Cable Glands Global Solutions Catalogue

The safety you rely on.

Introducing Crouse-Hinds by Eaton

The leader in electrical products for hazardous, industrial and commercial applications world wide.

Crouse-Hinds by EATON

Please note:
This file only contains the Raxton section of the Global Solutions Catalogue



Shell – Kittiwake photographic services / Shell International

Statoil – Norne FPSO – Kenneth Engelsvold/Statoil

The safety you rely on.

Delivering world-class reliability and safety in high consequence harsh and hazardous environments

Only Eaton's Crouse-Hinds Business can deliver...

- Protection and safety of people and assets around the world with unsurpassed reliability and quality in every product we offer
- Industry leading innovation and product efficiency
- Product solutions designed and certified for global specifications
- Best-in-class, global sales, and customer service teams that provide local support

The Eaton advantage.






Crouse-Hinds remains the brand that stands for safety in the harshest of environments when power management is most critical. While it all began with the Condulet®, the Crouse-Hinds brand has grown into the premier name for a comprehensive portfolio of solutions for high-consequence harsh and hazardous environments.

And now, the next phase in the evolution of the brand you trust: Crouse-Hinds joins the leading Eaton portfolio of reliable, client and safe electrical power management solutions.

More protection. More technology. Expect more.

Crouse-Hinds
by EATON

Contents

Please note:
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Global Cable Glands Solution

Eaton's Crouse-Hinds Business provides a termination solution for virtually every cable type used in hazardous and industrial environments – both onshore and offshore and above and below ground. Our cable glands and accessory products are designed for strict adherence to global specifications for IEC and NEC wiring standards, meeting International and North American certification requirements including ATEX, IECEx, UL and regional certifications. Our products are also certified for dust and mining applications.

From the deserts of Africa to the icy waters of the North Sea, the world turns to Eaton's Crouse-Hinds Business for its complete range of cable installation products. Our cable glands, thread conversion products and cable installation accessories are used in industrial and commercial applications throughout the world enhancing safety and productivity in the most severe environmental conditions.

Eaton's Crouse-Hinds Business cable glands are the easiest and safest solution for your installation and maintenance needs. In any electrical or instrumentation installation, our glands are the reliable and safe way to move power and signals.

Global Support & Manufacturing

Our sales support and manufacturing facilities are strategically positioned around the world to deliver products close to your project. Whenever required we are there on-site during construction, commissioning and training.

Eaton's Crouse-Hinds Business manufactures in 5 continents and sells into more than 100 countries. We have dedicated sales support in every major location with local technical sales and engineering teams to support your immediate needs. As one of the largest oil & gas bulk electrical and instrument material suppliers, we can easily provide you a single source for all the components to complete your project on time and on budget.

Crouse-Hinds
by EATON

A Powerful Transformation

Rely on the names you trust for the safety you need

The Capri, CEAG and Raxton products you know are evolving. Our products, part of Eaton's Crouse-Hinds portfolio, are now united with Eaton's leading range of reliable, efficient and safe electrical power management solutions. Combined, we provide the world's largest portfolio of electrical equipment for explosive, classified, and industrial areas.

With unsurpassed product reliability and quality, industry-leading innovation and product efficiency, and products designed and certified for global specifications, Eaton's Crouse-Hinds solutions, including Capri, CEAG and Raxton products, delivers proven solutions for harsh and hazardous environments.

Capri, CEAG and Raxton have a new look as Crouse-Hinds by Eaton, but the products and technology you trust remain unchanged. From explosion-proof panel boards and lighting to connectivity and cable glands, the broadest offering of solutions for harsh and hazardous environments is now available from Crouse-Hinds by Eaton.

More protection. More technology.
Expect more.

Raxton Adaptors

Technical Specification

Certifications and Compliances

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: ExdeI/IICU, ExdeIICU, ExeIIU
INMETRO: Ex de I/IIC Mb/Gb, Ex tb IIIC Db IP66/67
NEPSI: Ex d II C Gb, Ex e II C Gb, DIP A21 Ta IP6X

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: ExeIIU
INMETRO: Ex e IIC Gb, Ex tb IIIC Db IP66/67

Compliance Standards

ATEX / GOST: EN 60079-0:2009, EN 60079-1: 2007, EN 60079-7: 2007, EN 60079-31:2008
INMETRO: ABNT NBR IEC 60079-0:2008, ABNT NBR IEC 60079-1:2009, ABNT NBR IEC 60079-7:2008, ABNT NBR IEC 60079-31:2011
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)
NEPSI: GB 3836.1-2010, GB 3836.2-2010, GB 3836.3-2010, GB 12476.1-2000

Nylon Adaptors only:

ATEX / GOST: EN 60079-0:2009, EN 60079-7: 2007, EN 60079-31:2009
INMETRO: ABNT NBR IEC 60079-0:2008, ABNT NBR IEC 60079-1:2009, ABNT NBR IEC 60079-7:2008, ABNT NBR IEC 60079-31:2011
IECEx: IEC 60079-0:2007, IEC 60079-7:2006, IEC 60079-31:2008

Certificate Details

ATEX: Sira 10ATEX1225X, Sira 10ATEX3335U
IECEx: IECEx SIR 07.0010X, IECEx SIR 12.0014X
CSA: CSA 200455-1003277 (Brass and Stainless only)
GOST: TC RUC-G B.ГБ06.B.00105
INMETRO: NCC 12.0764X
NEPSI: GYJ13.1313X

TEMPERATURE

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

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

Ingress Protection (IP):

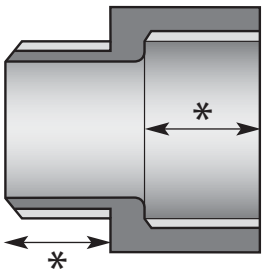
Independently tested to IP66 / IP68 when fitted in accordance to manufacturer's instructions.

Type AB Hex Type AJ Round

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

Adaptors are available for up to two step sizing. e.g. M20 Male x M32 Female



* 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 (Adaptors)	Code	Material	Code	Thread Reference				Approval		Special		Plating	
M-F HEX	AB	BRASS	A	M16	11	½" NPT	42	ATEX/IECEx/ INMETRO Ex de	Y	None (standard)	X or blank	None	Blank
M-F ROUND	AJ	ALUMINIUM	B	M20	12	¾" NPT	43			Customer Special	S	Nickel	N
		MILD STEEL	C	M25	13	1" NPT	44	For other approvals please see product coding list on page 64				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	Adaptors	Brass	1" NPT(M)	M32(F)	Ex de	PART NUMBER
	AB	A	44	14	Y	= ABA4414Y

Technical Specification

Certifications and Compliances

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, ExdeIICU, ExeIIU
INMETRO: Ex de I/IIC Mb/Gb, Ex tb IIIC Db IP66/67
NEPSI: Ex d II C Gb, Ex e II C Gb, DIP A21 Ta IP6X

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: Ex e IIC Gb, Ex tb IIIC Db IP66/67

Compliance Standards

ATEX / GOST: EN 60079-0:2009, EN 60079-1: 2007, EN60079-7: 2007, EN 60079-31:2008
INMETRO: ABNT NBR IEC 60079-0:2008, ABNT NBR IEC 60079-1:2009, ABNT NBR IEC 60079-7:2008, ABNT NBR IEC 60079-31:2011
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, IEC60079-0:1998, IEC 60079-1:1998
NEPSI: GB 3836.1-2010, GB 3836.2-2010, GB 3836.3-2010, GB 12476.1-2000

Nylon Reducers only:

ATEX / GOST: EN 60079-0:2009, EN 60079-7: 2007, EN60079-31:2009
INMETRO: ABNT NBR IEC 60079-0:2008, ABNT NBR IEC 60079-1:2009, ABNT NBR IEC 60079-7:2008, ABNT NBR IEC 60079-31:2011
IECEx: IEC 60079-0:2007, IEC 60079-7:2006, IEC 60079-31:2008

Certificate Details

ATEX: Sira 10ATEX1225X, Sira 10ATEX3335U
IECEx: IECEx SIR 07.0010X, IECEx SIR 12.0014X
CSA: CSA 200455-1003277 (Brass and Stainless only)
GOST: TC RUC-G B.ГБ06.B.00105
INMETRO: NCC 12.0764X
NEPSI: GYJ13.1314X

TEMPERATURE

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

Ingress Protection (IP):

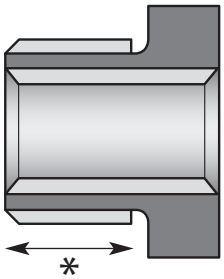
Independently tested to IP66 / IP68 when fitted in accordance to manufacturer's instructions.

Type BB Hex

Type BJ Round

Product Dimensions

Thread	Metallic Male Thread Max Bore	Nylon Male Thread Max Bore		
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

Product Codes

DIGIT 1+2		DIGIT 3		DIGIT 4 & 5 Male		DIGIT 6 & 7 Female		DIGIT 8		DIGIT 9		DIGIT 10	
Description (Adaptors)	Code	Material	Code	Thread Reference				Approval		Special		Plating	
M-F HEX	BB	BRASS	A	M16	11	½" NPT	42	ATEX/IECEx/ INMETRO Ex de	Y	None (standard)	X or blank	None	Blank
M-F ROUND	BJ	ALUMINIUM	B	M20	12	¾" NPT	43			Customer Special	S	Nickel	N
		MILD STEEL	C	M25	13	1" NPT	44	For other approvals please see product coding list on page 64				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	M32	M25	Ex de	PART NUMBER
	BB	E	14	13	Y	= BBE1413Y

Raxton Insulated Adaptors

Technical Specification

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.

Certifications and Compliances

Code of Protection Categories

ATEX: Ex d IIC
GOST: Ex d IICU

Compliance Standards

ATEX / GOST: EN 50014:1997, EN50018:2000, EN 50019: 2000, EN 5081-1-1:1998

Certificate Details

ATEX: Sira 00ATEX1073U
GOST: ТС RUC-G B.ГБ06.B.00105

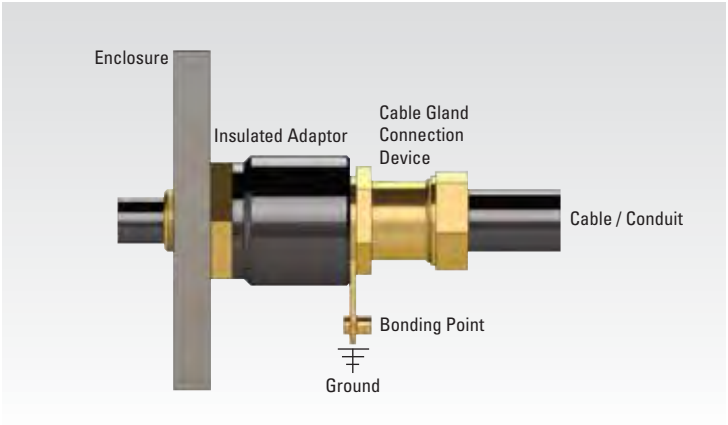
TEMPERATURE

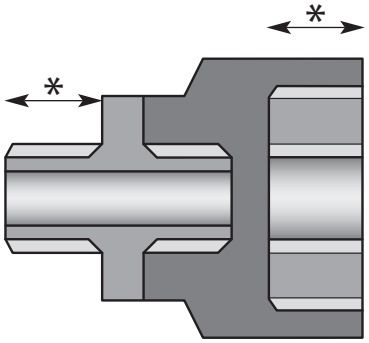
The item is classified as a component and is therefore not given a temperature rating.
Nylon temperature range -20°C to 130°C.
GF Nylon is UL rated @ H.B. @ 1.5mm

Type DB

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 (Adaptors)	**Code**	**Material**	**Code**	**Thread Reference**				**Approval**		**Special**		**Plating**	
INSULATED M-F	DB	BRASS	A	M16	11	½" NPT	42	ATEX/Ex d	D	None (standard)	X or blank	None	Blank
INSULATED M-M	DD	ALUMINIUM	B	M20	12	¾" NPT	43		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 64				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	Industrial	X or Blank				

Other sizes / threads are available on request

PRODUCT CODING EXAMPLE	Ins. Adaptors	Brass	M32(M)	M32(F)	Ex d	PART NUMBER
	DB	**A**	**14**	**14**	**D**	**= DBA1414D**

Raxton Male to Male / Female to Female Adaptors

Technical Specification

Certifications and Compliances

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: Ex d IIC Gb, Ex tb IIIC IP66/67

Compliance Standards

ATEX / GOST: EN 60079-0:2009, EN 60079-1:2007, EN 60079-7: 2007, EN 60079-31:2008
INMETRO: ABNT NBR IEC 60079-0:2008, ABNT NBR IEC 60079-1:2009, ABNT NBR IEC 60079-7:2008, ABNT NBR IEC 60079-31:2011
IECEx: IEC 60079-0:2007-10, IEC 60079-1:2007-04, IEC 60079-7:2006-07, IEC 61241-1:2004

Certificate Details

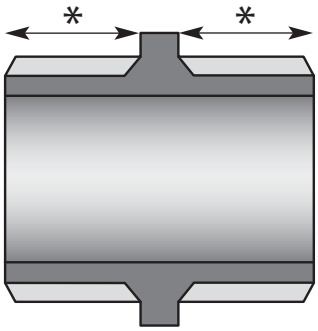
ATEX: Sira 10ATEX1225X
IECEx: IECEx SIR 12.0014X
GOST: TC RUC-G B.ГБ06.B.00105
INMETRO: NCC 12.0764X

TEMPERATURE

The item is classified as a component and therefore metallic products are not given an operating temperature range.

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.

Product Codes

DIGIT 1+2		DIGIT 3		DIGIT 4 & 5 Male		DIGIT 6 & 7 Female		DIGIT 8		DIGIT 9		DIGIT 10	
Description (Adaptors)	Code	Material	Code	Thread Reference				Approval		Special		Plating	
M-M	AR	BRASS	A	M16	11	½" NPT	42	ATEX/IECEx/ INMETRO Ex de	Y	None (standard)	X or blank	None	Blank
F-F HEX	AU	ALUMINIUM	B	M20	12	¾" NPT	43			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 64				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	Industrial	X or Blank				

PRODUCT CODING EXAMPLE	M-M Adp	Brass	M20(M)	M20(F)	Ex de	PART NUMBER
	AR	A	12	12	Y	= ARA1212Y

Raxton Right Angle Adaptors

Technical Specification

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.

Certifications and Compliances

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: Ex d IIC Gb, Ex tb IIIC IP66/67

Compliance Standards

ATEX / GOST: EN 60079-0:2009, EN60079-1:2007, EN 60079-7:2007, EN 60079-31:2008
INMETRO: ABNT NBR IEC 60079-0:2008, ABNT NBR IEC 60079-1:2009, ABNT NBR IEC 60079-7:2008, ABNT NBR IEC 60079-31:2011
IECEx: IEC 60079-0:2007-10, IEC 60079-1:2007-04, IEC 60079-7:2006-07, IEC 61241-1:2004

Certificate Details

ATEX: Sira 10ATEX1228U
IECEx: IECEx SIR 09.0086U
GOST: TC RUC-G B.ГБ06.B.00105
INMETRO: NCC 12.0764X

TEMPERATURE

The item is classified as a component and therefore metallic products are not given an operating temperature range.

*M20 and M25 may be supplied as Option A or B

Ingress Protection (IP):

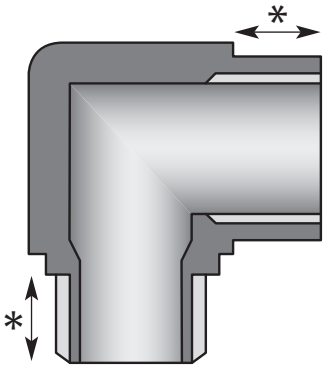
Independently tested to IP66 / IP68 when fitted in accordance to manufacturer's instructions.

