WWW.FLEXICON.UK.COM





11-000-000



Flexicon Excellence & Innovation

Utilising the latest technologies in production and automation, our manufacturing expertise and efficiencies allow us to be competitive in today's Global marketplace.

With a comprehensive stock holding we strive to deliver service excellence to meet our customers demands faster, ensuring you can count on us.



<image>

Flexicon a global presence

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

Flexicon continues to invest in its UK based headquarters and manufacturing facilities, ensuring excellence, innovation and quality assurance are second to none. We design, develop and manufacture our products in Birmingham, United Kingdom.

Committed to exceeding customer expectations when it comes to cable protection, Flexicon continue to innovate in product development, supported by exceptional levels of service and support.

MADE IN THE

Flexicon, leading the way for cable protection in today's global marketplace.

Flexicon - for quality & assurance excellence

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?

- Independently tested products that comply with relevant global standards
- User friendly products offering time saving innovations
- Quality products from the global experts when it comes to flexible conduit solutions
- A true cable management solution whether it's standard products or bespoke made to order assemblies
- Global outlets serving the industry products available in over 50 countries worldwide availability
- Progressive and expanding product portfolio

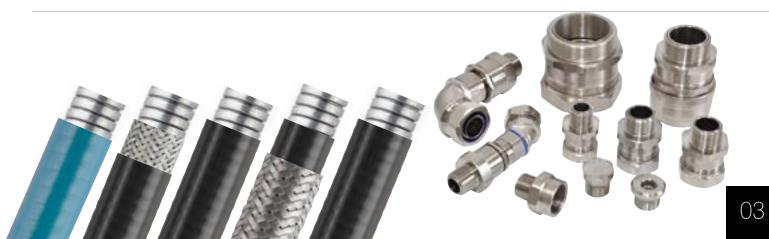




Flexicon Contents



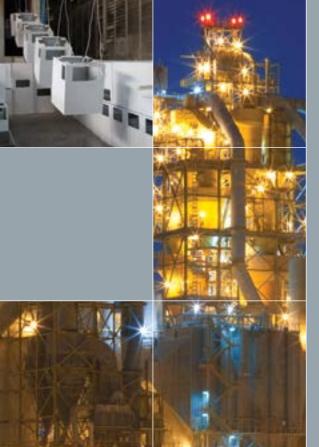
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Flexicon Hazardous Area Applications Why use Conduit over Cable?

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





Hazardous Area Applications

As a progressive organisation, Flexicon are continually investing in new product development to ensure superior cable protection in safety critical and hazardous areas.

With a reputation for manufacturing innovation and excellence, Flexicon operate and are accredited to ISO9001 2008 British Standards and BS EN IEC 61386 Worldwide Standard for conduit systems.

Flexicon's EXD glands have been tested and accredited by SIRA to both ATEX and IECEx Ex d, Ex e and Ex ta applications and also have GOST approval. In summary, using a Flexicon conduit system with a Flameproof Barrier Gland can provide the following benefits over cable:



and greater enclosure integrity



No need for specialist cables



 No need for use of SWA cables





Future proofing the installation - easier to upgrade

Ex d requirements insist that cable used in hazardous areas should be a considerably compact circular cable with extruded bedding and using fillers that are non-hygroscopic.

Further more, thought should be given to the volume of cable required and how it will be terminated. If numerous cables are to be terminated at the same point, the size of glanding panel may impact on the required control box enclosure size.

Using Flexicon conduit systems removes these issues as cables can be run through a protective conduit, allowing multi-cores to share the same space and so reduce the number of entry points required into the control box.

Calculating the cross-sectional area of the cables to be run through a single conduit will enable the correct specification and selection of conduit system required.

Hazardous Area Approvals - 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.

	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
ē	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
	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 CX/
	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
	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.B00	D207 PG



Flexicon Hazardous Area Classifications & Zones



Introduction

Hazardous Areas exist where a flammable mixture of gas and air, or dust and air, can exist in large enough quantities and for long enough periods to create a risk of explosion if an ignition source is present. Wherever possible it is important to minimise the risk of explosive mixtures forming and / or the risk of ignition. In the instances where this is impossible or impractical then means of providing a level of protection are required.

This guide will briefly explain how people and plant can be protected in hazardous areas. The guide is particularly focussed towards applications for the Flexicon EXD conduit gland and is not intended to be a full guide to hazardous areas. Users of this conduit gland should be fully qualified, competent and conversant with hazardous area requirements.

Flammable Mixtures & Ignition Sources

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

Certain fine dusts dispersed in air can also be explosive.

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

Hazardous Area Zones

The level of risk in hazardous areas is defined by a zoning system.



