



ELECTRICAL THREAD CONVERSIONS & CABLE INSTALLATION
SOLUTIONS FOR **HAZARDOUS AREAS**



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ABOUT US

Adaptors & Reducers



Stopping Plugs & Breather Drains

Specialized fittings & Cable Gland accessories



Raxton Limited is a subsidiary of Cooper Industries plc. Cooper Industries is a global leader in the manufacturing of electrical products and energy safety solutions.

Established in 1976, Raxton Limited is an industry leader for the supply of electrical thread conversion and accessory products that provide solutions for cable and enclosure installations fitted within potentially explosive or hazardous environments, (Ex certified products). With extensive applications within the oil and gas industries, Raxton products are also certified for dust and mining applications.

Industries Served

- Refining
- Offshore Exploration & Production
- Landbased Drilling & Production
- Mining
- Power Generation
- Dust Environments

Standard Products

Through the proven quality and high reliability of our products and a reputation for providing superior customer service within our key markets, Raxton is recognised as a leading international premium brand for thread conversion products. Our standard product range includes extensive material options on all industry thread types and sizes.

Custom Design & Manufacturing

As well as being a renowned market leader for the development of thread conversion products, Raxton's capability extends to offering design and manufacturing expertise to many types of specialist requirements for products and components across a wide range of industry sectors.

At our UK factory, the Raxton engineering design team has extensive experience in providing solutions for many types of applications requiring machined or cast components in all types of materials, for both hazardous areas and non-hazardous areas. With over 30 years of experience in designing products for the oil & gas and petrochemical industries, we understand the value of high quality products required to be used in both critical and environmentally harsh applications. In addition, our wide knowledge of materials enables us to offer solutions in metallic or plastic nylon designs.

To support our engineering team, our comprehensive workshop facilities can provide quick turn-around samples, prototypes and full production models.

For specific advice or consultation on your application, our engineered product sales department is ready to assist.





Quality Standards

Raxton Limited holds the International Quality Assurance Standard, ISO9001, which covers all company activities from design and development, to manufacture, sales and after sales service.

Bureau Veritas EN ISO 9001:2008

Environmental

Raxton Limited is committed to continual improvement in its environmental performance, and to operate in full compliance with all applicable current and future legislation and regulations. This is achieved by the implementation of an Environmental Management System which satisfies as a minimum the standards included in ISO14001: 2004, and the adoption of best practices in all its operations. The Environmental Management System is based upon the following principles:

- The company's facilities, processes, products and operations shall be managed in such a way that waste scrap, pollution and natural resource consumption are controlled, reduced or eliminated year on year.
- The environmental impact of the company's operations shall be monitored and adverse effects minimized or eliminated.

Material Specifications and Plating

Raxton's manufacturing capabilities enable us to offer an extensive range of material options on all our products.

Our standard range of material includes:

- Brass: BS2874: 1985 CZ121
- Stainless Steel: BS970 PT3 316 S11
- Nylon: 30% Glass Filled Nylon 66
- Aluminium: BS1474/1 6082 T4 or T6
- Aluminium Bronze: BS1400 1985 AB2 or BS2874:1986 CA104
- Mild Steel: BS970 PT3 230M07
- Metallic products are also available in a variety of finishes including Nickel, Electro Zinc, Zinc Passivated, Chromatised, Electroless Nickel and Anodised.

Thread Specifications

Isometric (ISO) to BS3643:1981 and ISO 965 Pts 1 & 3

Imperial (ET) to BS31:1940 (1979)

National Pipe Thread (NPT) to ANSI/ASME:1983

British Standard Pipe (BSP) to BS21:1985

Pg to DIN 40430:1971



PRODUCT CERTIFICATION

Product Type		Certifying Approvals					
All products Metric and NPT		IECEX					
		IECEX	ATEX Gas & Dust	ATEX Mining	North America	Brazil	Russia
Adaptors & Reducers		•	•	•	•	•	•
Insulated Adaptors		•	•	•		•	•
Male to Male and Female to Female Adaptors		•	•	•		•	•
Right Angle Adaptors		•	•	•		•	•
Swivel Adaptors		•	•	•			
Stopping Plugs		•	•	•	•	•	•
Stopping Plugs		•	•	•		•	•
Breather Drains Exd		•	•	•		•	•
Breather Drains Exe		•	•	•		•	•
Barrier Stopper Boxes for Cable Glands and Rigid Conduit		•	•	•		•	•
Unions		•	•	•		•	•
Earth Lead Adaptors/ Threaded Earth Plates		•	•	•		•	•
Nylon Cable Glands			•	•			
Barrier Stopper Boxes for Flexible Conduit		•	•	•			

ADAPTORS



Raxton Exd/Exe Adaptors provide a means of connection between dissimilar thread forms or sizes. Certified Adaptors should be used following the basic rules in line with good engineering practice:- no more than one conversion Adaptor should be used at one time on any given cable entry. Stopping Plugs should be fitted directly into unused entries of the equipment and not into an Adaptor.

Metallic Adaptors have a hexagonal body. Where space is a critical factor, Adaptors can be offered with a round body with a diameter equal to the A/F dimension of the standard item.

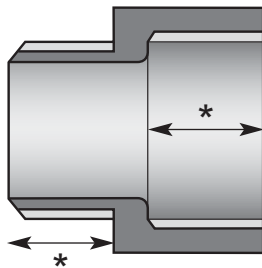
Nylon Adaptors are Exe only and are produced with a round body.

Exe Adaptors are supplied fitted with an 'O' ring to maintain the IP integrity of the installation.

Raxton Adaptors are marked with the applicable approval number and size. Independently tested to IP68.

Product Dimensions

Thread	Metallic Male Thread Max Bore	Nylon Male Thread Max Bore	Metallic Thread A/F (mm)	Nylon Head Dia. (mm)
M16	11.0	8.0	20.8	24.0
M20	14.3	12.5	23.4	27.5
M25	20.5	17.5	27.9	35.5
M32	26.8	24.5	37.6	41.0
M40	33.5	32.5	47.2	50.0
M50	44.0	42.5	56.4	60.0
M63	55.2	53.0	70.1	75.0
M75	66.7	64.0	80.0	85.0
M90	80.0	76.0	105.0	100.0



*Minimum 8 full threads parallel 5 full threads taper

Certification

Code of Protection Categories

ATEX: I M2, Ex d IMb, Ex e I Mb, or II G, Ex d IIC Gb, Ex e IIC Gb, Ex tb IIIC Db
 IECEx: Ex d I/IIC, Ex e I/IIC, Ex tb IIIC Db,
 CSA: Ex d IIC Class 1, Zone 1, AEx d IIC (Brass and Stainless only)
 GOST: Exdel/IICU, Exdel/ICU, ExellU
 INMETRO: BR-Ex de 1/IIC Mb/Gb, BR-Ex tD A21 IP 66/67

Nylon Adaptors only:

ATEX: II 2 GD, Ex e IIC Gb, Ex tb IIIC Db
 IECEx: Ex e IIC Gb, Ex tb IIIC Db
 GOST: ExellU
 INMETRO: BR-Ex e IIC Gb, BR-Ex tD A21 IP 66/67

Compliance Standards

ATEX / INMETRO / GOST: EN 60079-0:2009, EN 60079-1: 2007, EN 60079-7: 2007, EN 60079-31:2008
 IECEx: IEC 60079-0:2004, IEC 60079-1:2003, IEC 60079-7:2006-07
 CSA: CAN/CSA-E79-0-95, CAN/CSA-E79-1-95, UL 2279 1997, IEC 60079-0:1998, IEC 60079-1:1998 (Brass and Stainless only)

Nylon Adaptors only:

ATEX / INMETRO / GOST: EN 60079-0:2009, EN 60079-7: 2007, EN 60079-31:2009
 IECEx: IEC 60079-0:2007, IEC 60079-7:2006, IEC 60079-31:2008

Certificate Details

ATEX: SIRA10ATEX1225X, SIRA10ATEX3335U
 IECEx: IEC Ex SIR 07.0010X, IEC Ex SIR 10.0164U
 CSA: CSA 200455-1003277 (Brass and Stainless only)
 GOST: POCC GB.ГБ06.В01060
 INMETRO: NCC 5871/09 U

TEMPERATURE

The item is classified as a component and is therefore not given a temperature rating.
 Nylon temperature range -20°C to 65°C, 'O' ring -30°C to 125°C
 GF Nylon is UL rated @ H.B. @ 1.5mm.

Product Codes

DIGIT 1+2 Description (Adaptors)	Code	DIGIT 3	Code	DIGIT 4 & 5 Male		DIGIT 6 & 7 Female		DIGIT 8		DIGIT 9		DIGIT 10		
		Material		Thread Reference		Approval		Special		Plating				
M-F HEX	AB	BRASS	A	M16	11	1/2" NPT	42	ATEX Exde	A	None (standard)	X or blank	None	Blank	
M-F ROUND	AJ	ALUMINIUM	B	M20	12	3/4" NPT	43	IECEx Exde	R	Customer Special	S	Nickel	N	
		MILD STEEL	C	M25	13	1" NPT	44	For other approvals please see product coding list on page 28				Zinc	Z	
		STAINLESS STEEL	E	M32	14	1 1/4" NPT	45						Chromatised	C
		GLASS FILLED NYLON	M	M40	15	1 1/2" NPT	46						Special	S
				M50	16	2" NPT	47							
				M63	17	2 1/2" NPT	48							
				M75	18	3" NPT	49							
				M90	81	3 1/2" NPT	86							
				M100	82	4" NPT	87	Industrial	X or Blank					

Other sizes / threads are available on request

PRODUCT CODING EXAMPLE	Adaptors	Brass	1" NPT(M)	M32(F)	Exde	PART NUMBER
		AB	A	44	14	A

REDUCERS



Raxton Exd/Exe Reducers effectively reduce the threaded entry diameter of an enclosure to accept a gland or fitting with a smaller thread. Reducers may also be supplied to accept smaller glands of alternative threads.

Following the basic rules in line with good engineering practices, no more than one Reducer should be used at any one time. Stopping Plugs should be fitted directly into unused entries of the equipment and not into a Reducer.

Metallic Reducers are supplied with a hexagonal head as standard. Where space is a critical factor, Reducers with a circular head can be offered with a diameter equal to the A/F dimension of the hexagonal head.

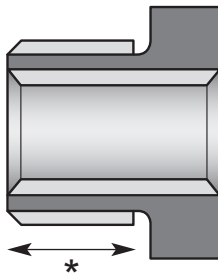
Nylon Reducers are Exe only and designed with a circular head. Exe Reducers are supplied with an 'O' ring to maintain the IP integrity of the installation.

Raxton Reducers are marked with the applicable approval number and size.

Independently tested to IP68.

Product Dimensions

Thread	Metallic Thread A/F (mm)	Nylon Head Dia. (mm)		
M16	20.8	22.0		
M20	23.4	25.0		
M25	27.9	30.0		
M32	37.6	38.0		
M40	47.2	46.0		
M50	56.4	56.0		
M63	70.1	70.0		
M75	80.0	81.0		
M90	105.0	96.0		



* Minimum length of thread 10mm

Certification

Code of Protection Categories

ATEX: I M2, Ex d IMb, Ex e I Mb, or II G, Ex d IIC Gb, Ex e IIC Gb, Ex tb IIIC Db

IECEx: Ex d I/IIc, Ex e I/IIc, Ex tb IIIC Db

CSA: Ex d IIC Class 1, Zone 1, AEx d IIC (Brass and Stainless only)

GOST: Exde/IIcU, ExdeIIcU, ExeIIU

INMETRO: BR-Ex de 1/IIc Mb/Gb, BR-Ex tD A21 IP 66/67

Nylon Reducers only:

ATEX: II 2 GD, Ex e IIC Gb, Ex tb IIIC Db

IECEx: Ex e IIC Gb, Ex tb IIIC Db

GOST: ExeIIU

INMETRO: BR-Ex e IIC Gb, BR-Ex tD A21 IP 66/67

Compliance Standards

ATEX / INMETRO / GOST: EN 60079-0:2009, EN 60079-1: 2007, EN 60079-7: 2007, EN 60079-31:2008

IECEx: IEC 60079-0:2004, IEC 60079-1:2003, IEC 60079-7:2006-07

CSA : CAN/CSA-E79-0-95, CAN/CSA-E79-1-95, UL 2279 1997, IEC 60079-0:1998, IEC 60079-1:1998

Nylon Reducers only:

ATEX / INMETRO / GOST: EN 60079-0:2009, EN 60079-7: 2007, EN 60079-31:2009

IECEx: IEC 60079-0:2007, IEC 60079-7:2006, IEC 60079-31:2008

Certificate Details

ATEX : SIRA10ATEX1225X, SIRA10ATEX3335U

IECEx: IEC Ex SIR 07.0010X, IEC Ex SIR 10.0164U

CSA: CSA 200455-1003277 (Brass and Stainless only)

GOST: POCC GB.ГБ06.Б01060

INMETRO: NCC 5871/09 U

TEMPERATURE

The item is classified as a component and is therefore not given a temperature rating. Nylon temperature range -20°C to 65°C, 'O' ring -30°C to 125°C

GF Nylon is UL rated @ H.B. @ 1.5mm.