Type FG (M-F) Option A

Type FG (M-F) Option B

Product Dimensions

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



* Minimum 8 full threads parallel 5 full threads taper.

Product Codes

DIGIT 1+2	Code	DIGIT 3	Code	DIGIT 4 & 5 Male		DIGIT 6 & 7 Female		DIGIT 8		DIGIT 9		DIGIT 10	
Description (Adaptors)		Material		Thread Reference				Approval		Special		Plating	
RIGHT ANGLE M-F	FG	BRASS	A	M16	11	½" NPT	42	ATEX/IECEx/ INMETRO Ex de	Y	None (standard)	X or blank	None	Blank
RIGHT ANGLE F-F	FN	ALUMINIUM	B	M20	12	¾" NPT	43			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 64		Round Design	C	Zinc	Z
		STAINLESS STEEL	E	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	Industrial	X or Blank				

Other sizes / threads are available on request

PRODUCT CODING EXAMPLE	R.A. M-F	Brass	M20(M)	M20(F)	Ex de	PART NUMBER
	FG	A	12	12	Y	= FGA1212Y

Raxton Swivel Adaptors

Technical Specification

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 the cable. The Inline type (Types FA, FC, FD) allows independent connection at both ends.

Certifications and Compliances

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

INMETRO: Ex d IIC Gb, Ex e IIC Gb, Ex d I Mb, Ex e Mb, Ex tb IIIC Db IP6X

Compliance Standards

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

INMETRO: ABNT NBR IEC 60079-0:2008, ABNT NBR IEC 60079-1:2009, ABNT NBR IEC 60079-7:2008, ABNT NBR IEC 60079-31:2011

IECEx: IEC 60079-0:2007, IEC 60079-1:2007, IEC 60079-7:2006, IEC 60079-31:2008

Certificate Details

ATEX: Sira 10ATEX1056U

IECEx: IECEx SIR 10.0025U

INMETRO: NCC 12.0764X

TEMPERATURE

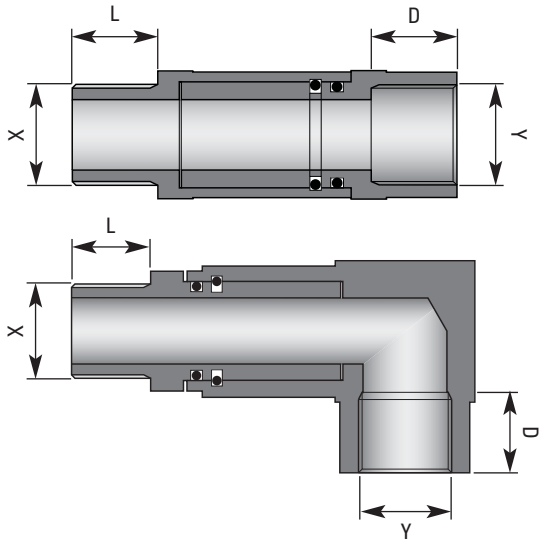
Temperature range: -50°C to +180°C

Ingress Protection (IP):

Independently tested to IP66 / IP68 when fitted in accordance to manufacturer's instructions.

Product Dimensions

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



Product Codes

DIGIT 1+2		DIGIT 3		DIGIT 4 & 5 Male		DIGIT 6 & 7 Female		DIGIT 8		DIGIT 9		DIGIT 10	
Description (Swivel Adaptors)	**Code**	**Material**	**Code**	**Thread Reference**				**Approval**		**Special**		**Plating**	
SWIVEL INLINE M-F	FA	BRASS	A	M16	11	½" NPT	42	ATEX/IECEx/ INMETRO Ex de	Y	None (standard)	X or blank	None	Blank
SWIVEL INLINE F-F	FC	ALUMINIUM	B	M20	12	¾" NPT	43			Customer Special	S	Nickel	N
SWIVEL INLINE M-M	FD	MILD STEEL	C	M25	13	1" NPT	44					Zinc	Z
SWIVEL 90° M-F	FP	STAINLESS STEEL	E	M32	14	1¼" NPT	45	For other approvals please see product coding list on page 64				Chromatised	C
SWIVEL 90° F-F	FQ			M40	15	1½" NPT	46					Special	S
SWIVEL 90° M-M	FR			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	Swivel	Brass	1" NPT(M)	M32(F)	Ex de	PART NUMBER
	FA	**A**	**44**	**14**	**Y**	**= FAA4414Y**

Raxton 'Y' and 'T' Adaptors

Technical Specification

IECEx

'Y' (Type YA) and 'T' (Type TA) Adaptors provide an opportunity for two entries where pre-machine entries are limited, and to also change threadform or to different sizes.

Certifications and Compliances

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

Compliance Standards

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

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

Certificate Details

ATEX: Sira 10ATEX1056U

IECEx: IECEx SIR 10.0025U

TEMPERATURE

The item is classified as a component and therefore metallic products are not given an operating temperature range.

Product Dimensions - 'Y' Adaptor

Thread	Overall Length (mm)	Angle Between Entries		
M20	70.00	120° each		
M25	80.00	120° each		
M32	85.00	120° each		

Product Dimensions - 'T' Adaptor

Thread	Female Size Range	Height (Single Entry to base - mm)	Length (Entry to Entry - mm)
M16	**M12 - M20**	45.00	55.00
M20	**M12 - M25**	51.00	60.00
M25	**M12 - M32**	57.00	65.00
M32	**M12 - M40**	66.00	72.00
M40	**M12 - M50**	75.00	80.00
M50	**M12 - M63**	86.00	90.00
M63	**M12 - M75**	101.50	105.00
M75	**M12 - M90**	119.00	120.00

Product Codes

DIGIT 1+2		DIGIT 3		DIGIT 4 & 5 Male		DIGIT 6 & 7 Female		DIGIT 8		DIGIT 9		DIGIT 10	
Description (Adaptors)	Code	Material	Code	Thread Reference				Approval		Special		Plating	
'Y' ADAPTORS M-F/F	YA	BRASS	A	M12	04	M12	04	ATEX Exde	A	None (standard)	X or blank	None	Blank
'T' ADAPTORS M-F/F	TA	MILD STEEL	C	M16	11	M16	11	IECEx Exde	R	Customer Special	S	Nickel	N
		STAINLESS STEEL	E	M20	12	M20	12	For other approvals please see product coding list on page 64				Zinc	Z
				M25	13	M25	13					Chromatised	C
				M32	14	M32	14					Special	S
				M40	15	M40	15						
				M50	16	M50	16						
				M63	17	M63	17						
				M75	18	M75	18						
				M90	81	M90	81	Industrial	X or Blank				

Other sizes / threads are available on request

PRODUCT CODING EXAMPLE	'Y' M-F	Brass	M20(M)	M25(F)	Ex de	PART NUMBER
	YA	A	12	13	A	= YAA1213

Raxton Earth Lead Adaptors & Threaded Earth Plates

Technical Specification

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

Threaded earth plates (Type DK) 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.

Certifications and Compliances - 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: ExeIIU
INMETRO: Ex e IIC Gb, Ex tb IIIC IP66/67

Compliance Standards

ATEX / GOST: EN 60079-0:2009, EN 60079-7:2007, EN 60079-31:2008
INMETRO: ABNT NBR IEC 60079-0:2008, ABNT NBR IEC 60079-1:2009, ABNT NBR IEC 60079-7:2008, ABNT NBR IEC 60079-31:2011
IECEx: IEC 60079-0:2007-10, IEC 60079-1:2007-04, IEC 60079-7:2006-07, IEC 61241-1:2004

Certificate Details

ATEX: Sira 10ATEX1225X
IECEx: IECEx SIR 12.0014X
GOST: TC RUC-G B.ГБ06.B.00105
INMETRO: NCC 12.0764X

TEMPERATURE

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

Certifications and Compliances - Threaded Earth Plates

Code of Protection Categories

ATEX: II 2GD, Ex e II

Compliance Standards

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

Certificate Details

ATEX: Sira 00ATEX1073U

TEMPERATURE

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

Product Dimensions - Earth Lead Adaptors

Earth Lead Adaptor	Length (mm)	Earth Lead x 300mm (mm2)		
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		

Product Dimensions - Threaded Earth Plates

Thread Earth Plate	Length (mm)	Earth Lead x 300mm (mm2)		
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		

Product Codes

DIGIT 1+2		DIGIT 3		DIGIT 4 & 5 Male		DIGIT 6 & 7 Female		DIGIT 8		DIGIT 9		DIGIT 10	
Description (Earth Accessories)	Code	Material	Code	Thread Reference				Approval		Special		Plating	
ADAPTOR M-F	DG	BRASS	A	M16	11	½" NPT	42	ATEX Exe	E	None (standard)	X or blank	None	Blank
PLATE	DK	ALUMINIUM	B	M20	12	¾" 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 64				Zinc	Z
		STAINLESS STEEL	E	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	Industrial	X or Blank				

Other sizes / threads are available on request

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

Raxton Stopping Plugs

Technical Specification

Certifications and Compliances

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: ExdeI/IICU, ExdeIICU, ExeIIU

INMETRO: Ex de I/IIC Mb/Gb, Ex tb IIIC IP66/67 (Brass and Stainless)

(not CY) Ex de IIC Gb, Ex tb IIIC IP66/67 (Aluminium)
Ex e IIC Gb, Ex tb IIIC IP66/67 (Nylon)

NEPSI: Ex d II C Gb, Ex e II C Gb, DIP A21 Ta IP6X

Compliance Standards

ATEX / 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

INMETRO: ABNT NBR IEC 60079-0:2008, ABNT NBR IEC 60079-1:2009, ABNT NBR IEC 60079-7:2008, ABNT NBR IEC 60079-31:2011

NEPSI: GB 3836.1-2010, GB 3836.2-2010, GB 3836.3-2010, GB 12476.1-2000

Certificate Details

ATEX: Sira 10ATEX1224X

IECEx: IECEx SIR 07.0009X

CSA: CSA 200455-1003277

GOST: TC RUC-G B.ГБ06.B.00105

INMETRO: NCC 12.0764X

NEPSI: GYJ13.1311X

TEMPERATURE

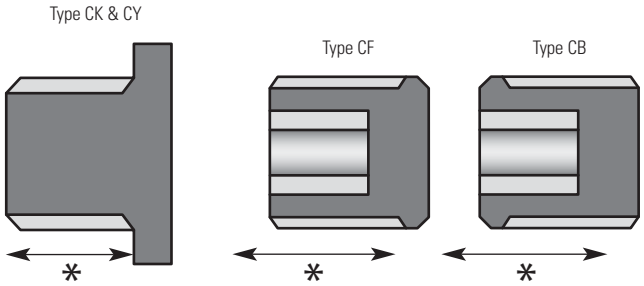
The item is classified as a component and therefore metallic products are not given an operating temperature range.

Ingress Protection (IP):

Tested to IP68

Product Dimensions

Thread	RX & Tamper-proof 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	19.0	47.0		
M50	19.0	56.0		
M63	19.0	70.0		
M75	19.0	80.0		



* Minimum 6 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 (Stopper Plugs)	**Code**	**Material**	**Code**	**Thread Reference**				**Approval**		**Special**		**Plating**	
RX (External Access)	CB	BRASS	A	M16	11	½" NPT	42	ATEX/IECEx/ INMETRO Ex de	Y	None (standard)	X or blank	None	Blank
TAMPERPROOF	CF	ALUMINIUM	B	M20	12	¾" NPT	43			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 64				Zinc	Z
HOLLOW HEX HEAD	CY	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	Hex Head	Brass	M25(M)	-	Ex de	PART NUMBER
	CB	**A**	**13**	**00**	**Y**	**= BBE1413Y**

Raxton Stopping Plugs

Technical Specification

Certifications and Compliances

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: ExdeI/IICU, ExdeIICU, ExeIIU

INMETRO: Ex de I/IIC Mb/Gb, Ex tb IIIC IP66/67 (Brass and Stainless)

(not CY) Ex de IIC Gb, Ex tb IIIC IP66/67 (Aluminium)

NEPSI: Ex d II C Gb, Ex e II C Gb, DIP A21 Ta IP6X

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: Ex e IIC Gb, Ex tb IIIC IP66/67 (Nylon)

Compliance Standards

Type CQ metallic only:

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

INMETRO: ABNT NBR IEC 60079-0:2008, ABNT NBR IEC 60079-1:2009, ABNT NBR IEC 60079-7:2008, ABNT NBR IEC 60079-31:2011

NEPSI: GB 3836.1-2010, GB 3836.2-2010, GB 3836.3-2010, GB 12476.1-2000

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

INMETRO: ABNT NBR IEC 60079-0:2008, ABNT NBR IEC 60079-1:2009, ABNT NBR IEC 60079-7:2008, ABNT NBR IEC 60079-31:2011

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: Sira 10ATEX1224X

IECEx: IECEx SIR 07.0009X

CSA: CSA 200455-1003277

NEPSI: GYJ13.1311X

Type CQ metallic/Nylon:

GOST: TC RUC-G B.ГБ06.B.00105

INMETRO: NCC 12.0764X

Type CQ Nylon only:

ATEX: Sira 10ATEX1225X

IECEx: IECEx SIR 12.0014X

Type CS only:

IECEx: IECEx LCI 08.0035X

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	19.0	46.0	44.0	
M50	19.0	56.0	54.0	
M63	19.0	69.0	67.0	
M75	19.0	81.0	N/A	

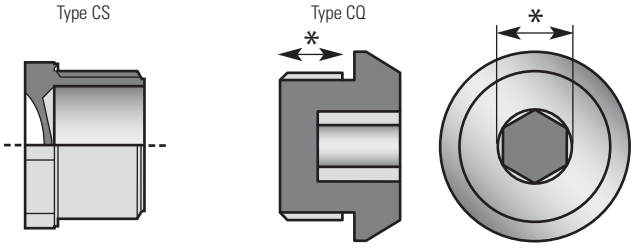
TEMPERATURE

The item is classified as a component and therefore metallic products are not given an operating temperature range.

Nylon temperature range -20°C to 65°C, 'O' ring -30°C to 125°C.

Ingress Protection (IP):

Tested to IP68



* Minimum 6 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 (Stopper Plugs)	Code	Material	Code	Thread Reference				Approval		Special		Plating	
DOME HEAD	CQ	BRASS	A	M16	11	½" NPT	42	ATEX/IECEx/ INMETRO Ex de	Y	None (standard)	X or blank	None	Blank
SLOTTED HEAD	CS	ALUMINIUM	B	M20	12	¾" NPT	43			Customer Special	S	Nickel	N
		MILD STEEL	C	M25	13	1" NPT	44	For other approvals please see product coding list on page 64				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	Brass	M25(M)	-	Ex de	PART NUMBER
	CQ	A	13	00	Y	= CQA1300Y

Raxton Breather Drains

Technical Specification

The Exde (Type CT) and the Exe (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.

Certifications and Compliances

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: ExdeIICU, ExeIIU. Nylon: - ExeIIU 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: (CV) Sira 10ATEX3279U
(CT) ITS 13ATEX17782X

IECEx: (CV) IECEx SIR 09.0096U
(CT) IECEx ITS 13.0018X

GOST: POCC GB. 06.B01060

INMETRO: (CV) NCC 12.0926X
(CT) NCC 12.0927X

TEMPERATURE

The Exde Type CT Breather/Drain plug: -50°C to 230°C.
The Exe Breather/Drain plug is classified as a component and therefore metallic products are not given an operating temperature.
Nylon temperature range -20°C to 65°C, 'O' ring -30°C to 125°C.