Zone 0

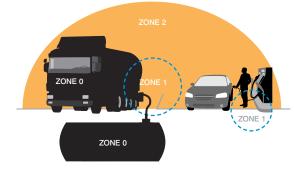
An area where an explosive gas atmosphere is present continuously or for long periods of time.

Zone 1

An area where an explosive gas atmosphere may exist under normal operating conditions.

Zone 2

An area where an explosive gas atmosphere is not likely to exist under normal operating conditions, but if it does it will exist only for a short period of time.



Combustible Dust Hazards

IEC 61241 - Electrical apparatus for use in the presence of combustible dust.

Zone 21

An area, in which combustible dust, as a cloud, is occasionally present during normal operation, in sufficient quantity to be capable of producing an explosive concentration of combustible dust in a mixture with air.

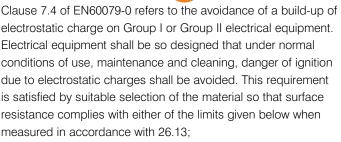


Zone 22

An area, in which combustible dust, as a cloud, may occur infrequently and persist for only a short period, or in which accumulations of layers of combustible dust may give rise to an explosive concentration of combustible dust in a mixture with air.

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

Anti-Static Applications



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

Flexicon Liquid Tight Flexible Conduit Range

With a choice of 11 different conduit types and fittings that provide the highest Ingress Protection rating IP69K, you can be sure your installation is Liquid Tight not just for now, but for many years to come!

High level of mechanical protection is paramount in arduous EXD Liquid Tight Fittings environments such as oil and gas, mining and other industrial installations. Flexicon Liquid Tight conduit and fittings offer a true heavy duty conduit and IP69K liquid tight solution for indoor or These fittings can be used with Liquid Tight Conduits outdoor cable installations offering hard wearing solutions thus minimising production downtime. Liquid tight NEW NEW conduit range LTPLFH I TPUI LTP/LTPAS LTPHC Conduit Galvanised Steel Core material Galvanised Steel Galvanised Steel Galvanised Steel **Outer sheath** PVC / Anti-Static PVC Thermoplastic Elastomer (TPE) LFH Polyolefin **PVC** 10mm to 63mm Size Range 12mm to 63mm 16mm to 32mm 16mm to 63mm -15°C....+75°C -20°C....+105°C -60°C+150°C -25°C+90°C **Temperature Range** IP66 + IP67 + IP68 (5 bar) + IP69K IP66 + IP67 + IP68 (5 bar) + IP69K **IP Rating** IP66 + IP67 + IP68 (5 bar) + IP69K IP66 + IP67 + IP68 (5 bar) + IP69K **Tensile Strength*** 130kg 130kc 130kg 160kg **Compression Strength*** 400kg 400kc 400kg 500kg Min Inside Bend Radius* 65mm 65mm 100mm 90mm Colours Black, Grey, Orange Black Black Black **UV Resistant** Yes Yes Yes Yes **Oil Resistance** Yes Yes Yes Yes Extra Low Fire Hazard Fire performance Self Extinguishing Self Extinguishing & Halogen Free Self Extinguishing & Self Extinguishing Applications Oil resistance Low / High Temp LEH Dual listed **Anti-Static Option** Yes (LTPAS) **Additional Approvals** Lloyds Register of Shipping London Underground UL Listed & CSA Approved

* Figures are representative for 20mm size

International Standards – the peace of mind you should expect!

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

Low Fire Hazard (LFH) conduit systems are becoming an increasing part of the specification in many cabling applications. Low Fire Hazard systems are required to protect personnel and property in the event of a fire and may be demanded by specifiers, occupiers, fire services or even insurers. Visit our website for more information.

	EXTRA
LTPLFH	LOW FIRE HAZARD
Self extinguishing	to EN 61386
Highly flame retardant	LOI = 50%
Low smoke to BS6853	maximum opacity $Ao = 0.01$
Low toxicity to BS6853	R = 0.27
Classification to BS6853	Cat 1a int and ext
London Underground Product Registration to 1-085	Certificate no. 2020
Halogen, Sulphur & Phosphorus free	

Flexicon Whatever your application...



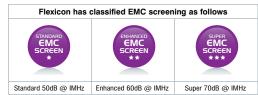
...we've got it covered!