Product Codes

DIGIT 1+2 Description (Reducers)	Code	DIGIT 3	Code	DIGIT 4 & 5 Male		DIGIT 6 & 7 Female		DIGIT 8		DIGIT 9		DIGIT 10	
		Material		Thread Reference		Approval		Special		Plating			
M-F HEX	BB	BRASS	A	M16	11	½" NPT	42	ATEX Exde	A	None (standard)	X or blank	None	Blank
M-F ROUND	BJ	ALUMINIUM	B	M20	12	¾" NPT	43	IECEx Exde	R	Customer Special	S	Nickel	N
		MILD STEEL	C	M25	13	1" NPT	44	For other approvals please see product coding list on page 28				Zinc	Z
		STAINLESS STEEL	E	M32	14	1¼" NPT	45					Chromatised	C
		GLASS FILLED NYLON	M	M40	15	1½" NPT	46					Special	S
				M50	16	2" NPT	47						
				M63	17	2½" NPT	48						
				M75	18	3" NPT	49						
				M90	81	3½" NPT	86						
				M100	82	4" NPT	87	Industrial	X or Blank				

Other sizes / threads are available on request

PRODUCT CODING EXAMPLE	Reducer	Stainless Steel	1" NPT(M)	M32(F)	Exde	PART NUMBER
		BB	E	14	13	A

INSULATED ADAPTORS



Raxton Insulated Adaptors provide a means to isolate the earth of the supply cable from the load equipment thus reducing the risk of damage to electronic equipment within the enclosure in the event of a short circuit to ground through the enclosure. Insulated Adaptors also reduce the problems of electrical noise on the armour affecting the clean earth required by some sensitive instruments. Single point grounding can reduce the circulating current that can cause heating of high capacity cables.

Cable gland and cable can still be earthed externally with the use of an earth tag fitted between the cable gland and the Insulated Adaptor.

Raxton Insulated Adaptors are marked with the appropriate approval number and size.

Certification

Code of Protection Categories

ATEX: Ex d IIC
 IECEx: Ex d IIC
 GOST: Ex d IICU
 INMETRO: BR-Ex d IIC Gb, BR-Ex tD A21 IP 66/67

Compliance Standards

ATEX / INMETRO / GOST: EN 50014:1997, EN 50018:2000, EN 50019: 2000, EN 5081-1-1:1998
 IECEx: IEC 60079-0:2007, IEC 60079-1:2007, IEC 60079-31:2008

Certificate Details

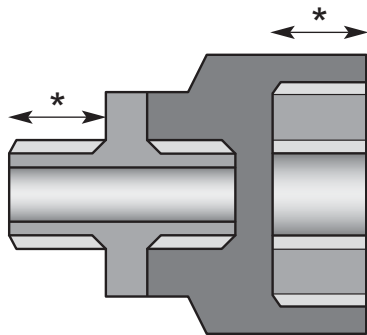
ATEX: SIR 11ATEX1219X
 IECEx: SIR 11.0099X
 GOST: POCC GB.ГБ06.В01060
 INMETRO: NCC 5871/09 U

TEMPERATURE

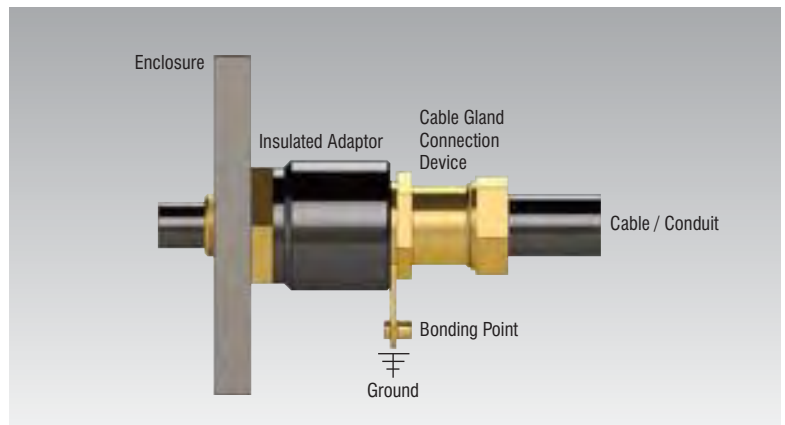
The item is classified as a component and is therefore not given a temperature rating.
 Nylon temperature range -20°C to 130°C.
 GF Nylon is UL rated @ H.B. @ 1.5mm

Product Dimensions

Thread	Protrusion (mm)	Bore (mm)	Dia. (mm)
M16	45.0	11.0	30.0
M20	45.0	14.3	42.0
M25	45.0	20.5	47.0
M32	45.0	26.8	54.0
M40	45.0	33.5	62.0
M50	45.0	44.0	77.0
M63	45.0	55.2	87.0
M75	45.0	66.7	102.0



*Minimum 8 full threads parallel 5 full threads taper



Product Codes

DIGIT 1+2		DIGIT 3		DIGIT 4 & 5 Male		DIGIT 6 & 7 Female		DIGIT 8		DIGIT 9		DIGIT 10		
Description (Insulated Adaptors)	Code	Material	Code	Thread Reference		Approval		Special		Plating				
INSULATED M-F	DB	BRASS	A	M16	11	1/2" NPT	42	ATEX Exde	A	None (standard)	X or blank	None	Blank	
INSULATED M-M	DD	ALUMINIUM	B	M20	12	3/4" NPT	43	IECEx Exde	R	Customer Special	S	Nickel	N	
INSULATED F-F	DE	MILD STEEL	C	M25	13	1" NPT	44	For other approvals please see product coding list on page 28				Zinc	Z	
		STAINLESS STEEL	E	M32	14	1 1/4" NPT	45						Chromatised	C
		GLASS FILLED NYLON	M	M40	15	1 1/2" NPT	46						Special	S
				M50	16	2" NPT	47							
				M63	17	2 1/2" NPT	48							
				M75	18	3" NPT	49							

PRODUCT CODING EXAMPLE	Ins. Adaptors	Brass	M32(M)	M32(F)	Exde	PART NUMBER
	DB	A	14	14	A	= DBA1414A

MALE TO MALE / FEMALE TO FEMALE ADAPTORS



Male to Male Adaptors provide a connection between two female threads of the same or dissimilar thread forms.

Female to Female Adaptors provide a connection between two male threads of the same or dissimilar thread forms.

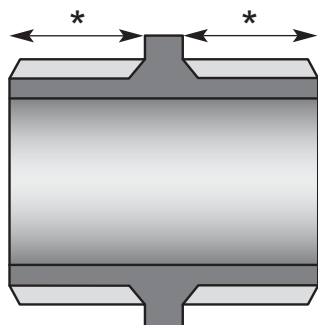
In each case, thread combinations can reduce by one size of the same thread form or to the equivalent of another form:

e.g. M25 x M20 or M25 x 1/2"NPT

Both Male to Male and Female to Female Adaptors are marked with the appropriate approval number and size.

Product Dimensions

Thread	Length (mm)	Bore (mm)	Dia. A/F (mm)
M16	38.0	11.0	18.0
M20	38.0	14.3	23.4
M25	38.0	20.5	28.0
M32	38.0	26.8	37.6



*Minimum 6 full threads parallel 5 full threads taper

Certification

Code of Protection Categories

ATEX: I M2, Ex d IMb, Ex e I Mb, or II GD, Ex d IIC Gb, Ex e IIC Gb, Ex tb IIIC Db

IECEx: Ex d I/IIC Mb/Gb Ex e I/IIC Mb/Gb, Ex tb IIIC Db

GOST: ExdIICU

INMETRO: BR-Ex d IIC Gb, BR-Ex tD A21 IP 66/67

Compliance Standards

ATEX / INMETRO / GOST: EN 60079-0:2009, EN 60079-1:2007, EN 60079-7: 2007, EN 60079-31:2008

IECEx: IEC 60079-0:2007-10, IEC 60079-1:2007-04, IEC 60079-7:2006-07, IEC 61241-1:2004

Certificate Details

ATEX : SIR10ATEX1226U

IECEx: IEC Ex SIR09.0084U

GOST: PCCC GB.ГБ06.В01060

INMETRO: NCC 5871/09 U

TEMPERATURE

The item is classified as a component and is therefore not given a temperature rating.

Product Codes

DIGIT 1 + 2 Description (Adaptors)	Code	DIGIT 3 Material	Code	DIGIT 4 & 5 Male			DIGIT 6 & 7 Female		DIGIT 8		DIGIT 9		DIGIT 10	
				Thread Reference				Approval		Special		Plating		
M-M	AR	BRASS	A	M16	11	1/2" NPT	42	ATEX Exde	A	None (standard)	X or blank	None	Blank	
F-F HEX	AU	ALUMINIUM	B	M20	12	3/4" NPT	43	IECEx Exde	R	Customer Special	S	Nickel	N	
F-F ROUND	AX	MILD STEEL	C	M25	13	1" NPT	44	For other approvals please see product coding list on page 28				Zinc	Z	
		STAINLESS STEEL	E	M32	14	1 1/4" NPT	45					Chromatised	C	
		GLASS FILLED NYLON	M	M40	15	1 1/2" NPT	46					Special	S	
				M50	16	2" NPT	47							
				M63	17	2 1/2" NPT	48							
				M75	18	3" NPT	49							

PRODUCT CODING EXAMPLE	M-M Adp	Brass	M20(M)	M20(F)	Exde	PART NUMBER
	AR	A	12	12	A	= ARA1212A

RIGHT ANGLE ADAPTORS



Raxton Right Angle Adaptors provide a means of connection where protrusion space is limited whilst simultaneously, if necessary, converting the entry thread to that of a different type or reducing size and/or gender of the female thread.

Right Angle Adaptors can be supplied either with male or female thread entries, or alternatively with female to female thread entries and are marked with the applicable approval number and size.

Protrusion dimensions are shown in the table below.

Product Dimensions

Thread	Height Assembly (mm)	Bore (mm)	Male Bore Size (mm)
M16	45.0	11.0	9.0
M20	51.0	14.3	15.0
M25	57.0	20.5	20.8
M32	66.0	26.8	26.8
M40	75.0	33.5	33.5
M50	86.0	44.0	44.0
M63	101.5	55.2	55.0
M75	119.0	66.7	66.5

Certification

Code of Protection Categories

ATEX: I M2, Ex d IMb, Ex e I Mb or II GD, Ex d IIC Gb, Ex e IIC Gb, Ex tb IIIC Db

IECEX: Ex d I/IIC Mb/Gb, Ex e I/IIC Mb/Gb, Ex tb IIIC Db

GOST: ExdIICU

INMETRO: BR-Ex d IIC Gb, BR-Ex tD A21, IP66/67

Compliance Standards

ATEX / INMETRO / GOST: EN 60079-0:2009 EN60079-1:2007 EN 60079-7:2007 EN 60079-31:2008

IECEX: IEC Ex SIR 09.0086U

60079-7:2006-07

Certificate Details

ATEX: SIRA 10ATEX1228U

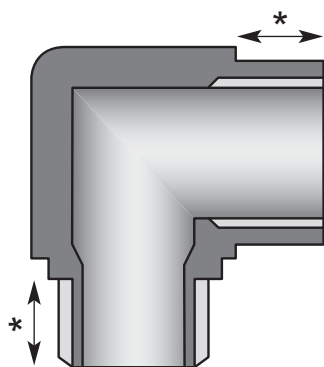
IECEX: IEC Ex SIR.09.086U

GOST: POCC GB.ГБ06.В01060

INMETRO: NCC 5871/09 U

TEMPERATURE

The item is classified as a component and is therefore not given a temperature rating.



* Minimum 6 full threads parallel 5 full threads taper

Product Codes

DIGIT 1+2 Description (Adaptors)	Code	DIGIT 3	Code	DIGIT 4 & 5 Male		DIGIT 6 & 7 Female		DIGIT 8		DIGIT 9		DIGIT 10	
		Material		Thread Reference		Approval		Special		Plating			
RIGHT ANGLE M-F	FG	BRASS	A	M16	11	1/2" NPT	42	ATEX Exde	A	None (standard)	X or blank	None	Blank
RIGHT ANGLE F-F	FN	ALUMINIUM	B	M20	12	3/4" NPT	43	IECEX Exde	R	Customer Special	S	Nickel	N
RIGHT ANGLE M-M	FK	MILD STEEL	C	M25	13	1" NPT	44	For other approvals please see product coding list on page 28				Zinc	Z
		STAINLESS STEEL	E	M32	14	1 1/4" NPT	45					Chromatised	C
				M40	15	1 1/2" NPT	46					Special	S
				M50	16	2" NPT	47						
				M63	17	2 1/2" NPT	48						
				M75	18	3" NPT	49						
				M90	81	3 1/2" NPT	86						
				M100	82	4" NPT	87	Industrial	X or Blank				

Other sizes / threads are available on request

PRODUCT CODING EXAMPLE	R.A. M-F	Brass	M20(M)	M20(F)	Exde	PART NUMBER
	FG	A	12	12	A	= FGA1212A

SWIVEL ADAPTORS



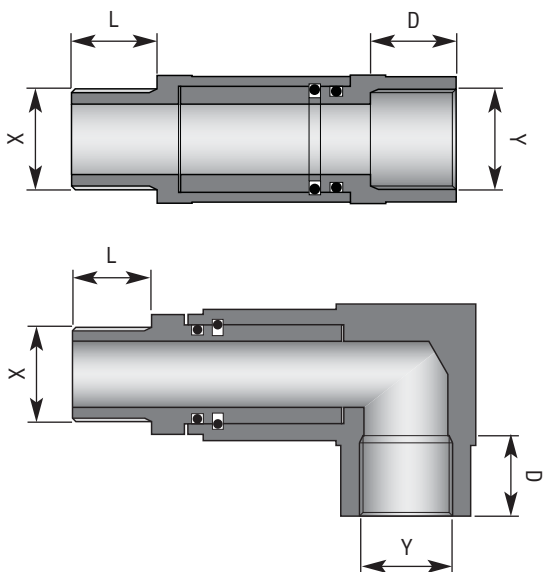
The Raxton Swivel Adaptor has the advantages of the standard inline and fixed 90° Adaptors, with the addition of the 'swivel' feature.