Ingress Protection (IP):

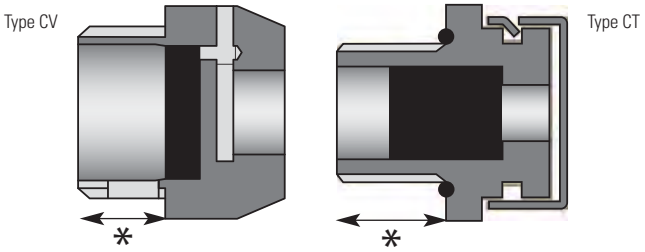
Tested to IP66

Product Dimensions - Ex e (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	
½" NPT	25.4	10	14	
¾" NPT	30.5	10	14	
1" NPT	38.0	10	14	

Product Dimensions - Ex de (Type CT)

Thread	Hex AF (mm)	Thread Length (mm)	OAL (mm)	
M20	27.0	16.0	31	
M25	31.8	16.0	31	
½" NPT	27.0	20.0	35	
¾" NPT	27.9	20.0	35	



* Minimum 6 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 (Breather Drains)	**Code**	**Material**	**Code**	**Thread Reference**				**Approval**		**Special**		**Plating**	
B.DRAIN Ex de	CT	BRASS	A	M16	11	½" NPT	42	ATEX Exde	A	None (standard)	X or blank	None	Blank
B.DRAIN Ex e	CV	STAINLESS STEEL	E	M20	12	¾" 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 64				Zinc	Z
				M32	14							Chromatised	C
												Special	S
								Industrial	X or Blank				

Other sizes / threads are available on request

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

Raxton Barrier Stopper Boxes for Cable Glands and Rigid Conduit

Technical Specification

The 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.

Type EG

Certifications and Compliances

Code of Protection Categories

ATEX: II 2 GD, Ex de IIC
GOST: ExdIICU
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

Certificate Details

ATEX: ITS 12ATEX17707X
IECEx: IECEx ITS 12.0079X
GOST: POCC GB. 06.B01060

TEMPERATURE

The item is classified as a component and therefore metallic products are not given an operating temperature range.

Ingress Protection (IP):

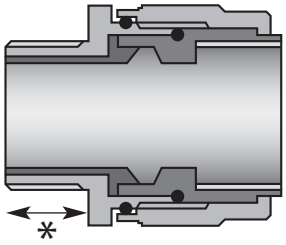
Independently tested to IP66 / IP68 when fitted in accordance to manufacturer's instructions.

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 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	



Type EG

✲ Minimum 6 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 (Stopper Boxes)	**Code**	**Material**	**Code**	**Thread Reference**				**Approval**		**Special**		**Plating**	
STOPPER BOX M-F	EG	BRASS	A	M16	11	½" NPT	42	ATEX Ex de	A	None (standard)	X or blank	None	Blank
STOPPER BOX F-F	EK	ALUMINIUM	B	M20	12	¾" NPT	43			Customer Special	S	Nickel	N
		MILD STEEL	C	M25	13	1" NPT	44	For other approvals please see product coding list on page 64				Zinc	Z
		STAINLESS STEEL	E	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	Industrial	X or Blank				

Other sizes / threads are available on request

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

Raxton Unions

Technical Specification

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 threadforms 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).

Certifications and Compliances

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

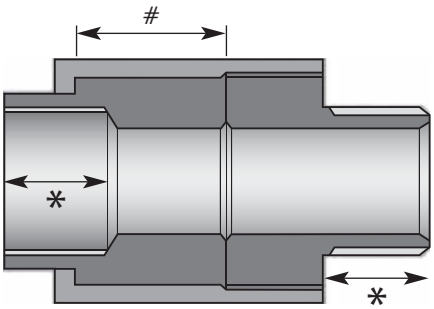
ATEX: Sira 10ATEX1227U
IECEx: IECEx SIR 09.0085U
GOST: POCC GB. 06.B01060
INMETRO: NCC 12.0764X

TEMPERATURE

The item is classified as a component and therefore metallic products are not given an operating temperature range.

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.

#Flamepath in accordance with appropriate standards.

Product Codes

DIGIT 1+2		DIGIT 3		DIGIT 4 & 5 Male		DIGIT 6 & 7 Female		DIGIT 8		DIGIT 9		DIGIT 10	
Description (Unions)	**Code**	**Material**	**Code**	**Thread Reference**				**Approval**		**Special**		**Plating**	
UNION M-F	FB	BRASS	A	M16	11	½" NPT	42	ATEX Ex de	A	None (standard)	X or blank	None	Blank
UNION F-F	FL	ALUMINIUM	B	M20	12	¾" NPT	43	IECEx Ex de	R	Customer Special	S	Nickel	N
		MILD STEEL	C	M25	13	1" NPT	44	For other approvals please see product coding list on page 64				Zinc	Z
		STAINLESS STEEL	E	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	Industrial	X or Blank				

Other sizes / threads are available on request

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

Raxton Nipples / Couplers / Bushes

Technical Specification

Screwed Nippling
Supplied 50mm long as standard, alternative lengths can be supplied as required.
Available in a variety of thread forms. 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 Materials include Brass, Mild Steel, Stainless Steel, Aluminium and may be plated to requirements.

TEMPERATURE
The item is classified as a component and therefore metallic products are not given an operating temperature range.

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	For other approvals please see product coding list on page 64		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					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

Raxton Locknuts, Washers & Serrated Washers

Technical Specification

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 therefore metallic products are not given an operating temperature range.

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	24.0	1" NPT	0044	40.0
M25	0013	30.0	1¼" NPT	0045	50.0
M32	0014	36.0	1½" NPT	0046	55.9
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	120.0
M90	0019	110.0	4" NPT	0051	135.0

Types GA

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.

Types HA

TEMPERATURE

The item is classified as a component and therefore metallic products are not given an operating temperature range.

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.

Types GC

TEMPERATURE

The item is classified as a component and therefore metallic products are not given an operating temperature range.

Product Codes

DIGIT 1+2		DIGIT 3		DIGIT 4 & 5 Male		DIGIT 6 & 7 Female		DIGIT 8		DIGIT 9		DIGIT 10	
Description (Earth Accessories)	Code	Material	Code	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	For other approvals please see product coding list on page 64		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

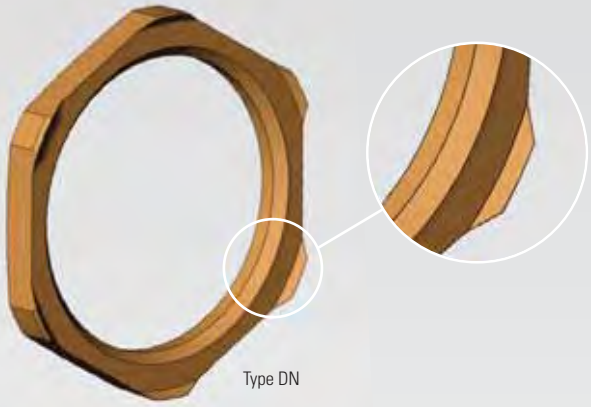
PRODUCT CODING EXAMPLE	Washer	Fibre	(M)	M40(F)	-	PART NUMBER
	HA	U	00	15	-	= HAU0015

Raxton Earthing Locknuts & Earth Tags

Technical Specification

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.

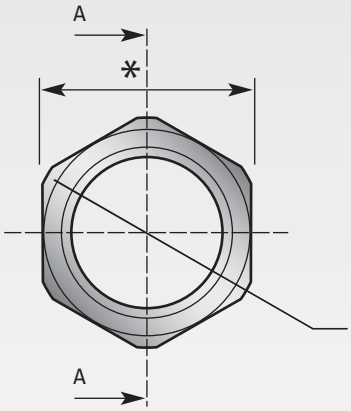


Type DN

TEMPERATURE

The item is classified as a component and therefore metallic products are not given an operating temperature range.

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	92.0	3½" NPT	0050	115.0
M90	0019	108.0	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.

Type DM

TEMPERATURE

The item is classified as a component and therefore metallic products are not given an operating temperature range.

Product Codes

DIGIT 1+2		DIGIT 3		DIGIT 4 & 5 Male		DIGIT 6 & 7 Female		DIGIT 8		DIGIT 9		DIGIT 10	
Description (Earth Accessories)	**Code**	**Material**	**Code**	**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	For other approvals please see product coding list on page 64		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**

Raxton Shrouds

Technical Specification

Shrouds

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.

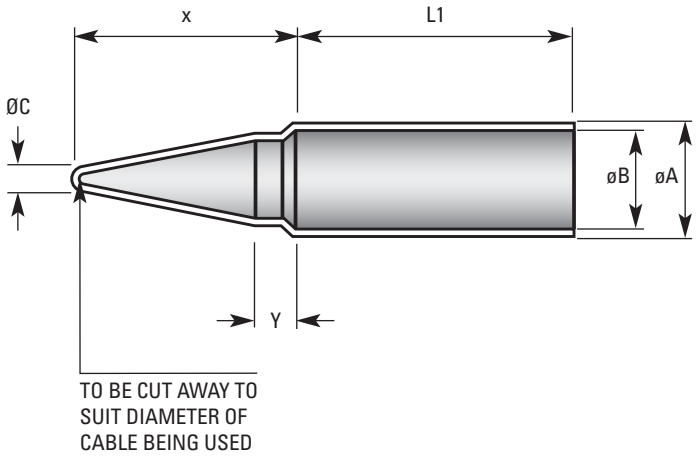
Supplied as standard in black PVC they are suitable for all leading makes of glands.

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 M16	ØA 11.0	ØB 8.0	ØC 20.8	X 24.0	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
8B	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	PCP BLACK
5	HCY 5	HCY FR 5	HCB 5	HCG 5	HCR 5	HCB LSF 5	HCW LSF 5	HCR LSF 5	HCL LSF 5	HCY 5X NEO
5A	HCY 5A	HCY FR 5A	HCB 5A	HCG 5A	HCR 5A	HCB LSF 5A	HCW LSF 5A	HCR LSF 5A	HCL LSF 5A	HCY 5A NEO
6	HCY 6	HCY FR 6	HCB 6	HCG 6	HCR 6	HCB LSF 6	HCW LSF 6	HCR LSF 6	HCL LSF 6	HCY 6X NEO
7	HCY 7	HCY FR 7	HCB 7	HCG 7	HCR 7	HCB LSF 7	HCW LSF 7	HCR LSF 7	HCL LSF 7	HCY 7X NEO
8	HCY 8	HCY FR 8	HCB 8	HCG 8	HCR 8	HCB LSF 8	HCW LSF 8	HCR LSF 8	HCL LSF 8	HCY 8X NEO
8B	HCY 8B	HCY FR 8B	HCB 8B	HCG 8B	HCR 8B	HCB LSF 8B	HCW LSF 8B	HCR LSF 8B	HCL LSF 8B	HCY 8B NEO
9	HCY 9	HCY FR 9	HCB 9	HCG 9	HCR 9	HCB LSF 9	HCW LSF 9	HCR LSF 9	HCL LSF 9	HCY 9X NEO
10	HCY 10	HCY FR 10	HCB 10	HCG 10	HCR 10	HCB LSF 10	HCW LSF 10	HCR LSF 10	HCL LSF 10	HCY 10 NEO
11	HCY 11	HCY FR 11	HCB 11	HCG 11	HCR 11	HCB LSF 11	HCW LSF 11	HCR LSF 11	HCL LSF 11	HCY 11 NEO
12	HCY 12	HCY FR 12	HCB 12	HCG 12	HCR 12	HCB LSF 12	HCW LSF 12	HCR LSF 12	HCL LSF 12	HCY 12 NEO
12E	HCY 12E	HCY FR 12E	HCB 12E	HCG 12E	HCR 12E	HCB LSF 12E	HCW LSF 12E	HCR LSF 12E	HCL LSF 12E	HCY 12E NEO
13	HCY 13	HCY FR 13	HCB 13	HCG 13	HCR 13	HCB LSF 13	HCW LSF 13	HCR LSF 13	HCL LSF 13	HCY 13 NEO

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 21:1985

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 - Raxton adaptors now available in 2 step format

MALE THREAD	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
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

Raxton 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
	RIGHT ANGLE M-M	FK
	45º ELBOW	FM
REDUCERS	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
	DRAIN Exe	CV
	DRAIN Exde	CT
INSULATING & EARTHING	INSULATED M-F	DB
	INSULATED M-M	DD
	INSULATED F-F	DE
	EARTH LEAD M-F	DG
	EARTH PLATE	DK
	EARTH TAG	DM
	EARTHING LOCK NUTS	DN
CABLE RETENTION	GLANDS	EB
	STOPPER BOX M-F	EG
	STOPPER BOX F-F	EK
	FLEXIBLE CONDUIT	EF
LOCKING	LOCKNUTS	GA
	LOCKRINGS	GB
	SERRATED WASHERS	GC
	LOCKNUTS CASTELLATED	GD
INGRESS PROTECTION (IP) AIDS	WASHERS	HA
	O RINGS	HB
	SHROUDS	HC
ACCESSORIES	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		BSP P		BSP T	
SIZE	CODE	SIZE	CODE	SIZE	CODE	SIZE	CODE
M6	01	1/2"	42	½"	62	½"	52
M8	02	3/4"	43	¾"	63	¾"	53
M10	03	1"	44	1"	64	1"	54
M12	04	1 1/4"	45	1¼"	65	1¼"	55
M16	11	1 1/2"	46	1½"	66	1½"	56
M20	12	2"	47	2"	67	2"	57
M22	07	2 1/2"	48	2½"	68	2½"	58
M24	08	3"	49	3"	69	3"	59
M25	13	3 1/2"	86	4"	89	4"	79
M28	09	4"	87	SPECIAL	60	SPECIAL	50
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. PG & 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 9	CODE
Special	
None (standard)	X or Blank
Customer Special	S
'O' Ring	U

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

DIGIT 8	CODE
Approval	
ATEX / IECEx / INMETRO Exd / Exe (all approvals)	Y
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/IICU	U
Gost Exd IICU	V
Gost Exe IICU	W
ATEX / IECEx Exde	B
ATEX / IECEx Exd	C
ATEX / IECEx Exe	Q
Industrial	X or Blank

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**	**½" 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**	

Redapt thread conversion products

The safety you rely on.

Introducing Crouse-Hinds by Eaton

The leader in electrical products for industrial, marine and commercial applications worldwide.

Crouse-Hinds
by EATON



Shell – Kittiwake photographic services / Shell International

Statoil – Norne FPSO – Kenneth Engelsvold/Statoil

The safety you rely on.

Delivering world-class reliability and safety in high consequence harsh and hazardous environments

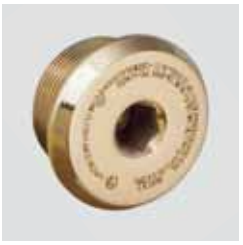
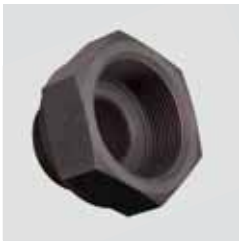
Only Eaton's Crouse-Hinds Business can deliver...

- Protection and safety of people and assets around the world with unsurpassed reliability and quality in every product we offer
- Industry-leading innovation and product efficiency
- Product solutions designed and certified for global specifications
- Best-in-class, global sales and customer service teams that provide local support

The Eaton advantage.





Crouse-Hinds remains the brand that stands for safety in the harshest of environments when power management is most critical. While it all began with the Condulet®, the Crouse-Hinds brand has grown into the premier name for a comprehensive portfolio of solutions for high consequence harsh and hazardous environments.

And now, the next phase in the evolution of the brand you trust: Crouse-Hinds joins the leading Eaton portfolio of reliable, efficient and safe electrical power management solutions.

More protection. More technology. Expect more.