Liq	uid Tight Fittin	gs 🧧	P66 IP67 IP68 IP69K Liqui	id Tight Stainless S	teel 1966 1967 1968 1969K
		These fittings can be to	used with Liquid Tight Conduits	Thes	e fittings can be used with Liquid Tight Conduits
Ne		5	NEW CHANCED SCREEN **	NEW PHANED EMC SCREEN **	SCREEN AND STATU
	TPPU/LTPPUAS	LTPSS	LTBRDP	LTBRDLFH	LTPBRD
	Galvanised Steel	Stainless Steel (316)	Galv Steel / Galv Steel Braid	Galv Steel / Galv Steel Braid	Galv Steel / TPE
Po	lyurethane / Anti-Static PU	PVC	PVC	LFH Polyolefin	SS316 Overbraid
	10mm to 63mm	16mm to 50mm	20mm to 50mm	20mm to 32mm	16mm to 50mm
	-40°C+80°C	-20°C+105°C	-20°C+105°C	-20°C+90°C	-60°C+150°C
IP66 -	- IP67 + IP68 (5 bar) + IP69K	IP66 + IP67 + IP68 (5 bar) + IP69K	IP66 + IP67 + IP68 (5 bar) + IP69K	IP66 + IP67 + IP68 (5 bar) + IP69K	IP66 + IP67 + IP68 (5 bar) IP69K
	130kg	130kg	130kg	130kg	350kg
	400kg	400kg	400kg	400kg	400kg
	65mm	65mm	65mm	130mm	65mm
	Blue, Black	Black	Black	Black	Stainless Steel
	Yes	Yes	Yes	Yes	Yes
	Yes	Yes	Yes	Yes	Yes
Self E	xtinguishing & Halogen Free	Self Extinguishing	Self Extinguishing	Extra Low Fire Hazard & Self Extinguishing	Self Extinguishing & Halogen Free
	Abrasion resistance	Corrosion resistance	EMC screened	EMC screening and LFH	Very arduous industrial environments
	Yes (LTPPUAS)	-	-	-	As standard
	-	-	-	London Underground	-

LTBRDLFH	EXTRA LOW FIRE HAZARD
Self extinguishing	to EN 61386
Highly flame retardant	LOI = 50%
Low smoke to BS6853	maximum opacity $Ao = 0.01$
Low toxicity to BS6853	R = 0.27
Classification to BS6853	Cat 1a int and ext
London Underground Product Registration to 1-085	Certificate no. 658
Halogen, Sulphur & Phosphorus free	· · · · · · · · · · · · · · · · · · ·

EMC Screening Performance



EMC screening performance charts are available on request. Contact Flexicon for further information.

Anti-Static Performance

Clause 7.4.2 of EN60079-0 refers to the avoidance of a build-up of electrostatic charge on Group I or Group II electrical equipment. Where necessary, Flexicon's AS ranges of products have been tested to and comply with this clause.

Flexicon Liquid Tight Conduit Galvanised Steel & Plastic Coated





Conduit



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

Special Characteristics: Oil resistant and self extinguishing.

LTPAS version as above but with anti-static performance coating



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

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

LTP, LTPAS, LTPHC, LTPUL, LTPPU, **LTPPUAS & LTPLFH**

Galvanised Steel Core, Plastic Coated Liquid Tight

Properties

- High mechanical strength
- IP rating: IP66 + IP67 + IP68 (5 bar) + IP69K
- Smooth, wipe clean outer cover
- · Cover does not wrinkle when bent
- Temperature range -20°C to +105°C (LTP) -40°C to +80°C (LTPPU) -60°C to +150°C (LTPHC) -25°C to +90°C (LTPLFH) -15°C to +75°C (LTPUL)
- LTP has Lloyd's Register Type Approval
- · LTPUL conduits are UL listed and CSA approved
- · Resistant to oils and greases
- Compliant to LUL Std 1-085-A3 (LTPLFH)
- Good flexibility (LTP, LTPAS, LTPHC, LTPUL, LTPPU & LTPPUAS)

NEW

p

- · UV resistant and suitable for external use
- · Nickel plated brass or stainless steel fittings
- Vibration and shock tested to EN61373 Cat 2
- LTPAS & LTPPUAS have Anti-Static



(mm)

dia

outside inside

(mm)

dia

1/4 11.8 7.0 **LTP10B**+

5/16 14.2 10.0 **LTP12B** 25, 50

17.8 12.6 LTP16B 10, 25, 50

26.4 21.0 LTP25B 10, 25, 50 100

LTP40B 10, 25

1/2 21.1 16.0 LTP20B 10, 25, 50

33.1 26.5 LTP32B 10, 25

11/2 47.9 40.4 LTP50B+ 10, 25

2 59.7 51.6 **LTP63B**⁺ 10, 25

US trade size (")

3/8

3⁄4

1

11/4 41.8 35.4

nominal size (mm)

10

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

Special Characteristics: UL listed and CSA approved.

number

oart ee

Ē

length

50



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

Colour black (B) and blue (BU). (RAL 5015) Special Characteristics: Low temperature

performance, high abrasion and high fatigue life.