The 90° Swivel Adaptor (Types FP, FQ, FR) has been designed to allow a full 360° choice of cable entry/exit positions. This enables the installer to run the cable in any direction which greatly improves ease of installation in confined or difficult situations. The cable entry/exit can be aligned without the over or under torque compromise imposed by the direction of cable. The inline type (Types FA, FC, FD) allows independent connection at both ends.

The temperature range of -50°C to +230°C is governed by the use of an internal silicone 'O' ring which maintains the integrity of the product ensuring that it conforms to the over pressure requirement of the latest standard.

Product Dimensions

Thread X	Thread Y	Length (L) (mm)	Width (W) (mm)	Depth (D) (mm)	Min Wall (mm)
M16	M20	17.0	4.0	17.0	2.25
M25	M25-M20	17.0	4.0	17.0	2.75
M32	M32-M20	17.0	5.0	17.0	3.00
M40	M40-M20	17.0	5.0	17.0	3.00
M50	M50-M20	17.0	5.0	17.0	3.00
M63	M63-M20	17.0	5.0	17.0	3.25
M75	M75-M20	17.0	5.0	17.0	3.25



Certification

Code of Protection Categories

ATEX: I M2, Ex d IMb, Ex e I Mb, (not Alum) or IIGd

Ex d IIC Gb, Ex e IIC Gb, Ex tb IIIC Db

IECEX: Ex d Ex e IIC Gb, Ex d Ex e IM (Not Alum), Ex tb IIIC Db, IP 6X

Compliance Standards

ATEX EN 60079-0:2009, EN

60079-1:2007, EN 60079-7:2007, EN 60079-31:2008

IECEX: IEC 60079-0:2007, IEC 60079-1:2007, IEC

60079-7:2006, IEC 60079-31:2008

Certificate Details

ATEX : SIRA 10ATEX1056U

IECEX: IEC Ex SIR.10.0025U

TEMPERATURE

Temperature range: -50°C to +180°C

Product Codes

DIGIT 1+2 Description (Swivel Adaptors)	Code	DIGIT 3	Code	DIGIT 4 & 5 Male	DIGIT 6 & 7 Female	DIGIT 8		DIGIT 9		DIGIT 10			
		Material		Thread Reference	Approval	Special	Plating						
SWIVEL INLINE M-F	FA	BRASS	A	M16	11	1/2" NPT	42	ATEX Exde	A	None (standard)	X or blank	None	Blank
SWIVEL INLINE F-F	FC	ALUMINIUM	B	M20	12	3/4" NPT	43	IECEX Exde	R	Customer Special	S	Nickel	N
SWIVEL INLINE M-M	FD	MILD STEEL	C	M25	13	1" NPT	44	For other approvals please see product coding list on page 28				Zinc	Z
SWIVEL 90° M-F	FP	STAINLESS STEEL	E	M32	14	1 1/4" NPT	45					Chromatised	C
SWIVEL 90° F-F	FQ			M40	15	1 1/2" NPT	46					Special	S
SWIVEL 90° M-M	FR			M50	16	2" NPT	47						
				M63	17	2 1/2" NPT	48						
				M75	18	3" NPT	49						
				M90	81	3 1/2" NPT	86						
				M100	82	4" NPT	87	Industrial	X or Blank				

Other sizes / threads are available on request

PRODUCT CODING EXAMPLE	Swivel	Brass	M20(M)	M20(F)	Exde	PART NUMBER
	FA	A	12	12	A	= FAA1212A

STOPPING PLUGS



NEW PRODUCT

Raxton's comprehensive range of Stopping Plugs are designed to close any unused entries in electrical equipment without revoking existing certification.

Following the basic rules in line with good engineering practice Raxton Stopping Plugs should be inserted directly into the unused entry and not into a thread Reducer or thread Adaptor.

Raxton Stopping Plugs are marked with the appropriate approval number and size. Tested to IP68.

RX Plug Type CB

RX Plugs are inserted with the allen key pointing away from the box and tightened from the outside.

Tamperproof Plug Type CF

Tamperproof Plugs are inserted from the outside with the allen key towards the enclosure and then tightened from the inside to leave a flush finish to prevent unauthorised removal.

Hexagon Head Plug Type CK

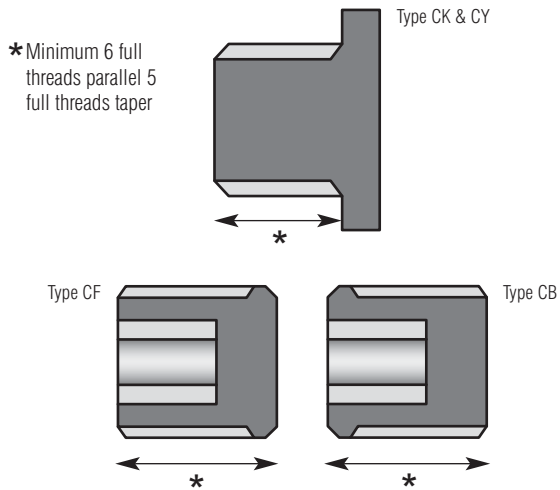
Hexagon Headed Plugs are inserted from the outside and fastened by means of a spanner. (Across flats dimensions are listed below).

Hollow Hexagon Head Plug Type CY

A hollow version of the Hexagon Head Plug but still with Exd/Exe certification. Not suitable for mining applications.

Product Dimensions

Thread	RX & Tamperproof Allen Key Type CF & CB	Hex Head A/F (mm) Type CK & CY		
M16	6.0	19.0		
M20	10.0	23.3		
M25	10.0	28.0		
M32	10.0	37.5		
M40	10.0	47.0		
M50	10.0	56.0		
M63	10.0	70.0		
M75	10.0	80.0		



Certification

Code of Protection Categories

ATEX: I M2 (not CY), Ex d IMb, Ex e I Mb, or II GD, Ex d IIC Gb, Ex e IIC Gb, Ex tb IIIC Db

IECEX: Ex d I/IIC Mb/Gb, Ex e I/IIC Mb/Gb, Ex tb IIIC Db, (Group I not for CY)

CSA: Ex d IIC Class 1, Zone 1, AEx d IIC Brass and Stainless only

GOST: Exdel/IICU, ExdellCU, ExellU

INMETRO: BR-Ex de 1/IIC Mb/Gb, BR-Ex tD A21 IP 66/67

Compliance Standards

ATEX / INMETRO / GOST: EN 60079-0:2009, EN 60079-1: 2007, EN 60079-7: 2007, EN 60079-31:2008

IECEX: 60079-0:2004, IEC 60079-1:2003, IEC 60079-7:2006-07

CSA: CAN/CSA-E79-0-95, CAN/CSA-E79-1-95, UL 2279 1997, IEC 60079-0:1998, IEC 60079-1:1998

Certificate Details

ATEX: SIRA10ATEX1224X

IECEX: IECEX SIR07.0009X

CSA: CSA 200455-1003277

GOST: POCC GB.ГБ06.В01060

INMETRO: NCC 5871/09 U

TEMPERATURE

The item is classified as a component and is therefore not given a temperature rating.

Product Codes

DIGIT 1+2 Description (Stopper Plugs)	Code	DIGIT 3	Code	DIGIT 4 & 5 Male			DIGIT 6 & 7 Female		DIGIT 8		DIGIT 9		DIGIT 10	
		Material		Thread Reference			Approval		Special		Plating			
RX (External Access)	CB	BRASS	A	M16	11	1/2" NPT	42	ATEX Exde	A	None (standard)	X or blank	None	Blank	
TAMPERPROOF	CF	ALUMINIUM	B	M20	12	3/4" NPT	43	IECEX Exde	R	Customer Special	S	Nickel	N	
HEX HEAD	CK	MILD STEEL	C	M25	13	1" NPT	44	For other approvals please see product coding list on page 28				Zinc	Z	
HOLLOW HEX HEAD	CY	STAINLESS STEEL	E	M32	14	1 1/4" NPT	45					Chromatised	C	
		GLASS FILLED NYLON	M	M40	15	1 1/2" NPT	46					Special	S	
				M50	16	2" NPT	47							
				M63	17	2 1/2" NPT	48							
				M75	18	3" NPT	49							
				M90	81	3 1/2" NPT	86							
				M100	82	4" NPT	87	Industrial	X or Blank					

Other sizes / threads are available on request

PRODUCT CODING EXAMPLE	Hex Head	Brass	M25(M)	-	Exde	PART NUMBER
	CB	A	13	00	A	= CBA1300A

STOPPING PLUGS



Raxton's comprehensive range of Stopping Plugs are designed to close any unused entries in electrical equipment without revoking existing certification. Exe plugs (CQ/CS) are supplied complete with an 'O' ring to ensure that the IP rating of the installation is maintained.

Following the basic rules in line with good engineering practice Raxton Stopping Plugs should be inserted directly into the unused entry and not into a thread Reducer or thread Adaptor.

Raxton Stopping Plugs are marked with the appropriate approval number and size. Tested to IP68.

Dome Head Plug Type CQ

Can be offered as an alternative to the Hexagon Headed version and are fastened by means of an allen key. Type CQ are available as a metallic Exde or nylon Exe product.

Slotted Head Plug Type CS

Hexagon Slotted Head Plugs with are fastened by means of a screwdriver. Type CS are available as nylon Exe only.

Product Dimensions

Thread	Dome Head Allen Key Type CQ	Dome Head Dia (mm) Type CQ	Slotted Head A/F (mm) Type CS
M16	6.0	20.5	19.0
M20	10.0	25.0	23.0
M25	10.0	30.0	28.0
M32	10.0	38.0	36.0
M40	10.0	46.0	44.0
M50	10.0	56.0	54.0
M63	10.0	69.0	67.0
M75	10.0	81.0	N/A

Certification

Code of Protection Categories

Type CQ metallic only:

ATEX: I M2, Ex d IMb, Ex e I Mb, or II GD, Ex d IIC Gb, Ex e IIC Gb, Ex tb IIIC Db

IECEx: Ex d I/IIC Mb/Gb, Ex e I/IIC Mb/Gb, Ex tb IIIC Db

CSA: Ex d IIC Class 1, Zone 1, AEx d IIC

GOST: Exde/IICU, ExdeIIICU, ExeIIU

INMETRO: BR-Ex de 1/IIC Mb/Gb, BR-Ex tD A21 IP 66/67

Type CQ/CS Nylon only:

ATEX: II 2 GD, Ex e IIC Gb, Ex tb IIIC Db (not Type CS)

IECEx: Ex e IIC Gb, Ex tb IIIC Db

GOST: ExeIIU (not Type CS)

INMETRO: BR-Ex e IIC Gb, BR-Ex tD A21 IP 66/67 (not Type CS)

Compliance Standards

Type CQ metallic only:

ATEX / INMETRO / GOST: EN 60079-0:2009, EN 60079-1:2007, EN 60079-7:2007 EN 60079-31:2008

IECEx: IEC 60079-0:2004, IEC 60079-1:2003, IEC 60079-7:2006-07

CSA: AN/CSA-E79-0-95, CAN/CSA-E79-1-95, UL 2279, 1997, IEC 60079-0:1998, IEC60079-1:1998

Type CQ Nylon only:

ATEX / INMETRO / GOST: EN 60079-0:2009, EN 60079-7:2007 EN 60079-31:2009

IECEx: IEC 60079-0:2007, IEC 60079-7:2006, IEC 60079-31:2008

Type CS only:

IECEx: IEC 60079-0:2007-10, IEC 60079-7:2006-07, IEC 60079-31:2008

Certificate Details

Type CQ metallic only:

ATEX: SIR10ATEX1224X

IECEx: IECExSIR07.0009X

CSA: CSA 200455-1003277

Type CQ metallic/Nylon:

GOST: POCC GB.ГБ06.В010600

INMETRO: NCC 5871/09 U

Type CQ Nylon only:

ATEX: SIR10ATEX3335U

IECEx: IECExSIR10.0164U

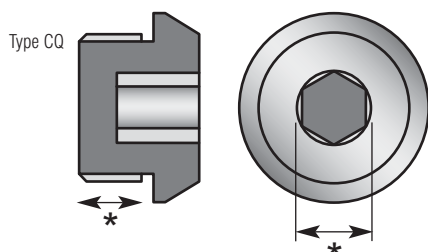
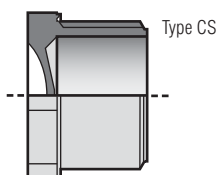
Type CS only:

