25              | 17.0             | 13.0            | 40                          |
| 20                | LFHU20B          | 10, 25, 50      | FPU20B          | 25, 50          | 21.5             | 16.9            | 45                          |
| 25                | LFHU25B          | 10, 25, 50      | FPU25B          | 25, 50          | 26.0             | 21.1            | 55                          |
| 32                | LFHU32B          | 10, 25          | FPU32B          | 25              | 34.0             | 28.1            | 80                          |
| 40                | LFHU40B          | 10, 25          | FPU40B*         | 10              | 44.5             | 37.6            | 90                          |
| 50                | LFHU50B          | 10, 25          | FPU50B*         | 10              | 55.0             | 48.4            | 100                         |
| 63                | LFHU63B          | 10              | FPU63B*         | 10              | 64.5             | 57.5            | 115                         |
| 75                | 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-PG42-S          | 51             | FSU50-P     |
| FSU63-M63-M               |                       | FSU63-M63-S               |                       | 61             | FSU63-P     |
| FSU75-M75-M               |                       |                           |                       | 75             | FSU75-P     |

### Important Note

- For LFH performance see page 102

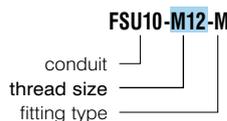
### Ordering Notes

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



- Available on request:**
  - longer lengths and bulk packaging
  - cut lengths and assemblies additional sizes
  - stainless steel fittings (grade 316)
  - 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 102 (LFHU)
- High fatigue life and high abrasion resistant (FPU)
- Halogen, sulphur and phosphorus free
- Compliant to LUL Std 1-085 (LFHU) (Cert No. 297)
- 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   |
|--|--|---|--|---|---|
| <p><b>fixed internal thread nickel plated brass</b></p> <p>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.</p> <p>IP54</p> | <p><b>external thread nickel plated brass</b></p> <p>Multipart compression fitting including elastomeric seal. Can be used for knockouts or threaded entries as fitting rotates until tightened.</p> <p>IP65</p> | <p><b>external thread nickel plated brass</b></p> <p>Multipart compression fitting including elastomeric seal. The external thread swivels about the main body even after tightening.</p> <p>IP65</p> | <p><b>external thread elbow nickel plated brass</b></p> <p>Multipart 90° compression fitting including elastomeric seal.</p> <p>IP65</p> | <p><b>nickel plated brass</b></p> <p>Multi part compression coupler including elastomeric seals to join 2 conduits.</p> <p>IP65</p> | <p><b>insert nickel plated brass</b></p> <p>Single part, machined insert to cap end of conduit.</p> |

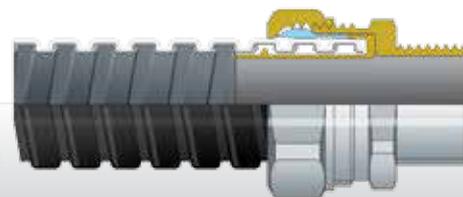
| metric thread part number | metric thread part number | PG thread part number | NPT thread part number | metric thread part number | metric thread part number | part number | part number | nominal size (mm) |
|---------------------------|---------------------------|-----------------------|------------------------|---------------------------|-------------------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

## Standards

## Technical Drawing



BS EN IEC 61386



Note: refer to conduit properties for applicable standards



# LTP, LTPAS, LTPHC, LTPUL & LTPLFH

NEW

AS ANTI-STATIC

EXTRA LOW FIRE HAZARD \*\*

galvanised steel,  
plastic coated liquid tight

## Conduit

## Fittings

### LTP / LTPAS

**Construction:** Galvanised steel, helically wound, flexible conduit with smooth oil resistant and high temperature pvc cover. Colour black. Grey or orange on request.

**Typical Applications:** Machine tools or outdoor installations where liquid tight is a requirement.

**Special Characteristics:** Oil resistant and self extinguishing.

**LTPAS** version as above but with anti-static performance coating (only available in black).

### LTPUL

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

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

**Special Characteristics:** UL listed and CSA approved.

### LTPHC

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

**Typical Applications:** Machine tools or outdoor installations where low or high temperature rating is required. ie. food processing

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

### LTPLFH

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

**Typical Applications:** Rail applications.

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

### C

**external thread nickel plated brass**

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

IP66 IP67 IP68 IP69



| nominal size (mm) | US trade size (") | outside dia (mm) | inside dia (mm) | LTP part number     | reel length (m) | min inside bend radius (mm) | LTPAS part number     | reel length (m) | min inside bend radius (mm) | LTPHC part number     | reel length (m) | min inside bend radius (mm) | LTPUL part number     | reel length (m) | min inside bend radius (mm) | LTPLFH part number | reel length (m) | min inside bend radius (mm) | metric thread part number | for PG thread size | for NPT thread size |
|-------------------|-------------------|------------------|-----------------|---------------------|-----------------|-----------------------------|-----------------------|-----------------|-----------------------------|-----------------------|-----------------|-----------------------------|-----------------------|-----------------|-----------------------------|--------------------|-----------------|-----------------------------|---------------------------|--------------------|---------------------|
| 10                | 3/8               | 11.8             | 7.0             | LTP10B <sup>+</sup> | 50              | 35                          |                       |                 |                             |                       |                 |                             |                       |                 |                             |                    |                 |                             | LTP10-M12-C               | PG7                |                     |
| 10                |                   |                  |                 |                     |                 |                             |                       |                 |                             | LTPHC12B <sup>+</sup> | 25              | 40                          |                       |                 |                             |                    |                 |                             | LTP10-M16-C               |                    |                     |
| 12                | 1/2               | 14.2             | 10.0            | LTP12B              | 25, 50          | 40                          |                       |                 |                             |                       |                 |                             |                       |                 |                             |                    |                 |                             | LTP12-M16-C               | PG9                |                     |
| 16                | 5/8               | 17.8             | 12.6            | LTP16B              | 10, 25, 50      | 45                          | LTPAS16B*             | 25              | 45                          | LTPHC16B              | 25              | 45                          | LTPUL16B              | 25              | 50                          | LTPLFH16B          | 25              | 60                          | LTP16-M16-C               | PG11               |                     |
| 16                |                   |                  |                 |                     |                 |                             |                       |                 |                             |                       |                 |                             |                       |                 |                             |                    |                 |                             | LTP16-M20-C               | PG13               | 050 (1/2")          |
| 20                | 3/4               | 21.1             | 16.0            | LTP20B              | 10, 25, 50      | 65                          | LTPAS20B*             | 25              | 65                          | LTPHC20B              | 25              | 65                          | LTPUL20B              | 25              | 90                          | LTPLFH20B          | 10, 25          | 100                         | LTP20-M20-C               | PG16               | 050 (1/2")          |
| 25                | 1                 | 26.4             | 21.0            | LTP25B              | 10, 25, 50      | 100                         | LTPAS25B*             | 25              | 100                         | LTPHC25B              | 25              | 100                         | LTPUL25B              | 25              | 110                         | LTPLFH25B          | 10, 25          | 130                         | LTP25-M25-C               | PG21               | 075 (3/4")          |
| 32                | 1 1/4             | 33.1             | 26.5            | LTP32B              | 10, 25, 50      | 135                         | LTPAS32B*             | 25              | 135                         | LTPHC32B              | 25              | 135                         | LTPUL32B              | 10, 25          | 140                         | LTPLFH32B          | 10              | 180                         | LTP32-M32-C               | PG29               | 100 (1")            |
| 40                | 1 1/2             | 41.8             | 35.4            | LTP40B              | 10, 25          | 175                         | LTPAS40B*             | 10              | 175                         | LTPHC40B              | 10              | 175                         | LTPUL40B              | 15              | 180                         |                    |                 |                             | LTP40-M40-C               | PG36               | 125 (1 1/4")        |
| 50                | 2                 | 47.9             | 40.4            | LTP50B <sup>+</sup> | 10, 25          | 230                         | LTPAS50B <sup>+</sup> | 10              | 230                         | LTPHC50B <sup>+</sup> | 10              | 230                         | LTPUL50B <sup>+</sup> | 15              | 230                         |                    |                 |                             | LTP50-M50-C               | PG42               | 150 (1 1/2")        |
| 63                | 2 1/2             | 59.7             | 51.6            | LTP63B <sup>+</sup> | 10, 25          | 280                         | LTPAS63B <sup>+</sup> | 10              | 280                         | LTPHC63B <sup>+</sup> | 10              | 280                         | LTPUL63B <sup>+</sup> | 15              | 280                         |                    |                 |                             | LTP63-M63-C               | PG48               | 200 (2")            |

## Ordering Notes

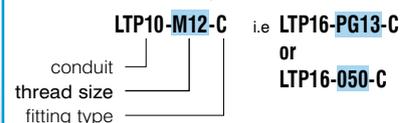
- Add reel length eg: LTP20B-25M for a 25m reel
- For LTP specify colour (B = Black, G = Grey)
- \* Indicates parts made to order on request and may be subject to MOQ and lead time
- + Double interlock section

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

**Note:** Stainless steel fittings also available see page 67

When ordering PG or NPT please see below.

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



# PG & NPT threads not supplied with insulated throats

# properties

- 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 (LTP & LTPAS)
  - 60°C to +150°C (LTPHC)
  - 15°C to +75°C (LTPUL)
  - 25°C to +90°C (LTPLFH)
- Good flexibility
- UV resistant (black) and suitable for external use

- LTPAS has Anti-Static performance coating to EN60079-0
- LTP has Lloyd's Register Type Approval
- LTPUL conduits are UL listed and CSA approved
- Resistant to oils and greases
- EXTRA Low Fire Hazard UL94 V0 for LFH see page 102
- Compliant to LUL Std 1-085 (LTPLFH) Cert No. 2020
- Nickel plated brass or stainless steel fittings available see page 67
- Vibration and shock tested to EN61373 Cat 2
- LTP UV resistant (black & grey) tested to UL (Report No. 13CA50836)

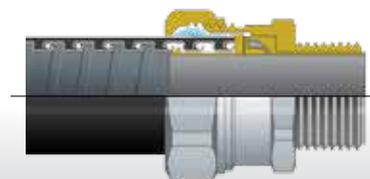


| C-S   | C90  | C45  | coupler   | RSW <small>NEW</small>  | E   | FCC  |                   |
|---|--|--|---|---|---|--|-------------------|
| <p><b>swivel external thread nickel plated brass</b></p> <p>Compression fitting for knockout or threaded entries.</p> <p>Multipart compression fitting including elastomeric seal. The external thread swivels about the main body even after tightening.</p> | <p><b>external thread nickel plated brass</b></p> <p>90° multipart compression fitting including elastomeric seal. Can be used for knockout.</p> | <p><b>external thread nickel plated brass</b></p> <p>45° multipart compression fitting including elastomeric seal. Can be used for knockout.</p> | <p><b>nickel plated brass</b></p> <p>Multi part compression coupler including elastomeric seals to join 2 conduits.</p> | <p><b>Polyester Elastomer, Retained face sealing washers</b></p> <p>Retained sealing washer to maintain IP rating of fitting to adjacent equipment.</p> | <p><b>insert nickel plated brass</b></p> <p>Single part, machined insert to cap end of conduit.</p> | <p><b>plated steel P clip with pvc liner stainless steel P clips</b></p> <p>P clip to support conduit. Also available in SS see page 87.</p> |                   |
| <p>IP66 IP67</p> <p>IP68 IP69</p>   | <p>IP66 IP67</p> <p>IP68 IP69</p>  | <p>IP66 IP67</p> <p>IP68 IP69</p>  | <p>IP66 IP67</p> <p>IP68 IP69</p>   |   |   |  |                   |
|   |  |  |   |   |   |  |                   |
| metric thread part number   | metric thread part number  | metric thread part number  | part number   | metric thread part number   | part number   | plated steel part number   | nominal size (mm) |
| LTP12-M16-S   | LTP12-M16-C90  |  |   |   | LTP10-E   | FCC10  | 10                |
| LTP16-M16-S   | LTP16-M16-C90  |  |   |   | LTP10-E   | FCC10  | 10                |
| LTP16-M20-S   | LTP16-M20-C90  | LTP16-M20-C45  | LTP16-LTP16   | RSW16   | LTP12-E   | FCC12  | 12                |
| LTP20-M20-S   | LTP20-M20-C90  | LTP20-M20-C45  | LTP20-LTP20   | RSW20   | LTP16-E   | FCC16  | 16                |
| LTP25-M25-S   | LTP25-M25-C90  | LTP25-M25-C45  | LTP25-LTP25   | RSW25   | LTP16-E   | FCC16  | 16                |
| LTP32-M32-S   | LTP32-M32-C90  | LTP32-M32-C45  | LTP32-LTP32   | RSW32   | LTP20-E   | FCC20  | 20                |
| LTP40-M40-S   | LTP40-M40-C90  | LTP40-M40-C45  |   | RSW40   | LTP25-E   | FCC25  | 25                |
| LTP50-M50-S   | LTP50-M50-C90  | LTP50-M50-C45  |   | RSW50   | LTP32-E   | FCC32  | 32                |
|   | LTP63-M63-C90  | LTP63-M63-C45  |   | RSW63*  | LTP40-E   | FCC40  | 40                |
|   |  |  |   |   | LTP50-E   | FCC50  | 50                |
|   |  |  |   |   | LTP63-E   | FCC63  | 63                |

## Standards



## Technical Drawing



Note: refer to conduit properties for applicable standards



# Specialist liquid tight products

**LTPSS** system stainless steel  
pvc coated liquid tight

**LTPPU/LTPPUAS\*\*** system  
galvanised steel, polyurethane  
coated liquid tight



## Conduit

## Fittings

### LTPSS

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

**Typical Applications:** Food processing machinery or outdoor applications where high corrosion resistance and liquid tight are a requirement.

**Special Characteristics:** Enhanced corrosion resistance performance.

### LTPPU/ LTPPUAS

**Construction:** Galvanised steel, helically wound, flexible steel conduit with smooth halogen free polyurethane cover. Colour black (B) and blue (BU). (RAL 5015)

**Typical Applications:** Where low temperature performance, high abrasion, high fatigue life and liquid tight are a requirement.

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

**LTPPUAS** version as above but with anti-static performance coating.

### 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.

### 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.

### C

**external thread  
nickel plated brass**

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



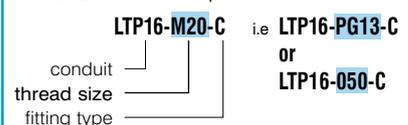
| nominal size (mm) | US trade size (") | outside dia (mm) | inside dia (mm) | LTPSS part number | reel length (m) | min inside bend radius (mm) | LTPPU part number | reel length (m) | min inside bend radius (mm) | LTPPUAS part number | reel length (m) | min inside bend radius (mm) | LTBRDP part number | reel length (m) | min inside bend radius (mm) | LTBRDLFH part number | reel length (m) | min inside bend radius (mm) | metric thread part number | for PG thread size | for NPT thread size |
|-------------------|-------------------|------------------|-----------------|-------------------|-----------------|-----------------------------|-------------------|-----------------|-----------------------------|---------------------|-----------------|-----------------------------|--------------------|-----------------|-----------------------------|----------------------|-----------------|-----------------------------|---------------------------|--------------------|---------------------|
| 10                | 3/8               | 11.8             | 7.0             | LTPSS10*          | 25              | 35                          | LTPPU10*          | 25              | 35                          |                     |                 |                             |                    |                 |                             |                      |                 |                             | LTP10-M12-C               | PG7                |                     |
| 10                |                   |                  |                 |                   |                 |                             |                   |                 |                             |                     |                 |                             |                    |                 |                             |                      |                 |                             | LTP10-M16-C               |                    |                     |
| 12                | 1/2               | 14.2             | 10.0            | LTPSS12*          | 25              | 40                          | LTPPU12*          | 25              | 40                          |                     |                 |                             |                    |                 |                             |                      |                 |                             | LTP12-M16-C               | PG9                |                     |
| 16                | 5/8               | 17.8             | 12.6            | LTPSS16*          | 25              | 45                          | LTPPU16*          | 25              | 45                          | LTPPUAS16*          | 25              | 45                          |                    |                 |                             |                      |                 |                             | LTP16-M16-C               | PG11               |                     |
| 16                |                   |                  |                 |                   |                 |                             |                   |                 |                             |                     |                 |                             |                    |                 |                             |                      |                 |                             | LTP16-M20-C               | PG13               | 050 (1/2")          |
| 20                | 3/4               | 21.1             | 16.0            | LTPSS20           | 25              | 65                          | LTPPU20*          | 25              | 65                          | LTPPUAS20*          | 25              | 65                          | LTBRDP20B          | 25              | 65                          | LTBRDLFH20B          | 25              | 130                         | LTP20-M20-C               | PG16               | 050 (1/2")          |
| 25                | 1                 | 26.4             | 21.0            | LTPSS25           | 25              | 100                         | LTPPU25*          | 25              | 100                         | LTPPUAS25*          | 25              | 100                         | LTBRDP25B          | 25              | 100                         | LTBRDLFH25B          | 25              | 200                         | LTP25-M25-C               | PG21               | 075 (3/4")          |
| 32                | 1 1/4             | 33.1             | 26.5            | LTPSS32           | 10              | 135                         | LTPPU32*          | 25              | 135                         | LTPPUAS32*          | 25              | 135                         | LTBRDP32B          | 25              | 120                         | LTBRDLFH32B*         | 25              | 270                         | LTP32-M32-C               | PG29               | 100 (1")            |
| 40                | 1 1/2             | 41.8             | 35.4            | LTPSS40           | 10              | 175                         | LTPPU40*          | 10              | 175                         | LTPPUAS40*          | 10              | 175                         | LTBRDP40B          | 10              | 140                         |                      |                 | LTP40-M40-C                 | PG36                      | 125 (1 1/4")       |                     |
| 50                | 2                 | 47.9             | 40.4            | LTPSS50           | 10              | 230                         | LTPPU50*+10       | 10              | 230                         | LTPPUAS50*+10       | 10              | 230                         | LTBRDP50B+10       | 10              | 180                         |                      |                 | LTP50-M50-C                 | PG42                      | 150 (1 1/2")       |                     |
| 63                | 2 1/2             | 59.7             | 51.6            | LTPSS63           | 10              | 280                         | LTPPU63*+10       | 10              | 280                         | LTPPUAS63*+10       | 10              | 280                         | LTBRDP63B+10       | 10              |                             |                      |                 | LTP63-M63-C                 | PG48                      | 200 (2")           |                     |

## Ordering Notes

- Add reel length eg: LTPSS20B-25M for a 25m reel
- Stainless Steel LTP fittings can be used with any of the conduits shown on page 26
- Add colour for LTPPU ie B=Black, BU=Blue eg. LTPPU20B is Black
- \* Indicates parts made to order on request and may be subject to MOQ and lead time
- + Double interlock section
- # PG & NPT threads not supplied with insulated throats
- **Available on request:**
  - longer lengths and bulk packaging
  - cut lengths and assemblies
  - other colours
  - 45 degree stainless steel elbows
  - full copies of independent test reports confirming screening effectiveness

When ordering PG or NPT please see below.