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

length (m) inside bend

Gel

25 40

25 100

25 135

10 175

10 230

25 45

25 65

part numbe

LTPHC12B

LTPHC16B

LTPHC20B

LTPHC25B

LTPHC32B

LTPHC40B

LTPHC50B+

LTPHC63B+ 10 280

min inside be radius (mm)

min inside ber radius (mm)	LTPP part number	reel length (m	min inside ber radius (mm)	LTPP	part number	reel length (m	min inside ber radius (mm)	LTPL	part number	reel length (m	min inside ber radius (mm)
	LTPPU10	25	35								
	LTPPU12	25	40								
50	LTPPU16	25	45	LTPF	PUAS16	25	45	LTPI	FH16B	25	60
90	LTPPU20	25	65	LTPF	PUAS20	25	65	LTPI	FH20B	10, 25	100
110	LTPPU25	25	100	LTPF	PUAS25	25	100	LTPI	FH25B	10, 25	130
140	LTPPU32	25	135	LTPF	PUAS32	25	135	LTPI	FH32B	10	180
180	LTPPU40	10	175	LTPF	PUAS40	10	175				
230	LTPPU50+	10	230	LTPF	PUAS50+	10	230				
280	LTPPU63+	10	280	LTPF	PUAS63+	10	280				

+ Double interlock section.

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.

inside bend us (mm)

min ins radius

45

65

175

280 10

eel length (m)

25

25

25 100

25 135

10

10 230

oart numbe

LTPAS16B

LTPAS20B

LTPAS25B

LTPAS32B

LTPAS40B

LTPAS50B⁺

LTPAS63B+

inside l is (mm

40

45

65

135

175

230

280



08

STANDARDS





BS EN IEC 61386



LTP, LTPAS, LTPHC, LTPUL, LTPPU, LTPPUAS & LTPLFH

Construction: Galvanised steel, helically wound, flexible conduit with smooth oil resistant Low Fire Hazard (LFH) cover. Colour black. Special Characteristics: As per LTP but where Extra Low Fire Hazard performance is required.

length (m)

<u>ee</u>

25

25

25

15

15

15

LTPUL16B

LTPUL20B

LTPUL25B

LTPUL32B

LTPUL40B

LTPUL50B+

LTPUL63B+ 15

performance coating LTPLFH

Flexicon Liquid Tight Conduit Stainless Steel & Galvanised



LTPSS system

Stainless Steel Core, PVC Coated Liquid Tight

LTPBRD system

Galv Steel Core, Thermoplastic Elastomer (TPE) Coated and Stainless Steel Overbraid

LTBRDP system

Galv Steel Core, Galv Steel Braid, PVC Coated Liquid Tight



LTBRDLFH system

Galv Steel Core, Galv Steel Braid, LFH Coated Liquid Tight



Conduit

LTPSS



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

Special Characteristics: Enhanced corrosion resistance performance.



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

Special Characteristics: EMC screening, antistatic performance.

Properties

- High mechanical strength
- Good flexibility (LTPSS,LTPBRD, LTBRDP)
- P IP rating: IP66 + IP67 + IP68 (5 bar) + IP69K
- Smooth, wipe clean outer cover
- Cover does not wrinkle when bent
- Resistant to oils and greases
- Temperature range: -20°C to +105°C (LTPSS & LTBRDP)
 -20°C to +90°C (LTBRDLFH)
 -60°C to +150°C (LTPBRD)
- Vibration and shock tested to EN61373 Cat 2
- Provides EMC screening (LTBRDP, LTBRDLFH, LTPBRD)

Technical Drawing

- Compliant to LUL Std 1-085-A3 (LTBRDLFH)
- LTPBRD offers inherent Anti-Static performance properties



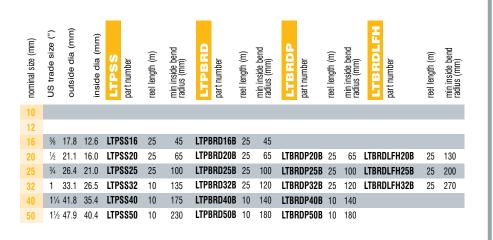
Construction: Galvanised steel, helically wound, flexible conduit with galvanised steel braid and oil resistant and high temperature pvc smooth cover. Colour black.

Special Characteristics: Good flexibility and EMC screening.



Construction: Galvanised steel, helically wound, flexible conduit with galvanised steel braid and smooth LFH cover. Colour black.

Special Characteristics: EMC screening and Extra Low Fire Hazard Performance.



+ Double interlock section.

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.