Crouse-Hinds
by EATON

Contents

Global Termination Solutions

Eaton's Crouse-Hinds Business provides a termination solution for virtually every cable type used in hazardous environments – both onshore and offshore and above and below ground. Our adaptors, reducers, plugs, drains and additional products are used to support hazardous area installations throughout the world, enhancing safety and productivity in the most severe environmental conditions.

Our thread conversion products are designed for strict adherence to global specifications, meeting international approvals including ATEX, IECEx and CSA certifications. Our products are also suitable for industries made hazardous by the presence of dust.

Eaton's Crouse-Hinds Business thread conversion products are the safest solution for your hazardous area installation. In oil and gas, mining or power generation installations, our products are the reliable and safe way to terminate cable and conduit installation.

Global Support & Manufacturing

Eaton's Crouse-Hinds Business manufactures in five continents and sells into more than 100 countries. We have dedicated sales support in every major location with local technical sales and engineering teams to support your immediate needs. As one of the largest oil and gas bulk electrical and instrument material suppliers, we can easily provide you a single source for all the components to complete your project on time and on budget.

Crouse-Hinds
by EATON

A Powerful Transformation

Rely on the names you trust for the safety you need

The Redapt products you know are evolving. Our products, part of Eaton's Crouse-Hinds portfolio, are now united with Eaton's leading range of reliable, efficient and safe electrical power management solutions. Combined, we provide the world's largest portfolio of electrical equipment for industrial areas.

With unsurpassed product reliability and quality, industry-leading innovation and product efficiency, and products designed and certified for global specifications, Eaton's Crouse-Hinds products, including Redapt, deliver proven solutions for harsh and hazardous environments.

Redapt has a new look as Crouse-Hinds by Eaton, but the products and technology you trust remain unchanged. From explosionproof panelboards and lighting to connectivity and cable glands, the broadest offering of solutions for harsh and hazardous environments is now available from Crouse-Hinds by Eaton.

More protection. More technology.
Expect more.

Product selection guide

When selecting Ex certified accessories for use in hazardous areas, it is important to ensure that the product selected not only performs the task required (i.e. adapting the thread), but also maintains the overall integrity of the equipment into which it will be fitted.

To help with the selection of Redapt products, we have prepared the following as a guide. However, when selecting equipment for use in hazardous areas, the appropriate national or international standards or codes of practice must be considered.

Product approvals (see page 8)
Redapt products are manufactured to comply with the relevant standards for which they are designed. This means Redapt products meet with the exacting standards found within hazardous area environments. To assist in ease of use, the Redapt range of adaptors, reducers, stopping plugs and breather drains are approved Exd I and IIC and Exe I and IIC and tested to IP66 and IP68.

Equipment certificates, Ex thread adaptors and Ex stopping plugs
Redapt adaptors and reducers with metric female threads (Ex adaptors) and full range of stopping plugs (Ex stopping plugs) are certified as apparatus and granted equipment certificates. This means that they can be fitted into Ex apparatus enclosures without further certification.

Component certificates
Redapt adaptors and reducers with non-coaxial threads, 90 degree adaptors, 90 degree swivel adaptors and breather drains are certified as components, and as such require further approval before they can be fitted to Ex apparatus enclosures. This applies to all products that have a 'U' at the end of the certificate number.

Worldwide compatibility
Keeping pace with the rapidly changing approvals and to ensure worldwide compatibility, Redapt has the following approvals: North American Ex approvals for both methods of hazardous location classification, Zones and Divisions in addition to our existing CENELEC approvals. Redapt can therefore offer adaptors and reducers Exd I and IIC and Exe I and IIC and/or Class I, Division 1, groups A, B, C, D, or Exe II, Class I, Division 2, etc.

Ingress protection (see page 9)
To ensure that the ingress protection of the equipment is maintained, the accessories need to satisfy the same level of protection as the equipment. The Redapt Exd I and IIC and Exe I and IIC range of adaptors, reducers, stopping plugs and breather drains are fitted with an integral o-ring seal and have been independently tested to IP66 and IP 68.

Material
To ensure the long-term integrity of the installation, care should be taken in selecting the product material; in particular, taking into account any corrosive atmosphere present and/or the potential for corrosion brought about by mating dissimilar metals. As standard we supply brass, which is suitable for most applications. In certain atmospheres, most notably ammonia, or to avoid bi-metallic corrosion and electrolytic action, it may be advisable to select an alternative material or request plated brass.

Thread fit, gauging and length
Parallel threads are gauged to a medium fit (6g, 6H) and are manufactured to provide a minimum of eight full threads, unless otherwise specified. Tapered threads are gauged and dimensioned to provide for five fully engaged threads, unless otherwise specified.

Part numbering system (see page 10)
When ordering or inquiring about adaptors and reducers, the male thread size should always be quoted first, followed by the female.

Dimensions
It is advisable to check the dimensions of the product to ensure that it can be installed into the equipment without fouling. Dimensions are given in the catalogue for regular metric size products; for other dimensions or information, please contact us. *Please note that dimensions are subject to change.*

Product marketing
To ensure clarity the relevant product information is marked on the product, and/or shown on the packaging and/or within the installation instructions.

European directives
Products approved within the ATEX directive will be shipped with detailed installation instructions. The CE mark is applied to the packaging and confirms that Redapt products meet with the essential health and safety requirements of the applicable European directives.

Redapt products are outside the scope of the Electromagnetic Compatibility Directive (EMC) as they are passive.

Product type

		IECEx	ATEX Gas & Dust	ATEX Mining (M2 only)	North America	Russia
Adaptors and reducers (metallic)		■	■	■	■	■
Adaptors and reducers (nylon)		■	■		■	■
Swivel adaptors		■	■	■		■
'Y' adaptors 'T' adaptors		■	■	■		
90 degree adaptors		■	■	■	■	
Male to male female to female (IECEx only) adaptors		■	■		■	■
Insulated adaptors			■			■
Cable gland stopper boxes		■	■			■
Unions			■		■	■
Stopping plugs (metallic) (check individual plugs for certification)		■	■	■	■	■
Stopping plugs (nylon)		■	■		■	■
Breather drains Exe		■	■	■	■	■
Breather drains Exde		■	■	■		
Earth lead adaptors		■	■		■	■
Threaded earth plates			■			
Flexible conduit stopper boxes		■	■			■
Flexible conduit						

Product approvals

ATEX directive compliance

The ATEX directive (94/9/EC) applies to equipment and protective systems intended for use in potentially explosive atmospheres within Europe. The directive outlines the conformity assessment procedures and product classification for Ex products. All Ex products placed on the market after June 30, 2003 within Europe must comply with these requirements.

Redapt complies with ATEX having had an EC type-examination carried out on our Ex product range and our production QA assessed and approved. This is in line with the requirements for Ex products for use in gas groups I and II.

North American approval

The Canadian Standards Association (CSA) develops standards, tests and certifies products for use in Canada and internationally. CSA international is recognised by the U.S. Occupational Safety and Health Administration (OSHA) under the Nationally Recognised Testing Laboratory (NRTL) scheme and are able to test and certify products for use in hazardous locations within the U.S.A. as well as Canada. Traditionally, Ex products used within North America have been designed and tested for compliance within the 'class and division system'. Recent updates of both electrical codes (NEC and CEC) have incorporated the 3 zone concept of area classification or 'zone system' for Class I.

Redapt products have been assessed and certified for use throughout North America in both the 'class and division system' and the 'zone system'.

IEC Ex approval

The International Electrotechnical Commission (IEC) has developed the IECEx international certification scheme in an attempt to harmonise national standards used throughout the world with the aim of producing an approval that is recognised globally. The IECEx scheme is based on the 3 zone concept of area classification. Collaboration between IEC and CENELEC has created virtually identical sets of standards that in time will become identical.

Redapt products have not been approved specifically under the IECEx scheme; however, the products are compliant with the requirements of the scheme via both the CENELEC EN600701 Ex approvals and CSA E79 Ex approvals.

TR-UNION approval

The Explosionproof components are to be used in accordance with the Explosionproof mark, requirements of GOST R 51330.13, current "electrical plant arrangement rules" (PUE, art. 7.3), "technical maintenance rules for electrical plants" (PTEEP, art. 3.4), other normative documents regulating application of electrical equipment in explosive areas, and the manufacturer's instruction manual.

Applicable explosive areas and condition of use, categories and groups of explosive air mixtures with gases and vapours are in accordance with TR-UNION and requirements of "electrical plants arrangement rules" (PUE, art. 7.3).

Notes

Equipment certificates, Ex thread adaptors and Ex stopping plugs

Redapt adaptors and reducers with metric female threads (Ex adaptors) and full range of stopping plugs (Ex stopping plugs) are certified as apparatus and granted equipment certificates. This means that they can be fitted to Ex apparatus enclosures without further certification (see installation instructions).

Component certificates

Products certified as components require further approval before they can be fitted to Ex apparatus enclosures. A certificate number ending with the 'U' suffix denotes a component certificate (see installation instructions).

Aluminium products

Aluminium versions of AD-U, RD-U, PD-U, PA-D, PB-D Series and GF nylon and aluminium versions of DP-E Series are not suitable for Group I applications.

Temperature classification

Redapt products do not carry a temperature class or 'T' rating as they are passive and do not generate any heat.

Hazardous area standards generally state a minimum IP rating of IP54 or NEMA 3. However, it is essential when selecting Redapt products to ensure that the product will maintain the IP or NEMA rating of the equipment and the integrity of the installation.

The following table contains definitions detailing the environmental protection levels that Redapt products are capable of maintaining:

IP codes are based on the IEC standard dust/water 50269 – degrees of protection provided by enclosures

1st numeral – protection against solid objects

2nd numeral – protection against water

IP54	• Dust protected. Prevents ingress of dust sufficient to cause harm. • Protected from splashing water from any direction.
IP66	• Dusttight. No ingress of dust possible. • Protected against heavy seas or powerful jets of water. Prevents ingress sufficient to cause harm.
IP67	• Dusttight. No ingress of dust possible. • Protected against harmful ingress of water when immersed between a depth of 150mm to 1m.
IP68	• Dusttight. No ingress of dust possible. • Protected against submersion. Suitable for continuous immersion in water at stated depth. (Depth stated for Redapt products = 2m)

North American and Canadian markets define environmental protection as CSA and NEMA enclosure types

Type 3	• Type 3 enclosures are intended for outdoor use primarily to provide a degree of protection against rain, sleet, windblown dust and damage from external ice formation.
Type 4	• Type 4 enclosures are intended for indoor or outdoor use primarily to provide a degree of protection against wind blown dust and rain, splashing water, hose directed water and damage from external ice formation.
Type 4X	• Type 4X enclosures are intended for indoor or outdoor use primarily to provide a degree of protection against corrosion, wind blown dust and rain, splashing water, hose directed water and damage from external ice formation.
Type 6	• Type 6 enclosures are intended for indoor or outdoor use primarily to provide a degree of protection against hose directed water, the entry of water during occasional temporary submersion at a limited depth and damage from external ice formation.
Type 6P	• Type 6P enclosures are intended for indoor or outdoor use primarily to provide a degree of protection against hose directed water, the entry of water during prolonged submersion at a limited depth and damage from external ice formation.

Integral o-rings available

Silicone	Fluorosilicone
Nitrile	EPDM
Neoprene	Viton

Part numbering system

Codes

Page No.	Product	Digits 1 & 2
Adaptors & reducers		
14-17	**AD**	Adaptor
14-17	RD	Reducer
18	TA	Swivel - in-line male x female
18	TC	Swivel - in-line female x female
18	TD	Swivel - in-line male x male
18	TP	Swivel - 90° male x female
18	TQ	Swivel - 90° female x female
18	TR	Swivel - 90° male x male
19	AY	'Y' adaptor
20	AT	'T' adaptor
21	AR	90° adaptor
22	AM	Male x male adaptor
23	AF	Female x female adaptor
24-25	AI	Insulated adaptor
Stopping Plugs		
26-27	PD	Dome head plug
28	PA	Type A plug
28	PB	Type B plug
29	PH	Hex head plug
30	PX	Hollow hex head plug
Breather Drains		
31	DP	Breather drain (Exe)
32	BD	Breather drain (Exde)
Accessories		
33	SB	Stopper box (rigid conduit)
34	UN	Union (MxF)
34	UF	Union (FxF)
35	AE	Earth lead adaptor
37	EP	Pear earth tag
36	ET	Threaded earth plate
38	LN	Locknut
38	LE	Earthing locknut
39	N	Nipples - consult sales for coding
39	CO	Couplers
39	MB	Bushes - male bush long
39	MS	Bushes - male bush short
39	FB	Bushes - female bush
40	SR	Serrated washer
40	SW	IP sealing washer
42	FX	Stopper box (flexible conduit)

Certification	Digit 3
U	Exd I and IIC & Exe I and IIC
D	Exd I and IIC
E	Exe I and IIC
Z	Industrial

Material	Digit 4
1	Brass
2	Mild steel
3	Stainless steel
4	Glass filled nylon
5	Aluminium
6	Nylon 6
7	Red fibre

Plating	Digit 5
0	Unplated
1	Electroless nickel
2	Zinc
6	Chromatise

Example

Digits 1 & 2		Digit 3		Digit 4		Digit 5		Digits 6 & 7		Digits 8 & 9
AD	-	**U**	-	**1**	-	**1**	-	**29**	-	**04**
Adaptor		Exd/e certified		Brass		Nickel-plated		1/2" NPT (male)		M20 (female)

Always quote male thread first.

Male thread – digits 6 & 7, female thread – digits 8 & 9 Note: threadform codes below to be used for both male and female threads.

Metric	ET imperial conduit	NPT	NPSM	ISO pipe parallel (BSPP)	ISO pipe taper (BSPT)	PG
03 M16	17 5/8" ET	**29 ½" NPT**	42 ½" NPSM	55 ½" BSPP	68 ½" BSPT	79 PG7
04 M20	18 ¾" ET	30 ¾" NPT	43 ¾" NPSM	56 ¾" BSPP	69 ¾" BSPT	80 PG9
05 M25	19 1" ET	31 1" NPT	44 1" NPSM	57 1" BSPP	70 1" BSPT	81 PG11
06 M32	20 1¼" ET	32 1¼" NPT	45 1¼ " NPSM	58 1¼" BSPP	71 1¼" BSPT	82 PG13.5
07 M40	21 1½" ET	33 1½" NPT	46 1½" NPSM	59 1½" BSPP	72 1½" BSPT	83 PG16
08 M50	22 2" ET	34 2" NPT	47 2" NPSM	60 2" BSPP	73 2" BSPT	84 PG21
09 M63	23 2½" ET	35 2½" NPT	48 2½" NPSM	61 2½" BSPP	74 2½" BSPT	85 PG29
10 M75	24 3" ET	36 3" NPT	49 3" NPSM	62 3" BSPP	75 3" BSPT	86 PG36
11 M80 x 2.0	ET Special	37 3½" NPT	50 3½" NPSM	63 3½" BSPP	76 3½" BSPT	87 PG42
12 M85 x 2.0		38 4" NPT	51 4" NPSM	64 4" BSPP	77 4" BSPT	88 PG48
13 M90 x 2.0		NT Special	NS Special	BP Special	BT Special	PG Special
14 M100 x 2.0						
15 M110 x 2.0						
BZ M120 x 2.0						
MT Special						

Shroud product coding (p.41) Please note the product coding for shrouds differs slightly from the main coding.