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



# LTBRDP system

galv steel, galv steel braid,  
pvc coated liquid tight

NEW



# properties

- 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 (LTPSS & LTBRDP)
  - 20 °C to +90 °C (LTBRDLFH)
  - 40 °C to +100 °C (LTPPU & LTPPUAS)
- UV resistant and suitable for external use
- High abrasion, high fatigue life (LTPPU)
- Vibration and shock tested to EN61373 Cat 2
- Provides EMC screening (LTBRDP & LTBRDLFH)
- Compliant to LUL Std 1-085 (LTBRDLFH) (Cert No. 658)
- LTPPUAS has Anti-Static performance coating to EN60079-0

# LTBRDLFH system

galv steel, galv steel braid,  
LFH coated liquid tight

NEW



## C-SS

### external thread stainless steel

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

IP66 IP67 IP68 IP69

## C-90-SS

### external thread stainless steel (316)

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

IP66 IP67 IP68 IP69

## LOCKNUTS

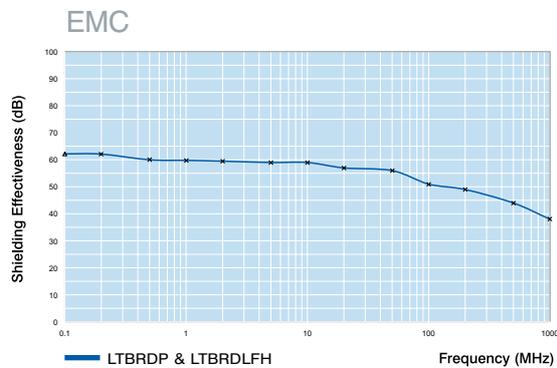
### stainless steel (316) locknuts

Hexagonal locknut to secure fitting.

## FCC-SS

### stainless steel (316) P clips

P clip to support conduit.



metric thread part number



metric thread part number



part number



part number

| C-SS          |  | C-90-SS         |  | LOCKNUTS |  | FCC-SS    |  | nominal size (mm) |
|---------------|--|-----------------|--|----------|--|-----------|--|-------------------|
| LTP16-M16-CSS |  |                 |  | SS-M16   |  | FCC16-SS  |  | 10                |
| LTP16-M20-CSS |  | LTP16-M20-CSS90 |  | SS-M20   |  | FCC16-SS  |  | 10                |
| LTP20-M20-CSS |  | LTP20-M20-CSS90 |  | SS-M20   |  | FCC20-SS  |  | 12                |
| LTP25-M25-CSS |  | LTP25-M25-CSS90 |  | SS-M25   |  | FCC25-SS  |  | 16                |
| LTP32-M32-CSS |  | LTP32-M32-CSS90 |  | SS-M32   |  | FCC32-SS  |  | 16                |
| LTP40-M40-CSS |  |                 |  | SS-M40   |  | FCC40-SS  |  | 20                |
| LTP50-M50-CSS |  |                 |  | SS-M50   |  | FCC50-SS* |  | 25                |
|               |  |                 |  |          |  |           |  | 32                |
|               |  |                 |  |          |  |           |  | 40                |
|               |  |                 |  |          |  |           |  | 50                |
|               |  |                 |  |          |  |           |  | 63                |

## Standards



BS EN IEC 61386



Note: refer to conduit properties for applicable standards

## Technical Drawing



LTPPU, LTPPUAS



LTBRDP & LTBRDLFH

# Hazardous area liquid tight conduit solutions

## EXD Conduit Glands

NEW



### Flameproof EXD Barrier gland properties

- IP Rating: IP66 + IP67 + IP68 (5 bar) + IP69
- Material: Nickel Plated Brass or Stainless Steel (316)
- Suitable for threaded entries
- Operating Temperature of gland -60°C to +85°C
- High mechanical strength
- Can be used with individual cores or oversheathed cable
- Can be used in Zone 1, Zone 2, Zone 21 and Zone 22 Hazardous areas when used with Flexicon's Liquid Tight range of flexible conduits
- ATEX and IECEx Ex d (Flameproof)
- ATEX and IECEx Ex e (Increased Safety)
- ATEX and IECEx Ex ta (Dust Ignition Protection)
- LUL Cert No. 2624

### Fittings

#### Standards



#### Hazardous Area Approvals

| Group I  | ATEX APPROVAL to EN60079-0 2009   | Sira Certificate no: | Sira 10ATEX1172X   | Ex d Flameproof           | Ex d I Mb          | EN 60079-1 2007   | Ex e Increased Safety             | Ex e I Mb            | EN 60079-7 2007    | Ex        |
|----------|-----------------------------------|----------------------|--------------------|---------------------------|--------------------|-------------------|-----------------------------------|----------------------|--------------------|-----------|
| Group I  | IECEx APPROVAL to IEC60079-0 2007 | Sira Certificate no: | IECEx SIR 10.0094X | Ex d Flameproof           | Ex d I Mb          | IEC 60079-1 2007  | Ex e Increased Safety             | Ex e I Mb            | IEC 60079-7 2006-7 | IEC IECEx |
|          | ATEX APPROVAL to EN60079-0 2009   | Sira Certificate no: | Sira 10ATEX1172X   | Ex d Flameproof           | Ex d II C Gb       | EN 60079-1 2007   | Ex e Increased Safety             | Ex e II C Gb         | EN 60079-7 2007    | Ex        |
| Group II | ATEX APPROVAL to EN60079-0 2009   | Sira Certificate no: | Sira 10ATEX1172X   | Ex ta Dust Ignition Proof | Ex ta IIIC DA IP6X | IEC 60079-31 2008 | IECEx APPROVAL to IEC60079-0 2007 | Sira Certificate no: | IECEx SIR 10.0094X | IEC IECEx |
|          | ATEX APPROVAL to EN60079-0 2009   | Sira Certificate no: | Sira 10ATEX1172X   | Ex d Flameproof           | Ex d II C Gb       | EN 60079-1 2007   | Ex e Increased Safety             | Ex e II C Gb         | IEC 60079-7 2006-7 | IEC IECEx |
|          | ATEX APPROVAL to EN60079-0 2009   | Sira Certificate no: | Sira 10ATEX1172X   | Ex ta Dust Ignition Proof | Ex ta IIIC DA IP6X | IEC 60079-31 2008 | GOST APPROVAL no.                 | POCC GB.HO06.B00207  | PG                 |           |

### LTP - EXD

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

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

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



IP66 IP67 IP68 IP69

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

### LTP - EXD - SS

NEW

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

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

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



IP66 IP67 IP68 IP69

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

Used with the following conduits:- as featured on pages 64 & 66



LTP / LTPAS



LTPHC

LTPLFH



LTPPU / LTPPUAS



## properties



- IP Rating: IP66 + IP67 + IP68 (5 bar)
- Material: Nickel Plated Brass
- Suitable for threaded entries
- Operating Temperature of gland -60°C to +85°C
- High mechanical strength
- Can be used with individual cores or oversheathed cable
- Can be used in Zone 1, Zone 2, Zone 21 and Zone 22 Hazardous areas when used with Flexicon's Liquid Tight range of flexible conduits
- ATEX and IECEx Ex d (Flameproof)
- ATEX and IECEx Ex e (Increased Safety)
- ATEX and IECEx Ex ta (Dust Ignition Protection)



## Hazardous Area Approvals

|  |                            |   |
|--|----------------------------|---|
| <b>ATEX APPROVAL to EN60079-0 2006</b>   |                            | Sira Certificate no: SIRA 13ATEX1072X   |
| Ex d Flameproof                          | Ex d II C Gb               |   |
| Ex e Increased Safety                    | Ex e II C Gb               |   |
| Ex ta Dust Ignition Proof                | Ex ta IIIC DA IP6X         |   |
| <b>IECEx APPROVAL to IEC60079-0 2004</b> |                            | Sira Certificate no: IEC Ex SIR13.0027X |
| Ex d Flameproof                          | Ex d II C Gb               |   |
| Ex e Increased Safety                    | Ex e II C Gb               |   |
| Ex ta Dust Ignition Proof                | Ex ta IIIC DA IP6X         |   |
| <b>GOST APPROVAL no.</b>                 | <b>POCC GB.HO06.B00207</b> |   |



### LTP - EXD - 90

NEW

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

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



IP66 IP67 IP68

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

### LTP - EXD - 45

NEW

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

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



IP66 IP67 IP68

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



LTPSS



LTPUL



LTBRDP



LTBRDLFH



# Hazardous area liquid tight conduit solutions

## EXD Braided Conduit Glands

NEW

AS  
ANTI-STATIC

### properties

- IP Rating: IP66 + IP67 + IP68 (5 bar) + IP69
- Material: Nickel Plated Brass
- Suitable for threaded entries
- Operating Temperature of gland -60 °C to +85 °C
- High mechanical strength
- Can be used with individual cores or oversheathed cable
- Used with overbraided conduit system LTPBRD to achieve EMC screening
- Can be used in Zone 1, Zone 2, Zone 21 and Zone 22 Hazardous areas when used with Flexicon's Liquid Tight range of flexible conduits
- ATEX and IECEx Ex d (Flameproof)
- ATEX and IECEx Ex e (Increased Safety)
- ATEX and IECEx Ex ta (Dust Ignition Protection)

### Fittings

### Accessories

### Hazardous Area Approvals

|          |  |                             |                           |  |
|----------|--|-----------------------------|---------------------------|--|
| Group I  | <b>ATEX APPROVAL to EN60079-0 2009</b>   | <b>Sira Certificate no:</b> | <b>Sira 10ATEX1172X</b>   |  |
|          | Ex d Flameproof                          | Ex d I Mb                   | EN 60079-1 2007           |  |
|          | Ex e Increased Safety                    | Ex e I Mb                   | EN 60079-7 2007           |  |
| Group II | <b>IECEx APPROVAL to IEC60079-0 2007</b> | <b>Sira Certificate no:</b> | <b>IECEx SIR 10.0094X</b> |  |
|          | Ex d Flameproof                          | Ex d I Mb                   | IEC 60079-1 2007          |  |
|          | Ex e Increased Safety                    | Ex e I Mb                   | IEC 60079-7 2006-7        |  |

|                       |  |                             |                           |  |
|-----------------------|--|-----------------------------|---------------------------|--|
| Group I               | <b>ATEX APPROVAL to EN60079-0 2009</b>   | <b>Sira Certificate no:</b> | <b>Sira 10ATEX1172X</b>   |  |
|                       | Ex d Flameproof                          | Ex d II C Gb                | EN 60079-1 2007           |  |
|                       | Ex e Increased Safety                    | Ex e II C Gb                | EN 60079-7 2007           |  |
| Group II              | <b>ATEX APPROVAL to EN60079-0 2009</b>   | <b>Sira Certificate no:</b> | <b>Sira 10ATEX1172X</b>   |  |
|                       | Ex ta Dust Ignition Proof                | Ex ta IIIC DA IP6X          | IEC 60079-31 2008         |  |
|                       | <b>IECEx APPROVAL to IEC60079-0 2007</b> | <b>Sira Certificate no:</b> | <b>IECEx SIR 10.0094X</b> |  |
| Ex d Flameproof       | Ex d II C Gb                             | IEC 60079-1 2007            |                           |  |
| Ex e Increased Safety | Ex e II C Gb                             | IEC 60079-7 2006-7          |                           |  |
|                       | Ex ta Dust Ignition Proof                | Ex ta IIIC DA IP6X          | IEC 60079-31 2008         |  |
| GOST APPROVAL no.     | POCC GB.HO06.B00207                      |                             |                           |  |

With a comprehensive range of EXD accessories we can offer customers choice when it comes to specifying hazardous area approved equipment. Our products are manufactured in the UK and have been tested to the latest ATEX & IECEx directives and standards. The approvals are marked on the body of the product allowing visibility once installed.

### LTPB - EXD

NEW

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

**Typical Applications:** Flameproof barrier gland offering a high specification, high quality solution for Ex d, Ex e and Ex ta applications. For use with external braided conduit systems where high mechanical protection and / or emc screening is required. IP rating: IP66 + IP67 + IP68 (5 bar) + IP69



IP66 IP67 IP68 IP69

| To fit nominal size (mm) | metric thread part number | NPT thread part number |
|--------------------------|---------------------------|------------------------|
| 20                       | LTPB20-M20-EXD            | LTPB20-050-EXD         |
| 25                       | LTPB25-M25-EXD            | LTPB25-075-EXD         |
| 32                       | LTPB32-M32-EXD            | LTPB32-100-EXD         |
| 40                       | LTPB40-M40-EXD            | LTPB40-125-EXD         |
| 50                       | LTPB50-M50-EXD            | LTPB50-150-EXD         |

Please note that some of the above products are made to order on request and may be subject to MOQ and lead time. Contact us for further details.



See page 72 for more information.

### Used with



LTPBRD

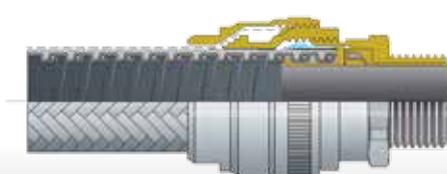
See page 80 for details.

### Standards

BS EN IEC 61386



### Technical Drawing



LTPB - EXD

# Hazardous area liquid tight conduit solutions

## EXE - Increased Safety and Dust Ignition Proof properties

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

### Hazardous Area Approvals

|                           |  |                     |   |  |
|---------------------------|--|---------------------|---|--|
| Group II                  | <b>ATEX APPROVAL to EN60079-0 2009</b>   |                     | <b>Intertek Certificate no:</b> ITS 14ATEX379584  |  |
|                           | Ex e Increased Safety                    | Ex e II Gb          | EN 60079-7 2007                                   |  |
|                           | Ex tb Dust Ignition Proof                | Ex tb III C DA IP6X | EN 60079-31 2009                                  |  |
|                           | <b>IECEx APPROVAL to IEC80079-0 2007</b> |                     | <b>Intertek Certificate no:</b> IECEx ITS 14.005U |  |
| Ex e Increased Safety     | Ex e II Gb                               | IEC 60079-7 2006    |   |  |
| Ex tb Dust Ignition Proof | Ex tb III C DA IP6X                      | IEC 60079-31 2008   |   |  |



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

| LTP - EXE <span style="float: right;">NEW</span>   |                           |                |                        | LTP - EXE - 90 <span style="float: right;">NEW</span>   |  |                           |  | LTP - EXE - 45 <span style="float: right;">NEW</span>   |  |  |  |
|--|---------------------------|----------------|------------------------|---|--|---------------------------|--|---|--|--|--|
| <b>external thread nickel plated brass</b><br>Multipart compression fitting including elastomeric seal. Can be used for knockout or threaded entries as fitting rotates until tightened. |                           |                |                        | <b>external thread nickel plated brass</b><br>90° multipart compression fitting including elastomeric seal. Can be used for knockout. |  |                           |  | <b>external thread nickel plated brass</b><br>45° multipart compression fitting including elastomeric seal. Can be used for knockout. |  |  |  |
|  |                           |                |                        |   |  |                           |  |   |  |  |  |
| To fit nominal size (mm)   | metric thread part number | PG thread      | NPT thread part number | metric thread part number   |  | metric thread part number |  |   |  |  |  |
| 16   | LTP16-M16-EXE             | LTP16-PG11-EXE | LTP16-050-EXE (1/2")   | LTP16-M16-EXE-90  |  | LTP16-M16-EXE-45          |  |   |  |  |  |
| 16   | LTP16-M20-EXE             | LTP16-PG13-EXE |                        | LTP16-M20-EXE-90  |  | LTP16-M20-EXE-45          |  |   |  |  |  |
| 20   | LTP20-M20-EXE             | LTP20-PG16-EXE | LTP20-050-EXE (1/2")   | LTP20-M20-EXE-90  |  | LTP20-M20-EXE-45          |  |   |  |  |  |
| 25   | LTP25-M40-EXE             | LTP25-PG21-EXE | LTP25-075-EXE (3/4")   | LTP25-M25-EXE-90  |  | LTP25-M25-EXE-45          |  |   |  |  |  |
| 32   | LTP32-M32-EXE             | LTP32-PG29-EXE | LTP32-100-EXE (1")     | LTP32-M32-EXE-90  |  | LTP32-M32-EXE-45          |  |   |  |  |  |
| 40   | LTP40-M40-EXE             | LTP40-PG36-EXE | LTP40-125-EXE (1 1/4") | LTP40-M40-EXE-90  |  | LTP40-M40-EXE-45          |  |   |  |  |  |
| 50   | LTP50-M50-EXE             | LTP50-PG42-EXE | LTP50-150-EXE (1 1/2") | LTP50-M50-EXE-90  |  | LTP50-M50-EXE-45          |  |   |  |  |  |
| 63   | LTP63-M63-EXE             | LTP63-PG48-EXE | LTP63-200-EXE (2")     | LTP63-M63-EXE-90  |  | LTP63-M63-EXE-45          |  |   |  |  |  |

**Used with**

LTPAS LTPPU LTBDFH  
or any of the LTP conduit types, see page 64

**Standards**

BS EN IEC 61386

**Technical Drawing**

LTP - EXE



# Flexicon EXD Accessories Range

properties

NEW

- ATEX Certification Detail - SIRA01ATEX1284U, SIRA02ATEX1003X  
IEC Ex Certification Detail: IEC Ex SIR07.0052X
- Continuous Operating Temperature: -60°C to +200°C
- Ingress Protection Rating: Up to IP68 when fitted with a suitable Sealing Washer
- Materials: Nickel Plated Brass
- Optional Accessories: Locknut, Serrated Washer, Earth Tag, Sealing Washer. See Page 86

## Accessories

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

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

| Technical Data                     |  |
|------------------------------------|--|
| Design Specification               | EN 50262:1989, BS 6121:Part 1:1989   |
| ATEX Code of Protection Category   | ATEX  II 2 GD Ex d IIC & Ex e II - Component & Equipment, Zone 1, Zone 2, Zone 21, & Zone 22 - Gas Groups IIA, IIB, IIC, ATEX IM2 Ex d I, Ex e I |
| ATEX Compliance Standards          | EN 60079-0:2006, EN 60079-1:2004, EN 60079-7:2007, EN 50281-1-1:1998   |
| IEC Ex Code of Protection Category | Ex d I, Ex e I, Ex d IIC, Ex e II, Ex tD A21 IP6X  |
| IEC Ex Compliance Standards        | IEC 60079-0:2004, IEC 60079-1:2003, IEC 60079-7:2006-07, IEC 61241-0:2004, IEC 61241-1:2004  |

## EXD Thread Converters

NEW



Our thread converters are Nickel Plated Brass as standard.