IECEx: IECEx LCI 08.0035X

TEMPERATURE

The item is classified as a component and is therefore not given a temperature rating. Nylon temperature range -20°C to 65°C, 'O' ring -30°C to 125°C

*Minimum 6 full threads parallel 5 full threads taper



Product Codes

DIGIT 1+2 Description (Stopper Plugs)	Code	DIGIT 3	Code	DIGIT 4 & 5 Male	DIGIT 6 & 7 Female		DIGIT 8		DIGIT 9		DIGIT 10			
		Material		Thread Reference			Approval		Special		Plating			
DOME HEAD	CQ	BRASS	A	M16	11	½" NPT	42	ATEX Exde	A	None (standard)	X or blank	None	Blank	
SLOTTED HEAD	CS	ALUMINIUM	B	M20	12	¾" NPT	43	For other approvals please see product coding list on page 28	IECEx Exde	R	Customer Special	S	Nickel	N
		MILD STEEL	C	M25	13	1" NPT	44						Zinc	Z
		STAINLESS STEEL	E	M32	14	1¼" NPT	45						Chromatised	C
		GLASS FILLED NYLON	M	M40	15	1½" NPT	46						Special	S
				M50	16	2" NPT	47							
				M63	17	2½" NPT	48							
				M75	18	3" NPT	49							
				M90	81	3½" NPT	86							
		M100	82	4" NPT	87	Industrial	X or Blank							

Other sizes / threads are available on request

PRODUCT CODING EXAMPLE	Dome Head	Nylon	M25(M)	-	Exde	PART NUMBER
	CQ	M	13	00	A	= CQM1300A

BREATHER DRAINS

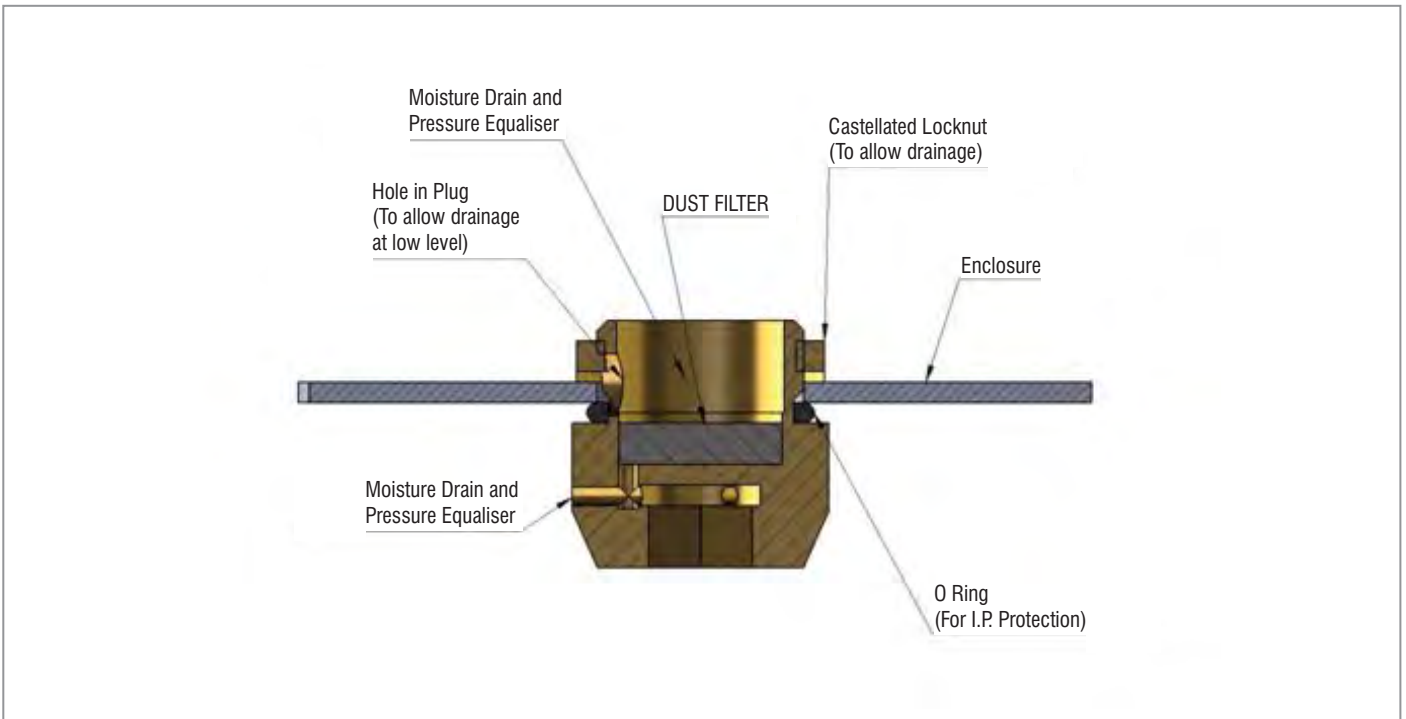


Electrical enclosures used outdoors with IP protection to prevent water and dust ingress can be subject to moisture build up inside the enclosure, which can damage or affect performance of the electrical equipment. Moisture build up can be caused by several conditions:

- Major changes in ambient temperatures
- Major changes in ambient pressures
- Heat generated by electrical equipment inside the enclosure

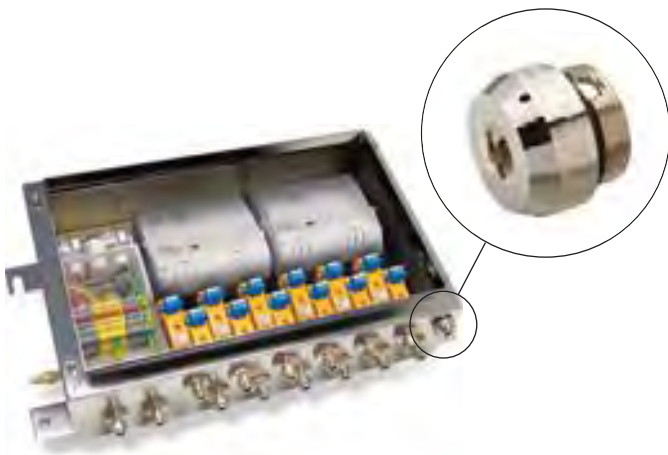
Installed at the bottom of the enclosure, the primary function is to effectively drain any water present within the enclosure, whilst allowing air in the enclosure to breath with the surrounding atmosphere, minimizing moisture build up within the enclosure.

The Type CV - Ex e Increased Safety model utilizes an internal dust filter, whilst the Type CT - Ex d Flameproof model incorporates a metallic dust seal manufactured from sintered copper/bronze alloy to also prevent a flame path in the event of an explosion within the enclosure.



Ex e Increased Safety Application

Cooper Crouse-Hinds MTL Fieldbus Barrier Modules mounted in 316 St. St.



Model CVE Breather Drain

Ex d Flameproof Application

Cooper Crouse-Hinds CEAG EJB12A Flameproof Control Station.



Model CTE Breather Drain

BREATHER DRAINS



The Raxton Exde (Type CT) and Exe Breather/Drain Plugs (Type CV) effectively drain moisture from an enclosure and allow air from the enclosure to vent into the surrounding atmosphere thereby minimising moisture build up.

The Plug is fastened to the lowest point of the enclosure by means of a spanner or allen key. The 'O' ring will seal against the enclosure face enhancing the I.P rating of the Plug. The Drain Plug can be supplied with either a serrated washer and locknut allowing the condensation to drain whilst ensuring the Plug is shakeproof or with a castellated locknut.

The Exde (Type CT) Breather/Drain Plug is an assembled item and must not be taken apart at any stage of installation. The Exde plug has an impact resistance of 20 Nm and can operate at temperatures between -50°C to +230°C.

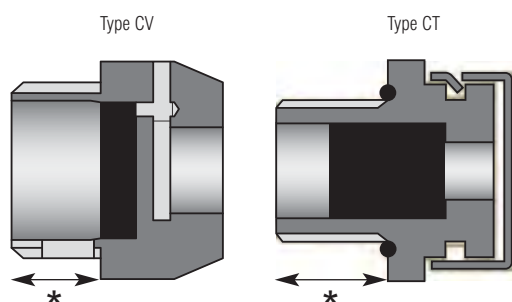
Raxton Drain Plugs are marked with the appropriate approval number and size. Tested to IP66.

Product Dimensions - Exe (Type CV)

Thread	Dia. (mm)	Allen Key (mm)	Head Protrusion (mm)
M20	25.4	10	14
M25	30.5	10	14
M32	38.0	10	14
1/2" NPT	25.4	10	14
3/4" NPT	30.5	10	14
1" NPT	38.0	10	14

Product Dimensions - Exde (Type CT)

Thread	Hex AF (mm)	Thread Length (mm)	OAL (mm)
M20	27.0	16.0	31
M25	31.8	16.0	31
1/2" NPT	27.0	20.0	35
3/4" NPT	27.9	20.0	35



*Minimum 6 full threads parallel 5 full threads taper

Certification

Code of Protection Categories

Type CT Breather Drain Plugs

ATEX: II 2 GD, Ex e IIC Gb, Ex tb IIIC Db

IECEX: Ex d I/IIC Mb/Gb, Ex e I/IIC Mb/Gb, Ex tb IIIC Db, IP 6X

Type CV Breather Drain Plugs

ATEX: I M2, Ex e I Mb or II GD, Ex e IIC Gb, Ex tb IIIC Db. Nylon: - II 2 GD, Ex e II only.

IECEX: Ex e IIC Mb/Gb, Ex IIIC tb Db (metallic only)

GOST: ExdellCU, ExellU. Nylon: - ExellU only.

INMETRO: BR-Ex e I/IIC Gb, BR-Ex tD A21, IP 66

Compliance Standards

Type CT Breather Drain Plugs

ATEX / INMETRO / GOST: EN 60079-0:2007 EN 60079-1:2007 EN 60079-7:2007 EN 61241-0:2006 EN 61241-1:2004

IECEX: IEC 60079-0:2007-10, IEC 60079-1:2007-04, IEC 60079-7:2006-07, IEC 61241-1:2004

Type CV Breather Drain Plugs

ATEX / INMETRO / GOST: EN 60079-0:2009 EN 60079-1:2007 EN 60079-7:2007 EN 60079-31:2008

(Metallic only); EN 50014:1997,

EN 50019:1994, EN 50281-1-1:1998 (Nylon only)

IECEX: IEC 60079-0:2007-10, IEC 60079-7:2006-07, IEC 61241-1:2004 (Metallic only)

Certificate Details

ATEX: SIRA 10ATEX1288U, SIRA 10ATEX3279U, SIRA 00ATEX3074U

IECEX: IECExSIR08.0127U, IECExSIR09.0096U

GOST: POCC GB.ГБ06.В01060

INMETRO: NCC 5871/09 U

TEMPERATURE

The Exde Type CT Breather/Drain plug: -50°C to 230°C

The Exe Breather/Drain plug is classified as a component and is therefore not given a temperature rating. Nylon temperature range -20°C to 65°C, 'O' ring -30°C to 125°C

Product Codes

DIGIT 1+2 Description (Breather Drains)	Code	DIGIT 3 Material	Code	DIGIT 4 & 5 Male			DIGIT 6 & 7 Female		DIGIT 8		DIGIT 9		DIGIT 10	
				Thread Reference			Approval		Special		Plating			
B.DRAIN Exde	CT	BRASS	A	M16	11	1/2" NPT	42	ATEX Exde	A	None (standard)	X or blank	None	Blank	
B.DRAIN Exe	CV	STAINLESS STEEL	E	M20	12	3/4" NPT	43	IECEX Exde	R	Customer Special	S	Nickel	N	
		GLASS FILLED NYLON	M	M25	13	1" NPT	44	For other approvals please see product coding list on page 28				Zinc	Z	
				M32	14								Chromatised	C
													Special	S

Other sizes / threads are available on request

PRODUCT CODING EXAMPLE	Breather Drain	Brass	M25(M)	-	Exde	PART NUMBER
	CT	A	13	00	A	= CTA1300A

BARRIER STOPPER BOXES FOR CABLE GLANDS & RIGID CONDUIT



Raxton Compound Stopper Box is designed to seal conductors at the entry to the enclosure via conduit or to enable an existing compression gland to be converted to a barrier gland. This is achieved by forming a barrier between the individual insulated conductors within the cable to prevent an explosion within the enclosure. The Compound Stopper Box allows compound to be packed around individual insulated conductors. Assembly of the component compresses the packing material and distributes the compound evenly to effect a barrier at point of entry into the enclosure. The Compound Stopper Box is supplied with compound in a pack, complete with making off instructions and gloves. Raxton Compound Stopper Box is marked with the appropriate approval number and size.