UNDERGROUND

STANDARDS





ITPSS

09

LTBRDP & LTBRDLFH

www.flexicon.uk.com

EXD Conduit Glands Flameproof EXD Barrier Gland



Standards



Properties

- IP Rating: IP66 + IP67 + IP68 (5bar) + IP69K
- Material: Nickel Plated Brass or Stainless Steel (316)
- Suitable for threaded entries
- High mechanical strength
- Can be used with individual cores or

Hazardous Area Approvals

- Can be used in Zone 1, Zone 2, Zone 21
- ATEX and IECEx Ex d (Flameproof)
- ATEX and IECEx Ex e (Increased Safety)
- ATEX and IECEx Ex ta (Dust Ignition Protection)

ŝ	100				
-		ATEX APPROVAL to EN60079-0 2009	Sira Certificate no:	Sira 10ATEX1172X	
		Ex d Flameproof	Ex d I Mb	EN 60079-1 2007	$\langle F_{\mathbf{Y}} \rangle$
		Ex e Increased Safety	Ex e I Mb	EN 60079-7 2007	
		IECEx APPROVAL to IEC60079-0 2007	Sira Certificate no:	IECEx SIR 10.0094X	
		Ex d Flameproof	Ex d I Mb	IEC 60079-1 2007	IEC ROL
		Ex e Increased Safety	Ex e I Mb	IEC 60079-7 2006-7	
1		ATEX APPROVAL to EN60079-0 2009	Sira Certificate no:	Sira 10ATEX1172X	—
		Ex d Flameproof	Ex d II C Gb	EN 60079-1 2007	7c \
		Ex e Increased Safety	Ex e II C Gb	EN 60079-7 2007	-\CX/
		Ex ta Dust Ignition Proof	Ex ta IIIC DA IP6X	IEC 60079-31 2008	\frown
		IECEx APPROVAL to IEC60079-0 2007	Sira Certificate no:	IECEx SIR 10.0094X	
		Ex d Flameproof	Ex d II C Gb	IEC 60079-1 2007	IEC ROL
Ċ	\Box	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.B00	0207	ſ₽Ġ

LTP - EXD

Construction: Nickel Plated Brass fitting with a nylon 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(5bar) + IP69K



To fit n	ominal 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

Construction: Stainless steel (grade 316) fitting with a nylon 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(5bar) + IP69K



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

USED WITH THE FOLLOWING CONDUITS: - as featured on pages 08 & 09



Conduit Solutions

Liquid Tight







Properties

- Suitable for threaded entries

- Can be used with individual cores or
- Can be used in Zone 1, Zone 2, Zone 21
 and Zone 22 Hazardous areas when used with
- ATEX and IECEx Ex d (Flameproof)
- ATEX and IECEx Ex e (Increased Safety)
- ATEX and IECEx Ex ta (Dust Ignition Protection)

Hazardous Area Approvals

ATEX APPROVAL to EN60079-0 2006	Sira Certificate no: SIRA 13ATEX107	2X
Ex d Flameproof	Ex d II C Gb	
Ex e Increased Safety	Ex e II C Gb	(5x)
Ex ta Dust Ignition Proof	Ex ta IIIC DA IP6X	
IECEx APPROVAL to IEC60079-0 2004	Sira Certificate no: IEC Ex SIR13.002	27X
Ex d Flameproof	Ex d II C Gb	
Ex e Increased Safety	Ex e II C Gb	IEC IECEX
Ex ta Dust Ignition Proof	Ex ta IIIC DA IP6X	
GOST APPROVAL no.	POCC GB.HO06.B00207	PG



LTP-EXD-90

Construction: 90° elbow, Nickel Plated Brass fitting with a nylon 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)



To fit n	ominal 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

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.

LTP-EXD-45

Construction: 45° elbow, Nickel Plated Brass fitting with a nylon 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)



To fit n	ominal 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	





Checkout our website for further details on how to use our products. www.flexicon.uk.com



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

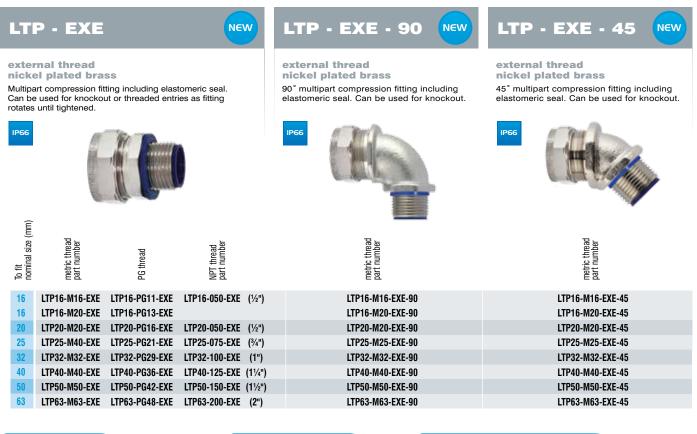
or any of the LTP conduit types, see page 64