Internal Metric to External Metric

| Male Thread - External | Female Thread - Internal |                      |                      |                      |                      |                      |
|------------------------|--------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|                        | M16                      | M20                  | M25                  | M32                  | M40                  | M50                  |
| M16                    |                          | <b>B-M16-M20-EXD</b> |                      |                      |                      |                      |
| M20                    | <b>B-M20-M16-EXD</b>     |                      | <b>B-M20-M25-EXD</b> |                      |                      |                      |
| M25                    |                          | <b>B-M25-M20-EXD</b> |                      | <b>B-M25-M32-EXD</b> |                      |                      |
| M32                    |                          |                      | <b>B-M32-M25-EXD</b> |                      | <b>B-M32-M40-EXD</b> |                      |
| M40                    |                          |                      |                      | <b>B-M40-M32-EXD</b> |                      |                      |
| M50                    |                          |                      |                      | <b>B-M50-M32-EXD</b> | <b>B-M50-M40-EXD</b> |                      |
| M63                    |                          |                      |                      |                      | <b>B-M63-M40-EXD</b> | <b>B-M63-M50-EXD</b> |

Internal Metric to External NPT

| Male Thread - External | Female Thread - Internal |                      |                      |                      |     |     |
|------------------------|--------------------------|----------------------|----------------------|----------------------|-----|-----|
|                        | M16                      | M20                  | M25                  | M32                  | M40 | M50 |
| 1/2"                   |                          | <b>B-050-M20-EXD</b> |                      |                      |     |     |
| 3/4"                   |                          | <b>B-075-M20-EXD</b> | <b>B-075-M25-EXD</b> |                      |     |     |
| 1"                     |                          |                      |                      | <b>B-100-M32-EXD</b> |     |     |

To obtain Adaptor & Reducer nominal dimensions, follow the steps below:-

**Step 1** - Select male thread by consulting the left hand column of the table.

**Step 2** - Select the female thread size by consulting column headings at the top of tables, and by cross referencing this with the selection in step 1.

Please note that the data in the tables above includes Adaptors and Reducers that are certified for use in Hazardous Areas.

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

## Allen Key

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

| Technical Data - Standard & Dome Head |  |
|---------------------------------------|--|
| Design Specification                  | BS 6121:Part 1:1989, EN 50262:1999   |
| ATEX Code of Protection Category      | ATEX  IM2 Ex d I, Ex e I;<br>ATEX  II 2 Ex d IIC, Ex e II |
| ATEX Compliance Standards             | EN 60079-0, EN 60079-7, EN 61241-0,<br>EN 61241-1  |
| IEC Ex Code of Protection Category    | Ex d I, Ex e I, Ex d IIC, Ex e II,<br>Ex tD A21 IP6X    |
| IEC Ex Compliance Standards           | IEC 60079-0:2004, IEC 60079-1:2003,<br>IEC 60079-7:2006-07, IEC 61241-0:2004,<br>IEC 61241-1:2004  |

## Hex Head

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

| Technical Data - Hex Head          |   |
|------------------------------------|---|
| ATEX Code of Protection Category   | ATEX  II 2 GD Ex d IIC & Ex e II -<br>Component & Equipment, Zone 1,<br>Zone 2, Zone 21, & Zone 22 -<br>Gas Groups IIA, IIB, IIC, ATEX <br>IM2 Ex d I, Ex e I |
| ATEX Compliance Standards          | EN 60079-0:2006, EN 60079-1:2004,<br>EN 60079-7:2007, EN 50281-1-1:1998   |
| IEC Ex Code of Protection Category | Ex d I / Ex e I / Ex d IIC / Ex e II,<br>Ex tD A21 IP6X    |
| IEC Ex Compliance Standards        | IEC 60079-0:2004,<br>IEC 60079-1:2003, IEC 60079-7:2006-07, IEC<br>61241-0:2004, IEC 61241-1:2004   |

## EXD Stopping Plugs

NEW



Our stopping plugs are Nickel Plated Brass as standard.



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

# FL system galvanised steel pliable



# FLP system galvanised steel pvc coated, pliable



## Conduit

## Fittings

## Conduit

## Fittings

### FL

**Construction:** Corrugated galvanised steel with kraft paper lining. Colour, zinc self colour.

**Typical Applications:** Any installation where there is no movement.

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

### C Type

**external thread nickel plated brass**

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

IP40



### FLP

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

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

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

### C Type

**external thread nickel plated brass**

Multipart compression fitting including serrated elastomeric seal. Can be used for knockout or threaded entries as fitting rotates until tightened. Provides EMC screening once outer plastic sheath is trimmed from end of conduit (see diagram on page 99).

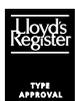
IP66

IP67



| nominal size (mm) | FL part number | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) | metric thread part number | nominal size (mm) | FLP part number | reel length (m) | min inside bend radius (mm) | outside dia (mm) | inside dia (mm) | metric thread part number |
|-------------------|----------------|-----------------|------------------|-----------------|-----------------------------|---------------------------|-------------------|-----------------|-----------------|-----------------------------|------------------|-----------------|---------------------------|
| 16                |                |                 |                  |                 |                             |                           | 16                | FLP16B          | 25              | 35                          | 17.8             | 11.6            | FLP16-M16-C               |
| 20                | FL20           | 25              | 19.0             | 14.6            | 35                          | FL20-M20-C                | 20                | FLP20B          | 10,25,50        | 35                          | 20.9             | 14.6            | FLP20-M20-C               |
| 25                | FL25           | 25              | 25.1             | 20.4            | 45                          | FL25-M25-C                | 25                | FLP25B          | 10,25,50        | 45                          | 27.3             | 20.4            | FLP25-M25-C               |
| 32                |                |                 |                  |                 |                             |                           | 32                | FLP32B          | 10,25           | 55                          | 34.0             | 26.7            | FLP32-M32-C               |
| 40                |                |                 |                  |                 |                             |                           | 40                | FLP40B*         | 10, 25          | 70                          | 40.4             | 32.8            | (use C-HS fitting)        |
| 50                |                |                 |                  |                 |                             |                           | 50                | FLP50B*         | 10, 20          | 110                         | 53.1             | 45.3            | (use C-HS fitting)        |

## Standards

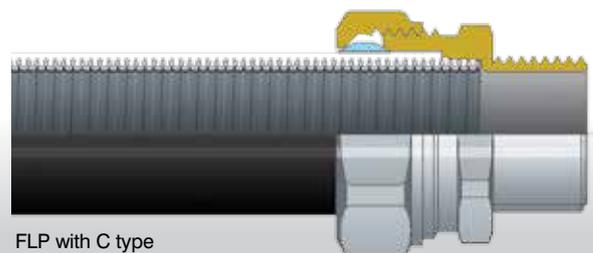


BS EN IEC 61386



Note: refer to conduit properties for applicable standards

## Technical Drawing



FLP with C type

# Flexicon Ultrascreen™

NEW

## LFHP system

galvanised steel extra LFH coated, pliable



### Conduit

### Fittings

#### LFHP

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

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

- Pull off strength: Type C-HS 100kg (20mm)
- Extra low fire hazard, oil resistant and UV resistant
- Vibration and shock tested to EN61373 Cat 2
- High compression strength 570kg/100mm
- Provides EMC screening
- IP rating: IP66 + IP67 + IP68 (5 bar) + IP69
- Can be formed into shape requiring fewer clips
- Temperature range -25°C to +90°C
- Smooth, wipe clean outer cover
- Does not wrinkle when bent
- Lloyd's Register Type Approved
- LUL (Cert No. 297)
- NCAGE No. U5256

#### C-HS

**external thread brass - high specification**

Multipart compression fitting including serrated elastomeric seal. Can be used for knockout or threaded entries as fitting rotates until tightened. Provides EMC screening once outer plastic sheath is trimmed from end of conduit (see diagram on page 99).

IP66 IP67 IP68 IP69

#### F-HS

**internal thread brass - high specification**

Multipart compression fitting including serrated elastomeric seal. Provides EMC screening once outer plastic sheath is trimmed from end of conduit (see diagram on page 99).

IP66 IP67 IP68 IP69

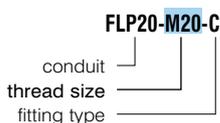


| nominal size (mm) | LFHP part number | reel length (m) | min inside bend radius (mm) | outside dia (mm) | inside dia (mm) | metric thread part number | metric thread part number |
|-------------------|------------------|-----------------|-----------------------------|------------------|-----------------|---------------------------|---------------------------|
| 16                | LFHP16B          | 25              | 40                          | 17.8             | 11.6            | FLP16-M16-C-HS            | FLP16-M16-F-HS            |
| 20                | LFHP20B          | 25              | 40                          | 20.9             | 14.6            | FLP20-M20-C-HS            | FLP20-M20-F-HS            |
| 25                | LFHP25B          | 25              | 55                          | 27.3             | 20.4            | FLP25-M25-C-HS            | FLP25-M25-F-HS            |
| 32                | LFHP32B          | 25              | 65                          | 34.0             | 26.7            | FLP32-M32-C-HS            | FLP32-M32-F-HS            |
| 40                | LFHP40B*         | 25              | 85                          | 40.4             | 32.8            | FLP40-M40-C-HS*           | FLP40-M40-F-HS*           |
| 50                | LFHP50B*         | 25              | 130                         | 53.1             | 45.3            | FLP50-M50-C-HS*           | FLP50-M50-F-HS*           |

### Ordering Notes

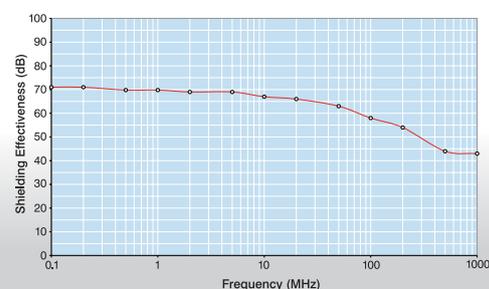
- Add reel length eg: FLP20B-25M for 25m reel
- **Available on request:**
  - longer lengths
  - cut lengths and assemblies
  - additional sizes
  - full copies of independent test report confirming screening effectiveness

#### How to read the fittings code



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

### EMC Screening Performance





**FSB system** galvanised steel core, pvc coated, galvanised steel overbraid



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



Conduit

Fittings

**FSB**

**Construction:** Galvanised steel, helically wound, flexible conduit with pvc coating and galvanised steel overbraid. Colour zinc, self colour.

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

**LFHUBRD**

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

**Typical Applications:** Metro rail stations where LFH, EMC screening and anti-vandal properties are required. Compliant to LUL std 1-085 (Cert No.297).

**M**

**fixed external thread nickel plated brass**

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

IP54



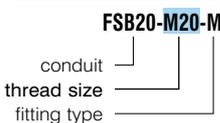
| nominal size (mm) | FSB part number |           | reel length (m) | outside dia (mm) | inside dia (mm) | min. inside bend radius (mm) |
|-------------------|-----------------|-----------|-----------------|------------------|-----------------|------------------------------|
|                   | FSB             | LFHUBRD   |                 |                  |                 |                              |
| 12                | FSB12           |           | 25              | 15.2             | 10.2            | 30                           |
| 16                | FSB16           |           | 25              | 18.2             | 13.0            | 40                           |
| 20                | FSB20           | LFHUBRD20 | 25              | 22.7             | 16.9            | 45                           |
| 25                | FSB25           | LFHUBRD25 | 25              | 27.2             | 21.1            | 55                           |
| 32                | FSB32           | LFHUBRD32 | 25              | 35.2             | 28.1            | 70                           |
| 40                | FSB40           | LFHUBRD40 | 10              | 45.7             | 37.6            | 80                           |
| 50                | FSB50           |           | 10              | 57.7             | 48.4            | 90                           |

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

Ordering Notes

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

How to read the fittings code



Standards



BS EN IEC 61386



Note: refer to conduit properties for applicable standards

# properties

- High mechanical strength
- Tensile strength with standard fittings 120kg for 20mm size
- Tensile strength with C type fittings 300kg for 20mm size
- Highly flexible
- IP rating: IP54 for standard fittings, IP65 for C type fittings
- High abrasion resistance
- Resists hot metal swarf and splashes
- Provides EMC screening
- Temperature range
  - 15°C to +70°C (FSB)
  - 20°C to +90°C (LFHUBRD)
- LFHUBRD is extra low fire hazard
- Compliant to LUL Std 1-085 (LFHUBRD) (Cert No. 297)
- Nickel plated brass fittings
- Vibration and shock tested to EN61373 Cat 2



**P**

**plain hole connector nickel plated brass**

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

IP54

**C**

**fixed external thread nickel plated brass**

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

IP65

**C-S**

**swivel external thread nickel plated brass**

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

IP65

**C90**

**external thread elbow nickel plated brass**

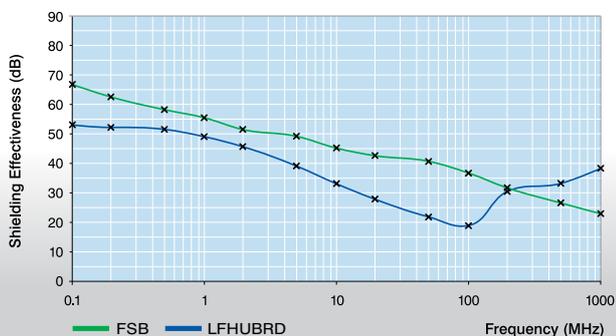
Multipart 90° compression fitting including elastomeric seal. Braid is locked between inner and outer compression nuts.

IP65

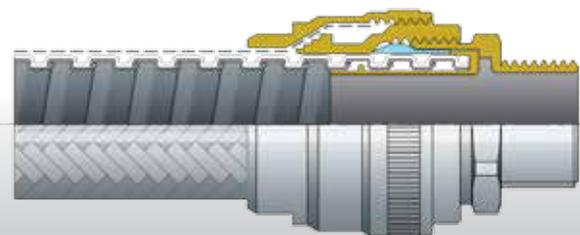


| hole size (mm) | part number | metric thread part number | PG thread part number | metric thread part number | metric thread part number | nominal size (mm) |
|----------------|-------------|---------------------------|-----------------------|---------------------------|---------------------------|-------------------|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

## EMC Screening Performance



## Technical Drawing





# FB system

galvanised steel core  
galvanised steel overbraid

# FUSSB system

galvanised steel core  
stainless steel overbraid



## Conduit

## Fittings

### 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.

### M

**fixed external thread  
nickel plated brass**

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

IP40

### S

**swivel external thread  
nickel plated brass**

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

IP40



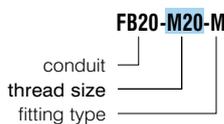
| nominal size (mm) | FB part number | FUSSB part number | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) |
|-------------------|----------------|-------------------|-----------------|------------------|-----------------|-----------------------------|
| 12                | FB12           | FUSSB12*          | 25              | 14.0             | 10.2            | 30                          |
| 16                | FB16           | FUSSB16*          | 25              | 17.5             | 13.0            | 40                          |
| 16                |                |                   |                 |                  |                 |                             |
| 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



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)
- Fully compliant to LUL Std 1-085. (Cert No. 296)
- Nickel plated brass fittings



### P

**plain hole connector nickel plated brass**

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

**IP40**

### 90° elbow

**internal and external threaded nickel plated brass elbow**

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

### locknuts

**galvanised steel and nickel plated brass locknuts**

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

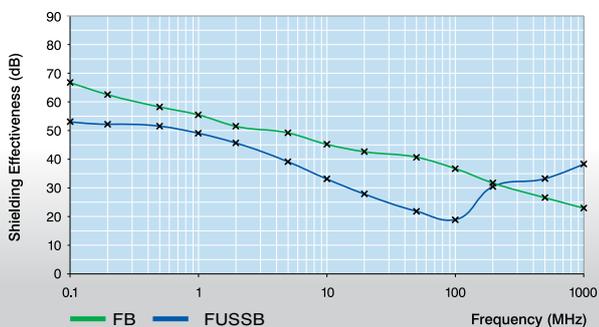
### FCC

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

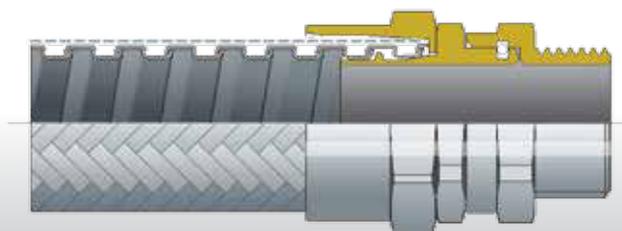
P clip to support and secure conduit.