Product Dimensions

Thread	Bore MN (mm)	Thread Length (mm)	Protrusion (mm)
M16	7.2	15.0	32.0
M20	12.5	15.0	34.5
M25	18.3	15.0	34.5
M32	24.3	15.0	34.5
M40	30.0	17.0	35.0
M50	41.6	17.0	37.0
M63	53.3	17.0	37.0
M75	65.0	17.0	37.0

Certification

Code of Protection Categories

ATEX: II 2 GD, Ex de IIC
 IECEx: Ex d I/IIC, Ex e I/IIC, Ex tb IIIC Db
 GOST: ExdIIICU
 INMETRO: BR-Ex d IIC Gb, BR-Ex tD A21 IP 66/67

Compliance Standards

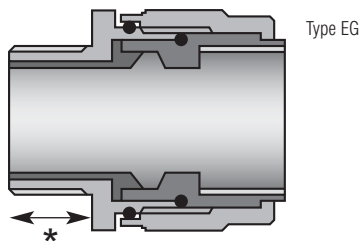
ATEX / INMETRO / GOST: EN 50014:1997,
 EN 50018:2000, EN 50019:2000, EN 5081-1-1:1998
 IECEx: IEC 60079-0:2004, IEC 60079 - 1:2003, IEC 60079-7:2006-07

Certificate Details

ATEX: SIRA 11ATEX1301X
 IECEx: IECEx SIR 11.0144X
 GOST: POCC GB.ГБ06.В01060
 INMETRO: NCC 5871/09 U

TEMPERATURE

The item is classified as a component and is therefore not given a temperature rating.



* Minimum 6 full threads parallel 5 full threads taper

Barrier Stopper Box used with a rigid steel conduit.



Barrier Stopper Box used with a compression type cable gland to provide a barrier gland assembly.

Product Codes

DIGIT 1+2 Description (Stopper Boxes)	Code	DIGIT 3 Material	Code	DIGIT 4 & 5 Male		DIGIT 6 & 7 Female		DIGIT 8 Approval		DIGIT 9 Special		DIGIT10 Plating		
				Thread Reference										
STOPPER BOX M-F	EG	BRASS	A	M16	11	1/2" NPT	42	ATEX Exde	A	None (standard)	X or blank	None	Blank	
STOPPER BOX F-F	EK	ALUMINIUM	B	M20	12	3/4" NPT	43	IECEx Exde	R	Customer Special	S	Nickel	N	
		MILD STEEL	C	M25	13	1" NPT	44	For other approvals please see product coding list on page 28				Zinc	Z	
		STAINLESS STEEL	E	M32	14	1 1/4" NPT	45						Chromatised	C
				M40	15	1 1/2" NPT	46						Special	S
				M50	16	2" NPT	47							
				M63	17	2 1/2" NPT	48							
				M75	18	3" NPT	49							

Other sizes / threads are available on request

PRODUCT CODING EXAMPLE	Box M-F	Brass	M20(M)	M20(F)	Exde	PART NUMBER
	EG	A	12	12	A	= EGA1212A

UNIONS



Raxton Unions are designed to provide a running joint whilst eliminating exposed threads and are particularly suitable for use where a coupler would be impractical.

Unions are available in a variety of thread forms and can be supplied with male to female or female to female thread entries. The female connection thread of the Union shall step not more than one size up from the male connection thread, or equal to one size up in the case of a thread gender change: e.g M20(M) to M25(F) or M20(M) to 3/4 NPT(F).

Raxton Unions are marked with the appropriate approval number and size.

Product Dimensions

Thread	Protrusion (mm)	Bore (mm)	Dia (mm)
M16	45.0	11.0	30.0
M20	45.0	14.3	42.0
M25	45.0	20.5	47.0
M32	45.0	26.8	54.0
M40	45.0	33.5	62.0
M50	45.0	44.0	77.0
M63	45.0	55.2	87.0
M75	45.0	66.7	102.0

Certification

Code of Protection Categories

ATEX: I M2, Ex d IMb, Ex e I Mb or II GD, Ex d IIC Gb, Ex e IIC Gb, Ex tb IIIC Db

IECEx: Ex d I/IIC Mb/Gb, Ex e I/IIC Mb/Gb, Ex tb, IIIC Db

GOST: ExdIICU

INMETRO: BR-Ex d IIC Gb

Compliance Standards

ATEX / INMETRO / GOST: EN 60079-0:2009, EN60079-1:2007, EN 60079-7:2007, EN 60079-31:2008

IECEx: IEC 60079-0:2007-10, IEC 60079-1:2007-04, IEC 60079-7:2006-07, IEC 61241-1:2004

Certificate Details

ATEX: SIRA 10ATEX1227U

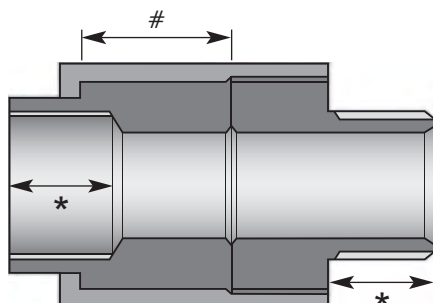
IECEx: IECEx SIR09.0085U

GOST: POCC GB.ГБ06.В01060

INMETRO: NCC 5871/09 U

TEMPERATURE

The item is classified as a component and is therefore not given a temperature rating.



*Minimum 8 full threads parallel 5 full threads taper

#Flamepath in accordance with appropriate standards

Product Codes

DIGIT 1 + 2	Code	DIGIT 3	Code	DIGIT 4 & 5 Male			DIGIT 6 & 7 Female		DIGIT 8		DIGIT 9		DIGIT 10	
Description (Unions)		Material		Thread Reference				Approval		Special		Plating		
UNION M-F	FB	BRASS	A	M16	11	1/2" NPT	42	ATEX Exde	A	None (standard)	X or blank	None	Blank	
UNION F-F	FL	ALUMINIUM	B	M20	12	3/4" NPT	43	IECEx Exde	R	Customer Special	S	Nickel	N	
UNION M-M	FE	MILD STEEL	C	M25	13	1" NPT	44	For other approvals please see product coding list on page 28				Zinc	Z	
		STAINLESS STEEL	E	M32	14	1 1/4" NPT	45					Chromatised	C	
				M40	15	1 1/2" NPT	46					Special	S	
				M50	16	2" NPT	47							
				M63	17	2 1/2" NPT	48							
				M75	18	3" NPT	49							

Other sizes / threads are available on request

PRODUCT CODING EXAMPLE	Union	Brass	M32(M)	M32(F)	Exde	PART NUMBER
	FB	A	14	14	A	= FBA1414A

NIPPLES / COUPLERS / BUSHES



Screwed Nippling

Supplied 50mm long as standard, alternative lengths can be supplied as required. Available in a variety of thread forms (see page 27). Materials include Brass, Mild Steel, Stainless Steel, Aluminium and Nylon.

Metallic finishes can be plated to requirements.

Couplers

Available in round or hexagonal. Manufactured in Brass as standard in a wide combination of thread forms and sizes.

Bushes

Male and Female Bushes are available in a variety of thread forms (see page 27). Materials include Brass, Mild Steel, Stainless Steel, Aluminium and may be plated to requirements.

TEMPERATURE

The item is classified as a component and is therefore not given a temperature rating.

Product Codes

DIGIT 1+2		DIGIT 3		DIGIT 4 & 5 Male		DIGIT 6 & 7 Female		DIGIT 8		DIGIT 9		DIGIT 10		
Description	Code	Material	Code	Thread Reference				Approval		Special		Plating		
MALE BUSH LONG	JA	BRASS	A	M12	04	½" NPT	42	Industrial	X or Blank	None (standard)	X or blank	None	Blank	
MALE BUSH SHORT	JB	ALUMINIUM	B	M16	11	¾" NPT	43			Customer Special	S	Nickel	N	
FEMALE BUSH	JC	MILD STEEL	C	M20	12	1" NPT	44					Zinc	Z	
NIPPLE	JD	STAINLESS STEEL	E	M25	13	1¼" NPT	45					Chromatised	C	
NIPPLE LONG	JE	NYLON BLACK	G	M32	14	1½" NPT	46			No Hazardous Area Approval			Special	S
NIPPLE BARREL	JF			M40	15	2" NPT	47							
COUPLER ROUND	JG			M50	16	2½" NPT	48							
COUPLER HEX	JH			M63	17	3" NPT	49							
COUPLER FLANGE	JJ			M75	18	3½" NPT	86							
				M90	81	4" NPT	87							

Other sizes / threads are available on request

PRODUCT CODING EXAMPLE	Male Bush	Brass	M25(M)	-	-	PART NUMBER
	JA	A	13	00		= JAA1300

LOCKNUTS, WASHERS & SERRATED WASHERS



Locknuts & Lockrings (Type GA, GB)

Raxton offer a large variety of Locknuts/Lockrings which are often recommended for securing cable glands, thread Adaptors or thread Reducers to a gland plate or into equipment. Locknuts are available in Brass, Mild Steel, Stainless Steel, Aluminium or Nylon.

TEMPERATURE

The item is classified as a component and is therefore not given a temperature rating.

Product Dimensions

Female Thread	Thread Coding	A/F Dims (mm)	Female Thread	Thread Coding	A/F Dims (mm)
M16	0011	19.0	¾" NPT	0043	33.0
M20	0012	25.4	1" NPT	0044	40.0
M25	0013	30.0	1¼" NPT	0045	50.0
M32	0014	46.0	1½" NPT	0046	56.0
M40	0015	46.0	2" NPT	0047	70.0
M50	0016	65.0	2½" NPT	0048	90.0
M63	0017	80.0	3" NPT	0049	105.0
M75	0018	95.0	3½" NPT	0050	115.0
M90	0019	105.0	4" NPT	0051	130.0

Based on metallic products

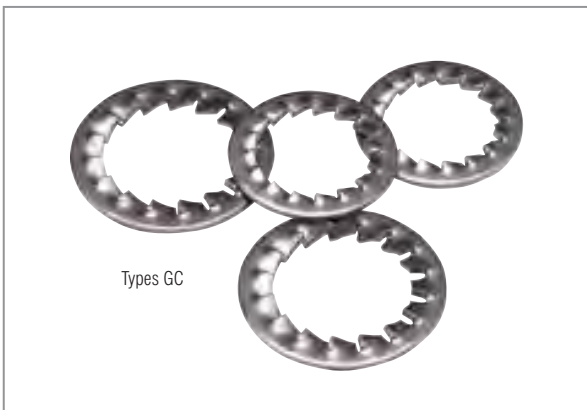


Serrated Washers

Raxton Serrated (Shakeproof) Washers are available in both Mild Steel Zinc plated and Stainless Steel and prevent the risk of attachments becoming loose when used in conjunction with a Locknut.

TEMPERATURE

The item is classified as a component and is therefore not given a temperature rating.



Washers

To maintain the IP rating of the equipment Raxton offer a wide variety of entry thread sealing Washers and 'O' rings. Materials include Nylon, Teflon, Neoprene, Fibre and Rubber. In addition Raxton can offer a non setting universal jointing sealant.

TEMPERATURE

The item is classified as a component and is therefore not given a temperature rating.

Product Codes

DIGIT 1+2 Description (Earth Accessories)	Code	DIGIT 3	Code	DIGIT 4 & 5 Male		DIGIT 6 & 7 Female		DIGIT 8		DIGIT 9		DIGIT 10		
		Material		Thread Reference				Approval		Special		Plating		
LOCKNUTS	GA	BRASS	A	M16	11	½" NPT	42	Industrial	X or Blank	None (standard)	X or blank	None	Blank	
LOCKRINGS	GB	ALUMINIUM	B	M20	12	¾" NPT	43	No Hazardous Area Approval		Customer Special	S	Nickel	N	
SERRATED WASHERS	GC	MILD STEEL	C	M25	13	1" NPT	44						Zinc	Z
CASTELLATED LOCKNUTS	GD	STAINLESS STEEL	E	M32	14	1¼" NPT	45						Chromatised	C
WASHERS	HA	NYLON BLACK	G	M40	15	1½" NPT	46						Special	S
'O' RINGS	HB	TEFLON	P	M50	16	2" NPT	47							
		EPDM	Q	M63	17	2½" NPT	48							
		NEOPRENE	T	M75	18	3" NPT	49							
		NYLON WHITE	R	M90	81	3½" NPT	86							
		RED FIBRE	U	M100	82	4" NPT	87							

Other sizes / threads are available on request

PRODUCT CODING EXAMPLE	Washer	Fibre	(M)	M40(F)	-	PART NUMBER
	HA	U	00	15	-	= HAU0015

EARTH LEAD ADAPTORS & THREADED EARTH PLATES



Raxton Exe Earth Lead Adaptors (Type DG) allow for earth continuity to be maintained by providing an earth lead which can be terminated inside the enclosure.

Earth Lead Adaptors are produced with an undercut and supplied complete with an 'O' ring to maintain the IP integrity of the installation.

Earth Lead Adaptors are marked with the appropriate approval number and size.

Raxton Exe Threaded Earth Plates are designed to ensure earth continuity when terminating brass glands into non-metallic enclosures. The additional use of a locknut is recommended to ensure pressure is maintained with the wall enclosure. Threaded Earth Plates are marked with the appropriate approval number and size.