Digits 1 & 2 product	Digit 3 certification	Digit 4 material	Digit 5 colour	Digits 6 & 7 thread size	Digits 8 & 9 defaults to '00'	Digits 10 to 13 shroud size
SH Shroud	Z Industrial*	R PVC (standard)	B Black	01 M10	00	S005 5
		Q PVC (low smoke and fume - LSF)	G Grey	02 M12		S05A 5A
		N PVC (flame retardant - FR)	R Red	03 M16		S006 6
		V PCP	W White	04 M20		S007 7
			L Blue	05 M25		S008 8
				06 M32		S08B 8B
				07 M40		S009 9
				08 M50		S010 10
				09 M63		S011 11
						S012 12
						S12E 12E
						S013 13

Example

Digits 1 to 3		Digit 4		Digit 5		Digits 6 & 7		Digits 8 & 9		Digits 10 to 13
SHZ	-	**R**	-	**B**	-	**04**	-	**00**	-	**S005**
Shroud		Standard PVC		Black		M20		Default		Shroud Size 5

Example

Digits 1 to 3		Digit 4		Digit 5		Digits 6 & 7		Digits 8 & 9		Digits 10 to 13
SHZ	-	**V**	-	**R**	-	**07**	-	**00**	-	**S008**
Shroud		PCP		Red		M40		Default		Shroud Size 8

Part numbering system

Part numbering system for DPE breather drains only

Product	Certification	Material	Plating	Thread type	Thread length	Hole position	Castellated L/Nut
DP Standard	**E** Exe I and IIC	1 Brass	**0** Unplated	**04** M20	**S1** 10mm	2 Holes	With
		3 S/Steel	1 E/Nickel	05 M25	S1 10mm	2 Holes	Without
		4 GF Nylon	2 Zinc	06 M32	S1 15mm	3 Holes	With
				29 ½" NPT	S1 15mm	3 Holes	Without
				30 ¾" NPT			
				31 1" NPT			

Note: Glass filled nylon version is only available in S3 & S4 options and is supplied complete with a brass castellated locknut.
NPT threaded breather drains are only available in S3 and S4 options.

Example

Standard	Exe I and IIC	Stainless Steel	Unplated	M20	10mm
DP	**E**	**3**	**0**	**04**	**S1**

Part numbering system for BDU breather drains only

Product	Certification	Material	Plating	Thread	O-ring
BD Standard	**U** Exd I and IIC and Exe I and IIC	1 Brass	**0** Unplated	**04** M20	**D1** Silicone
		3 Stainless Steel	1 Electroless Nickel	05 M25	D2 Fluorosilicone
			2 Zinc	29 ½" NPT	D3 Viton
				30 ¾" NPT	D4 EPDM
					D5 Neoprene
					D6 Nitrile

Example

Standard	Exe I and IIC and Exe I and IIC	Stainless Steel	Unplated	M20	Silicone o-ring
BD	**U**	**3**	**0**	**04**	**S1**

Flexible conduit product coding (see pages 43-44) **Please note the product coding for flexible conduit differs from the main coding.**

Digits 1 to 4 product codes - flexible conduit	Digit 5* colour (for FEZR only)	Digits 6 & 7 thread size of conduit	Digits 8 & 9 defaults to '00'	Digits 10 to 13** reel size
FAZ3 Galv. steel conduit with rubber cover and stainless steel overbraid	B Black	01 M10	00	S010 10 metres
FDZH Galv. steel conduit with rubber cover	G Grey	02 M12		S025 25 metres
FEZR Galv. steel conduit with PVC cover	O Orange	03 M16		S050 50 metres
FFZR Galv. steel conduit with galv. steel braid and PVC cover		04 M20		
FGZR Stainless steel conduit with PVC cover		05 M25		
		06 M32		
FYZ3 Stainless steel fixing clip		07 M40		
FZZR Plated steel with PVC liner fixing clip		08 M50		
		09 M63		

* Digit 5 represents colour, although only the FEZR conduit is available in other colours. For other conduit types/clips, use 'B' for black as default.
** Digits 10 to 13 not used for fixing clips.

Example

Digits 1 to 3	Digit 4	Digit 5	Digits 6 & 7	Digits 8 & 9	Digits 10 to 13
FAZ	**3**	**B**	**04**	**00**	**S010**
Galv. Steel conduit with rubber cover and stainless steel overbraid		Black	M20	Default	10m

Example

Digits 1 to 3	Digit 4	Digit 5	Digits 6 & 7	Digits 8 & 9	Digits 10 to 13
FEZ	**R**	**G**	**07**	**00**	**S050**
Galv. Steel conduit with PVC cover		Grey	M16	Default	50m

ISO metric

BS 3643 1.5mm pitch		
Size	**Major dia.**	**TPI**
M16	15.97	16.93
M20	19.97	16.93
M25	24.97	16.93
M32	31.97	16.93
M40	39.97	16.93
M50	49.97	16.93
M63	62.97	16.93
M75	74.97	16.93
2.0mm pitch		
M80	79.97	12.70
M85	84.97	12.70
M90	89.97	12.70
M100	99.97	12.70
M110	109.97	12.70
M120	119.97	12.70

NPT

ANSI.ASME B1.20.1		
Size	**Pipe dia.**	**TPI**
½"	21.34	14.00
¾"	26.67	14.00
1"	33.40	11.50
1¼"	42.16	11.50
1½"	48.26	11.50
2"	60.33	11.50
2½"	73.03	8.00
3"	88.90	8.00
3½"	101.60	8.00
4"	114.30	8.00

PG

BS 3643 1.5mm pitch		
Size	**Major dia.**	**TPI**
PG7	12.50	20.00
PG9	15.20	18.00
PG11	18.60	18.00
PG13.5	20.40	18.00
PG16	22.50	18.00
PG21	28.30	16.00
PG29	37.00	16.00
PG36	47.00	16.00
PG42	54.00	16.00
PG48	59.30	16.00

Alternate ISO pipe thread designations

BS 3643 1.5mm pitch	
UK	**BSP P**arallel or **T**aper BS2279 (BS21)
Europe	**G**(Parallel) **GK**(Taper) **R**(Parallel) **RK**(Taper)
Japan	**PF**(Parallel) JIS B 303
CIS	**K mpy** (Taper)

BSP ISO pipe thread

ISO R/7; UNI 6125		
Size	**Pipe Dia.**	**TPI**
⅜"	16.66	19.00
½"	20.96	14.00
¾"	26.44	14.00
1"	33.25	11.00
1¼"	41.91	11.00
1½"	47.80	11.00
2"	59.61	11.00
2½"	75.18	11.00
3"	87.88	11.00

ET imperial conduit

BS31		
Size	**Major dia.**	**TPI**
⅝"	15.88	18.00
¾"	19.05	16.00
1"	25.40	16.00
1¼"	31.75	16.00
1½"	38.10	14.00
2"	50.80	14.00
2½"	63.50	14.00
3"	76.20	14.00

Thread dimension substitution chart

Metric	NPT (or NPS)	PG	BSP ISO Pipe	ET
M16	–	7, 9	–	⅝"
M20	½"	11, 13.5	½"	¾"
M25	¾"	16	¾"	1"
M32	1"	21	1"	1¼"
M40	1¼"	29	1¼"	1½"
M50	1½"	36	1½"	2"
M63	2"	42, 48	2"	2½"
M75	2½"	–	2½"	3"
M90 x 2.0	3"	–	3"	–
M100 x 2.0	3½"	–	–	–
M110 x 2.0	–	–	–	–
M120 x 2.0	–	–	–	–

Metallic (Exde) adaptors and reducers - ADU / RDU Series

Type ADU

Features

- International Ex approvals
- IP66, IP68, CSA Enclosure Type (NEMA) 4X, 6P
- Various threadforms/materials available

Benefits

- Used to change size/threadform of connection device
- Maintains Ex certification while matching threadforms

Materials

- Brass CZ121
- 316 stainless steel
- Aluminium
- Mild steel

Threadforms

- Metric
- NPT
- PG
- ISO Pipe (BSP)
- ET

Plating options

- Electroless nickel
- Zinc
- Others on application

Technical specification

Code of protection categories
ATEX: I M2, II 2 GD Ex d I/IIC Mb Gb, Ex e I/IIC Mb Gb, Ex tb IIIC Db, IP6X
IECEx: Ex d I/IIC, Mb/Gb, Ex e I/IIC, Mb/Gb, Ex tb IIIC Db, IP6X
CSA: Ex de IIC IP66/67/68; Class I, Divisions 1 and 2; Groups A, B, C, D; Class II, Groups E, F, G; Class III; Enclosure Type 4X/6P
GOST: ExdeIU, ExdeIICU, IP66/67/68
Compliance standards
ATEX: EN 60079-0, EN 60079-1, EN 60079-7, EN 60079-3
IECEx: IEC 60079-0, IEC 60079-1, IEC 60079-31, IEC 60079-7
CSA: C22.2 No .30-M1986 (R2012), CAN/CSA 60079-0-11, CAN/CSA 60079-1-11, CAN/CSA 60079-7-12, CAN/CSA 60079-31:12, UL1203-5th Edition
Certificate details
ATEX: Sira 00ATEX1094X
IECEx: IECEx SIR 12.0016X
CSA: 1248014 (LR 106084)
GOST: TR RU C-GB.GB06.B.00106
Temperature
Temperature will depend on the type of o-ring used
None: -50°C to +180°C
Nitrile: -20°C to +80°C (supplied as standard)
EPDM: -30°C to +125°C
Neoprene: -20°C to +100°C
Viton: -5°C to +180°C
Silicone: -30°C to +180°C
Fluorosilicone: -50°C to +150°C
The maximum temperature is limited to +150°C for Group I applications
Ingress protection (IP):
Independently tested to IP66 / IP68 when fitted in accordance to manufacturer's instructions
Part number:
Please refer to page 10 for part numbering system

Available thread sizes and corresponding bore size

Metric	Bore	NPT	Bore	ISO Pipe	Bore	ET	Bore	PG	Bore
M16	10.00	-	-	⅜"	10.00	⅝"	10.00	PG7	8.00
M20	14.00	½"	15.00	½"	15.00	¾"	14.00	PG9	10.00
M25	18.00	¾"	19.00	¾"	19.00	1"	18.00	PG11	13.50
M32	24.00	1"	25.00	1"	25.00	1¼"	24.00	PG13.5	14.00
M40	32.00	1¼"	32.00	1¼"	32.00	1½"	32.00	PG16	16.00
M50	41.00	1½"	38.00	1½"	38.00	2"	41.00	PG21	21.00
M63	53.00	2"	49.00	2"	49.00	2½"	53.00	PG29	29.00
M75	64.00	2½"	60.00	2½"	60.00	3"	64.00	PG36	38.00
M80 x 2.0	69.00	3"	75.00	3"	75.00	-	-	PG42	45.00
M85 x 2.0	73.00	3½"	88.00	3½"	88.00	-	-	PG48	50.00
M90 x 2.0	78.00	4"	100.00	4"	100.00				
M100 x 2.0	88.00								
M110 x 2.0	98.00								
M120 x 2.0	108.00								

Glass filled nylon (Exe) adaptors and reducers - ADE4 / RDE4 Series

Type ADE4

Technical specification

Code of protection categories
ATEX: II 2 GD, Ex e IIC Mb Gb, Ex tb IIIC Db, IP6X
IECEx: Ex e IIC Gb, Ex tb IIIC Db, IP6X
CSA: Ex e IIC IP66/67/68; Class I, Division 2; Groups A, B, C, D; Class II, Groups E, F, G; Class III; Enclosure Type 4X/6P
GOST: ExeIIC, IP66/67/68
Compliance standards
ATEX: EN 60079-0, EN 60079-7, EN 61241-0, EN 61241-1
IECEx: IEC 60079-0, IEC 60079-31, IEC 60079-7
CSA: C22.2 No.0.17-00 (R2009), CAN/CSA 60079-0-11, CAN/CSA 60079-7-12, CAN/CSA 60079-31:12
UL514C 3rd Editions
Certificate details
ATEX: Sira 00ATEX3091X
IECEx: IECEx SIR 12.0038X
CSA: 1248014 (LR 106084)
GOST: TR RU C-GB.GB06.B.00106
Temperature
Temperature will depend on the type of o-ring used
No o-ring: -20°C to +40°C Viton o-ring: -5°C to +40°C
Ingress protection (IP):
Independently tested to IP66 / IP68 when fitted in accordance to manufacturer's instructions
Part number:
Please refer to page 10 for part numbering system

Features

- International Ex approvals
- IP66, IP68
- Various threadforms available

Benefits

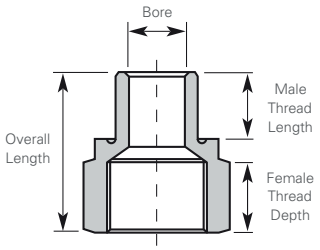
- Used to change size/threadform of connection device
- Maintains increased safety certification while matching threadforms

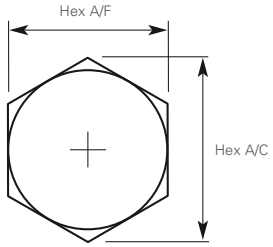
Materials

- Glass filled nylon

Threadforms

- Metric
- NPT
- NPSM
- PG
- ISO Pipe (BSP)
- ET





Available thread sizes and corresponding bore size

Metric	Bore	NPT	Bore	ISO Pipe	Bore	ET	Bore	PG	Bore
M16	9.00			3⁄8″	9.30	5⁄8″	9.30	PG9	9.00
M20	11.00	1⁄2″	12.00	1⁄2″	12.00	3⁄4″	1.00	PG11	10.00
M25	16.00	3⁄4″	13.00	3⁄4″	13.00	1″	16.00	PG13.5	11.50
M32	21.00	1″	18.00	1″	18.00	1 1⁄4″	21.00	PG16	13.50
M40	31.00	1 1⁄4″	33.00	1 1⁄4″	33.00	1 1⁄2″	31.00	PG21	9.00
M50	41.00	1 1⁄2″	38.00	1 1⁄2″	38.00	2″	40.00	PG29	28.00
-	-	-	-	-	-	-	-	PG36	37.00
-	-	-	-	-	-	-	-	PG42	44.00

Adaptors and reducers selection guide

STEP 1 – To obtain the correct reference number, select the male size from the left hand column, then refer horizontally across the page to the female size (i.e. M32 (male) x M40 (female) = 208). Reference numbers in blue are adaptors; other references are reducers.