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

## EMC Screening Performance



## Ordering Notes





# LTPBRD system

galvanised steel core,  
thermoplastic elastomer  
coated and stainless  
steel overbraid



## Conduit

### LTPBRD

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

**Typical Applications:** Very arduous industrial environments such as steel works.

## Fittings

### C

#### external thread nickel plated brass

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

IP66 IP67 IP68 IP69

### C-S

#### swivel external thread nickel plated brass

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

IP66 IP67 IP68 IP69

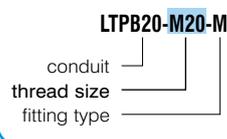


| nominal size (mm) | LTPBRD part number | reel length (m) | outside dia (mm) | inside dia (mm) | min inside bend radius (mm) | metric thread part number | metric thread part number |
|-------------------|--------------------|-----------------|------------------|-----------------|-----------------------------|---------------------------|---------------------------|
| 16                | LTPBRD16           | 25              | 19.3             | 12.6            | 45                          | LTPB16-M16-C              | LTPB16-M16-S              |
| 16                |                    |                 |                  |                 |                             | LTPB16-M20-C              | LTPB16-M20-S              |
| 20                | LTPBRD20           | 25              | 22.6             | 16.0            | 65                          | LTPB20-M20-C              | LTPB20-M20-S              |
| 25                | LTPBRD25           | 25              | 27.9             | 21.0            | 100                         | LTPB25-M25-C              | LTPB25-M25-S              |
| 32                | LTPBRD32           | 25              | 34.6             | 26.5            | 135                         | LTPB32-M32-C              | LTPB32-M32-S              |
| 40                | LTPBRD40           | 10              | 43.3             | 35.4            | 175                         | LTPB40-M40-C              | LTPB40-M40-S              |
| 50                | LTPBRD50*+         | 10              | 49.3             | 40.4            | 230                         | LTPB50-M50-C*             | LTPB50-M50-S*             |

## Ordering Notes

- Add reel length eg: LTPBRD20B-25M for 25m reel
- \* Indicates parts made to order on request and may be subject to MOQ and lead time
- + Double interlock section
- **Available on request:**
  - longer lengths
  - 45° available in sizes 16-50mm
  - cut lengths and assemblies
  - additional sizes
  - full copies of independent test report confirming screening effectiveness

### How to read the fittings code



## Standards

BS EN IEC 61386



# properties

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



## 90° elbow

### external threaded elbow nickel plated brass

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

IP66 IP67 IP68 IP69

## RSW

NEW

### Polyester Elastomer Retained face sealing washers

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

## locknuts

### galvanised steel and nickel plated brass locknuts

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

## FCC

### 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 steel part number

metric thread EMC part number

metric thread brass part number

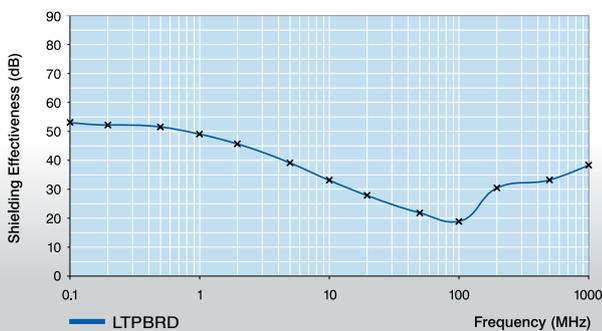
plated steel part number

stainless steel part number

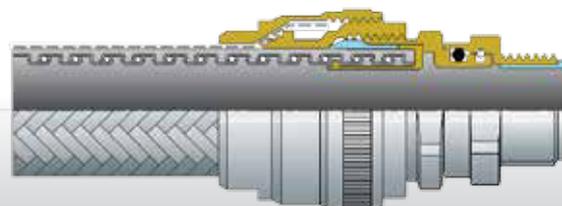
nominal size (mm)

|                |       |       |           |       |       |           |    |
|----------------|-------|-------|-----------|-------|-------|-----------|----|
| LTPB16-M16-C90 | RSW16 | S-M16 |           | B-M16 | FCC16 | FCC16-SS  | 16 |
| LTPB16-M20-C90 | RSW20 |       |           |       |       |           | 16 |
| LTPB20-M20-C90 | RSW20 | S-M20 | B-M20-EMC | B-M20 | FCC20 | FCC20-SS  | 20 |
| LTPB25-M25-C90 | RSW25 | S-M25 | B-M25-EMC | B-M25 | FCC25 | FCC25-SS  | 25 |
| LTPB32-M32-C90 | RSW32 | S-M32 | B-M32-EMC | B-M32 | FCC32 | FCC32-SS  | 32 |
| LTPB40-M40-C90 | RSW40 | S-M40 | B-M40-EMC | B-M40 | FCC40 | FCC40-SS  | 40 |
| LTPB50-M50-C90 | RSW50 | S-M50 |           | B-M50 | FCC50 | FCC50-SS* | 50 |

## EMC Screening Performance



## Technical Drawing





**FPRSS system** corrugated nylon, stainless steel overbraid

**FPRTC system** corrugated nylon, tinned copper overbraid



Conduit

Fittings

**FPRSS**

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

**Typical Applications:** Metro rail stations for anti-vandal.

**FPRTC**

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

**Typical Applications:** Inside railway carriages where screening is required.

**FPISS**

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

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

**FPIHSS**

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

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

**C**

**fixed external thread nickel plated brass**

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

IP67

**C-S**

**swivel external thread nickel plated brass**

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

IP67



| nominal size (mm) | <b>FPRSS</b><br>part number | <b>FPRTC</b><br>part number | <b>FPISS</b><br>part number | <b>FPIHSS</b><br>part number | outside dia (mm) | min inside dia (mm) | min inside bend radius (mm) | metric thread part number | metric thread part number | PG thread part number |
|-------------------|-----------------------------|-----------------------------|-----------------------------|------------------------------|------------------|---------------------|-----------------------------|---------------------------|---------------------------|-----------------------|
| 16                | FPRSS16-50M                 | FPRTC16-50M*                | FPISS16-50M*                | FPIHSS16-50M                 | 17.3             | 11.5                | 35                          | BC16-M16-C                | BC16-M16-S                | BC16-PG11-S           |
| 20                | FPRSS21-50M                 | FPRTC21-50M*                | FPISS21-50M*                | FPIHSS21-50M                 | 22.7             | 15.0                | 45                          | BC21-M20-C                | BC21-M20-S                | BC21-PG16-S           |
| 25                | FPRSS28-50M                 | FPRTC28-50M*                | FPISS28-50M*                | FPIHSS28-50M                 | 30.0             | 21.3                | 50                          | BC28-M25-C                | BC28-M25-S                | BC28-PG21-S           |
| 32                | FPRSS34-50M                 | FPRTC34-50M*                | FPISS34-25M*                | FPIHSS34-25M                 | 36.0             | 27.6                | 60                          | BC34-M32-C                | BC34-M32-S                | BC34-PG29-S           |
| 40                | FPRSS42-25M*                | FPRTC42-25M*                | FPISS42-25M*                | FPIHSS42-25M*                | 44.0             | 35.5                | 70                          | BC42-M40-C                | BC42-M40-S                |                       |
| 50                | FPRSS54-25M*                | FPRTC54-25M*                | FPISS54-25M*                | FPIHSS54-25M*                | 56.0             | 47.2                | 80                          | BC54-M50-C*               | BC54-M50-S*               |                       |

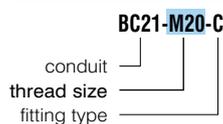
Ordering Notes

\* 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



BS EN IEC 61386



Note: refer to conduit properties for applicable standards

# properties

## FPISS system

corrugated nylon,  
stainless steel overbraid



## FPIHSS system

corrugated nylon,  
stainless steel overbraid



### FPRSS & FPRTC

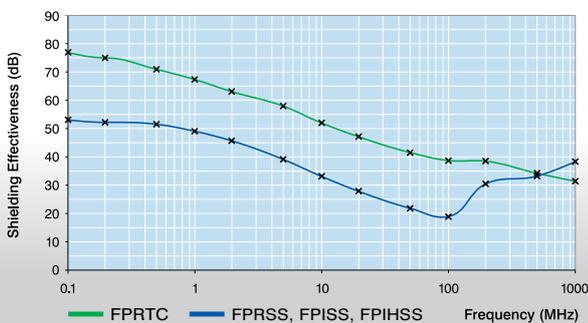
- Highly flexible and high fatigue life
- High impact strength
- Temperature range -40°C to +120°C
- Extra low fire hazard
- Provides EMC screening  
49dB@1MHz (FPRSS)  
67dB@1MHz (FPRTC)
- FPRSS provides high tensile strength and resistance to abrasion, corrosion and vandals
- Vibration and shock tested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

### FPISS & FPIHSS

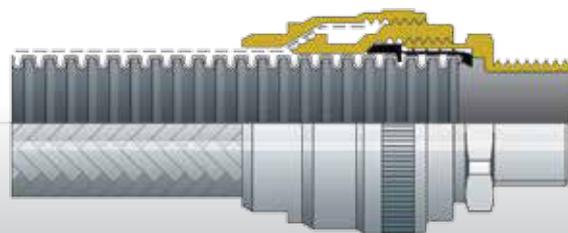
- Highly flexible
- Exceptional fatigue life
- Very high impact resistance even at low temperatures
- Temperature range -50°C to +110°C
- Low fire hazard
- Provides EMC screening 49dB@1MHz
- Provides high tensile strength and resistance to abrasion, corrosion and vandals
- Vibration and shock tested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

| C-90   | 90° elbow   | RSW <small>NEW</small>  | sealing washers   | locknuts   | FCC  |  |   |                                  |                   |
|--|---|---|---|--|--|--|---|----------------------------------|-------------------|
| <b>external thread elbow nickel plated brass</b><br>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. | <b>internal and external nickel threaded brass elbow</b><br>90° elbow which can be screwed onto external threaded fittings. | <b>Polyester Elastomer Retained face sealing washers</b><br>Retained sealing washer to maintain IP rating of fitting to adjacent equipment. | <b>fibre face sealing washers</b><br>Sealing washer to maintain IP rating of fitting to adjacent equipment. | <b>galvanised steel and nickel plated brass locknuts</b><br>Hexagonal locknut to secure fitting. EMC locknuts have raised corners to ensure good continuity. | <b>plated steel P clip with pvc liner, stainless steel P clips</b><br>P clip to support conduit.       |  |   |                                  |                   |
| IP67   |   |   |   |  |  |  |   |                                  |                   |
|   |    |    |                          |    |                   |  |   |                                  |                   |
| 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<br>BM90-20M<br>BM90-25M<br>BM90-32M<br>BM90-40M<br>BM90-50M  | RSW16<br>RSW20<br>RSW25<br>RSW32<br>RSW40<br>RSW50  | FWPG11<br>FWPG16<br>FWPG21<br>FWPG29  | S-M16<br>S-M20<br>S-M25<br>S-M32<br>S-M40<br>S-M50   | B-M16<br>B-M20-EMC<br>B-M20<br>B-M25-EMC<br>B-M25<br>B-M32-EMC<br>B-M32<br>B-M40-EMC<br>B-M40<br>B-M50 | FCC16<br>FCC20<br>FCC25<br>FCC32<br>FCC40<br>FCC50 | FCC16-SS<br>FCC20-SS<br>FCC25-SS<br>FCC32-SS<br>FCC40-SS<br>FCC50-SS* | 16<br>20<br>25<br>32<br>40<br>50 |                   |

## EMC Screening Performance



## Technical Drawing



# Cable Gland Fittings NEW

## 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

### Conduit

### Fittings

| Conduit size (mm) | Part Number    | Suitable for the following conduits  | Conduit   | Fitting   | IP rating of conduit system       | IP rating of cable gland | Clamping range of cable gland           |
|-------------------|----------------|--|---|---|-----------------------------------|--------------------------|---|
| 16                | FSU16-BM16-CG  | FU & SSU   |    |    | IP40                              | IP68 (10 bar) + IP69     | 4.5-10mm<br>7-13mm<br>9-17mm<br>11-21mm |
| 20                | FSU20-BM20-CG  |  |   |   |                                   |                          |   |
| 25                | FSU25-BM25-CG  |  |   |   |                                   |                          |   |
| 32                | FSU32-BM32-CG  |  |   |   |                                   |                          |   |
| 16                | FSU16-BM16-CG  | FSU, FNU, LFHU and FPU   |    |    | IP65                              | IP68 (10 bar) + IP69     | 4.5-10mm<br>7-13mm<br>9-17mm<br>11-21mm |
| 20                | FSU20-BM20-CG  |  |   |   |                                   |                          |   |
| 25                | FSU25-BM25-CG  |  |   |   |                                   |                          |   |
| 32                | FSU32-BM32-CG  |  |   |   |                                   |                          |   |
| 16                | LTP16-BM16-CG  | LTP, LTPHC, LTPUL, LTPAS, LTPSS, LTPLFH, LTBRDR, LTBRDLFH, LTPPU and LTPPUAS |  |  | IP66+IP67+<br>IP68 (5 bar) + IP69 | IP68 (10 bar) + IP69     | 4.5-10mm<br>7-13mm<br>9-17mm<br>11-21mm |
| 20                | LTP20-BM20-CG  |  |   |   |                                   |                          |   |
| 25                | LTP25-BM25-CG  |  |   |   |                                   |                          |   |
| 32                | LTP32-BM32-CG  |  |   |   |                                   |                          |   |
| 16                | FSB16-BM16-CG  | FB & FUSSB   |  |  | IP40                              | IP68 (10 bar) + IP69     | 4.5-10mm<br>7-13mm<br>9-17mm<br>11-21mm |
| 20                | FSB20-BM20-CG  |  |   |   |                                   |                          |   |
| 25                | FSB25-BM25-CG  |  |   |   |                                   |                          |   |
| 32                | FSB32-BM32-CG  |  |   |   |                                   |                          |   |
| 16                | FSB16-BM16-CG  | FSB & LFHUBRD  |  |  | IP65                              | IP68 (10 bar) + IP69     | 4.5-10mm<br>7-13mm<br>9-17mm<br>11-21mm |
| 20                | FSB20-BM20-CG  |  |   |   |                                   |                          |   |
| 25                | FSB25-BM25-CG  |  |   |   |                                   |                          |   |
| 32                | FSB32-BM32-CG  |  |   |   |                                   |                          |   |
| 16                | LTPB16-BM16-CG | LTPBRD   |  |  | IP66+IP67+<br>IP68 (5 bar) + IP69 | IP68 (10 bar) + IP69     | 4.5-10mm<br>7-13mm<br>9-17mm<br>11-21mm |
| 20                | LTPB20-BM20-CG |  |   |   |                                   |                          |   |
| 25                | LTPB25-BM25-CG |  |   |   |                                   |                          |   |
| 32                | LTPB32-BM32-CG |  |   |   |                                   |                          |   |
| 16                | LPC16-BM16-CG  | LPC, LPCG, LPCO, LPCBU   |  |  | IP66+IP67+<br>IP68 (5 bar) + IP69 | IP68 (10 bar) + IP69     | 4.5-10mm<br>7-13mm<br>9-17mm<br>11-21mm |
| 20                | LPC20-BM20-CG  |  |   |   |                                   |                          |   |
| 25                | LPC25-BM25-CG  |  |   |   |                                   |                          |   |
| 32                | LPC32-BM32-CG  |  |   |   |                                   |                          |   |

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

### Standards

BS EN IEC 61386





# FTCB Braided sleeving

## tinned copper braid system for EMC screening

NEW

ENHANCED EMC SCREEN \*\*\*

INHERENT LOW FIRE HAZARD \*\*\*

### properties

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

## Overbraid

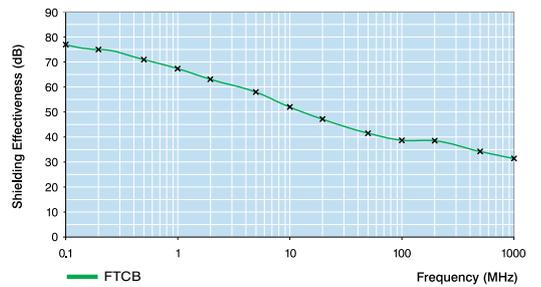
### FTCB

NEW

**Construction:** Tinned copper braided sleeving. Colour: self colour

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

| FTCB part number | Reel length (m) | Nominal I/D (mm) | Usable $\phi$ mm min | Usable $\phi$ mm max | Cross sectional area -mm <sup>2</sup> |
|------------------|-----------------|------------------|----------------------|----------------------|---------------------------------------|
| 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                                 |



- 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



Use with Braid

### FPA

**Construction:** Nylon PA66 & Nickel Plated Brass. Colour: Black

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

IP66

IP66

IP67

IP68

IP69

Conduit Size (mm)

FPA part number

|    |                |
|----|----------------|
| 21 | FPA21-M20-SBCA |
| 28 | FPA28-M25-SBCA |
| 34 | FPA34-M32-SBCA |
| 42 | FPA42-M40-SBCA |

FPAX part number

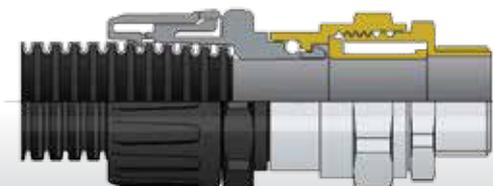
|                 |
|-----------------|
| FPAX21-M20-SBCA |
| FPAX28-M25-SBCA |
| FPAX34-M32-SBCA |
| FPAX42-M40-SBCA |

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

## Ordering Notes

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

## Technical Drawing



**metric locknuts**

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



nickel plated brass part number  
nickel plated EMC part number  
plated steel part number  
stainless steel part number  
nylon part number

|       |           |       |         |         |
|-------|-----------|-------|---------|---------|
| B-M12 |           |       |         | LM12-N# |
| B-M16 |           | S-M16 | SS-M16  | LM16-N# |
| B-M20 | B-M20-EMC | S-M20 | SS-M20  | LM20-N# |
| B-M25 | B-M25-EMC | S-M25 | SS-M25  | LM25-N# |
| B-M32 | B-M32-EMC | S-M32 | SS-M32  | LM32-N# |
| B-M40 | B-M40-EMC | S-M40 | SS-M40  | LM40-N# |
| B-M50 |           | S-M50 | SS-M50* | LM50-N# |
| B-M63 |           | S-M63 | SS-M63* | LM63-N# |
| B-M75 |           |       |         |         |

**PG locknuts**

nickel plated brass, nylon black or grey



nickel plated brass part number  
nylon part number

|        |         |
|--------|---------|
| B-PG7  | PG7-N#  |
| B-PG9  | PG9-N#  |
| B-PG11 | PG11-N# |
| B-PG13 | PG13-N# |
| B-PG16 | PG16-N# |
| B-PG21 | PG21-N# |
| B-PG29 | PG29-N# |
| B-PG36 | PG36-N# |
| B-PG42 | PG42-N# |
| B-PG48 | PG48-N# |

**stop plug**

nylon metric black



metric part number

|         |
|---------|
| SP-M12* |
| SP-M16  |
| SP-M20  |
| SP-M25  |
| SP-M32  |

**stop plug**

nylon PG



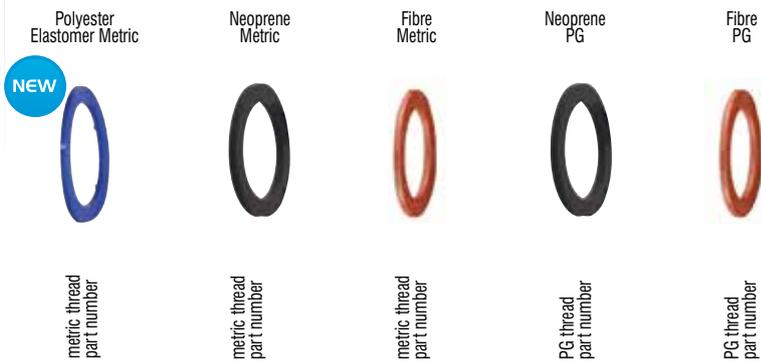
PG part number

|         |
|---------|
| SP-PG7* |
| SP-PG9  |
| SP-PG11 |
| SP-PG13 |
| SP-PG16 |
| SP-PG21 |
| SP-PG29 |

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

**sealing washers**

Polyester Elastomer, Neoprene and fibre face sealing washers



| metric thread part number | metric thread part number | metric thread part number | PG thread part number | PG thread part number |
|---------------------------|---------------------------|---------------------------|-----------------------|-----------------------|
| RSW16                     | SW12                      | FW12                      | SWPG7                 | FWPG7                 |
| RSW20                     | SW16                      | FW16                      | SWPG9                 | FWPG9                 |
| RSW25                     | SW20                      | FW20                      | SWPG11                | FWPG11                |
| RSW32                     | SW25                      | FW25                      | SWPG13                | FWPG13                |
| RSW40                     | SW32                      | FW32                      | SWPG16                | FWPG16                |
| RSW50                     | SW40                      | FW40                      | SWPG21                | FWPG21                |
| RSW63*                    | SW50                      | FW50                      | SWPG29                | FWPG29                |
|                           | SW63                      | FW63                      | SWPG36                | FWPG36                |
|                           |                           |                           | SWPG42                |                       |
|                           |                           |                           | SWPG48                | FWPG48                |

**earthing washers**

shake proof washer



metric thread part number

|       |
|-------|
| SPW16 |
| SPW20 |
| SPW25 |
| SPW32 |

earth tag washer



metric thread part number

|        |
|--------|
| ET-M20 |
| ET-M25 |

## fixing clips

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



## conduit clip

nylon conduit clip with integral lid - black or grey



## FCLAMP NEW

non-metallic, heavy duty conduit clamp

Nylon PA66, Nylon conduit fixing clamp for corrugated conduit.