	ATEX APPROVAL to EN60079-0 2009	Intertek Certificate no:	ITS 14ATEX379584	
	Ex e Increased Safety	Ex e II Gb	EN 60079-7 2007	$\langle x_3 \rangle$
	Ex tb Dust Ignition Proof	Ex tb III C DA IP6X	EN 60079-31 2009	
	IECEx APPROVAL to IEC80079-0 2007	Intertek Certificate no:	IECEx ITS 14.005U	
	IECEx APPROVAL to IEC80079-0 2007 Ex e Increased Safety	Intertek Certificate no: Ex e II Gb	IECEx ITS 14.005U	IEC IECE

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



NEW





EXD Braided Conduit Glands Flameproof EXD Barrier Gland



Properties

- Can be used with individual cores or oversheathed cable

Hazardous Area Approvals

- and Zone 22 Hazardous areas when used with Flexicon's Liquid Tight range of flexible conduits
- ATEX and IECEx Ex e (Increased Safety)

Standards



	ATEX APPROVAL to EN60079-0 2009	Sira Certificate no:	Sira 10ATEX1172X	
	Ex d Flameproof	Ex d I Mb	EN 60079-1 2007	$\langle F \mathbf{v} \rangle$
	Ex e Increased Safety	Ex e I Mb	EN 60079-7 2007	
	IECEx APPROVAL to IEC60079-0 2007	Sira Certificate no:	IECEx SIR 10.0094X	
	Ex d Flameproof	Ex d I Mb	IEC 60079-1 2007	IEC RCA
	Ex e Increased Safety	Ex e I Mb	IEC 60079-7 2006-7	
	ATEX APPROVAL to EN60079-0 2009	Sira Certificate no:	Sira 10ATEX1172X	
	Ex d Flameproof	Ex d II C Gb	EN 60079-1 2007	/c
	Ex e Increased Safety	Ex e II C Gb	EN 60079-7 2007	\C X /
	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	
	Ex d Flameproof	Ex d II C Gb	IEC 60079-1 2007	LEC ROY
G	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.B00	207	PG

NEW



LTPB - EXD

Construction: Nickel Plated Brass fitting with a nylon 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(5bar) + IP69K

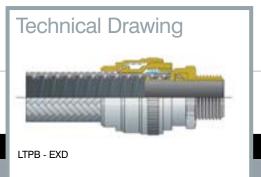


To fit r	nominal size (mm)	metric thread part number	NPT thread part number
20		LTPB20-M20-EXD	LTPB20-050-EXD
25		LTPB25-M25-EXD	LTPB25-075-EXD
32		LTPB32-M32-EXD	LTPB32-100-EXD
40		LTPB40-M40-EXD	LTPB40-125-EXD
50		LTPB50-M50-EXD	LTPB50-150-EXD

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.

USED WITH THE FOLLOWING CONDUITS:-







LTPBRD

Flexicon EXD Accessories Range



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 standards. The standards are marked on the body of the product allowing visibility once installed.

NEW

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 Certification Detail	SIRA01ATEX1284U, SIRA02ATEX1003X
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 Certification Detail	IEC Ex SIR07.0052X
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
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 15

NEW

Thread Converters

Our thread converters are Nickel Plated Brass as standard.

Internal Metric to External Metric Female Thread - Internal Male Thread -M16 //20 **VI25 VI32** M40 **VI50** External B-M16-M20-EXD M16 B-M20-M16-EXD M20 B-M20-M25-EXD M25 B-M25-M20-EXD B-M25-M32-EXD B-M32-M40-EXD M32 B-M32-M25-EXD B-M40-M32-EXD M40 M50 B-M50-M32-EXD B-M50-M40-EXD B-M63-M40-EXD B-M63-M50-EXD M63

Internal Metric to External NPT

	Female Thread - Internal							
Male Thread - External	M16	M20	M25	M32	M40	M50		
1/2"		B-050-M20-EXD						
3⁄4″		B-075-M20-EXD	B-075-M25-EXD					
1″	B-100-M32-EXD							

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

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

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

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

Flexicon EXD Accessories Range

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 & Dom	e Head		
Design Specification	BS 6121:Part 1:1989, EN 50262:1999		
ATEX Certification Detail	SIRA01ATEX1284U, SIRA02ATEX1003X		
ATEX Code of Protection Category	ATEX 🐵 IM2 Ex d I, Ex e I; ATEX 🚱 II 2 Ex d IIC, Ex e II		
ATEX Compliance Standards	EN 60079-0, EN 60079-7, EN 61241-0, EN 61241-1		
IEC Ex Certification Detail	IEC Ex SIR07.0056X		
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		
Continuous Operating Temperature	-60°C to + 200°C		
Ingress Protection Rating	IP66		
Materials	Nickel Plated Brass		
Optional Accessories	Locknut, Serrated Washer, Earth Tag, Sealing Washer. See Page 15		