Product Dimensions - Earth Lead Adaptors

Thread Earth Lead	Length (mm)	Earth Lead x 300mm (mm ²)		
M16	38.0	2.5		
M20	38.0	2.5		
M25	38.0	4.0		
M32	38.0	6.0		
M40	39.0	10.0		
M50	39.0	16.0		
M63	39.0	25.0		
M75	39.0	25.0		

Certification - Earth Lead Adaptors

Code of Protection Categories

ATEX: I M2, Ex e I Mb or II G D, Ex e IIC Gb, ExIIIC tb Db

IECEX: Ex d I/IIC Mb/Gb, Ex E I/IIC Mb/Gb, Ex IIIC tb Db

GOST: ExellU

INMETRO: BR-Ex e II Gb (DG/DN/DK) BR-Ex tD A21 IP66/67

Compliance Standards

ATEX / INMETRO / GOST: EN 60079-0:2009, EN 60079-7:2007, IEC 60079-31:2008

IECEX: IEC 60079-0:2007-10, IEC 60079-1:2007-04,

IEC 60079-7:2006-07, IEC 61241-1:2004

Certificate Details

ATEX: Sira 10ATEX3229U

IECEX: IECEX SIR 09.0087U

GOST: POCC GB.ГБ06.В01060

INMETRO: NCC 5871/09 U

TEMPERATURE

The item is classified as a component and is therefore not given a temperature rating, 'O' ring - 30°C to 125°C.

Product Dimensions - Threaded Earth Plates

Threaded Earth Plate	Material Size (mm)	Earth Lead x 300mm (mm ²)		
M16	22.0	2.5		
M20	30.0	2.5		
M25	32.0	4.0		
M32	38.0	6.0		
M40	50.8	10.0		
M50	63.5	16.0		
M63	76.0	25.0		
M75	102.0	25.0		

Certification - Threaded Earth Plates

Code of Protection Categories

ATEX: II 2GD, EEx e II

GOST: ExdIIICU

INMETRO: BR-Ex e II Gb

Compliance Standards

ATEX / INMETRO / GOST: EN 50014:1997, EN50018:2000, EN 50019:2000, EN50281-1-1:1998

Certificate Details

ATEX: SIRA 00ATEX1073U

GOST: POCC GB.ГБ06.В01060

INMETRO: NCC 5871/09 U

TEMPERATURE

The item is classified as a component and is therefore not given a temperature rating.

Product Codes

DIGIT 1+2 Description (Earth Accessories)	Code	DIGIT 3	Code	DIGIT 4 & 5 Male		DIGIT 6 & 7 Female		DIGIT 8		DIGIT 9		DIGIT 10		
		Material		Thread Reference		Approval		Special		Plating				
ADAPTOR M-F PLATE	DG	BRASS	A	M16	11	1/2" NPT	42	ATEX Exe	E	None (standard)	X or blank	None	Blank	
	DK	ALUMINIUM	B	M20	12	3/4" NPT	43	IECEX Exe I/II	P	Customer Special	S	Nickel	N	
		MILD STEEL	C	M25	13	1" NPT	44	For other approvals please see product coding list on page 28				Zinc	Z	
		STAINLESS STEEL	E	M32	14	1 1/4" NPT	45						Chromatised	C
				M40	15	1 1/2" NPT	46						Special	S
				M50	16	2" NPT	47							
				M63	17	2 1/2" NPT	48							
				M75	18	3" NPT	49							
				M90	81	3 1/2" NPT	86							
				M100	82	4" NPT	87	Industrial	X or Blank					

Other sizes / threads are available on request

PRODUCT CODING EXAMPLE	EL Adaptor	Brass	M20(M)	M20(F)	Exe	PART NUMBER
	DG	A	12	12	E	= DGA1212E

EARTHING LOCKNUTS & EARTH TAGS

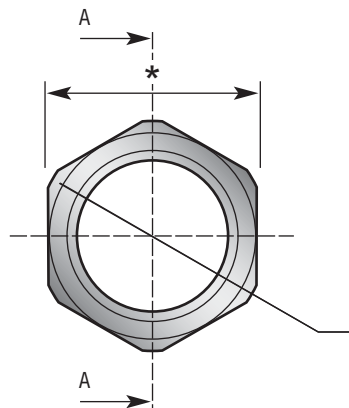


Earthing Locknuts

Raxton Earthing Locknuts offer an alternative to the standard Earth Tag when terminating a metallic cable gland into a thin wall steel enclosure. The Earthing Locknut design includes a number of cutting teeth formed on one surface of the nut. When tightened, these teeth cut into the enclosure wall, preventing the nut from turning and enabling the gland to be tightened to the nut from the outside with only one tool. This allows all connections of the gland to be made within the enclosure, away from the corrosive or flammable atmosphere and away from possible mechanical damage, and results in a neater appearance. The nut may also be fitted with the plain side facing the enclosure where this is preferred.

TEMPERATURE

The item is classified as a component and is therefore not given a temperature rating.



Product Dimensions

Female Thread	Thread Coding	A/F Dims (mm)	Female Thread	Thread Coding	A/F Dims (mm)
M12	0010	14.0	½" NPT	0042	30.0
M16	0011	18.0	¾" NPT	0043	36.0
M20	0012	23.0	1" NPT	0044	42.0
M25	0013	28.0	1¼" NPT	0045	50.0
M32	0014	36.0	1½" NPT	0046	55.0
M40	0015	44.0	2" NPT	0047	70.0
M50	0016	54.0	2½" NPT	0048	80.0
M63	0017	70.0	3" NPT	0049	98.0
M75	0018		3½" NPT	0050	115.0
M90	0019		4" NPT	0051	130.0



Earth Tags

Raxton Earth Tags provide a means of connecting a flexible earth bond with the gland, thread Adaptor or thread Reducer in any required position whilst ensuring suitable earth continuity. Available in Brass, Aluminium and Stainless Steel and supplied self colour as standard, additional plating is available if required.

TEMPERATURE

The item is classified as a component and is therefore not given a temperature rating.

Product Codes

DIGIT 1+2 Description (Earth Accessories)	Code	DIGIT 3	Code	DIGIT 4 & 5 Male		DIGIT 6 & 7 Female		DIGIT 8		DIGIT 9		DIGIT 10	
		Material		Thread Reference		Approval		Special		Plating			
EARTH TAG	DM	BRASS	A	M16	11	½" NPT	42	Industrial	X or Blank	None (standard)	X or blank	None	Blank
EARTHING LOCKNUT	DN	ALUMINIUM	B	M20	12	¾" NPT	43	No Hazardous Area Approval		Customer Special	S	Nickel	N
		STAINLESS STEEL	E	M25	13	1" NPT	44			Zinc	Z		
				M32	14	1¼" NPT	45			Chromatised	C		
				M40	15	1½" NPT	46			Special	S		
				M50	16	2" NPT	47						
				M63	17	2½" NPT	48						
				M75	18	3" NPT	49						
				M90	81	3½" NPT	86						
		M100	82	4" NPT	87								

Other sizes / threads are available on request

PRODUCT CODING EXAMPLE	Earth Tag	Brass	(M)	M20(F)	-	PART NUMBER
	DM	A	00	12	-	= DMA0012

SHROUDS



Type HC

Also available in other colours

Raxton offer a range of push on Shrouds which are used to minimise the risk of dirt or foreign substances gathering on the cable gland body and/or point of cable to the gland interface.

Supplied as standard in black PVC they are suitable for all leading makes of glands.

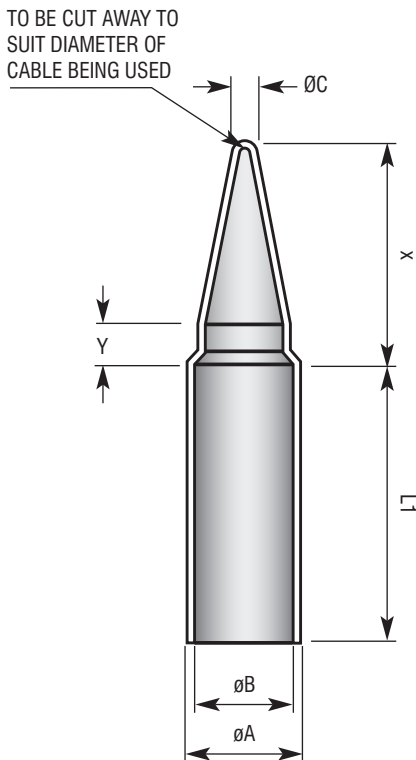
Raxton also offer coloured PVC shrouds (blue, grey, red), Flame Retardant (FR) black PVC shrouds, Low Smoke and Fume (LSF) Halogen free PVC shrouds in black, white, red, blue, and PCP shrouds in black.

It should be noted that shrouds do not necessarily improve the ingress protection (IP) of the installed gland and may in certain conditions retain unwanted moisture.

TEMPERATURE

The item is classified as a component and is therefore not given a temperature rating.

Product Dimensions



SIZE	ØA	ØB	ØC	X	Y	L1
5	19.9	16.5	2.5	40.0	9.0	57.0
5A	23.8	20.0	2.5	50.0	10.0	60.0
6	25.2	20.0	2.5	50.0	10.0	78.0
7	31.5	26.0	8.0	50.0	10.0	80.0
8	43.0	36.0	11.0	50.0	12.0	78.0
8	38.8	32.0	11.0	50.0	12.0	80.0
9	49.5	40.0	15.0	50.0	12.0	83.0
10	57.8	48.0	20.0	60.0	14.0	91.0
11	67.2	60.0	25.0	70.0	14.0	105.0
12	75.6	68.0	31.0	75.0	13.0	90.0
12E	84.0	70.0	34.0	75.0	13.0	115.0
13	89.3	75.0	37.0	75.0	13.0	110.0

Product Codes

SHROUD NUMBER	PDM 100 BLACK	PDM 100 FR BLACK	PDM 100 BLUE	PDM 100 GREY	PDM 100 RED	PDM 100 LSF BLACK	PDM 100 LSF WHITE	PDM 100 LSF RED	PDM 100 LSF BLUE
5	HCY 5	HCY FR 5	HCB 5	HCG 5	HCR 5	HCB LSF 5	HCW LSF 5	HCR LSF 5	HCL LSF 5
5A	HCY 5A	HCY FR 5A	HCB 5A	HCG 5A	HCR 5A	HCB LSF 5A	HCW LSF 5A	HCR LSF 5A	HCL LSF 5A
6	HCY 6	HCY FR 6	HCB 6	HCG 6	HCR 6	HCB LSF 6	HCW LSF 6	HCR LSF 6	HCL LSF 6
7	HCY 7	HCY FR 7	HCB 7	HCG 7	HCR 7	HCB LSF 7	HCW LSF 7	HCR LSF 7	HCL LSF 7
8	HCY 8	HCY FR 8	HCB 8	HCG 8	HCR 8	HCB LSF 8	HCW LSF 8	HCR LSF 8	HCL LSF 8
8B	HCY 8B	HCY FR 8B	HCB 8B	HCG 8B	HCR 8B	HCB LSF 8B	HCW LSF 8B	HCR LSF 8B	HCL LSF 8B
9	HCY 9	HCY FR 9	HCB 9	HCG 9	HCR 9	HCB LSF 9	HCW LSF 9	HCR LSF 9	HCL LSF 9
10	HCY 10	HCY FR 10	HCB 10	HCG 10	HCR 10	HCB LSF 10	HCW LSF 10	HCR LSF 10	HCL LSF 10
11	HCY 11	HCY FR 11	HCB 11	HCG 11	HCR 11	HCB LSF 11	HCW LSF 11	HCR LSF 11	HCL LSF 11
12	HCY 12	HCY FR 12	HCB 12	HCG 12	HCR 12	HCB LSF 12	HCW LSF 12	HCR LSF 12	HCL LSF 12
12E	HCY 12E	HCY FR 12E	HCB 12E	HCG 12E	HCR 12E	HCB LSF 12E	HCW LSF 12E	HCR LSF 12E	HCL LSF 12E
13	HCY 13	HCY FR 13	HCB 13	HCG 13	HCR 13	HCB LSF 13	HCW LSF 13	HCR LSF 13	HCL LSF 13



NYLON GLANDS



Raxton Ex e and Ex i Cable Glands are designed with an outer seal and cable grip for use with unarmoured cable. Cable Glands are designed for direct installation to the threaded entry of an enclosure or used with a locknut into a clearance hole. Unused entries require the use of a certified stopping plug.

Raxton Cable Glands which comprise of a body, clamping ring, sealing ring and capnut have a sealing range as shown in the table below.

It is recommended that brass locknuts are used with PG threads.

Certification

Code of Protection Categories

ATEX: LCIE 97 ATEX 6007X / Exe II/Ex tD/Ex II 2 GD, IP68

Compliance Standards

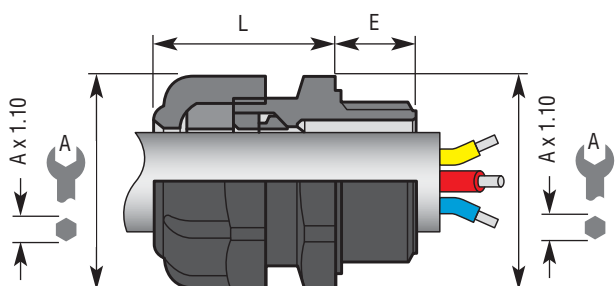
ATEX: EN 50262, EN60529 (IP68)

Certificate Details

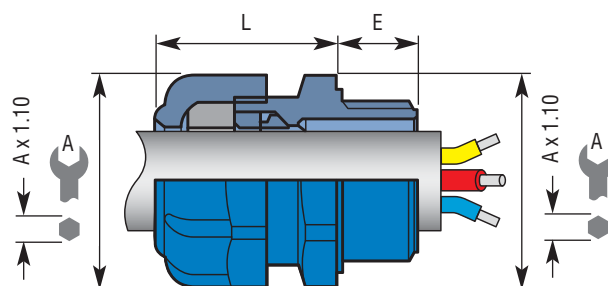
ATEX; LCIE 97ATEX 6007X

TEMPERATURE

ATEX temperature range -20°C to 80°C.