## EC

end cap

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



## REC NEW

rubber end cap

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



For fixing rails and accessories see page 45

| to fit conduit size | fixing clips |             | to fit nominal conduit sizes | conduit clip                |                                 | FCLAMP       | End Cap | REC         |                     |              |
|---------------------|--------------|-------------|------------------------------|-----------------------------|---------------------------------|--------------|---------|-------------|---------------------|--------------|
|                     | part number  | part number |                              | conduit clip for corrugated | conduit clip for plain or rigid |              |         | 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       | 11                  | 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        |             | 34                           | FCL34                       | FCL33B-P                        | FCLAMP- 5-34 | EC34B   | REC34       | 34                  | 0-25         |
| 75                  | FCC75        |             | 42                           | FCL42                       |                                 | FCLAMP- 6-42 | EC42B   | REC42       | 42                  | 0-34         |
| 80                  | FCC80        |             | 54                           | FCL54                       |                                 | FCLAMP- 7-54 | EC54B   | REC54       | 54                  | 0-46         |
| 106                 | FCC106       |             | 67                           |                             |                                 | FCLAMP- 7-67 |         |             |                     |              |
|                     |              |             | 80                           |                             |                                 | FCLAMP- 8-80 |         |             |                     |              |

\* 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 four colours, Black, Red (RAL 3020), White and Light Grey (RAL 7035) they have been designed to provide the highest degree of functionality and safety.



| Thread Size. | Black Part No. | Red Part No. | White Part No. | Grey Part No. | Thread Length (mm) | Cable Dia (min) (mm) | Cable Dia (max) (mm) | Spanner Size (mm) | Pack Quantity |
|--------------|----------------|--------------|----------------|---------------|--------------------|----------------------|----------------------|-------------------|---------------|
| M16          | CGM16B         | CGM16R       | CGM16W         | CGM16G        | 11                 | 5                    | 10                   | 22                | 100           |
| M20          | CGM20SB        | CGM20SR      | CGM20SW        | CGM20SG       | 11                 | 6                    | 12                   | 24                | 100           |
| M20          | CGM20B         | CGM20R       | CGM20W         | CGM20G        | 11                 | 10                   | 14                   | 27                | 100           |
| M25          | CGM25B         | CGM25R       | CGM25W         | CGM25G        | 11                 | 13                   | 18                   | 33                | 50            |
| M32          | CGM32B         |              |                |               | 11                 | 18                   | 25                   | 41                | 25            |

### Technical Details

- Material: PA6
- IP Rating; IP68 (4 bar)
- Nitrile Rubber seal
- Produced and tested in accordance with EN 50262:1999
- Temperature range; -20°C to +90°C

Red, white and grey supplied with locknut. Black supplied without locknut.



| 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             |

### 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

### 90° elbow

internal and external threaded nickel plated brass 90° elbow



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

### couplers

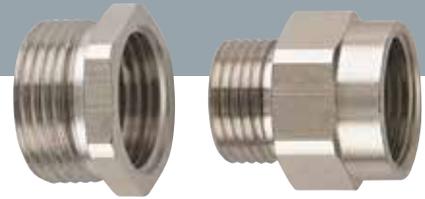
nickel plated brass internally threaded



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

### thread converters

nickel plated brass thread converters, reducers and enlargers external and internal thread.



#### Metric Internal Threads

|                 | external thread | internal thread | M16        | M20        | M25        | M32        | M40        | M50       |
|-----------------|-----------------|-----------------|------------|------------|------------|------------|------------|-----------|
| Metric - Metric | M16             |                 |            | B-M16-M20  |            |            |            |           |
|                 | M20             |                 | B-M20-M16  |            | B-M20-M25  |            |            |           |
|                 | M25             |                 |            | B-M25-M20  |            | B-M25-M32  |            |           |
|                 | M32             |                 |            | B-M32-M20  | B-M32-M25  |            | B-M32-M40  |           |
|                 | M40             |                 |            |            |            | B-M40-M32  |            |           |
|                 | M50             |                 |            |            |            | B-M50-M32  | B-M50-M40  |           |
| PG - Metric     | M63             |                 |            |            |            |            | B-M63-M40  | B-M63-M50 |
|                 | PG7             |                 | B-PG7-M16  | B-PG7-M20  |            |            |            |           |
|                 | PG9             |                 | B-PG9-M16  | B-PG9-M20  |            |            |            |           |
|                 | PG11            |                 | B-PG11-M16 | B-PG11-M20 |            |            |            |           |
|                 | PG13.5          |                 | B-PG13-M16 | B-PG13-M20 |            |            |            |           |
|                 | PG16            |                 | B-PG16-M16 | B-PG16-M20 | B-PG16-M25 |            |            |           |
|                 | PG21            |                 |            | B-PG21-M20 | B-PG21-M25 | B-PG21-M32 |            |           |
|                 | PG29            |                 |            | B-PG29-M20 | B-PG29-M25 | B-PG29-M32 | B-PG29-M40 |           |
|                 | PG36            |                 |            |            |            | B-PG36-M32 | B-PG36-M40 |           |
|                 | PG48            |                 |            |            |            |            | B-PG48-M40 |           |
| NPT - Metric    | 3/4" NPT        |                 | B-038-M16  |            |            |            |            |           |
|                 | 1/2" NPT        |                 |            | B-050-M20  |            |            |            |           |
|                 | 3/4" NPT        |                 |            | B-075-M20  | B-075-M25  |            |            |           |
|                 | 1" NPT          |                 |            |            |            | B-100-M32  |            |           |

#### PG Internal Threads

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

Note: Refer to page 96 for thread dimensions tables.

For EXD thread converters, please see page 72

## tools

The following tools and accessories are available to aid installation. See page 92 for cutting and assembly advice. Alternatively visit our website & view our handy video clips to aid your installation.

### clamp

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

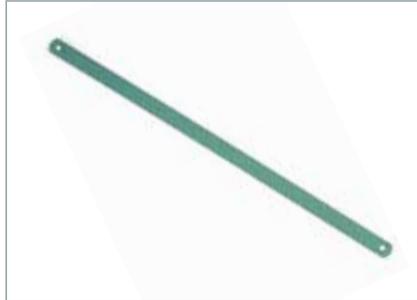


Part Number

**BSB** clamp

### hacksaw blade

fine tooth (32 TPI) blade for standard hacksaw.



Part Number

**HACKSAWBLADE**

### bandsaw

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



Part Number

**BANDSAW**  
**BANDSAWBLADE** (spare blades)

### conduit cutter

for any non metallic flexible and rigid conduits.



Part Number

**CC01** up to 34mm conduits  
**CC02** up to 67mm conduits

### slitting tool

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



Part Number

**CS01** slitting tool

### slit conduit insertion tool

for easy installation of wires into slit conduit.



Part Number

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

### removal tool for push in Flexilok® fittings (see page 38)



Part Number

For use with:

|               |   |
|---------------|---|
| <b>RTPF20</b> | <b>FLK16-PL20, FLK20-PL20, FLK21-PL20</b> |
| <b>RTPF25</b> | <b>FLK25-PL25, FLK28-PL25</b>             |
| <b>RTPF32</b> | <b>FLK34-PL32</b>                         |

### 4 tooth Flexilok® Removal tool for use with 42mm & 54mm sizes (see page 38)



Part Number

For use with:

|                |   |
|----------------|---|
| <b>FLK42RT</b> | <b>FLK42-M40, FLK42-M50, FLK42-PG36</b> |
| <b>FLK54RT</b> | <b>FLK54-M50, FLK54-M63, FLK54-PG48</b> |

Each pack contains:

10m conduit  
10 fittings  
10 locknuts



FPYE-CP25B

## Benefits

- Simplistic ordering
- Easy storage
- Ready to use



### PVC white

IP66

NEW

FPL-CP20W  
FPL-CP25W

M20 thread  
M25 thread

- 10 metres of white corrugated upvc FPL20 or FPL25
- Pliable conduit for static applications
- Self extinguishing

- 10 white nylon Flexilok fittings and locknuts FLK20-M20W or FLK25-M25W
- IP66
- 1 part, fast fit



### SLIT POLYPROPYLENE grey

NEW

FPPS-TP21G

- 10 metres of slit grey polypropylene FPP21G
- Self extinguishing

- Can be slipped over existing cables to tidy up and protect them
- 1 slit conduit insertion tool ST20



**STEEL**  
- pvc coating - black

IP54

**FSU-CP20B** M20 thread



- 10 metres of galvanised steel with PVC coating
- Temperature range -15°C to +70°C
- Self extinguishing
- High mechanical strength
- Highly flexible
- 5 M20 fixed fittings
- 5 M20 swivel fittings
- 10 steel locknuts
- IP54

**NYLON**  
- black

IP66



**FPAS-CP21B** M20 thread  
**FPAS-CP25B** M25 thread



- 10 metres of standard weight nylon PA6 FPAS21 or FPAS25
- Low fire hazard
- Halogen free
- Self extinguishing
- Low smoke and Low toxicity
- High flexibility and fatigue life
- High impact strength
- Oil and solvent resistant
- UV resistant
- Temperature range -40°C to +120°C
- 10 FPA fittings and locknuts FPA21-M20B or FPA25-M25B
- One part, fast fit
- Removable using a screwdriver
- High pull-off strength
- Anti-vibration
- IP66
- UV resistant

**PVC SPIRAL**  
- black

IP54

**FPC-CP20B** M20 thread  
**FPC-CP25B** M25 thread



- 10 metres of spiral reinforced pvc FPC20 or FPC25
- Highly flexible
- Accepts torsional movement
- Self extinguishing
- UV resistant
- Temperature range -5°C to +70°C
- 10 MPC fittings and locknuts
- IP65
- UV resistant
- Smooth bore

**NYLON**  
- black

IP66

NEW

**FPYE-CP20B** M20 thread  
**FPYE-CP25B** M25 thread



- 10 metres of light weight nylon PA6 FPAL20 or FPAL25
- Flexible
- Halogen free
- Self extinguishing
- Temperature range -40°C to +120°C
- 10 Flexilok fittings and locknuts FLK20-M20B or FLK25-M25B
- IP66
- One part, fast fit

**POLYPROPYLENE**  
- black or grey

IP66

NEW

**FPP-CP20B** M20 thread  
**FPP-CP25B** M25 thread



- 10 metres of polypropylene FPP20 or FPP25
- Temperature range -20°C to +90°C
- Self extinguishing
- To specify grey change B to a G eg: FPP-CP20G
- 10 Flexilok (PP) fittings and locknuts FLK20-M20-PP or FLK25-M25-PP
- IP66
- One part, fast fit

Standards

Don't Forget



See page 45



# 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%) |   |
|-------------|---|------------|------------|------------|-------------------|---------|--------------------|---------|----------------------|------------|-------------|-----------------|--------|------------|--------------|---------|-------|------------|-----------------|----------|-------------------------|-------------------------|---|
| 20          | <b>FPAS</b><br>nylon LFH PA6 corrugated, std weight           | ✓          | ✓          | ✓          | L                 | ✓       | X                  | ✓       | ✓                    | X          | ✓           | L               | X      | ✓          | ✓            | ✓       | ✓     | ✓          | ✓               | ✓        | ✓                       | X                       | X |
| 20          | <b>FPAL</b><br>nylon PA6 corrugated, light weight             | ✓          | ✓          | ✓          | L                 | ✓       | X                  | ✓       | ✓                    | X          | ✓           | L               | X      | ✓          | ✓            | ✓       | ✓     | ✓          | ✓               | ✓        | ✓                       | X                       | X |
| 20          | <b>FPAH</b><br>nylon LFH PA6 corrugated, heavy weight         | ✓          | ✓          | ✓          | L                 | ✓       | X                  | ✓       | ✓                    | X          | ✓           | L               | X      | ✓          | ✓            | ✓       | ✓     | ✓          | ✓               | ✓        | ✓                       | X                       | X |
| 21          | <b>FPR</b><br>nylon extra LFH PA6 corrugated, std weight      | ✓          | ✓          | ✓          | L                 | ✓       | X                  | ✓       | ✓                    | X          | ✓           | L               | X      | ✓          | ✓            | ✓       | ✓     | ✓          | ✓               | ✓        | ✓                       | X                       | X |
| 21          | <b>FPI</b><br>nylon PA12 corrugated, standard weight          | ✓          | ✓          | ✓          | L                 | ✓       | L                  | ✓       | ✓                    | X          | ✓           | L               | X      | ✓          | L            | L       | ✓     | L          | ✓               | ✓        | ✓                       | X                       | X |
| 21          | <b>FPIH</b><br>nylon PA12 corrugated, heavy weight            | ✓          | ✓          | ✓          | L                 | ✓       | L                  | ✓       | ✓                    | X          | ✓           | L               | X      | ✓          | L            | L       | ✓     | L          | ✓               | ✓        | ✓                       | X                       | X |
| 21          | <b>FPADS</b><br>nylon PA6 double slit corrugated              | ✓          | ✓          | ✓          | L                 | ✓       | X                  | ✓       | ✓                    | X          | ✓           | L               | X      | ✓          | ✓            | ✓       | ✓     | ✓          | ✓               | ✓        | ✓                       | X                       | X |
| 22          | <b>FPP</b><br>polypropylene corrugated, std weight            | ✓          | ✓          | L          | PP                | ✓       | L                  | L       | L                    | L          | ✓           | L               | X      | ✓          | ✓            | ✓       | ✓     | ✓          | ✓               | ✓        | ✓                       | PPPP                    |   |
| 22          | <b>FPP-NFR</b><br>polypropylene corrugated non flame retarded | ✓          | ✓          | L          | PP                | ✓       | L                  | L       | L                    | L          | ✓           | L               | X      | ✓          | ✓            | ✓       | ✓     | ✓          | ✓               | ✓        | ✓                       | PPPP                    |   |
| 22          | <b>FPPH</b><br>polypropylene corrugated heavy weight          | ✓          | ✓          | L          | PP                | ✓       | L                  | L       | L                    | L          | ✓           | L               | X      | ✓          | ✓            | ✓       | ✓     | ✓          | ✓               | ✓        | ✓                       | PPPP                    |   |
| 40          | <b>FPL</b><br>upvc corrugated                                 | ✓          | ✓          | ✓          | L                 | X       | L                  | X       | L                    | X          | ✓           | L               | X      | ✓          | L            | ✓       | ✓     | L          | ✓               | L        | ✓                       | L                       | X |
| 42          | <b>FPY</b><br>nylon PA6 corrugated                            | ✓          | ✓          | ✓          | L                 | ✓       | X                  | ✓       | ✓                    | X          | ✓           | L               | X      | ✓          | ✓            | ✓       | ✓     | ✓          | ✓               | ✓        | ✓                       | X                       | X |
| 42          | <b>FPYS</b><br>slit nylon PA6 corrugated, std weight          | ✓          | ✓          | ✓          | L                 | ✓       | X                  | ✓       | ✓                    | X          | ✓           | L               | X      | ✓          | ✓            | ✓       | ✓     | ✓          | ✓               | ✓        | ✓                       | X                       | X |
| 42          | <b>FPYL</b><br>nylon PA6 corrugated, light weight             | ✓          | ✓          | ✓          | L                 | ✓       | X                  | ✓       | ✓                    | X          | ✓           | L               | X      | ✓          | ✓            | ✓       | ✓     | ✓          | ✓               | ✓        | ✓                       | X                       | X |
| 42          | <b>FPYLS</b><br>slit nylon PA6 corrugated, light weight       | ✓          | ✓          | ✓          | L                 | ✓       | X                  | ✓       | ✓                    | X          | ✓           | L               | X      | ✓          | ✓            | ✓       | ✓     | ✓          | ✓               | ✓        | ✓                       | X                       | X |
| 44          | <b>FPY</b><br>nylon PA6, large diameter                       | ✓          | ✓          | ✓          | L                 | ✓       | X                  | ✓       | ✓                    | X          | ✓           | L               | X      | ✓          | ✓            | ✓       | ✓     | ✓          | ✓               | ✓        | ✓                       | X                       | X |
| 46          | <b>FPCB</b><br>pvc spiral reinforced black                    | X          | X          | X          | L                 | X       | L                  | X       | L                    | X          | ✓           | L               | X      | L          | L            | X       | L     | L          | L               | L        | L                       | X                       | X |
| 46          | <b>FPCG</b><br>pvc spiral reinforced grey                     | X          | X          | X          | L                 | X       | L                  | X       | L                    | X          | ✓           | L               | X      | L          | L            | X       | L     | L          | L               | L        | L                       | X                       | X |
| 46          | <b>FPCGN</b><br>pvc spiral reinforced green oil resistant     | ✓          | ✓          | ✓          | ✓                 | X       | X                  | X       | L                    | X          | ✓           | L               | ✓      | L          | X            | L       | L     | L          | L               | L        | L                       | L                       | X |
| 46          | <b>FPCBU</b><br>pvc spiral reinforced blue high temperature   | X          | X          | X          | L                 | X       | L                  | X       | L                    | X          | ✓           | L               | X      | L          | L            | X       | L     | L          | L               | L        | L                       | X                       | X |
| 48          | <b>LPC</b><br>smooth, pvc spiral reinforced                   | ✓          | ✓          | ✓          | ✓                 | X       | X                  | X       | L                    | X          | ✓           | L               | ✓      | L          | X            | L       | L     | L          | L               | L        | L                       | L                       | X |
| 48          | <b>LPCO</b><br>smooth pvc spiral orange ultra flexible        | ✓          | ✓          | ✓          | ✓                 | X       | X                  | X       | L                    | X          | ✓           | L               | ✓      | L          | X            | L       | L     | L          | L               | L        | L                       | L                       | X |
| 48          | <b>LPCGN</b><br>smooth pvc spiral green oil resistant         | ✓          | ✓          | ✓          | ✓                 | X       | X                  | X       | L                    | X          | ✓           | L               | ✓      | L          | X            | L       | L     | L          | L               | L        | L                       | L                       | X |
| 48          | <b>LPCBU</b><br>smooth pvc spiral blue high temperature       | ✓          | ✓          | ✓          | ✓                 | X       | X                  | X       | L                    | X          | ✓           | L               | ✓      | L          | X            | L       | L     | L          | L               | L        | L                       | L                       | X |