Hex Head

NEW

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 Certification Detail	SIRA01ATEX1284U, SIRA02ATEX1003X
ATEX Code of Protection Category	ATEX (1) 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 (1) 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 Certification Detail	IEC Ex SIR07.0056X
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 60079-7:2006-07, IEC 61241-0:2004, IEC 61241-1:2004
Continuous Operating Temperature	-60°C to +200°C
Ingress Protection Rating	Up to IP68 when fitted with suitable Sealing Washer
Materials	Nickel Plated Brass
Optional Accessories	Locknut, Serrated Washer, Earth Tag, Sealing Washer. See Page 15

Stopping Plugs

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-H\$P-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

Flexicon General Accessories

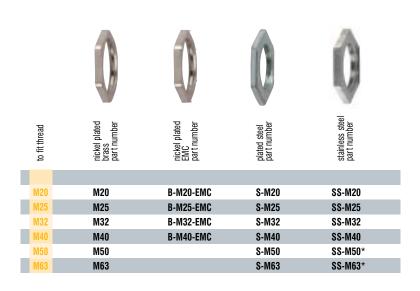




MADE IN UNITED KINGDOM

Metric Locknuts

Nickel plated brass, plated steel, stainless steel



Fixing Clips For Conduits

Plated steel with black pvc liner or stainless steel.

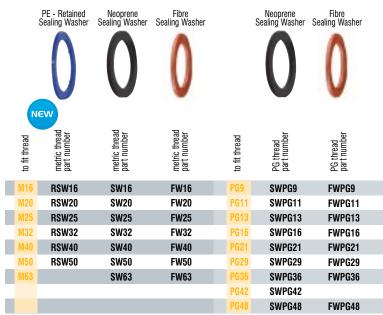
Note: LFH liner available on request

to fit conduit size (mm)	part number	bart number
16	FCC16	FCC16-SS
20	FCC20	FCC20-SS
25	FCC25	FCC25-SS
32	FCC32	FCC32-SS
40	FCC40	FCC40-SS
50	FCC50	FCC50-SS*
63	FCC63	

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

Sealing Washers

Polyester Elastomer (PE), Neoprene and fibre face sealing washers



Earthing Washers Shake proof washer Earth tag washer



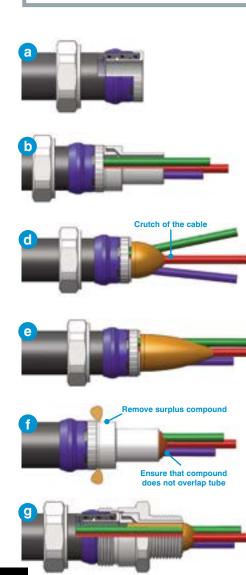
Flexicon EXD Conduit Gland Installation Guide & Instructions



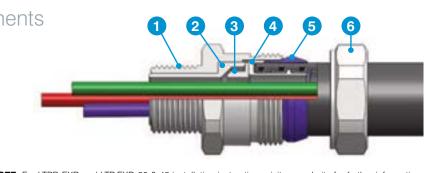
Barrier cable gland for use in hazardous areas with unarmoured cable or individual cores housed in Flexicon flexible conduit. Incorporating EC declaration of conformity to directive 94/9/EC.

Conduit Gland Components

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



www.flexicon.uk.com



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.
- 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.
 - 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.
 - 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.

Flexicon EXD Conduit Gland Installation Guide & Instructions

Technical data and specification.

Technical Data

CONDUIT GLAND TYPE :	EXD
INGRESS PROTECTION :	IP66, IP67, IP68 (5 Bar) & IP69K
PROCESS CONTROL SYSTEM :	BS EN ISO 9001

Hazardous Area Approvals

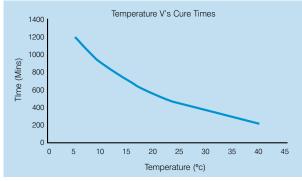
	ATEX APPROVAL to EN60079-0 2009	Sira Certificate no:	Sira 10ATEX1172X	\frown
	Ex d Flameproof	Ex d I Mb	EN 60079-1 2007	/C\
4	Ex e Increased Safety	Ex e I Mb	EN 60079-7 2007	
Q	IECEx APPROVAL to IEC60079-0 2007	Sira Certificate no:	IECEx SIR 10.0094X	Inco Inco
Ū	Ex d Flameproof	Ex d I Mb	IEC 60079-1 2007	IEC IECEX
	Ex e Increased Safety	Ex e I Mb	IEC 60079-7 2006-7	
	ATEX APPROVAL to EN60079-0 2009	Sira Certificate no:	Sira 10ATEX1172X	
up II Grou	Ex d Flameproof	Ex d II C Gb	EN 60079-1 2007	$\langle c \rangle$
	Ex e Increased Safety	Ex e II C Gb	EN 60079-7 2007	\X.3/
	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	
2	Ex d Flameproof	Ex d II C Gb	IEC 60079-1 2007	IEC JECEX
C	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		PG