Type EB Ex e Gland (Black)



Type EB Ex i Gland (Blue)

Product Codes

PRODUCT CODE		Size	Thread	E	OUTER SEAL		L	A/F DIMENSIONS	
Ex e	Ex i				Min	Max		A	B
EBG0400E	EBK0400E	4	M12	9	3.5	6	18	15	15
EBG1100EXS	EBK1100EXS	5	M16S	12	5	8	22	19	19
EBG1100E	EBK1100E	6	M16	9	6	10	22	22	22
EBG1200EXS	EBK1200EXS	7	M20S	12	8	13	23	24	24
EBG1200E	EBK1200E	8	M20	10	10	15	23	26	26
EBG1300E	EBK1300E	9	M25	13	13	19	29	32	32
EBG1400E	EBK1400E	10	M32	15	18	25	29	41	41
EBG1500E	EBK1500E	11	M40	15	24	32	35	52	52
EBG1600E	EBK1600E	12	M50	16	29	38	40	59	59
EBG1700E	EBK1700E	13	M63	16	36	44	42	65	65
EBG2000E	EBK2000E	4	PG7	9	3.5	6	18	15	15
EBG2100E	EBK2100E	5	PG9	9	5	8	22	19	19
EBG2200E	EBK2200E	6	PG11	9	6	10	22	22	22
EBG2300E	EBK2300E	7	PG13.5	10	8	13	23	24	24
EBG2400E	EBK2400E	8	PG16	10	10	15	23	23	23
EBG2500E	EBK2500E	9	PG21	11	13	19	29	32	32
EBG2600E	EBK2600E	10	PG29	12	18	25	29	41	41
EBG2700E	EBK2700E	11	PG36	14	24	32	35	52	52
EBG2800E	EBK2800E	12	PG42	16	29	38	40	59	59

Other sizes / threads are available on request

PRODUCT CODING EXAMPLE	Gland	Ex	M20(M)	-	Exe	PART NUMBER
	EB	K	12	00	E	= EBK1200E

BARRIER STOPPER BOXES FOR FLEXIBLE CONDUIT



The Raxton Barrier Stopper Box for flexible conduit is designed to provide a flameproof connection for liquid tight and braided flexible conduit in hazardous area applications. This is achieved by forming a barrier between the individual insulated conductors of a cable inside the conduit that are to be terminated within an enclosure.

The barrier is formed by using a setting compound packed around individual insulated conductors. Assembly of the component compresses the packing material and distributes the compound evenly to effect a barrier at point of entry into the enclosure.

The Barrier Stopper Box is supplied with compound in a pack, complete with making off instructions and gloves.

Product Dimensions

Stopper Box Size	Thread A Min	Ø B Nominal	Length H
M20	15	21.1	44.5
M25	15	26.4	46.0
M32	15	33.1	51.5
M40	15	41.8	52.5
M50	15	47.9	58.5
M63	15	59.7	61.5

Certification

Code of Protection Categories

ATEX: I M2, Ex d IMb, Ex e IMB, or II G, Ex d IIC Gb, Ex e IIC Gb, Ex tb IIIC Db

IECEX: Ex d I/IIC, Ex e I/IIC, Ex tb IIIC Db

Compliance Standards

ATEX: EN 60079-0: 2009, EN 60079-1: 2007, EN 60079-7: 2007, EN 60079-31: 2008

IECEX: IEC 60079-0: 2004, IEC 60079-1: 2003, IEC 60079-7: 2006-07

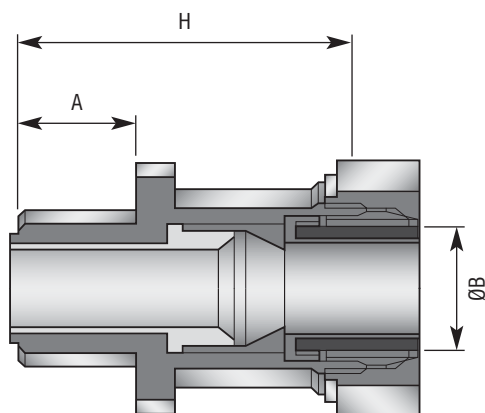
Certificate Details

ATEX: SIRA 11ATEX1301X

IECEX: SIR 11.0144X

TEMPERATURE

The item is classified as a component and is therefore not given a temperature rating.



Product Codes

DIGIT 1+2 Description (Stopper Boxes)	Code	DIGIT 3 Material	Code	DIGIT 4 & 5 Male		DIGIT 6 & 7 Female		DIGIT 8	
				Thread Reference		Approval			
BARRIER STOPPER BOX (FLEXIBLE CONDUIT) M-F	EF	BRASS	A	M16	11	½" NPT	42	ATEX Exde	A
		ALUMINIUM	B	M20	12	¾" NPT	43	ATEX Exd	D
		MILD STEEL	C	M25	13	1" NPT	44	ATEX Exe	E
		STAINLESS STEEL	E	M32	14	1¼" NPT	45	IECEX Exd I/IIC	N
				M40	15	1½" NPT	46	IECEX Exe I/II	P
				M50	16	2" NPT	47		
				M63	17	2½" NPT	48		
M75	18	3" NPT	49						

Other sizes / threads are available on request

PRODUCT CODING EXAMPLE	Box M-F	Brass	M20(M)	M20(F)	Exde	PART NUMBER
	EF	A	12	12	A	= EFA1212A

FLEXIBLE CONDUIT



Raxton now offer a range of flexible conduit, all of which feature a high mechanical strength and are suitable for various applications.

Conduit Type MXS

Description: Stainless steel (316), helically wound, flexible conduit with oil resistant and high temperature pvc smooth cover. **ONLY AVAILABLE IN BLACK**

Application: Food processing machinery or outdoor applications where high corrosion resistance and liquid tight are a requirement

Features: High mechanical strength and resistant to oils and greases
UV resistant (black) and good flexibility
Smooth wipe clean outer cover
Cover does not wrinkle when bent

IP Rating: IP66 + IP67 + IP68 (5 bar)

Temp range: -20°C to +105°C

Product Dimensions - MXS

Nominal Size	Outside Dia. (mm)	Inside Dia. (mm)	Inside Bend Rad (mm)
10	11.8	7.0	35
12	14.2	10.0	40
16	17.8	12.6	45
20	21.1	16.0	65
25	26.4	21.0	100
32	33.1	26.5	135
40	41.8	35.4	175
50	47.9	40.4	230
63	59.7	51.6	280

Conduit Type MXB

Description: Galvanised steel, helically wound, flexible conduit with thermoplastic rubber cover and stainless steel (316) overbraid

Application: Very arduous industrial environments such as steel works

Features: High mechanical strength
High abrasion resistance and very high tensile strength
EMC Screening Performance

IP Rating: IP66 + IP67 + IP68 (5 bar)

Temp range: -45°C to +135°C

Product Dimensions - MXB

Nominal Size	Outside Dia. (mm)	Inside Dia. (mm)	Inside Bend Rad (mm)
16	19.3	12.6	45
20	22.6	16.0	65
25	27.9	21.0	100
32	34.6	26.5	135

Conduit Support P Clips Type MYV

Description: Type MYV plated steel P clip with pvc liner

Application: P Clips to support flexible conduit Types MXB, MXH and MXP

Conduit Support P Clips Type MYT

Description: Type MYT stainless steel P clip

Application: P Clips to support flexible conduit Type MXB, MXH, MXP, MXR and MXS



Product Codes

DIGIT 1+2 Description (Flexible Conduit)	Code	DIGIT 3 Type	Code	DIGIT 4 & 5 Size mm	Code	DIGIT 6 Colour	Code	DIGIT 7 & 8 Reel Length	Code
FLEXIBLE CONDUIT	MX	TYPE MXP	P	M10	09	Black	B	10 metres	10
SUPPORT CLIP	MY	TYPE MXS	S	M12	10	Grey	G	25 metres	25
		TYPE MXH	H	M16	11	Orange	O	50 metres	50
		TYPE MXB	B	M20	12				
		TYPE MXR	R	M40	15				
		PVC/STEEL CLIP	V	M25	13				
		STAINLESS STEEL CLIP	T	M32	14				
				M50	16				
				M63	17	Clips	Blank	Clips	Blank

Other sizes / threads are available on request

PRODUCT CODING EXAMPLE	Conduit	MXP	M20	Black	10m	PART NUMBER
	MX	P	12	B	10	= MXP12B10

FLEXIBLE CONDUIT



Raxton now offer a range of flexible conduit, all of which feature a high mechanical strength and are suitable for various applications.

Conduit Type MXP

Description: Galvanised steel, helically wound, flexible conduit with smooth oil resistant and high temperature pvc cover

Application: Machine tools or outdoor installations where liquid tight is a requirement

Features : High mechanical strength and resistant to oils and greases
UV resistant (black) and good flexibility
Smooth wipe clean outer cover
Cover does not wrinkle when bent

IP Rating: IP66 + IP67 + IP68 (5 bar)

Temp range: -20°C to +105°C

Approvals: Lloyd's Register Type Approval

Product Dimensions - MXP, MXH & MXR

Nominal Size	Outside Dia. (mm)	Inside Dia. (mm)	Inside Bend Rad (mm)	Inside Bend Rad (mm) MXR only
10	11.8	7.0	35	-
12	14.2	10.0	40	-
16	17.8	12.6	45	-
20	21.1	16.0	65	65
25	26.4	21.0	100	100
32	33.1	26.5	135	120
40	41.8	35.4	175	140
50	47.9	40.4	230	180
63	59.7	51.6	280	-

Conduit Type MXH

Description: Galvanised steel, helically wound, flexible conduit with smooth thermoplastic rubber cover. ONLY AVAILABLE IN BLACK

Application: Machine tools or outdoor installations where liquid tight together with a low or high temperature rating is a requirement

Features : High mechanical strength and resistant to oils and greases
UV resistant (black) and good flexibility
Smooth wipe clean outer cover
Cover does not wrinkle when bent

IP Rating: IP66 + IP67 + IP68 (5 bar)

Temp range: -45°C to +135°C

Conduit Type MXR

Description: Galvanised steel, helically wound, flexible conduit with galvanised steel braid and oil resistant and high temperature pvc smooth cover. ONLY AVAILABLE IN BLACK

Application: Machinery or outdoor installations where high corrosion resistance and liquid tight are a requirement combined with EMC screening.

Features : High mechanical strength and resistant to oils and greases
UV resistant (black) and good flexibility
Smooth wipe clean outer cover
Cover does not wrinkle when bent

IP Rating: IP66 + IP67 + IP68 (5 bar)

Temp range: -20°C to +105°C

Product Codes

DIGIT 1+2 Description (Flexible Conduit)	Code	DIGIT 3 Type	Code	DIGIT 4 & 5 Size mm	Code	DIGIT 6 Colour	Code	DIGIT 7 & 8 Reel Length	Code
FLEXIBLE CONDUIT	MX	TYPE MXP	P	M10	09	Black	B	10 metres	10
		TYPE MXS	S	M12	10	Grey	G	25 metres	25
		TYPE MXH	H	M16	11	Orange	O	50 metres	50
		TYPE MXB	B	M20	12				
		TYPE MXR	R	M25	13				
				M32	14				
				M40	15				
				M50	16				
				M63	17				

Other sizes / threads are available on request

PRODUCT CODING EXAMPLE	Conduit	MXP	M20	Black	10m	PART NUMBER
	MX	P	12	B	10	= MXP12B10

THREAD SELECTION / DIMENSIONS

Isometric to BS 3643:1981

SIZE	MAJOR DIAMETER (mm)	THREADS PER INCH	PITCH
16mm (M16)	16	16.93	1.50
20mm (M20)	20	16.93	1.50
25mm (M25)	25	16.93	1.50
32mm (M32)	32	16.93	1.50
40mm (M40)	40	16.93	1.50
50mm (M50)	50	16.93	1.50
63mm (M63)	63	16.93	1.50
75mm (M75)	75	16.93	1.50

National Pipe Thread to ANSI / ASME: 1983

SIZE	MAJOR DIAMETER (mm)	THREADS PER INCH	PITCH
1/8" NPT	10.30	27	0.94
1/4" NPT	13.72	18	1.41
3/8" NPT	17.15	18	1.41
1/2" NPT	21.34	14	1.81
3/4" NPT	26.67	14	1.81
1" NPT	33.40	11 1/2	2.20
1 1/4" NPT	42.16	11 1/2	2.20
1 1/2" NPT	48.26	11 1/2	2.20
2" NPT	60.33	11 1/2	2.20
2 1/2" NPT	73.03	8	3.175
3" NPT	88.90	8	3.175
4" NPT	114.30	8	3.175