## key

✓ good resistance  
L limited resistance

PP suitable with polypropylene fittings  
SS suitable with stainless steel fittings

X poor resistance



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

# non-metallic conduit and fittings



| HYDROGEN PEROXIDE (30%) | HYDROGEN PEROXIDE (60%) | LACTIC ACID | LUBRICATING OIL | METHANOL | METHYL BROMIDE | MEK | NITRIC ACID (10%) | NITRIC ACID (60%) | OXALIC ACID | OZONE (GAS) | PARAFFIN OIL | PETROL | PHENOL | SEA WATER | SILVER NITRATE | SKYDROL | SODIUM CHLORIDE | SODIUM HYDROXIDE (10%) | SODIUM HYDROXIDE (60%) | SULPHUR DIOXIDE (GAS) | SULPHURIC ACID (10%) | TOLUENE | TRANSFORMER OIL | 1,1,1-TRICHLOROETHANE | TRICHLOROETHYLENE | TURPENTINE | VEGETABLE OIL | VINYL ACETATE | WATER | WHITE SPIRIT | ZINC CHLORIDE   |   |   |
|-------------------------|-------------------------|-------------|-----------------|----------|----------------|-----|-------------------|-------------------|-------------|-------------|--------------|--------|--------|-----------|----------------|---------|-----------------|------------------------|------------------------|-----------------------|----------------------|---------|-----------------|-----------------------|-------------------|------------|---------------|---------------|-------|--------------|---|---|---|
| X                       | X                       | L           | ✓               | L        | X              | ✓   | X                 | X                 | L           | X           | ✓            | ✓      | X      | ✓         | ✓              | ✓       | ✓               | ✓                      | ✓                      | X                     | X                    | ✓       | ✓               | ✓                     | L                 | ✓          | ✓             | L             | ✓     | ✓            | X   | <b>FPAS</b><br>nylon LFH PA6 corrugated, std weight         |   |
| X                       | X                       | L           | ✓               | L        | X              | ✓   | X                 | X                 | L           | X           | ✓            | ✓      | X      | ✓         | ✓              | ✓       | ✓               | ✓                      | ✓                      | X                     | X                    | ✓       | ✓               | ✓                     | L                 | ✓          | ✓             | L             | ✓     | ✓            | X   | <b>FPAL</b><br>nylon PA6 corrugated, light weight           |   |
| X                       | X                       | L           | ✓               | L        | X              | ✓   | X                 | X                 | L           | X           | ✓            | ✓      | X      | ✓         | ✓              | ✓       | ✓               | ✓                      | ✓                      | X                     | X                    | ✓       | ✓               | ✓                     | L                 | ✓          | ✓             | L             | ✓     | ✓            | X   | <b>FPAH</b><br>nylon LFH PA6 corrugated, heavy weight       |   |
| X                       | X                       | L           | ✓               | L        | X              | ✓   | X                 | X                 | L           | X           | ✓            | ✓      | X      | ✓         | ✓              | ✓       | ✓               | ✓                      | ✓                      | X                     | X                    | ✓       | ✓               | ✓                     | L                 | ✓          | ✓             | L             | ✓     | ✓            | X   | <b>FPR</b><br>nylon extra LFH PA6 corrugated, std weight    |   |
| X                       | X                       | L           | ✓               | L        | X              | ✓   | X                 | X                 | L           | X           | ✓            | ✓      | X      | ✓         | ✓              | ✓       | ✓               | ✓                      | ✓                      | L                     | X                    | X       | ✓               | ✓                     | X                 | ✓          | ✓             | L             | ✓     | ✓            | X   | <b>FPI</b><br>nylon PA12 corrugated, standard weight        |   |
| X                       | X                       | L           | ✓               | L        | X              | ✓   | X                 | X                 | L           | X           | ✓            | ✓      | X      | ✓         | ✓              | ✓       | ✓               | ✓                      | ✓                      | L                     | X                    | X       | ✓               | ✓                     | X                 | ✓          | ✓             | L             | ✓     | ✓            | X   | <b>FPIH</b><br>nylon PA12 corrugated, heavy weight          |   |
| X                       | X                       | L           | ✓               | L        | X              | ✓   | X                 | X                 | L           | X           | ✓            | ✓      | X      | ✓         | ✓              | ✓       | ✓               | ✓                      | ✓                      | X                     | X                    | ✓       | ✓               | ✓                     | L                 | ✓          | ✓             | L             | ✓     | ✓            | X   | <b>FPADS</b><br>nylon PA6 double slit corrugated            |   |
| X                       | X                       | PP          | ✓               | L        | X              | ✓   | PP                | PP                | PP          | X           | ✓            | ✓      | X      | ✓         | ✓              | ✓       | ✓               | ✓                      | ✓                      | PP                    | PP                   | ✓       | ✓               | ✓                     | L                 | L          | X             | ✓             | L     | ✓            | ✓   | X   | <b>FPP</b><br>polypropylene corrugated, std weight            |
| X                       | X                       | PP          | ✓               | L        | X              | ✓   | PP                | PP                | PP          | X           | ✓            | ✓      | X      | ✓         | ✓              | ✓       | ✓               | ✓                      | ✓                      | PP                    | PP                   | ✓       | ✓               | ✓                     | L                 | L          | X             | ✓             | L     | ✓            | ✓   | X   | <b>FPP-NFR</b><br>polypropylene corrugated non flame retarded |
| X                       | X                       | PP          | ✓               | L        | X              | ✓   | PP                | PP                | PP          | X           | ✓            | ✓      | X      | ✓         | ✓              | ✓       | ✓               | ✓                      | ✓                      | PP                    | PP                   | ✓       | ✓               | ✓                     | L                 | L          | X             | ✓             | L     | ✓            | ✓   | X   | <b>FPPH</b><br>polypropylene corrugated heavy weight          |
| X                       | X                       | L           | ✓               | L        | X              | X   | X                 | X                 | L           | X           | ✓            | ✓      | X      | ✓         | ✓              | ✓       | ✓               | ✓                      | ✓                      | X                     | X                    | X       | ✓               | X                     | X                 | ✓          | ✓             | X             | ✓     | ✓            | X   | <b>FPL</b><br>upvc corrugated                               |   |
| X                       | X                       | L           | ✓               | L        | X              | ✓   | X                 | X                 | L           | X           | ✓            | ✓      | X      | ✓         | ✓              | ✓       | ✓               | ✓                      | ✓                      | X                     | X                    | ✓       | ✓               | ✓                     | L                 | ✓          | ✓             | L             | ✓     | ✓            | X   | <b>FPY</b><br>nylon PA6 corrugated                          |   |
| X                       | X                       | L           | ✓               | L        | X              | ✓   | X                 | X                 | L           | X           | ✓            | ✓      | X      | ✓         | ✓              | ✓       | ✓               | ✓                      | ✓                      | X                     | X                    | ✓       | ✓               | ✓                     | L                 | ✓          | ✓             | L             | ✓     | ✓            | X   | <b>FPYS</b><br>slit nylon PA6 corrugated, std weight        |   |
| X                       | X                       | L           | ✓               | L        | X              | ✓   | X                 | X                 | L           | X           | ✓            | ✓      | X      | ✓         | ✓              | ✓       | ✓               | ✓                      | ✓                      | X                     | X                    | ✓       | ✓               | ✓                     | L                 | ✓          | ✓             | L             | ✓     | ✓            | X   | <b>FPYL</b><br>nylon PA6 corrugated, light weight           |   |
| X                       | X                       | L           | ✓               | L        | X              | ✓   | X                 | X                 | L           | X           | ✓            | ✓      | X      | ✓         | ✓              | ✓       | ✓               | ✓                      | ✓                      | X                     | X                    | ✓       | ✓               | ✓                     | L                 | ✓          | ✓             | L             | ✓     | ✓            | X   | <b>FPYLS</b><br>slit nylon PA6 corrugated, light weight     |   |
| X                       | X                       | L           | ✓               | L        | X              | ✓   | X                 | X                 | L           | X           | ✓            | ✓      | X      | ✓         | ✓              | ✓       | ✓               | ✓                      | ✓                      | X                     | X                    | ✓       | ✓               | ✓                     | L                 | ✓          | ✓             | L             | ✓     | ✓            | X   | <b>FPY</b><br>nylon PA6, large diameter                     |   |
| L                       | X                       | L           | L               | X        | X              | X   | X                 | X                 | L           | X           | L            | X      | X      | ✓         | ✓              | X       | ✓               | ✓                      | L                      | X                     | X                    | X       | L               | X                     | X                 | L          | L             | X             | ✓     | L            | X   | <b>FPCB</b><br>pvc spiral reinforced black                  |   |
| L                       | X                       | L           | L               | X        | X              | X   | X                 | X                 | L           | X           | L            | X      | X      | ✓         | ✓              | X       | ✓               | ✓                      | L                      | X                     | X                    | X       | L               | X                     | X                 | L          | L             | X             | ✓     | L            | X   | <b>FPCG</b><br>pvc spiral reinforced grey                   |   |
| L                       | X                       | L           | ✓               | X        | X              | X   | L                 | X                 | ✓           | L           | ✓            | ✓      | L      | ✓         | ✓              | X       | ✓               | ✓                      | X                      | X                     | X                    | L       | X               | X                     | L                 | ✓          | X             | ✓             | L     | X            | <b>FPCGN</b><br>pvc spiral reinforced green oil resistant |   |   |
| L                       | X                       | L           | L               | X        | X              | X   | X                 | X                 | L           | X           | L            | X      | X      | ✓         | ✓              | X       | ✓               | ✓                      | L                      | X                     | X                    | X       | L               | X                     | X                 | L          | L             | X             | ✓     | L            | X   | <b>FPCBU</b><br>pvc spiral reinforced blue high temperature |   |
| L                       | X                       | L           | ✓               | X        | X              | X   | L                 | X                 | ✓           | L           | ✓            | ✓      | L      | ✓         | ✓              | X       | ✓               | ✓                      | X                      | SS                    | X                    | L       | X               | X                     | L                 | ✓          | X             | ✓             | L     | X            | <b>LPC</b><br>smooth, pvc spiral reinforced               |   |   |
| L                       | X                       | L           | ✓               | X        | X              | X   | L                 | X                 | ✓           | L           | ✓            | ✓      | L      | ✓         | ✓              | X       | ✓               | ✓                      | X                      | SS                    | X                    | L       | X               | X                     | L                 | ✓          | X             | ✓             | L     | X            | <b>LPCO</b><br>smooth pvc spiral orange ultra flexible    |   |   |
| L                       | X                       | L           | ✓               | X        | X              | X   | L                 | X                 | ✓           | L           | ✓            | ✓      | L      | ✓         | ✓              | X       | ✓               | ✓                      | X                      | SS                    | X                    | L       | X               | X                     | L                 | ✓          | X             | ✓             | L     | X            | <b>LPCGN</b><br>smooth pvc spiral green oil resistant     |   |   |
| L                       | X                       | L           | ✓               | X        | X              | X   | L                 | X                 | ✓           | L           | ✓            | ✓      | L      | ✓         | ✓              | X       | ✓               | ✓                      | X                      | SS                    | X                    | L       | X               | X                     | L                 | ✓          | X             | ✓             | L     | X            | <b>LPCBU</b><br>smooth pvc spiral blue high temperature   |   |   |

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.

# 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%) |   |
|-------------|---|------------|------------|------------|-------------------|---------|--------------------|---------|----------------------|------------|-------------|-----------------|--------|------------|--------------|---------|-------|------------|-----------------|----------|-------------------------|-------------------------|---|
| 58          | <b>FU</b><br>galvanised steel   | ✓          | ✓          | ✓          | X                 | ✓       | X                  | ✓       | ✓                    | ✓          | ✓           | ✓               | ✓      | ✓          | ✓            | ✓       | ✓     | ✓          | ✓               | X        | X                       | X                       | X |
| 58          | <b>SSU</b><br>stainless steel, grade 316                              | ✓          | ✓          | ✓          | ✓                 | ✓       | X                  | ✓       | ✓                    | ✓          | ✓           | ✓               | ✓      | ✓          | ✓            | ✓       | ✓     | ✓          | ✓               | ✓        | ✓                       | X                       | X |
| 60          | <b>FSU</b><br>galvanised steel, pvc coated                            | X          | X          | X          | L                 | X       | X                  | X       | X                    | X          | ✓           | ✓               | L      | L          | X            | X       | X     | X          | L               | L        | ✓                       | X                       |   |
| 60          | <b>FNU</b><br>galvanised steel, nylon coated                          | ✓          | ✓          | ✓          | L                 | ✓       | X                  | L       | ✓                    | X          | ✓           | L               | X      | ✓          | ✓            | ✓       | ✓     | ✓          | ✓               | ✓        | ✓                       | X                       | X |
| 62          | <b>LFHU</b><br>galvanised steel, LFH coated                           | L          | L          | L          | ✓                 | X       | X                  | X       | X                    | X          | ✓           | ✓               | X      | X          | ✓            | X       | X     | X          | ✓               | X        | X                       | X                       |   |
| 62          | <b>FPU</b><br>galvanised steel, polyurethane coated                   | ✓          | ✓          | ✓          | X                 | L       | L                  | L       | L                    | X          | ✓           | ✓               | X      | ✓          | L            | ✓       | L     | X          | ✓               | X        | X                       | X                       |   |
| 64          | <b>LTP/LTPAS</b><br>galv steel, pvc coated, liquid tight              | L          | L          | L          | ✓                 | X       | X                  | X       | L                    | X          | ✓           | ✓               | L      | L          | L            | X       | L     | L          | L               | L        | L                       | L                       | X |
| 64          | <b>LTPHC</b><br>galv steel, thermoplastic rubber, liquid tight        | ✓          | L          | L          | ✓                 | ✓       | X                  | X       | L                    | L          | ✓           | ✓               | ✓      | ✓          | ✓            | ✓       | ✓     | ✓          | L               | ✓        | X                       | ✓                       | ✓ |
| 64          | <b>LTPUL</b><br>galv steel, LFH coated, liquid tight                  | ✓          | ✓          | ✓          | ✓                 | X       | X                  | X       | L                    | X          | ✓           | ✓               | L      | ✓          | L            | X       | L     | L          | L               | L        | L                       | L                       | X |
| 64          | <b>LTPLFH</b><br>galv steel, LFH coated, liquid tight                 | ✓          | ✓          | ✓          | ✓                 | X       | X                  | X       | L                    | X          | ✓           | ✓               | L      | ✓          | L            | X       | L     | L          | L               | L        | L                       | L                       | X |
| 66          | <b>LTPSS</b><br>stainless steel, pvc coated, liquid tight             | ✓          | ✓          | ✓          | ✓                 | X       | X                  | X       | L                    | X          | ✓           | ✓               | L      | ✓          | L            | X       | L     | L          | L               | L        | L                       | L                       | X |
| 66          | <b>LTPPU/LTPPUAS</b><br>galv steel, polyurethane coated, liquid tight | ✓          | ✓          | ✓          | X                 | L       | L                  | L       | L                    | X          | ✓           | ✓               | X      | ✓          | L            | ✓       | L     | X          | ✓               | X        | X                       | X                       |   |
| 66          | <b>LTBRDP</b><br>galv steel, braided core, pvc coated, liquid tight   | ✓          | ✓          | ✓          | ✓                 | X       | X                  | X       | L                    | X          | ✓           | ✓               | L      | ✓          | L            | X       | L     | L          | L               | L        | L                       | L                       | X |
| 66          | <b>LTBRDLFH</b><br>galv steel, braided core, LFH coated, liquid tight | L          | L          | L          | ✓                 | X       | X                  | X       | X                    | X          | ✓           | ✓               | X      | X          | ✓            | X       | X     | X          | ✓               | X        | X                       | X                       |   |
| 74          | <b>FL</b><br>galvanised steel, pliable                                | ✓          | ✓          | ✓          | X                 | ✓       | X                  | ✓       | ✓                    | ✓          | ✓           | ✓               | ✓      | ✓          | ✓            | ✓       | ✓     | ✓          | ✓               | X        | X                       | X                       | X |
| 74          | <b>FLP</b><br>galvanised steel, pvc coated, pliable                   | X          | X          | X          | L                 | X       | X                  | X       | L                    | X          | ✓           | ✓               | L      | L          | L            | X       | L     | L          | L               | L        | ✓                       | L                       |   |
| 75          | <b>LFHP</b><br>galvanised steel, LFH coated, pliable                  | L          | L          | L          | ✓                 | X       | X                  | X       | X                    | X          | ✓           | ✓               | X      | X          | ✓            | X       | X     | X          | ✓               | X        | X                       | X                       |   |
| 76          | <b>FSB</b><br>galv steel, pvc, galv steel overbraid                   | X          | X          | X          | L                 | X       | X                  | X       | X                    | X          | ✓           | ✓               | L      | L          | X            | X       | X     | X          | L               | L        | ✓                       | X                       |   |
| 76          | <b>LFHUBRD</b><br>galv steel, LFH coated, SS316 overbraid             | L          | L          | L          | ✓                 | X       | X                  | X       | X                    | X          | ✓           | ✓               | X      | X          | ✓            | X       | X     | ✓          | X               | X        | X                       | X                       |   |
| 78          | <b>FB</b><br>galvanised steel, galv steel overbraid                   | ✓          | ✓          | ✓          | X                 | ✓       | X                  | ✓       | ✓                    | ✓          | ✓           | ✓               | ✓      | ✓          | ✓            | ✓       | ✓     | ✓          | ✓               | X        | X                       | X                       | X |
| 78          | <b>FUSSB</b><br>galvanised steel, SS316 overbraid                     | ✓          | ✓          | ✓          | X                 | ✓       | X                  | ✓       | ✓                    | ✓          | ✓           | ✓               | ✓      | ✓          | ✓            | ✓       | ✓     | ✓          | ✓               | X        | X                       | X                       | X |
| 80          | <b>LTPBRD</b><br>galv steel, rubber coated, SS316 overbraid           | ✓          | L          | L          | ✓                 | ✓       | X                  | X       | L                    | L          | ✓           | ✓               | ✓      | ✓          | ✓            | ✓       | ✓     | ✓          | L               | ✓        | X                       | ✓                       | ✓ |
| 82          | <b>FPRSS</b><br>PA6 corrugated, SS316 overbraid                       | ✓          | ✓          | ✓          | L                 | ✓       | X                  | ✓       | ✓                    | X          | ✓           | L               | X      | ✓          | ✓            | ✓       | ✓     | ✓          | ✓               | ✓        | ✓                       | X                       | X |
| 82          | <b>FPRTC</b><br>PA6 corrugated, tinned copper overbraid               | ✓          | ✓          | ✓          | L                 | ✓       | X                  | ✓       | ✓                    | X          | ✓           | L               | X      | ✓          | ✓            | ✓       | ✓     | ✓          | ✓               | X        | X                       | X                       | X |
| 82          | <b>FPISS</b><br>PA12 corrugated, SS316 overbraid                      | ✓          | ✓          | ✓          | L                 | ✓       | L                  | ✓       | ✓                    | X          | ✓           | L               | X      | ✓          | L            | L       | ✓     | L          | ✓               | ✓        | ✓                       | X                       | X |
| 82          | <b>FPIHSS</b><br>PA12 corrugated, SS316 overbraid                     | ✓          | ✓          | ✓          | L                 | ✓       | L                  | ✓       | ✓                    | X          | ✓           | L               | X      | ✓          | L            | L       | ✓     | L          | ✓               | ✓        | ✓                       | X                       | X |