Installation Instructions

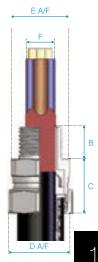
Installation should only be performed by a competent person using the correct tools. Read all instructions before beginning installation.

Special Conditions For Safe Use

- 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. See pages 9, 10 & 11 for accessory details.



Liquid	Available Entr	y Threads 'A'	Minimum	Diameter	Number	Across	Across	Nominal		Cable
Tight Conduit	Standard	Option	Thread Length	Over Conductors 'F'	of Cores	Flats 'E'	Corners 'D'	Protrusion Length	Part No.	Gland Weight
Size (mm)	Metric	NPT	'B'	Max	Max	Max	Max	ʻC'		(Kgs)
16	M20	1/2"	15.0	10.7	11	30.0	29.0	32.0	LTP16-M20-EXD	0.100
20	M20	1/2"	15.0	12.6	11	30.0	29.0	32.0	LTP20-M20-EXD	0.100
25	M25	3/4"	15.0	17.5	21	36.0	35.0	35.0	LTP25-M25-EXD	0.250
32	M32	1"	15.0	23.6	38	46.0	42.0	37.0	LTP32-M32-EXD	0.460
40	M40	11⁄4"	15.0	30.0	59	52.0	52.0	38.0	LTP40-M40-EXD	0.615
50	M50	11⁄2"	15.0	36.6	89	60.0	58.0	40.0	LTP50-M50-EXD	0.700
63	M63	2"	15.0	47.9	115	70.0	70.0	40.0	LTP63-M63-EXD	0.820



17

Flexicon Non Hazardous Area Products

metallic conduit & fittings

non-metallic conduit & fittings

With over 29 different metal 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.



With over 21 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 10mm up to 106mm, manufactured from a range of materials offering different properties.

Key Features

- High compression strength
- High pull off strength
- Wide temperature tolerances
- High impact strength
- EMC screening performance
- High IP rating up to IP69K

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

Key Features

- Wide range of sizes
- Light weight
- Easy to cut
- High fatigue life
- Superior IP ratings
 up to IP69K
- 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 applicationsSuitable for diverse environments
- Movement without any impact on performance











Flexicon Make it simple!

Flexicon are all about innovation, not only in our products, but also in the ways that we deliver product information to our customers.



Our website now features a new and improved selection process that guides our users through to an informed selection. In addition to adding a new part number search facility, we have created an intuitive Product Selector tool that pinpoints exacting data to ensure selection criteria is met. Visit www.flexicon.uk.com - selecting Flexicon product has never been easier.

ADOC UN	 PLEXICIN	

Flexicon 3D CAD Models

Powered by Cadenas, our Parts Community provides technical information on all of our conduits, fittings and accessories. From CAD models, dimensional diagrams and 3D PDFs to part numbers, sizes and downloadable datasheets - all available in one place.

Visit http://flexicon.partcommunity.com for further information, or follow the link on the Flexicon website.

Latest Flexicon Product & Solutions Guide

Our Product and Solutions guide for flexible and pliable conduit systems, features many new products - 100 pages showcasing over 4,000 products covering 48 different conduit systems.

Contact us for your copy now - sales@flexicon.uk.com or visit our website to view on-line.



EXICAN

Flexicon Limited (Head Office)

- A Roman Way, Coleshill, Birmingham,
 B46 1HG, United Kingdom
- T +44 (0)1675 466900
- F +44 (0)1675 466901
- E sales@flexicon.uk.com
- W www.flexicon.uk.com



Flexicon in Europe

- E sales@flexicon.eu.com
- W www.flexicon.eu.com

Flexicon in USA

- E sales@flexicon.us.com
- W www.flexicon.us.com

Flexicon Australia Pty Limited

- T National Sales Hotline: 1300 00 FLEX (3539)
- E sales@flexiconaustralia.com
- W www.flexiconaustralia.com

Sydney Office

- A 1/38 Binney Road, Kings Park, NSW 2148
- F +61 (0)2 8884 3889

Melbourne Office

- A Unit 6/60 Stubbs Street, Flemington, VIC 3031
- F +61 (0)3 9372 3448