Female Size

	Metric														NPT										PG								
Male	M16	M20	M25	M32	M40	M50	M63	M75	M80	M85	M90	M100	M110	M120	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	PG7&9	PG11	PG13.5	PG16	PG21	PG29	PG36	PG42	PG48
M16	201	201													216										201	201	201						
M20	301	202	203												217	218									301	202	202	202	204				
M25	303	303	257	206											303	219	221								303	303	303	257	204				
M32	305	305	305	206	208										305	305	221	223							305	305	305	305	207	258			
M40	307	307	307	307	208	209									307	307	307	223	224						307	307	307	307	307	208	209		
M50	309	309	309	309	309	259	211								309	309	309	309	225	226					309	309	309	309	309	309	210	210	211
M63	310	310	310	310	310	310	211	212							310	310	310	310	310	226	227				310	310	310	310	310	310	310	310	211
M75	311	311	311	311	311	311	311	212	261	213	213				311	311	311	311	311	311	360	228			311	311	311	311	311	311	311	311	311
M80	311	311	311	311	311	311	311	261	261	214	214																						
M85	312	312	312	312	312	312	312	214	214	214	214																						
M90	312	312	312	312	312	312	312	312	214	214	214	215			312	312	312	312	312	312	312	229	230	231									
M100	313	313	313	313	313	313	313	313	313	313	215	215	262	263	313	313	313	313	313	313	313	313	230	231									
M110	325	325	325	325	325	325	325	325	325	325	325	262	262	263																			
M120	326	326	326	326	326	326	326	326	326	326	326	326	263	263																			

	Metric										NPT											PG								
NPT	M16	M20	M25	M32	M40	M50	M63	M75	M90	M100	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	PG7&9	PG11	PG13.5	PG16	PG21	PG29	PG36	PG42	PG48
1/2"	314	232	234								245	246										314	232	232	232	265				
3/4"	315	315	234	235							315	246	247									315	315	315	234	235				
1"	316	316	316	236	237						316	316	248	249								316	316	316	316	236	237			
1 1/4"	317	317	317	317	237	238					317	317	317	249	250							317	317	317	317	317	237	238		
1 1/2"	318	318	318	318	318	238	240				318	318	318	318	250	251						318	318	318	318	318	318	238	239	240
2"	319	319	319	319	319	319	240	241			319	319	319	319	319	251	252					319	319	319	319	319	319	319	319	240
2 1/2"	320	320	320	320	320	320	320	242	243		320	320	320	320	320	320	253	254				320	320	320	320	320	320	320	320	320
3"	321	321	321	321	321	321	321	321	243	244	321	321	321	321	321	321	321	254	255			321	321	321	321	321	321	321	321	321
3 1/2"	322	322	322	322	322	322	322	322	322	244	322	322	322	322	322	322	322	322	255	256		322	322	322	322	322	322	322	322	322
4"	323	323	323	323	323	323	323	323	323	323	323	323	323	323	323	323	323	323	323	256	264	323	323	323	323	323	323	323	323	323
5"	–	–	–	–	–	–	–	–	–	–	327	327	327	327	327	327	327	327	327	327	–	–	–	–	–	–	–	–	–	–

	Metric								NPT							PG								
PG	M16	M20	M25	M32	M40	M50	M63	M75	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	PG7&9	PG11	PG13.5	PG16	PG21	PG29	PG36	PG42	PG48
7&9	201	201							216							201	201	201						
11	202	202	203						217	218						301/202	202	202	202					
13.5	301	202	203						217	218						301	202	202	202	204				
16	302	203	203						218	218	221					302	302	203	203	204				
21	304	304	205	206	206				304	220	221					304	304	304	304	205	258			
29	306	306	306	306	208	209			306	306	223	223	224			306	306	306	306	306	208	209		
36	308	308	308	308	308	209	211		308	308	308	224	224			308	308	308	308	308	308	209	210	211
42	324	324	324	324	324	210	211		324	324	324	324	324	226		324	324	324	324	324	324	324	210	211
48	310	310	310	310	310	310	211	211	310	310	310	310	310	226	227	310	310	310	310	310	310	310	310	211

STEP 2 – Having obtained the reference number, go to the relevant column within the dimension tables to obtain the adaptor or reducer's dimensions. Please note that these dimensions refer to metallic products only.

Adaptors

Metric x metric, metric x PG, PG x metric, PG x PG																			
Reference numbers	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	257	258	259
Hex across flats	23.4	27.0	30.5	33.0	36.0	37.6	37.6	47.2	55.9	61.2	70.1	90.2	106.4	106.4	114.3	23.4	31.8	41.3	57.2
Hex across corners	26.8	31.0	35.0	38.0	41.5	43.2	43.2	53.4	64.3	70.4	81.8	103.7	122.4	122.4	131.4	26.8	36.1	47.7	66.0
Male thread length	16	16	16	16	16	16	16	16	16	16	16	16	16	20	20	15	16	16	16
Female thread length	17	17	17	17	17	17	17	17	17	17	17	17	22	22	22	20	17	17	17
Total length	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	39.5	39.5	39.5	39.5	45.0	49.0	49.0	42.0	38.5	38.5	39.5

Metric x NPT, PG x NPT																			
Reference numbers	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	261	262	263	-
Hex across flats	27.0	30.5	32.0	37.6	37.6	41.3	47.2	55.9	57.2	70.1	80.0	106.4	106.4	114.3	127.0	90.2	120.7	139.7	-
Hex across corners	31.0	35.0	36.7	43.2	43.2	47.5	53.4	64.3	66.0	81.8	92.0	122.4	122.4	131.4	147.0	104.1	139.4	161.3	-
Male thread length	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	20	20	-
Female thread length	20	20	20	20	25	25	26	26	26	27	40	35	42	42	44	22	22	22	-
Total length	42	42	42	42	47	47	47	48	48	48	58	58	62	62	62	48	48	49	-

NPT x metric, NPT x PG																			
Reference numbers	232	233	234	235	236	237	238	239	240	241	242	243	244	260	265	-	-	-	-
Hex across flats	23.4	28.6	30.5	37.6	37.6	44.5	55.9	70.1	70.1	90.2	90.2	106.4	114.3	90.2	33.0	-	-	-	-
Hex across corners	26.8	32.9	35.0	43.2	43.2	51.1	64.3	70.4	81.8	103.7	103.7	122.4	131.4	103.7	38.0	-	-	-	-
Male thread length	20	20	20	20	25	25	25	25	25	25	35	35	35	16	20				
Female thread length	17	17	17	17	17	17	17	17	17	17	17	22	22	35	77	-	-	-	-
Total length	43	43	43	43	48	48	49	49	49	49	59	64	64	58	43	-	-	-	-

NPT x NPT																			
Reference numbers	245	246	247	248	249	250	251	252	253	254	255	256	264	-	-	-	-	-	-
Hex across flats	23.4	30.5	37.6	37.6	47.2	55.9	70.1	80.0	80.0	106.4	114.3	127.0	158.8	-	-	-	-	-	-
Hex across corners	26.8	35.0	43.2	43.2	53.4	64.3	81.8	92.0	92.0	122.4	131.4	146.0	183.3	-	-	-	-	-	-
Male thread length	20	20	20	25	25	25	25	25	35	35	35	35	35	-	-	-	-	-	-
Female thread length	20	20	25	25	25	25	25	35	35	35	35	35	47	-	-	-	-	-	-
Total length	46	46	51	56	56	57	57	67	77	77	78	78	81	-	-	-	-	-	-

Reducers

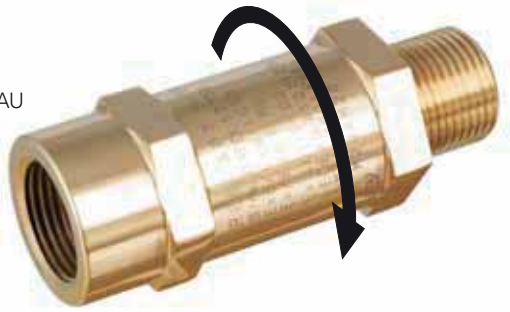
Metric and PG																			
Reference numbers	301	302	303	304	305	306	307	308	309	310	311	312	313	324	325	326	-	-	-
Hex across flats	27.0	30.5	31.8	36.0	37.6	44.5	47.2	55.9	57.2	70.1	90.2	106.4	114.3	61.2	120.7	127.0	-	-	-
Hex across corners	31.0	35.0	36.7	41.5	43.2	51.1	53.4	64.3	66.0	81.8	103.7	122.4	131.0	70.7	139.4	146.6	-	-	-
Male thread length	16	16	16	16	16	16	16	16	16	16	16	20	20	16	16	16	-	-	-
Total length	26	26	26	26	26	26	26	27	27	27	27	31	31	27	28	28	-	-	-

NPT																			
Reference numbers	314	315	316	317	318	319	320	321	322	323	327	-	-	-	-	-	-	-	-
Hex across flats	23.4	27.9	34.9	44.5	52.1	61.2	80.0	90.2	106.4	120.7	146.0	-	-	-	-	-	-	-	-
Hex across corners	26.8	32.1	40.2	51.1	59.9	70.4	92.0	103.7	122.4	138.8	168.6	-	-	-	-	-	-	-	-
Male thread length	20	20	25	25	25	25	35	35	35	35	35	-	-	-	-	-	-	-	-
Total length	30	30	35	35	35	36	46	46	46	47	47	-	-	-	-	-	-	-	-

In-line and 90 degree (Exde) swivel adaptors - TAU / TPU Series

Type TPU

Type TAU



Technical specification

Code of protection categories
ATEX: I M2, (not aluminium) Ex d, Ex IIC Gb, Ex d, Ex e I Mb (not aluminium), Ex tb IIIC Db 6X II 2GD, Ex d, Ex e IIC Gb, Ex d, Ex e I Mb (not aluminium), Ex tb IIIC Db 6X
IECEx: Ex d Ex e IIC Gb, Ex d Ex e IMb, Ex tb IIIC Db, IP 6X
GOST: ExdIU, ExeIU, ExeIIU, ExdIICU, IP66
Compliance standards
ATEX: EN 60079-0, EN 60079-1, EN 60079-7, EN 60079-31
IECEx: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 60079-31
Certificate details
ATEX: Sira 10ATEX1275U
IECEx: IECEx SIR 10.0123U, IECEx SIR 12.0016X (in-line)
GOST: TR RU C-GB.GB06.B.00106
Temperature
Temperature range: Exd -20°C to +60°C, Exe -50°C to +200°C
Ingress protection (IP):
Independently tested to IP66 / IP68 when fitted in accordance to manufacturer's instructions
Part number:
Please refer to page 10 for part numbering system

Features

- In-line and 90° models available
- International Ex approvals
- IP66, IP68
- Male to male and female to female options available
- Various threadforms/materials available

Benefits

- Allows 360° choice of cable entry/exit positions (90° model)
- In-line models allow independent connection at both ends
- Improves ease of installation in confined or difficult situations

Materials

- Brass CZ121
- 316 stainless steel
- Aluminium

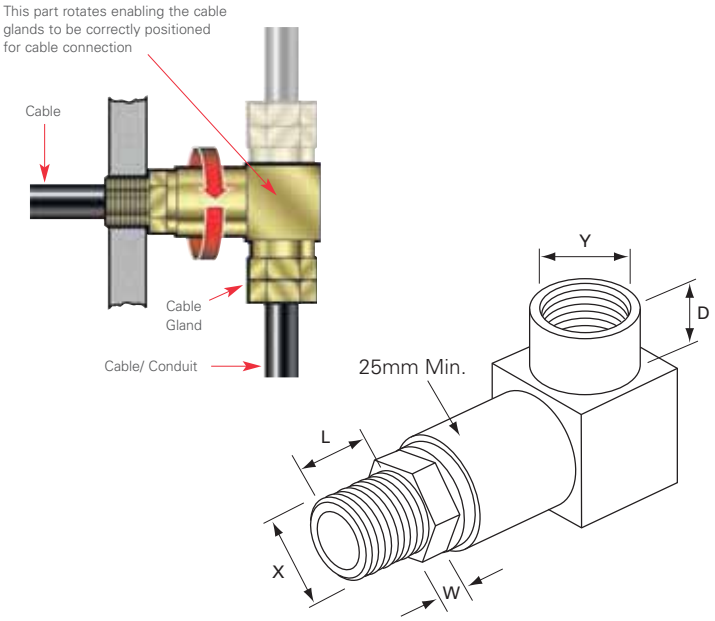
Threadforms

- Metric
- NPT
- NPSM
- PG
- ISO Pipe (BSP)
- ET

Plating options

- Electroless nickel
- Zinc
- Others on application

90° Swivel Adaptor



Dimensions of metric versions

Male thread (X)	Female thread (Y)	L	W	D
M20	M20	17.00	4.00	17.00
M25	M20-M25	17.00	4.00	17.00
M32	M20-M32	17.00	5.00	17.00
M40	M20-M40	17.00	5.00	17.00
M50	M20-M50	17.00	5.00	17.00
M63	M20-M63	17.00	5.00	17.00
M75	M20-M75	17.00	5.00	17.00

Type AYU

Technical specification

Code of protection categories
ATEX: I M2, (not aluminium) Ex d IMb, Ex e I Mb II 2GD, Ex d IIC Gb, Ex e IIC Gb, Ex tb IIIC Db IP6X
IECEx: Ex d I Mb, Ex e I Mb (not aluminium), Ex d IIC Gb Ex e IIc Gb, Ex tb IIIC Db IP6X
Compliance standards
ATEX: EN 60079-0, EN 60079-1, EN 60079-7, EN 60079-31
IECEx: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-1
Certificate details
ATEX: Sira 10ATEX1056U
IECEx: IECEx SIR 10.0025U
Temperature
The item is classified as a component and therefore metallic products are not given an operating temperature range
Ingress protection (IP):
Independently tested to IP66 / IP68 when fitted in accordance to manufacturer's instructions
Part number:
Please refer to page 10 for part numbering system

Features

- International Ex approvals
- IP66, IP68
- Available in brass, stainless steel and mild steel

Benefits

- Provides means of connection where space is limited
- Used to change size/threadform of connection device
- Maintains Ex certification while matching threadforms

Materials

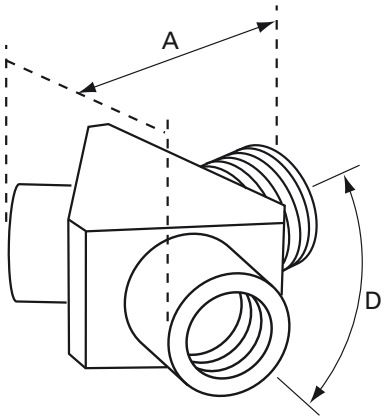
- Brass CZ121
- 316 stainless steel
- Mild steel

Threadforms

- Metric

Plating options

- Electroless nickel
- Zinc
- Others on application



Dimensions of Metric Versions

Size	A	Angle between entries (D)
M20	70.00	120° each
M25	80.00	120° each
M32	85.00	120° each

'T' (Exde) adaptors - ATU Series

Type ATU

Technical specification

Code of protection categories
ATEX: I M2, (not aluminium) Ex d IMb, Ex e I Mb II 2GD, Ex d IIC Gb, Ex e IIC Gb, Ex tb IIIC Db IP6X
IECEx: Ex d I Mb, Ex e I Mb (not aluminium), Ex d IIC Gb Ex e IIc Gb, Ex tb IIIC Db IP6X
Compliance standards
ATEX: EN 60079-0, EN 60079-1, EN 60079-7, EN 60079-31
IECEx: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-1
Certificate details
ATEX: Sira 10ATEX1056U
IECEx: IECEx SIR 10.0025U
Temperature
The item is classified as a component and therefore metallic products are not given an operating temperature range
Ingress protection (IP):
Independently tested to IP66 / IP68 when fitted in accordance to manufacturer's instructions
Part number:
Please refer to page 10 for part numbering system

Features

- International Ex approvals
- IP66, IP68
- Available in brass, stainless steel and mild steel

Benefits

- Provides an opportunity for two cable entries
- Can be used to change size/threadform of connection device
- Maintains Ex certification while matching threadforms

Materials

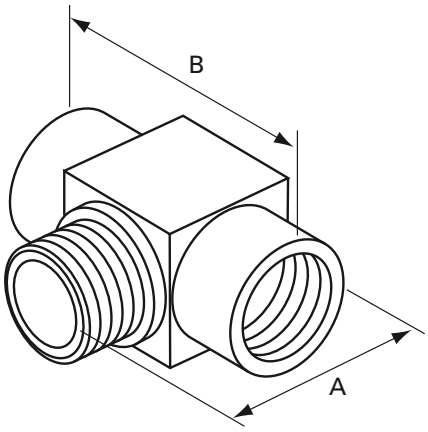
- Brass CZ121
- 316 stainless steel
- Mild steel

Threadforms

- Metric

Plating options

- Electroless nickel
- Zinc
- Others on application



Dimensions of metric versions

Male size	Female size	A	B
M20	M12-M25	51.00	60.00
M25	M12-M32	57.00	65.00
M32	M12-M40	66.00	72.00
M40	M12-M50	75.00	80.00
M50	M12-M63	86.00	90.00
M63	M12-M75	101.50	105.00
M75	M12-M90	119.00	120.00