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

# metallic conduit and fittings



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

|                      | HYDROGEN PEROXIDE (30%) | HYDROGEN PEROXIDE (60%) | LACTIC ACID | LUBRICATING OIL | METHANOL | METHYL BROMIDE | MEK | NITRIC ACID (10%) | NITRIC ACID (60%) | 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 |   |   |
|----------------------|-------------------------|-------------------------|-------------|-----------------|----------|----------------|-----|-------------------|-------------------|-------------|-------------|--------------|--------|--------|-----------|----------------|---------|-----------------|------------------------|------------------------|-----------------------|----------------------|---------|-----------------|-----------------------|-------------------|------------|---------------|---------------|-------|--------------|---------------|---|---|
| <b>FU</b>            | X                       | X                       | X           | ✓               | ✓        | ✓              | ✓   | X                 | X                 | X           | X           | ✓            | ✓      | ✓      | X         | X              | ✓       | X               | X                      | X                      | X                     | ✓                    | ✓       | X               | X                     | ✓                 | ✓          | X             | X             | ✓     | X            |               |   |   |
| <b>SSU</b>           | ✓                       | ✓                       | ✓           | ✓               | ✓        | ✓              | ✓   | X                 | X                 | ✓           | ✓           | ✓            | ✓      | ✓      | SS        | ✓              | ✓       | SS              | ✓                      | L                      | X                     | ✓                    | ✓       | ✓               | ✓                     | ✓                 | ✓          | ✓             | ✓             | ✓     | ✓            |               |   |   |
| <b>FSU</b>           | ✓                       | ✓                       | L           | L               | X        | X              | X   | ✓                 | ✓                 | X           | L           | L            | X      | X      | X         | ✓              | X       | X               | ✓                      | L                      | X                     | X                    | X       | L               | X                     | X                 | L          | L             | X             | ✓     | L            | ✓             |   |   |
| <b>FNU</b>           | X                       | X                       | L           | ✓               | L        | X              | X   | ✓                 | X                 | L           | X           | ✓            | ✓      | X      | X         | ✓              | ✓       | X               | ✓                      | ✓                      | X                     | X                    | ✓       | ✓               | ✓                     | L                 | ✓          | ✓             | L             | ✓     | ✓            | X             |   |   |
| <b>LFHU</b>          | X                       | X                       | ✓           | L               | X        | X              | X   | ✓                 | X                 | ✓           | ✓           | X            | X      | X      | X         | ✓              | X       | ✓               | ✓                      | ✓                      | X                     | X                    | L       | L               | L                     | L                 | X          | L             | X             | ✓     | X            | ✓             |   |   |
| <b>FPU</b>           | L                       | X                       | L           | L               | L        | X              | L   | X                 | L                 | L           | L           | ✓            | X      | X      | L         | X              | ✓       | L               | X                      | L                      | L                     | X                    | L       | X               | X                     | X                 | ✓          | X             | ✓             | L     | L            | ✓             |   |   |
| <b>LTP/LTPAS</b>     | L                       | X                       | L           | ✓               | X        | X              | L   | L                 | X                 | ✓           | L           | X            | L      | SS     | ✓         | X              | SS      | ✓               | ✓                      | X                      | SS                    | X                    | L       | X               | X                     | L                 | ✓          | X             | ✓             | L     | X            | ✓             |   |   |
| <b>LTPHC</b>         | L                       | X                       | L           | ✓               | L        | ✓              | ✓   | ✓                 | ✓                 | L           | ✓           | ✓            | ✓      | SS     | ✓         | ✓              | SS      | ✓               | X                      | ✓                      | SS                    | X                    | X       | L               | X                     | X                 | ✓          | ✓             | ✓             | X     | ✓            | ✓             |   |   |
| <b>LTPUL</b>         | L                       | X                       | L           | ✓               | X        | X              | X   | L                 | X                 | ✓           | L           | ✓            | ✓      | L      | SS        | ✓              | X       | SS              | ✓                      | ✓                      | X                     | SS                   | X       | L               | X                     | X                 | L          | ✓             | X             | ✓     | L            | X             | ✓ |   |
| <b>LTPLFH</b>        | L                       | X                       | L           | L               | X        | X              | X   | L                 | X                 | ✓           | L           | L            | ✓      | L      | SS        | ✓              | X       | SS              | ✓                      | ✓                      | X                     | SS                   | X       | L               | X                     | X                 | L          | L             | X             | ✓     | L            | X             | ✓ |   |
| <b>LTPSS</b>         | L                       | X                       | L           | ✓               | X        | X              | X   | L                 | X                 | ✓           | L           | ✓            | ✓      | L      | SS        | ✓              | X       | SS              | ✓                      | ✓                      | X                     | SS                   | X       | L               | X                     | X                 | L          | ✓             | X             | ✓     | L            | X             | ✓ |   |
| <b>LTPPU/LTPPUAS</b> | L                       | X                       | L           | L               | L        | X              | L   | X                 | L                 | L           | L           | ✓            | X      | SS     | L         | X              | ✓       | L               | X                      | L                      | L                     | X                    | L       | X               | X                     | X                 | ✓          | X             | ✓             | L     | L            | ✓             | ✓ |   |
| <b>LTBRDP</b>        | L                       | X                       | L           | ✓               | X        | X              | L   | L                 | X                 | ✓           | L           | ✓            | ✓      | L      | SS        | ✓              | X       | SS              | ✓                      | ✓                      | X                     | SS                   | X       | L               | X                     | X                 | L          | ✓             | X             | ✓     | L            | X             | ✓ |   |
| <b>LTBRDLFH</b>      | X                       | X                       | ✓           | L               | X        | X              | X   | ✓                 | X                 | ✓           | X           | X            | X      | SS     | ✓         | X              | ✓       | ✓               | ✓                      | X                      | X                     | L                    | L       | L               | L                     | X                 | L          | X             | ✓             | X     | ✓            | ✓             | ✓ |   |
| <b>FL</b>            | X                       | X                       | X           | ✓               | ✓        | ✓              | ✓   | X                 | X                 | X           | X           | ✓            | ✓      | ✓      | X         | X              | ✓       | X               | X                      | X                      | X                     | X                    | ✓       | ✓               | X                     | X                 | ✓          | ✓             | X             | X     | ✓            | X             | ✓ | ✓ |
| <b>FLP</b>           | ✓                       | ✓                       | L           | L               | X        | X              | X   | ✓                 | ✓                 | L           | L           | L            | X      | L      | L         | ✓              | X       | L               | ✓                      | L                      | X                     | X                    | X       | L               | X                     | L                 | L          | X             | ✓             | L     | ✓            | ✓             | ✓ |   |
| <b>LFHP</b>          | X                       | X                       | ✓           | L               | X        | X              | X   | ✓                 | X                 | ✓           | ✓           | X            | X      | X      | L         | ✓              | X       | ✓               | ✓                      | ✓                      | X                     | X                    | L       | L               | L                     | L                 | X          | L             | X             | ✓     | X            | ✓             | ✓ |   |
| <b>FSB</b>           | X                       | X                       | X           | L               | X        | X              | X   | X                 | X                 | X           | L           | X            | X      | X      | X         | X              | X       | X               | X                      | X                      | X                     | X                    | X       | L               | X                     | X                 | L          | L             | X             | X     | L            | X             | ✓ | ✓ |
| <b>LFHUBRD</b>       | X                       | X                       | ✓           | L               | X        | X              | X   | ✓                 | X                 | ✓           | ✓           | X            | X      | X      | X         | ✓              | X       | ✓               | ✓                      | ✓                      | X                     | X                    | L       | L               | L                     | L                 | X          | L             | X             | ✓     | X            | ✓             | ✓ |   |
| <b>FB</b>            | X                       | X                       | X           | ✓               | ✓        | ✓              | ✓   | X                 | X                 | X           | ✓           | ✓            | ✓      | X      | X         | ✓              | X       | X               | X                      | X                      | X                     | X                    | ✓       | ✓               | X                     | X                 | ✓          | ✓             | X             | X     | ✓            | X             | ✓ | ✓ |
| <b>FUSSB</b>         | X                       | X                       | X           | ✓               | ✓        | ✓              | ✓   | X                 | X                 | X           | ✓           | ✓            | ✓      | X      | X         | ✓              | X       | X               | X                      | X                      | X                     | X                    | ✓       | ✓               | X                     | X                 | ✓          | ✓             | X             | X     | ✓            | X             | ✓ | ✓ |
| <b>LTPBRD</b>        | L                       | X                       | L           | L               | ✓        | L              | ✓   | ✓                 | ✓                 | ✓           | L           | ✓            | ✓      | L      | ✓         | ✓              | SS      | ✓               | X                      | ✓                      | SS                    | X                    | X       | L               | X                     | X                 | ✓          | ✓             | ✓             | X     | ✓            | ✓             | ✓ |   |
| <b>FPRSS</b>         | X                       | X                       | L           | ✓               | L        | X              | ✓   | X                 | X                 | L           | X           | ✓            | ✓      | X      | L         | ✓              | ✓       | ✓               | ✓                      | ✓                      | ✓                     | X                    | X       | ✓               | ✓                     | ✓                 | L          | ✓             | ✓             | L     | ✓            | ✓             | ✓ |   |
| <b>FPRTC</b>         | X                       | X                       | X           | ✓               | L        | X              | ✓   | X                 | X                 | X           | ✓           | ✓            | X      | X      | X         | X              | X       | X               | X                      | X                      | X                     | X                    | ✓       | ✓               | X                     | L                 | ✓          | X             | L             | ✓     | ✓            | ✓             | ✓ |   |
| <b>FPISS</b>         | X                       | X                       | L           | ✓               | L        | X              | ✓   | X                 | X                 | L           | X           | ✓            | ✓      | X      | L         | ✓              | ✓       | ✓               | ✓                      | L                      | X                     | X                    | ✓       | ✓               | X                     | ✓                 | ✓          | ✓             | L             | ✓     | ✓            | ✓             | ✓ |   |
| <b>FPIHSS</b>        | X                       | X                       | L           | ✓               | L        | X              | ✓   | X                 | X                 | L           | X           | ✓            | ✓      | X      | L         | ✓              | ✓       | ✓               | ✓                      | L                      | X                     | X                    | ✓       | ✓               | X                     | ✓                 | ✓          | ✓             | L             | ✓     | ✓            | ✓             | ✓ |   |

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 outside diameter (mm) | Pitch mm |
|----------------------|---------------------------------------|----------|
| 3/8"                 | 16.7                                  | 1.14     |
| 1/2"                 | 21.0                                  | 1.81     |
| 3/4"                 | 26.4                                  | 1.81     |
| 1"                   | 33.3                                  | 2.21     |
| 1 1/4"               | 41.9                                  | 2.21     |
| 1 1/2"               | 47.8                                  | 2.21     |
| 2"                   | 59.6                                  | 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"               | 34.9                                  | 33.4                                 | 1.41     |
| 1 1/2" - 18 UNEF    | 1 1/2"               | 31.8                                  | 30.2                                 | 1.41     |
| 1 3/4" - 18 UNEF    | 1 3/4"               | 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 <sup>2</sup> ) | Nominal overall cross sectional area (mm <sup>2</sup> ) of cable |
|---|--|
| 1.0                                       | 6.6  |
| 1.5                                       | 7.6  |
| 2.5                                       | 9.6  |
| 4.0                                       | 14.5   |
| 6.0                                       | 18.8   |
| 10.0                                      | 29.3   |
| 16.0                                      | 40.2   |
| 25.0                                      | 63.8   |
| 35.0                                      | 83.5   |
| 50.0                                      | 113.0  |
| 70.0                                      | 149.0  |
| 95.0                                      | 204.0  |

Example: is LTP20 suitable for five 4.0mm<sup>2</sup> cables?

- The total cross sectional area of the conductors is  $5 \times 14.5\text{mm}^2 = 73\text{mm}^2$
- The cross sectional area of LTP20 is  $3.142 \times \frac{(\text{inside diameter})^2}{4} = 201\text{mm}^2$
- % 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 at 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 is most suited to your application. Factors which may be important include:-

#### Standards, performance and approvals

- 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
- Colours
- Ease of installation
- Anti tamper
- Hazardous Areas

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 AS2053.

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.

Further information regarding standards and approvals can be found on page 104.

**Technical Data Sheets are available giving additional information. Please call +44 (0)1675 466900 for technical information and application advice.**



3D CAD models can be downloaded from our website [www.flexicon.uk.com](http://www.flexicon.uk.com)



Flexicon has classified EMC screening of our products as follows;

| STANDARD EMC SCREEN  | ENHANCED EMC SCREEN  | SUPER EMC SCREEN  |
|----------------------|----------------------|-------------------|
| Standard 50dB @ 1MHz | Enhanced 60dB @ 1MHz | Super 70dB @ 1MHz |

## Classification of conduit systems to BS EN IEC 61386

| Level | 1st digit<br>Compression<br>Strength<br>N/50mm | 2nd digit<br>Impact Strength<br>Joules at<br>min temp | 3rd digit<br>Minimum<br>Temp deg C | 4th digit<br>Maximum<br>Temp deg C | 5th digit<br>Conduit<br>Type | 6th digit<br>Electrical<br>Properties | 7th digit<br>IP Rating<br>Solids | 8th digit<br>IP Rating<br>Water | 9th digit<br>Corrosion<br>Resistance<br>(water) | 10th digit<br>Tensile<br>Strength N | 11th digit<br>Flame<br>Propagation | 12th digit<br>Suspended<br>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                               |   |                                     |                                    |  |

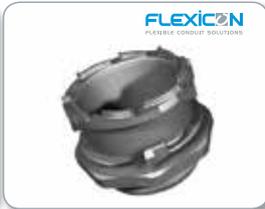


# Cutting and Assembly Guidance

Visit our website for instructional videos offering useful hints on how to speed up your conduit installation when using our products – [www.flexicon.uk.com](http://www.flexicon.uk.com)



TECHNICAL DATA



## Cutting Conduit

### Non-Metallic



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

### Metallic



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

### Overbraided



Cutting of overbraided conduit is made much easier by tightly wrapping self adhesive tape around the conduit and sawing through the middle of the tape. The tape should be removed if EMC screening is required. Ensure you make a straight vertical cut.

Flexicon offer a bench mounted bandsaw designed to cut metallic conduit easily – see Page 89. Conduit length is measured under light tension. When cutting an exact number of lengths from a reel (e.g. 5 x 5m from 25m) please take into account the length tolerance of the reel and each cut length.

## Non-Metallic Fittings

### FPA Fitting



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

### FPA



For Flexilok® and FPA fittings simply push the conduit into the end of the fitting with a slight twist until it will go no further. Pull back slightly to ensure the locking teeth mechanism has engaged with the corrugations.

### FPAX



The FPAX fitting features a conduit seal to provide the ultimate IP rating up to IP69K. This simply fits onto the end of the conduit before the fitting is connected to the conduit. To aid assembly moisten this seal. An FPA fitting cannot be uprated to IP69K with the addition of a seal. Pull back slightly to ensure the locking teeth mechanism has engaged with the corrugations.

To remove the FPA or FPAX fittings simply insert a small screwdriver into the screwdriver slot and move the screwdriver handle towards the "off" position. Remove the screwdriver then manually twist the cap further towards the off position - the fitting can then be released from the conduit. Once removed, the fitting can be reused by simply twisting the cap so that the screwdriver slot lines up with the ON position.



# Cutting and Assembly Guidance

## Metallic Fittings

### FSU Conduit



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

### Insert being fitted



Firstly place the back nut on the conduit followed by the seal (note the orientation). Next, screw the insert into the end of the conduit until this gives a secure fit.

### Attaching the body



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

## Braided Fittings

### Type C Braided Fittings



Our type-C braided fittings consist of an outer compression nut, an inner compression nut, an elastomeric seal, an insert and a body. Firstly place the outer compression nut on the conduit as per 1. Remove the tape securing the braid and pull back to allow the inner compression nut to be fitted as per 2. Next, fit the elastomeric seal (note the orientation) and screw the insert into the end of the conduit until this gives a secure fit as per 3.

Bring the body to mate with the inner compression nut and secure. Next, bring the back shell to mate with the inner compression nut to secure the braid as per 4. Metal fittings should be tightened with grips or spanner to ensure securing and IP rating as per 5.

## EMC Screening Using Pliable Conduit



To obtain EMC screening on pliable FLP conduit, the outer plastic sheath must be trimmed back prior to assembly of the fitting to ensure good electrical contact with the tapered bore of the fitting body as shown

## FLEXILOK® Removal Tool



Snap in FLEXILOK® fittings can be removed by using a tool – see page 89

42 & 54mm FLEXILOK® can be removed using our hinged tool – see page 89

## General

We recommend that RSW (Retained Sealing Washers) are used with plastic and metal threads to maintain IP rating between systems, see page 86.