British Standard Pipe to BS 3643:1981

SIZE	MAJOR DIAMETER (mm)	THREADS PER INCH	PITCH
1/8" BSP	9.73	28	0.91
1/4" BSP	13.16	19	1.34
3/8" BSP	16.66	19	1.34
1/2" BSP	20.96	14	1.81
3/4" BSP	26.44	14	1.81
1" BSP	33.25	11	2.31
1 1/4" BSP	41.91	11	2.31
1 1/2" BSP	47.80	11	2.31
2" BSP	59.61	11	2.31
2 1/2" BSP	75.18	11	2.31
3" BSP	87.88	11	2.31
4" BSP	113.03	11	2.31

Certified Products

		FEMALE THREAD																	
		M16	M20	M25	M32	M40	M50	M63	M75	1/2" NPT / BSP	3/4" NPT / BSP	1" NPT / BSP	1 1/4" NPT / BSP	1 1/2" NPT / BSP	2" NPT / BSP	2 1/2" NPT / BSP	3" NPT / BSP	4" NPT	
MALE THREAD	M16																		
	M20																		
	M25																		
	M32																		
	M40																		
	M50																		
	M63																		
	M75																		
	1/2" NPT																		
	3/4" NPT																		
	1" NPT																		
	1 1/4" NPT																		
	1 1/2" NPT																		
	2" NPT																		
	2 1/2" NPT																		
	3" NPT																		
	4" NPT																		
	1/2" BSP																		
	3/4" BSP																		
	1" BSP																		
1 1/4" BSP																			
1 1/2" BSP																			
2" BSP																			
2 1/2" BSP																			
3" BSP																			

Adaptors
 Reducers
 Not Certified

PRODUCT CODING

DIGIT 1 + 2		CODE
Product	Description	
ADAPTORS	M-F HEX	AB
	M-F ROUND	AJ
	M-M	AR
	F-F HEX	AU
	F-F ROUND	AX
SWIVEL ADAPTORS	M-F INLINE	FA
	M-M INLINE	FD
	F-F INLINE	FC
	M-F RIGHT ANGLE	FP
	M-M RIGHT ANGLE	FR
	F-F RIGHT ANGLE	FQ
ADAPTING AIDS	UNION M-F	FB
	UNION F-F	FL
	UNION M-M	FE
	RIGHT ANGLE M-F	FG
	RIGHT ANGLE F-F	FN
REDUCERS	RIGHT ANGLE M-M	FK
	45° ELBOW	FM
	M-F HEX	BB
	M-F ROUND	BJ
PLUGS	RX (Externally Accessible)	CB
	TAMPERPROOF (Internally Accessible)	CF
	HEX HEAD	CK
	HEX HEAD (Hollow)	CY
	DOME HEAD	CQ
	SLOTTED	CS
INSULATING & EARTHING	DRAIN Exe	CV
	DRAIN Exde	CT
	INSULATED M-F	DB
	INSULATED M-M	DD
	INSULATED F-F	DE
	EARTH LEAD M-F	DG
	EARTH PLATE	DK
CABLE RETENTION	EARTH TAG	DM
	EARTHING LOCK NUTS	DN
	GLANDS	EB
	STOPPER BOX M-F	EG
LOCKING	STOPPER BOX F-F	EK
	FLEXIBLE CONDUIT	EF
	LOCKNUTS	GA
	LOCKRINGS	GB
INGRESS PROTECTION (IP) AIDS	SERRATED WASHERS	GC
	LOCKNUTS CASTELLATED	GD
	WASHERS	HA
ACCESSORIES	O RINGS	HB
	SHROUDS	HC
	MALE BUSH LONG	JA
	MALE BUSH STD 17	JB
	MALE BUSH ROUND	JQ
	FEMALE BUSH	JC
	NIPPLE THREADED 30mm	JD
	NIPPLE LONG THREADED	JE
	NIPPLE BARREL	JF
	COUPLER ROUND	JG
COUPLER HEX	JH	
COUPLER FLANGE	JJ	

Products shaded are not certified and do not have any associated approvals

THREAD REFERENCES

MALE DIGIT 4 + 5		FEMALE 6 + 7			
ISOMETRIC		NPT		PG	
SIZE	CODE	SIZE	CODE	SIZE	CODE
M6	01	1/2"	42	7	20
M8	02	3/4"	43	9	21
M10	03	1"	44	11	22
M12	04	1 1/4"	45	13.5	23
M16	11	1 1/2"	46	16	24
M20	12	2"	47	21	25
M22	07	2 1/2"	48	29	26
M24	08	3"	49	36	27
M25	13	3 1/2"	86	42	28
M28	09	4"	87	48	29
M32	14	5"	88		
M38	05	SPECIAL	40		
M40	15				
M50	16				
M63	17				
M75	18				
M80	80				
M90	81				
M100	82				
SPECIAL	10				

Normally Male thread is specified first (digits 4+5), Female thread second (digits 6+7), with all digits used for M-M and F-F products. BSP P; BSP T & ET thread components are still available, please consult sales department for advice.

DIGIT 3	CODE
Material	
BRASS	A
ALUMINIUM	B
STEEL	C
COPPER & NON-ASB	D
STAINLESS STEEL	E
PVC	F
NYLON BLACK	G
NYLON GREY	H
SILICONE	J
NYLON BLUE	K
LEAD	L
GLASS FILLED NYLON	M
NYLON 66	N
RED FIBRE	U
TEFLON	P
EPDM	Q
NYLON WHITE	R
SPECIAL	S

DIGIT 8	CODE
Approval	
Atex Exde	A
Atex Exd	D
Atex Exe	E
Mining Group 1	M
CSA ©Exd IIC	J
CSA (US) Class 1 Zone 1	K
AExd IIC	L
IECEX Exd I/IIC	N
IECEX Exe I/II	P
IECEX Exde I/II	R
Gost Exde IICU	T
Gost Exde I/ICU	U
Gost Exd IICU	V
Gost Exe IICU	W
INMETRO Exd	G
INMETRO Exe	H
INMETRO Exde	F
Atex/IECEX Exde	B
Atex/IECEX Exd	C
Atex/IECEX Exe	Q
Industrial	X or Blank

DIGIT 9	CODE
Special	
None (standard)	X or Blank
Customer Special	S

DIGIT 10	CODE
Plating	
None	Blank
Nickel	N
Zinc	Z
Chromatised	C
Special	S

Product Coding Notes

Male thread is always quoted first (digits 4+5) followed by the Female thread (digits 6+7)

Other threads are available, please consult the sales department

Digit 8 (No approval) is blank if digits 9 & 10 are not required, otherwise use X

Digit 9 (Not Customer specific) is blank if digit 10 is not required, otherwise use X

Digit 10 (Plating) is blank if no plating is required

	PRODUCT	MATERIAL	MALE THREAD	FEMALE THREAD	APPROVAL	SPECIAL	PLATING	PART NUMBER
PRODUCT CODING EXAMPLE	Adaptor	Brass	1/2" NPT(M)	M20(F)	Exd	None	Nickel	= ABA4212DXN
	AB	A	42	12	D	X	N	
PRODUCT CODING EXAMPLE	Hex Head Plug	ST/ST	2" BSPT(M)	(F)	Gost Exd IICU	Yes	None	= CKE5700VS
	CK	E	57	00	V	S	Blank	

HAZARDOUS AREAS

GROUPING OF ELECTRICAL APPARATUS FOR POTENTIALLY EXPLOSIVE ATMOSPHERES

GROUP I: ELECTRICAL APPARATUS FOR MINING, TYPIFIED BY THE GAS METHANE (FIREDAMP)

GROUP II: ELECTRICAL APPARATUS FOR SURFACE INDUSTRY

Group II may be further divided into three gas groups:

IIA - Representative Gas Propane

IIB - Representative Gas Ethylene

IIC - Representative Gas Hydrogen

Gas Group IIC covers the most hazardous gases and as such, apparatus marked IIC may be used in IIA and IIB applications.

CLASSIFICATIONS

	GAS	DUST	
ZONE	0	20	Zone in which an explosive atmosphere is constantly present, or present for long periods. (Rough guide: hazard present for more than 1000 hours/year).
ZONE	1	21	Zone in which an explosive atmosphere is likely to occur in normal operation. (Rough guide: hazard present between 10 & 1000 hours/year).
ZONE	2	22	Zone in which an explosive atmosphere is not likely to occur in normal operation and if it occurs it will exist only for a short time. (Rough guide: hazard present for less than 10 hours/year).
Guidance in the classification of hazardous areas is given in BS EN 60079-10-1:2009, IEC79-10.			

PROTECTION CONCEPTS

STANDARD IEC/EN		CODE		PROTECTION CONCEPT	ZONE	
GAS	DUST	GAS	DUST		GAS	DUST
60079-0	61241-0			General Requirements		
60079-1		Ex d		Flameproof	1	
	61241-1		Ex tD	Enclosure		20/21/22
60079-2	61241-2	Ex p	Ex pD	Pressurised	1	21/22
60079-5		Ex q		Powder Filled	1	
60079-6		Ex o		Oil Filled	1	
60079-7		Ex e		Increased Safety	1	
60079-11	61241-11	Ex ia	Ex iaD	Intrinsic Safety	0	20
		Ex ib	Ex ibD		1	21
60079-15		Ex nA		Non Sparking	2	
		Ex nL		Energy Limited		
		Ex nR		Restricted Breathing		
		Ex nC		Enclosed Break		
		Ex nP		Pressurisation		
60079-18	61241-18	Ex ma	Ex maD	Encapsulation	0	20
		Ex mb	Ex mbD		1	21

*In some countries the methods of protection a & q are allowed in Zone 1.

TEMPERATURE CLASS


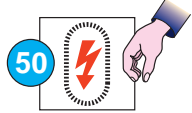
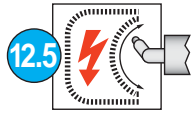
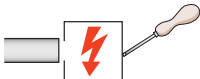
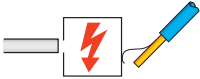
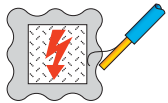
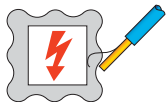
Explosion protected electrical apparatus must be designed and tested to ensure that the maximum surface temperature of any part(s) of the products are below the ignition temperature of the explosive atmosphere concerned. Group II electrical apparatus is divided into temperature classes according to the maximum permissible surface temperature of the apparatus. The preferable classification of temperatures is given in the table on the right.

Unless otherwise specified the maximum ambient temperature is taken to be 400°C.

TEMPERATURE CLASS	MAXIMUM SURFACE TEMPERATURE (DEGREES CELSIUS)
T1	450
T2	300
T3	200
T4	135
T5	100
T6	85





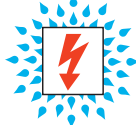
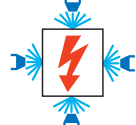
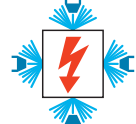
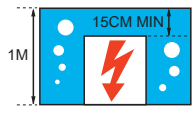

INGRESS PROTECTION INFORMATION

FIRST NUMBER - DUST

0		Non-protected
1		Protected against solid foreign objects of 50mm \varnothing and greater. The object probe, sphere of 50mm \varnothing , shall not fully penetrate†
2		Protected against solid foreign objects of 12.5mm \varnothing and greater. The object probe, sphere of 12.5mm \varnothing , shall not fully penetrate†
3		Protected against solid foreign objects of 2.5mm \varnothing and greater. The object probe, sphere of 2.5mm \varnothing , shall not fully penetrate† at all
4		Protected against solid foreign objects of 1.0mm \varnothing and greater. The object probe, sphere of 1.0mm \varnothing , shall not fully penetrate† at all
5		Dust Protected. Ingress of dust is not totally prevented, but dust shall not penetrate in a quantity to interfere with satisfactory operation of apparatus or to impair safety.
6		Dust-tight. No ingress of dust.

† The full diameter of the object probe shall not pass through an opening of the enclosure.

SECOND NUMBER - WATER

0		Non-protected
1		Protected against vertically falling water drops. Vertically falling drops shall have no harmful effects.
2		Protected against vertically falling water drops when enclosure tilted up to 15° Vertically falling drops shall have no harmful effects when the enclosure is tilted at any angle up to 15° on either side of the vertical.
3		Protected against spraying water. Water sprayed at an angle up to 60° on either side of the vertical shall have no harmful effects.
4		Protected against splashing water. Water splashed against the enclosure from any direction shall have no harmful effects.
5		Protected against water jets. Water projected in jets against the enclosure from any direction shall have no harmful effects.
6		Protected against powered water jets. Water projected in jets against the enclosure from any direction shall have no harmful effects.
7		Protected against the effect of temporary immersion in water. Ingress of water in quantities causing harmful effects shall not be possible when enclosure is temporarily immersed in water under standardised conditions of pressure and time.
8		Protected against the effect of continuous immersion in water. Ingress of water in quantities causing harmful effects shall not be possible when enclosure is continuously immersed in water under conditions which shall be agreed between manufacturer and user but which are more severe than for numeral 7.





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