Type ARD

Technical specification

Code of protection categories
ATEX: II 2GD, Ex d IIC Gb, Ex tb IIIC Db IP6X
IECEx: Ex d IIC Gb, Ex tb IIIC Db IP6X
Compliance standards
ATEX: EN 60079-0, EN60079-31, EN 60079-1
IECEx: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-1
Certificate details
ATEX: Sira 99ATEX1195U
IECEx: IECEx SIR 05.0042U
Temperature
The item is classified as a component and therefore metallic products are not given an operating temperature range
Ingress Protection (IP):
Independently tested to IP66 / IP68 when fitted in accordance to manufacturer's instructions
Part number:
Please refer to page 10 for part numbering system

Features

- International Ex approvals
- IP64, CSA Enclosure Type (NEMA) 3
- Available in brass, stainless steel and aluminium
- Various threadforms available

Benefits

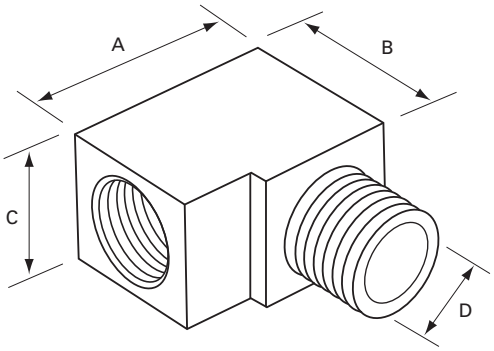
- Provides means of connection where space is limited
- Can be used to change size/threadform of connection device
- Maintains Ex certification while matching threadforms

Materials

- Brass CZ121
- 316 stainless steel
- Aluminium

Threadforms

- Metric
- NPT
- NPSM
- PG
- ISO Pipe (BSP)
- ET



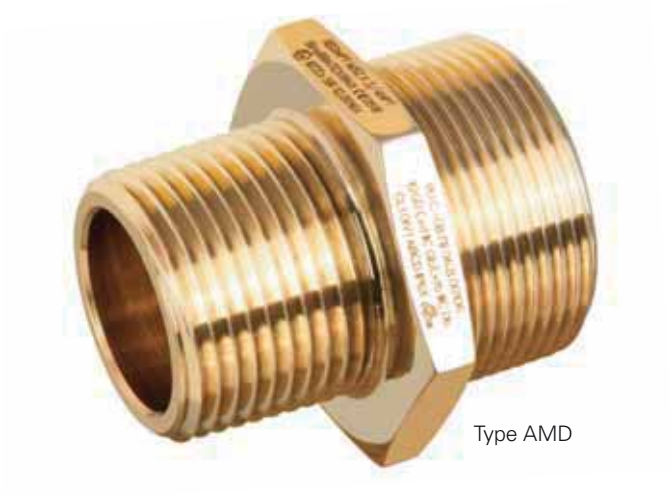
Plating options

- Electroless nickel
- Zinc
- Others on application

Dimensions of Metric Versions

Size	Bore (D)	Male length	Height (A)	Length (B)	Width (C)
M16 x M16	10.00	16.00	33.00	27.00	23.00
M20 x M20	14.00	16.00	39.00	29.00	25.40
M25 x M25	18.00	16.00	46.00	35.00	32.00
M32 x M32	24.00	16.00	51.00	44.00	40.00
M40 x M40	32.00	16.00	61.00	52.00	48.00
M50 x M50	41.00	16.00	73.00	65.00	60.00
M63 x M63	53.00	16.00	86.00	77.00	73.00
M75 x M75	64.00	16.00	99.00	94.00	87.00

Male to male (Exd) adaptors - AMD Series



Type AMD

Technical specification

Code of protection categories
ATEX: II 2GD, Ex d IIC Gb, Ex tb IIIC Db IP6X
IECEx: Ex d IIC Gb, Ex tb IIIC Db IP6X
CSA: Ex d IIC IP54, Class I, Division 1 and 2; Groups A, B, C, D; Class II, Groups E, F, G; Class III; Enclosure Type 3
GOST: ExdIICU
Compliance standards
ATEX: EN 60079-0, EN 60079-1, EN 60079-31
IECEx: IEC 60079-0, IEC 60079-1, IEC 60079-31
CSA: C22.2 No. 30-M1986 (R2012), CAN/CSA 60079-0-11, CAN/CSA 60079-1-11, CAN/CSA 60079-31:12, UL1203-5th Edition
Certificate details
ATEX: Sira 99ATEX1114X
IECEx: IECEx SIR 12.0016X
GOST: TR RU C-GB.GB06.B.00106
CSA: 1248014 (LR 106084)
Temperature
Temperature range: -50°C to +180°C
Ingress protection (IP):
Independently tested to IP66 / IP68 when fitted in accordance to manufacturer's instructions
Part number:
Please refer to page 10 for part numbering system

Features

- International Ex approvals
- IP64, CSA Enclosure Type (NEMA) 3
- Available in brass and stainless steel
- Various threadforms available

Benefits

- Provides method of connecting female threadforms
- Connects either matching or dissimilar sizes/threadforms
- Maintains Ex certification

Materials

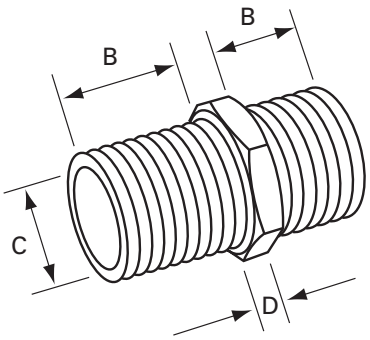
- Brass CZ121
- 316 stainless steel

Threadforms

- Metric
- NPT
- PG
- ISO pipe (BSP)
- ET

Plating options

- Electroless nickel
- Zinc
- Others on application



Dimensions of metric versions

Size	B (min)	C	D	A/F
M16	16.00	11.00	5.00	23.37
M20	16.00	14.00	5.50	23.37
M25	16.00	18.00	5.50	30.48
M32	16.00	24.00	5.50	37.59
M40	16.00	32.00	5.50	47.24
M50	16.00	41.00	6.00	55.88
M63	16.00	53.00	6.00	70.10
M75	16.00	64.00	6.50	80.01

Type AFU

Technical specification

Code of protection categories
IECEx: Ex d I/IIC Mb/Gb Ex e I/IIC Mb/Gb, Ex tb IIIC Db
Compliance standards
IECEx: IEC 60079-0, IEC 60079-1, IEC 61241-1
Certificate details
IECEx: IECEx SIR 12.0016X
Temperature
Temperature range: -50°C to +180°C
Ingress protection (IP):
Independently tested to IP66 / IP68 when fitted in accordance to manufacturer's instructions
Part number:
Please refer to page 10 for part numbering system

Features

- IECEx approval
- IP64
- Available in brass and stainless steel
- Various threadforms available

Benefits

- Provides method of connecting male threadforms
- Connects either matching or dissimilar sizes/threadforms
- Maintains Ex certification

Materials

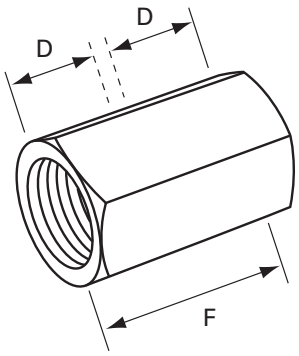
- Brass CZ121
- 316 stainless steel

Threadforms

- Metric
- NPT
- PG
- ISO pipe (BSP)
- ET

Plating options

- Electroless nickel
- Zinc
- Others on application



Dimensions of metric versions

Size	D	F	A/F
M16	16.00	37.50	23.37
M20	16.00	37.50	23.37
M25	16.00	37.50	30.48
M32	16.00	37.50	37.59
M40	16.00	37.50	47.24
M50	16.00	37.50	55.88
M63	16.00	37.50	70.10
M75	16.00	37.50	80.01

Insulated (Exd) adaptors - AID Series

Technical specification

Code of protection categories
ATEX: Ex d IIC
GOST: Ex d IICU
Compliance standards
ATEX: EN 50014, EN 50018, EN 50019, EN 5081-1-1
Certificate details
ATEX: Sira 00ATEX1073U
GOST: TC RUC-G B.ГБ06.B.00105
Temperature
Temperature range -20°C to +130°C
Part number:
Please refer to page 10 for part numbering system

Features

- International Ex approvals
- IP54, CSA Enclosure Type (NEMA) 3
- Available in brass, stainless steel and aluminium
- Glass filled nylon insulating material

Benefits

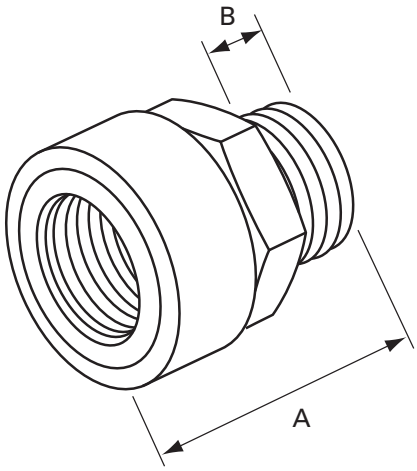
- Provides method of insulating connection device from the equipment
- Allows armour current to be controlled in a positive manner
- Inspection of grounding made easy

Materials

- Brass CZ121
- 316 stainless steel
- Aluminium

Threadforms

- Metric
- NPT
- NPSM
- PG
- ISO pipe (BSP)
- ET



Dimensions of metric versions

Size	Total length (A)	Male length (B)
M20	60.00 (min)	15.00 (min)
M25	60.00 (min)	15.00 (min)
M32	60.00 (min)	15.00 (min)
M40	60.00 (min)	15.00 (min)
M50	60.00 (min)	15.00 (min)
M63	60.00 (min)	15.00 (min)
M75	60.00 (min)	15.00 (min)

Application

To avoid relying on the contact between cable termination and equipment enclosure for grounding the cable armour, an insulated adaptor can be fitted to both ends of the cable with a grounding device (i.e. earth tag/lug) fitted between the adaptor and the termination. The armour current can then be taken from the grounding device to ground in a controlled, positive manner that can be ***inspected*** easily.

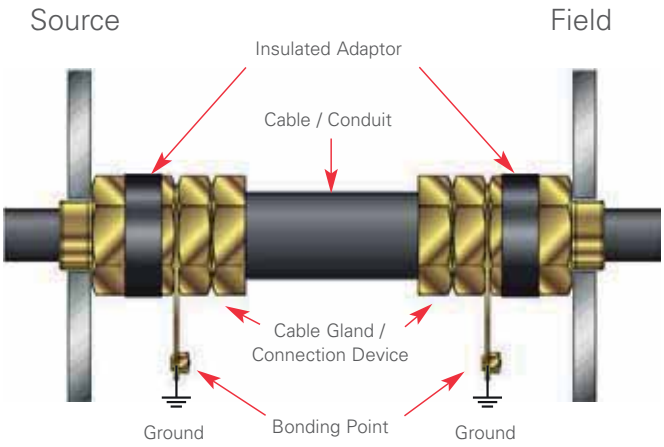
Single point grounding

In many applications it is sufficient to ground the cable armour at one end. For single point grounding, the insulated adaptors would again be used at both ends of the cable but with the earth tag fitted only to the end where grounding is required.

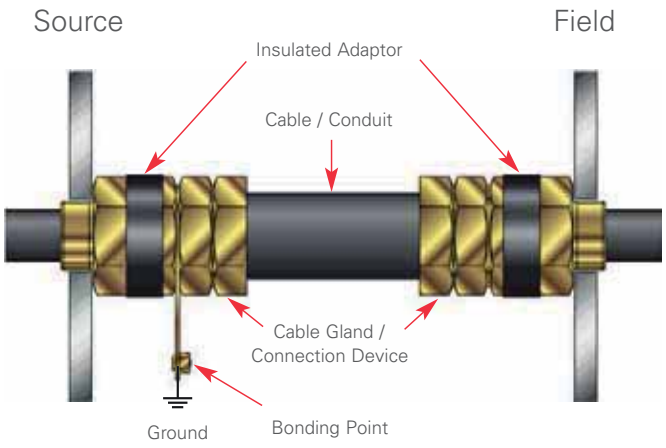
Single point grounding can:

- Reduce the circulating currents that can cause heating of high capacity cables.
- Reduce the risk of damage to electronic equipment within the enclosure in the event of a short circuit to ground through the enclosure.
- Reduce the problems of electrical noise on the armour affecting the clean earth required for some sensitive instruments.

Standard application



Single point grounding



Note: Graphic representation only - actual appearance may differ.

Metallic dome head (Exde) stopping plugs - PDU Series

Type PDU

Features

- International Ex approvals
- IP66, IP68, CSA Enclosure Type (NEMA) 4X, 6P
- Available in brass, stainless steel, mild steel and aluminium
- Various threadforms available

Benefits

- Provides method of filling unused entries in equipment
- Maintains Ex certification
- Maintains IP integrity

Materials

- Brass CZ121
- 316 stainless steel
- Aluminium
- Mild Steel

Threadforms

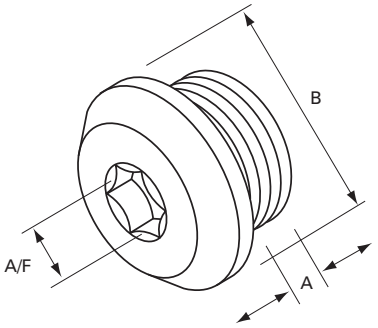
- Metric
- NPT
- NPSM
- PG
- ISO pipe (BSP)
- ET

Plating options

- Electroless nickel
- Zinc
- Others on application

Technical specification

Code of protection categories
ATEX: I M2, II 2 GD Ex d I/IIC Mb Gb, Ex e I/IIC Mb Gb, Ex tb IIIC Db, IP6X
IECEx: Ex d I/IIC, Mb/Gb, Ex e I/IIC, Mb/Gb, Ex tb IIIC Db, IP6X
CSA: Ex de IIC IP66/67/68; Class I, Division 1 and 2; Groups A, B, C, D; Class II, Groups E, F, G; Class III; Enclosure Type 4X/6P
GOST: ExdeIU, ExdeIICU, IP66/67/68
Compliance standards
ATEX: EN 60079-0, EN 60079-1, EN 60079-7, EN 60079-31
IECEx: IEC 60079-0, IEC 60079-1, IEC 60079-31, IEC 60079-7
CSA: C22.2 No. 30-M1986 (R2012), CAN/CSA 60079-0-11, CAN/CSA 60079-1-11, CAN/CSA 60079-7-12, CAN/CSA 60079-31:12, UL1203-5th Edition
Certificate details
ATEX: Sira 00ATEX1094X
IECEx: IECEx SIR 12.0016X
CSA: 1248014 (LR 106084)
GOST: TR RU C-GB.GB06.B.00106
Temperature
Temperature will depend on the type of o-ring used
None: -50°C to +180°C
Nitrile: -20°C to +80°C (supplied as standard)
EPDM: -30°C to +125°C
Neoprene: -20°C to +100°C
Viton: -5°C to +180°C
Silicone: -30°C to +180°C
Fluorosilicone: -50°C to +150°C
The maximum temperature is limited to +150°C for Group I applications
Ingress protection (IP):
Independently tested to IP66 / IP68 when fitted in accordance to manufacturer's instructions
Part number:
Please refer to page 10 for part numbering system



Dimensions of metric versions

Size	Thread length (A)	Hex (Allen) key A/F	Diameter (B)
M16	15.00	10.00	22.00
M20	15.00	10.00	27.00
M25	15.00	10.00	31.75
M32	15.00	10.00	40.00
M40	15.00	10.00	47.63
M50	15.00	10.00	57.15
M63	15.00	14.00	69.85
M75	15.00	14.00	82.55