The easiest way of installing cables into flexible and pliable conduit is to simultaneously draw in the cables with the conduit in straight condition before installation.

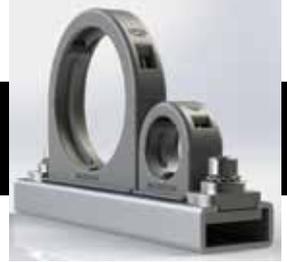


For more handy tips visit our website [www.flexicon.uk.com](http://www.flexicon.uk.com)





# Conduit Mounting Options



## Conduit Clips

### Clip Mounting



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

The clips can also be mounted and secured using a mounting rail.

The clip design has rail guides either side, allowing easy location.

To install, slide the FCL clip in from the end of the rail.

### Fixing Conduit



Ensure the hinged lid is open and insert the conduit from above. The clip size is shown on the clip for easy reference. The clip provides a secure fit whether the hinge is open or closed. The FCL clip includes an internal rib to help locate and retain corrugated conduits. The FCL-P clips do not have this rib and can therefore be used with plain or smooth outer conduits.

Once the conduit is located, close the hinge and listen for a click. The clip does not rely on the hinge to retain the conduit in place however the lid increases conduit retention.

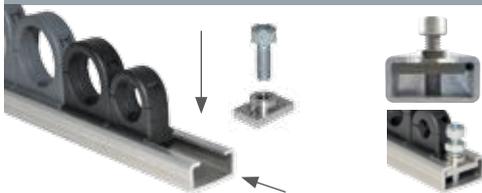
### Simple Removal



To remove the conduit insert a small screwdriver where it states OPEN. Push down and lever to release. The hinge should then be free to open.

## Mounting Rails

### Basic Clip Fixing



Slide the FCL or FCL-P clip in from the end of the mounting rail.

Move the clips into the desired position and use Mounting Rail Fixing Accessories (MRFA) to secure. The **MRFAL** can be inserted from above at any given position, or alternatively from the end of the rail.

Secure its position using a bolt. The bolt length will be dependant on the mounting rail depth used - consult us for more details. Tighten the bolt until secure. For anti-vibration performance add a spring washer and locking nut as shown above.

### Other Fixing Accessories



The **MRFAM** products can be inserted from above at any given position along the rail or alternatively can be inserted from the end of the rail.

The **MFRAM** clamps onto the top rail to secure the fittings. This accessory can also be used to secure the F-Clamps products to the Mounting Rail.

### Other Fixing Accessories



The **MRFAH** products can be inserted from the end of the rail. The **MFRAH** has a serrated washer to offer anti-vibration performance. It clamps on the top rail to secure the fittings.

## F-Clamp Options

### Universal Adaptor



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

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

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

### Accessories



The Cover plate sits on top of the F-Clamp and can be used to provide additional strength when using the F-Clamps.

For additional strength the F-Clamps can be mounted onto Weld plates. Flexicon can offer two versions. For further details consult us.

### F-Clamp Stacking



The F-Clamps products can be mounted side by side and / or can be stacked vertically. This offers a flexible and adaptable method of support for different conduit sizes.

For stacking arrangements and stacking bolts contact us for further details.



# Flexicon EXD Conduit Gland

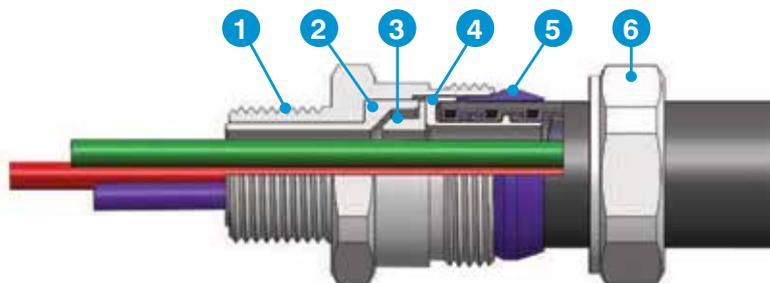


## Installation Guide & Instructions

Technical data and specification.

### Conduit Gland Components

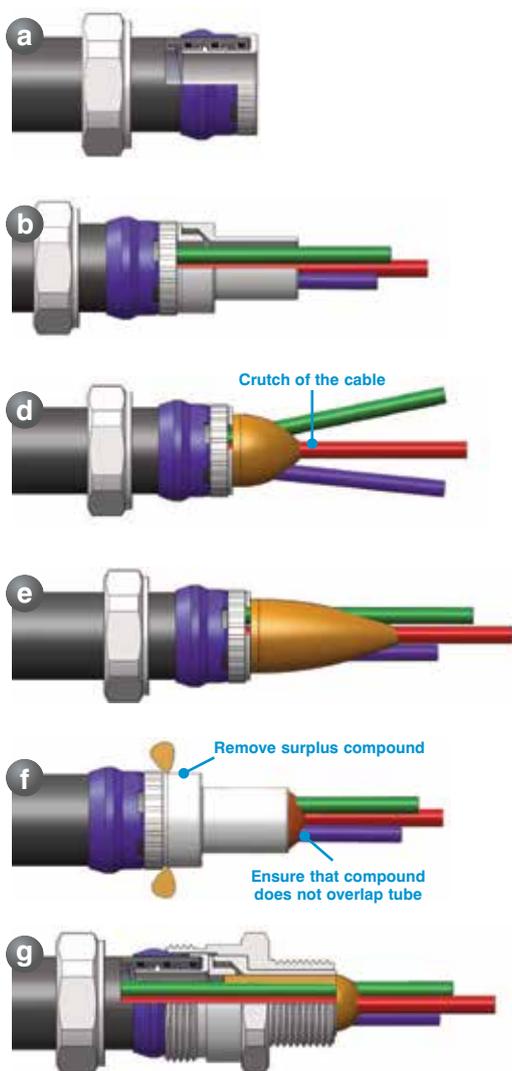
1. Entry Thread
2. Compound Tube
3. Washer
4. Conduit Insert
5. Conduit Seal
6. Compression Nut



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

### Installation instructions for Flexicon conduit gland type EXD

**Please read all instructions carefully before beginning the installation**



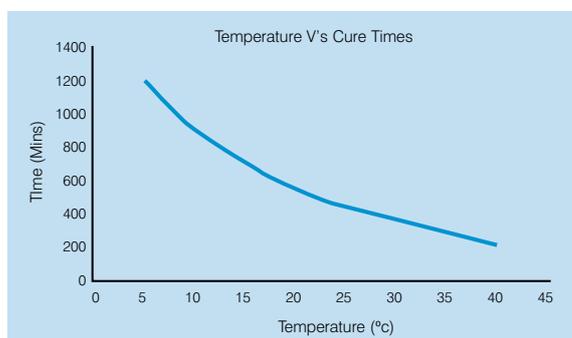
- a** Disconnect the Compression Nut (6) and remove the Conduit Seal (5) and Conduit Insert (4) from the gland. Slide the nut over the conduit, followed by the conduit seal (orientated as shown below) and screw the conduit insert into place.
- b** Remove the Compound Tube (2), and Washer (3) as an assembly from the Entry Item (1). Feed the prepared cable/cable cores through the flexible conduit and through the compound tube/washer assembly.
- c** Remove the compound tube. If the installation involves a cable, remove any bedding or fillers from around the cable cores. If the cable cores have screens, these should be unravelled and then twisted together to form a single core. Wearing the protective gloves supplied, mix all of the two-part epoxy compound (EP2122) until it is pliable and an even colour is achieved. The minimum temperature when mixing is 10°C. Ensure compound is within use-by date.
- d** Separate the cable cores and apply the compound to the crutch of the cable for a distance of about 6mm and pack into place. If a drain wire is present then it should be sleeved with some heat shrink tubing which is pushed into the compound before shrinking with the application of some heat. Screens that have been twisted together should be treated as a drain wire.
- e** Bring the cores together again and pack more compound around them to a length and diameter sufficient to fill the compound tube, ending in a taper.
- f** Pass the Compound Tube (2) over the conductors until the stepped end is fully located with the Washer (3). Pack more compound into place until the compound tube is fully filled.
- g** Re-install the conduit assembly into the entry item making sure the compound is not disturbed and loosely tighten the Compression Nut (6) onto the Entry Item (1). When the compound has cured the entry item should be removed from the assembly and fitted to the apparatus. The gland can then be refitted into it and the Compression Nut (6) finally tightened. Typical cure times are shown opposite.

### Installation Instructions

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

### Special Conditions For Safe Use

- 1 The conduit gland ranges shall only be used where the temperature, at the point of entry, is in the following ranges: -60°C to +85°C.
- 2 The entry component threads may need additional sealing to maintain the ingress protection ratings as applicable to the associated equipment to which it is attached.



# Low Fire Hazard (LFH) Performance

LFH encompasses LSF (low smoke and fume) and LS0H (low smoke zero halogen)

Low Fire Hazard (LFH) conduit systems are becoming an increasing part of the specification in many cabling applications. Public buildings, high rise office blocks, hospital theatres and transport installations - these are just a few of the instances where Low Fire Hazard products may be required.

**Low Fire Hazard systems are required to protect personnel and property in the event of a fire and may be demanded by specifiers, occupiers, building owners, fire services or even insurers.**

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

- **Highly Flame Retardant** to prevent a fire starting or limit its development if one does start.
- **Low Smoke** emission in the event of a fire to enable personnel to see their way to escape.
- **Low Toxicity** in the event of a fire to ensure personnel are not overcome during their escape.
- **Halogen Free** gives an indication of low smoke and low toxicity. It also rules out halogen acid gas emission - a fact that is of interest to insurers as acid smoke can destroy computer equipment and damage the structure of a building. Halogens are Fluorine, Chlorine, Bromine and Iodine.

## Methods of Assessing Fire Performance



**Flame Retardancy** The minimum requirement is self-extinguishing according to the worldwide conduit system standard BS EN IEC 61386 where a vertical sample of conduit is exposed to a 1kW burner and must extinguish within 30 seconds of the removal of the flame. The char must not have travelled more than a certain distance up the sample and there must be no flaming droplets. Fittings are tested by means of a 750°C glow wire test. To assess how flame retardant a material is, the normal test method is to measure the Limiting Oxygen Index (LOI) according to BS EN ISO

4589-2 which determines the percentage of oxygen that needs to be present to support combustion. The higher the LOI percentage, the greater the flame retardancy of the material. Oxygen present in normal air is approx. 21%. Another method is the glow wire test, BS EN IEC 60695-2, which applies a glow wire to a plaque of material at 750°C, 850°C or 960°C.

UL94 is an Underwriters Laboratories standard that measures the rate of burning up a vertical test plaque, category V0 is the most flame retardant followed by V1 and V2. There is a category HB but this indicates that the material is flammable even along a horizontal test plaque.



**Low Smoke emission** There are a number of fire tests, mainly from the rail industry, where a specified sample of material is burnt under controlled conditions in a given size smoke

chamber and the smoke obscuration of a defined beam of light is measured. Although the different tests are similar, the results and the requirements are different.



**Low Toxicity** There are a number of fire tests, mainly from the rail industry, where a specified sample of material is burnt under controlled conditions in a given size smoke chamber and the fumes are analysed for various gases, the concentration of each gas is

then multiplied by its toxic potency to give a toxicity index. Although the different tests are similar, the results and the requirements are different.

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



**Halogen Free** The Halogens are fluorine, chlorine, bromine and iodine. Chlorine is the most common in PVC, fluorine is in fluoro-polymers and bromine appears in flame retardants. All of them give off highly toxic fumes and thick smoke. A material cannot be

considered as Low Fire Hazard if it contains halogen.

However a halogen free material is not necessarily Low Fire hazard as it may not be low toxicity, low smoke and highly flame retardant.

Halogen content is assessed by various chemical tests and analytical techniques.

## Classification of Low Fire Hazard performance (LFH)



### Inherently Low Fire Hazard

These products are made entirely from metals so there is no non-metallic material to burn or create smoke or toxic fumes.

Inherently Low Fire Hazard products include; FU, SSU, FB, FUSSB, FTGB and metal fittings.



### Extra Low Fire Hazard

These products have a Limiting Oxygen Index of greater than 34% as well as being low smoke and low toxicity.

Extra Low Fire Hazard products include; LFHU, LFHUBRD, LTPLFH, LTBRDLFH, LFHP, FPR, FPRSS and FPRTC



### Standard Low Fire Hazard

These products have a Limiting Oxygen Index of greater than 22% as well as being low smoke and low toxicity.

Standard Low Fire Hazard products include; FPAS, FPAH, FPI, FPISS, FPIH, FPIHSS and PA66 fittings.

## Specifying Bodies

**Flexicon provides Technical data sheets which give full details of product performance and test data on each product. Full independent test reports are available on request.**

**UK Rail** uses BS6853 which includes tests for LOI, glow wire, smoke and toxicity. Minimum LOI for over ground trains is 28%.

**London Underground** uses BS6853 which includes tests for LOI, glow wire, smoke and toxicity with additional requirements within its own standard 1-085. Minimum LOI for underground trains is 34%. The following products have been approved by London Underground;

Certificate No. 296, conduit types FU, SSU and FUSSB.

Certificate No. 297, conduit types LFHU, LFHUBRD and LFHP.

Certificate No. 298, conduit types FPR and FPRSS.

Certificate No. 658, conduit type LTBRDLFH.

Certificate No. 2020, conduit type LTPLFH.

Certificate No. 2624, EXD barrier glands.

**French Rail** uses NF F 16-101/2 which gives an I (Ignition) and F (Fume) rating.

**German Rail** uses DIN 5510.

**Italian Rail** uses CEI 11170.

**European Rail**, there is now a new European rail fire standard, EN 45545, which will eventually replace national rail standards. This gives a HL (Hazard Level) classification.

**Australian Rail** uses AS/NZS 1530.3.

**USA Rail** uses ASTM E 162 and ASTM E 662.

**UK Ministry of Defence** uses Defence Standards 02-711 and 02-713.

**Russian Fire Certificate** No. 0642449



Flexicon Technical Data Sheets



## Buyer Beware

It is unfortunate that the European standard writing organisation for cable management products has yet to prepare a classification standard for Low Fire Hazard products that would define terms, detail test methods and classify results. As a result there are many undefined terms used that may not be clearly understood.

To be Low Fire Hazard a product must display **ALL** of the following: Highly flame retardant, Low smoke emission, Low toxic fumes and Halogen free.

Terms such as Low Smoke and Fume (LSF) may not address Toxicity and Low Smoke Zero Halogen (LS0H) may not address flame retardancy.

Make sure your supplier can provide documented evidence for all four aspects of Low Fire Hazard performance.



# Standards and Approvals

## Information



FMS8347  
BSEN ISO9001 2008

### ISO 9001

Flexicon is accredited to ISO 9001 2008 by the British Standards Institution (BSI) for the design and manufacture of conduit systems and accessories. Certificate No FM58347.



### BS EN IEC 61386

### BS EN IEC 61386

BS EN IEC 61386 is the new worldwide standard for conduit systems and is superseding the previous European conduit standard EN 50086. Flexicon were one of the first companies in the UK to have its products tested to the new standard.

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



### CE

Flexicon are marked with the CE mark to show that they comply with the essential requirements of the relevant European Directives.



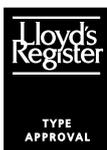
### RoHS

All Flexicon's products meet the requirements of the European RoHS Directive, Restriction of Hazardous substances. This precludes the use of certain toxic materials and heavy metals.



### REACH

All Flexicon products in the catalogue meet the requirement of the European REACH regulation, Regulation, Evaluation, Authorisation and restriction of Chemicals.



### Lloyds Register of Shipping Type Approval

Specific conduit systems from Flexicon have Lloyds Register of Shipping Type Approval having been assessed for suitability for marine and other arduous applications.



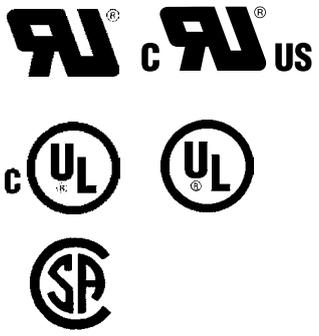
### Standards Australia (AS)

### Standards Australia (AS)

Standards Australia is Australia's peak standards body. It co-ordinates standardisation activities, develops internationally aligned Australian Standards and facilitates the accreditation of other Standards Development Organisations. Certain conduit systems have been tested and approved to the relevant parts of the Australian Standard AS2053.

### WEEE

Flexicon's conduit products are not covered by the European WEEE Directive, Waste Electrical and Electric Equipment.



### North American Approvals

Most of Flexicon's nylon conduits and fittings have UL (Underwriters Laboratories) recognition for component use within UL listed equipment. File No. E229161.

Some nylon conduits have cUL listing to the UL standard UL1660 and CSA standard C22.2 No. 227.2.1. File No. 246572.

Some nylon fittings have cUL listing to UL514B and CSA standard C22.2 No. 18.3-04. File No. E247502.

LTPUL conduit is UL listed to UL360 and CSA approved.

FPC conduits and MPC fittings are UL recognised to UL1696 and CSA standard 22.2 No. 227 for use in USA and Canada. File No. E229161.

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



### Rail accreditations

Flexicon's Low Fire Hazard conduits and fittings have been independently tested to following international rail fire standards.

France NFF 16-101/2, Germany DIN 5510, UK BS 6853, London Underground LUL 1-085 GM/RT2120, Australia/New Zealand AS/NZS 1530, European TS 45545.

Flexicon holds a wide range of Product Registration Certificates issued by Transport for London, London Underground Ltd.

Flexicon Ltd are fully registered as a Supplier on Link-up, Supplier number 093691.



### Hazardous Area Approvals

Flexicon's EXD glands have been tested and accredited by SIRA to both ATEX IECEx Ex d, Ex e and Ex t applications. We also have GOST approvals.

Our LTP EX e fittings have been tested and accredited by Intertek to both ATEX and IEC Ex.



### UK MOD

Flexicon is a registered supplier to the UK Ministry of Defence NCAGE No. U5256 and holds NATO codification numbers for specific conduits.



### BEAMA Member

BEAMA Limited is the UK's trade body for manufacturers of electrical installation and cable management products. It stands for the British Electrotechnical and Allied Manufacturers Association.

Errors, omissions and amendments excepted  
Information given in this catalogue is for guidance only as our policy is one of continuous development and specifications may change. Flexicon is not liable for claims arising from product misuse.

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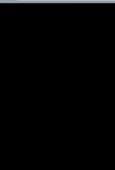
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