Glass filled nylon dome head (Exe) stopping plugs - PDE4 Series

Type PDE4

Technical specification

Code of protection categories
ATEX: II 2 GD, Ex e IIC Mb Gb, Ex tb IIIC Db, IP6X
IECEx: Ex e IIC Gb, Ex tb IIIC Db, IP6X
CSA: Ex e IIC IP66/67/68; Class I, Division 2; Groups A, B, C, D; Class II, Groups E, F, G; Class III; Enclosure Type 4X/6P
GOST: ExeIIC, IP66/67/68
Compliance standards
ATEX: EN 60079-0, EN 60079-7, EN 61241-0, EN 61241-1
IECEx: IEC 60079-0, IEC 60079-31, IEC 60079-7
CSA: C22.2 No.0.17-00 (R2009), CAN/CSA 60079-0-11, CAN/CSA 60079-7-12, CAN/CSA 60079-31:12
UL514 C 3rd Edition
Certificate details
ATEX: Sira 00ATEX3091X
IECEx: IECEx SIR 12.0038X
CSA: 1248014 (LR 106084)
GOST: TR RU C-GB.GB06.B.00106
Temperature
Temperature will depend on the type of o-ring used
None: -20°C to +40°C or -5°C to +40°C when used with Viton o-ring
Ingress protection (IP):
Independently tested to IP66 / IP68 when fitted in accordance to manufacturer's instructions

Features

- International Ex approvals
- IP66, IP68, CSA Enclosure Type (NEMA) 4X, 6P
- Nitrile o-ring supplied as standard
- Various threadforms available

Benefits

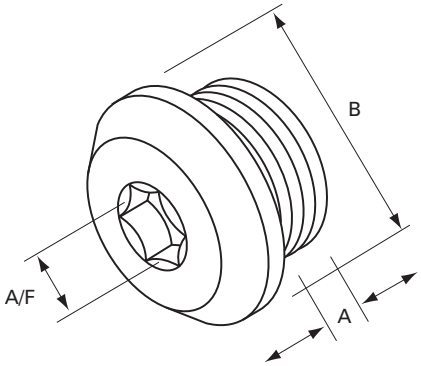
- Provides method of filling unused entries in equipment
- Maintains increased safety certification
- Maintains IP integrity

Materials

- Glass filled nylon

Threadforms

- Metric
- NPT
- NPSM
- PG
- ISO pipe (BSP)
- ET



Dimensions of Metric Versions

Size	HEX A/F	Diameter (B)	Thread Length (A)
M16	10.00	20.50 (min)	10.00 (min)
M20	10.00	24.50 (min)	10.00 (min)
M25	10.00	29.50 (min)	10.00 (min)
M32	10.00	36.50 (min)	10.00 (min)
M40	10.00	44.50 (min)	10.00 (min)
M50	10.00	54.50 (min)	10.00 (min)
M63	10.00	67.50 (min)	10.00 (min)
M75	10.00	79.50 (min)	10.00 (min)

Parallel threads have 10mm minimum length or to specification.

Tapered threads to provide for five fully engaged threads.

Type A and Type B (Exd) stopping plugs - PAD / PBD Series

Type PBD

Type PAD

Technical specification

Code of protection categories
ATEX: II 2GD, Ex d IIC Gb, Ex tb IIIC Db IP6X
IECEx: Ex d IIC Gb, Ex tb IIIC Db IP6X
CSA: Ex d IIC IP54, Class 1, Division 1&2; Groups A,B,C&D; Class II, Groups E,F&G; Class III; Enclosure Type 3
GOST: ExdIICU
Compliance standards
ATEX: EN 60079-0, EN 60079-1, EN 60079-31
IECEx: IEC 60079-0, IEC 60079-1, IEC 60079-31
CSA: C22.2 No.30-M1986 (R2012), CAN/CSA 60079-0-11, CAN/CSA 60079-1-11, CAN/CSA 60079-31:12, UL 1203-5th Edition
Certificate details
ATEX: Sira 99ATEX1113X
IECEx: IECEx SIR 12.0016X
GOST: TR RU C-GB.GB06.B.00106
CSA: 1248014 (LR 106084)
Temperature
Temperature range: -50°C to +180°C
Ingress protection (IP):
Independently tested to IP66 / IP68 when fitted in accordance to manufacturer's instructions
Part number:
Please refer to page 10 for part numbering system

Features

- International Ex approvals
- IP64 CSA Enclosure Type (NEMA) 3
- Available in brass, stainless steel, mild steel and aluminium
- Various threadforms available

Benefits

- Provides method of filling unused entries in equipment
- Type B secures from inside, providing extra security
- Maintains Ex certification
- Maintains IP integrity

Materials

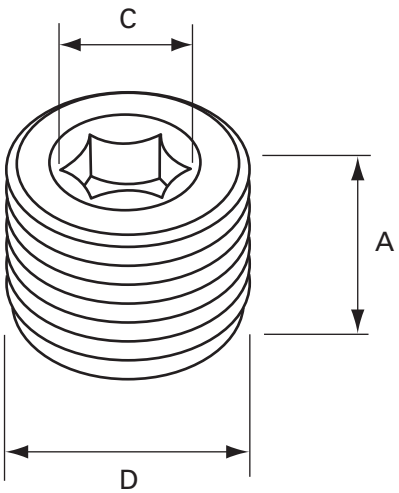
- Brass CZ121
- 316 stainless steel
- Aluminium
- Mild steel

Threadforms

- Metric
- NPT
- NPSM
- PG
- ISO pipe (BSP)
- ET

Plating options

- Electroless nickel
- Zinc
- Others on application



Dimensions of metric versions

Size	Overall length (A)	Hex recess (C)	Diameter (D)
M16	17.90	8.00	16.30
M20	17.70	10.00	20.30
M25	17.70	10.00	25.30
M32	17.60	10.00	32.30
M40	16.80	10.00	40.20
M50	17.50	10.00	50.20
M63	17.30	14.00	63.10
M75	17.30	14.00	75.00

Type PHE

Technical specification

Code of protection categories
ATEX: II 2GD, Ex e IIC Gb, Ex tb IIIC Db IP6X
CSA: Ex d IIC IP54, Class I, Division 1 and 2; Groups A, B, C, D; Class II, Groups E, F, G; Class III; Enclosure Type 3
GOST: ExeIICU
Compliance standards
ATEX: EN 60079-0, IEC 60079-0, EN 60079-7, EN 61241-0, EN 61241-1
CSA: C22.2 No. 30-M1986 (R2012), CAN/CSA 60079-0-11, CAN/CSA 60079-31:12, UL1203-5th Edition
Certificate details
ATEX: Sira 00ATEX3092X
GOST: TR RU C-GB.GB06.B.00106
CSA: 1248014 (LR 106084)
Temperature
Temperature range: -50°C to +180°C
Ingress protection (IP):
Independently tested to IP66 / IP68 when fitted in accordance to manufacturer's instructions
Part number:
Please refer to page 10 for part numbering system

Features

- International Ex approvals
- IP6X CSA Enclosure Type (NEMA) 3
- Available in brass, stainless steel and aluminium
- Various threadforms available

Benefits

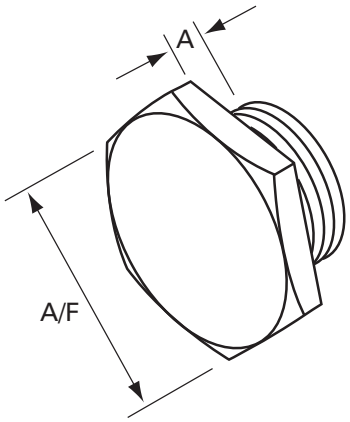
- Provides method of filling unused entries in equipment
- Maintains increased safety certification
- Maintains IP integrity

Materials

- Brass CZ121
- 316 stainless steel
- Aluminium

Threadforms

- Metric
- NPT
- NPSM
- PG
- ISO pipe (BSP)
- ET



Dimensions of metric versions

Size	A/F	Thread length (A)
M16	20.00 (min)	12.00 (min)
M20	24.00 (min)	12.00 (min)
M25	29.00 (min)	12.00 (min)
M32	36.00 (min)	12.00 (min)
M40	44.00 (min)	12.00 (min)
M50	54.00 (min)	12.00 (min)
M63	67.00 (min)	12.00 (min)
M75	79.00 (min)	12.00 (min)

Hollow hex head (Exde) stopping plugs - PXU Series

Type PXU

Technical specification

Code of Protection Categories
ATEX: II 2GD, Ex d IIC Gb, Ex e IIC Gb, Ex tb IIIC Db
IECEx: Ex d IIC Gb, Ex e IIC Gb, Ex tb IIIC Db
GOST: ExdeIICU, ExdeIICU, ExeIIU
INMETRO: Ex de IIC Gb, Ex tb IIIC IP66/67 (brass and stainless steel)
NEPSI: Ex d II C Gb, Ex e II C Gb, DIP A21 Ta IP6X
Compliance Standards
ATEX: EN 60079-0, EN 60079-1, EN 60079-7, EN 60079-31
IECEx: IEC 60079-0, IEC 60079-7, IEC 60079-31
INMETRO: ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-7, ABNT NBR IEC 60079-31
NEPSI: GB 3836.1-2010, GB 3836.2-2010, GB 3836.3-2010, GB 12476.1-2000
Certificate Details
ATEX: Sira 10ATEX1224X
IECEx: IECEx SIR 07.0009X
GOST: TC RUC-G B.ГБ06.B.00105
INMETRO: NCC 12.0764X
NEPSI: GYJ13.1311X
Temperature
Temperature range: -50°C to +180°C
Ingress protection (IP):
Tested to IP68
Part number:
Please refer to page 10 for part numbering system

Features

- International Ex approvals
- Available in brass, stainless steel and aluminium
- Metric and NPT threads available

Benefits

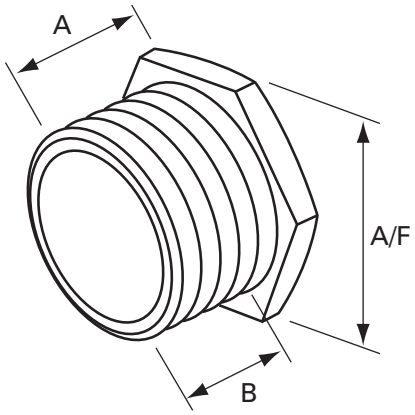
- Provides method of filling unused entries in equipment
- Maintains Ex certification
- Maintains IP integrity
- Lighter product due to hollow design

Materials

- Brass CZ121
- 316 stainless steel
- Aluminium

Threadforms

- Metric
- NPT



Dimensions of metric versions

Size	A/F	Overall length (A)	Thread length (B)
M16	19.00	21.00	17.00
M20	24.00	21.00	17.00
M25	28.00	21.00	17.00
M32	37.50	21.00	17.00
M40	47.00	21.50	17.00
M50	56.00	22.50	17.00
M63	70.00	24.00	17.00
M75	80.00	25.00	17.00

Type DPE

Features

- International Ex approvals
- IP66, CSA Enclosure Type (NEMA) 4X
- Available in two thread lengths: 10mm 2 drain holes or 15mm 3 drain holes
- Available in brass, stainless steel, aluminium and glass filled nylon
- Metric and NPT threads available

Benefits

- Provides method of draining moisture within enclosures
- Allows air within enclosure to breathe with surrounding atmosphere
- Maintains increased safety certification
- Maintains IP integrity

Materials

- Brass CZ121
- 316 stainless steel
- Aluminium
- Glass filled nylon

Threadforms

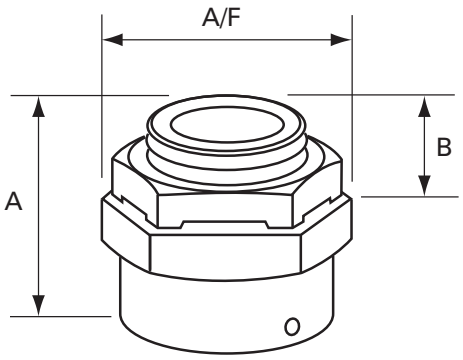
- Metric
- NPT

Plating options

- Electroless nickel
- Zinc
- Others on application

Technical specification

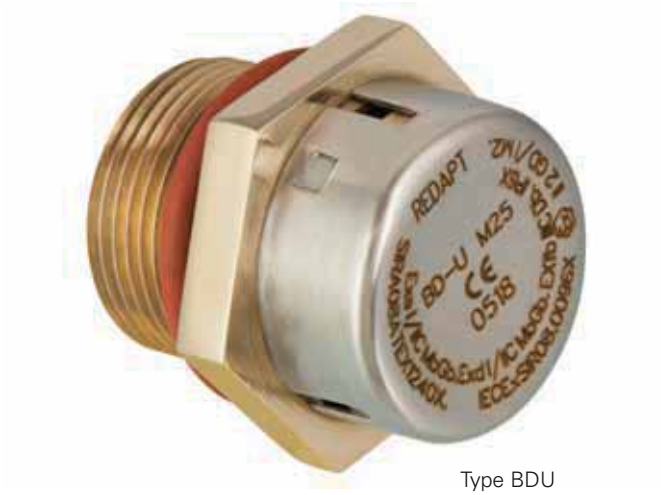
Code of protection categories
ATEX: I M2/II2GD, Ex e I/II Mb Gb, Ex tb IIIC Db IP66, II2GD, Ex e IIGb Ex tb IIIC Db IP66
IECEx: Ex e I/IIC Mb/Gb, Ex tb IIIC Db, IP66, Ex e IIC Gb, Ex tb Db IP66
GOST: ExeIU. Nylon, ExeIIU IP66
CSA; Class 1, Zone 1 Ex e II IP66, CSA Enclosure Type 4X (NEMA 4X)
Compliance standards
ATEX: EN 60079-0, EN 60079-7, EN 60079-31
IECEx: IEC 60079-0, IEC 60079-7, IEC 60079-31
CSA: CSA Standard C22.2 No. 0-M, CSA Standard C22.2 No. 0.5, CSA Standard C22.2 No. 94, CAN/CSA E79-7-95, UL2279
Certificate details
ATEX: Sira 99ATEX3050X
IECEx: IECEx SIR 08.0024X
GOST: TR RU C-GB.GB06.B.00106
CSA: 185887-2500003408 (LR 106084)
Temperature
Metallic body dependent on filter and seal material
Nylon body: -50°C to +125°C, unless limited by filter material
HDPE filter: -50°C to 85°C
Metallic filter dependent on body and interface material
Nitrile: -30°C to +100°C (supplied as standard)
EPDM: -50°C to +125°C
Neoprene: -40°C to +100°C
Viton: -20°C to +180°C
Silicone: -50°C to +180°C
Fluorosilicone: -70°C to +150°C
Ingress protection (IP):
Tested to IP66
Part number:
Please refer to page 10 for part numbering system



Dimensions of metric versions

Size	A/F	Overall length (A)	Thread length (B)
M20	28.60	23.00 (min)	10.00 (min)
M25	34.90	23.00 (min)	10.00 (min)
M32	41.30	23.00 (min)	10.00 (min)
1/2" NPT	28.60	28.00 (min)	15.00 (min)
3/4" NPT	34.90	28.00 (min)	15.00 (min)
1" NPT	41.30	28.00 (min)	15.00 (min)

Flameproof (Exde) breather drains - BDU Series



Type BDU

Technical specification

Code of Protection Categories
ATEX: I M2/II2GD, Ex e I/II Mb Gb, Ex d I/II Mb Gb, Ex tb IIIC Db IP6X
IECEx: Ex e I/IIC Mb/Gb, Ex d I/IIC Mb/Gb Ex tb IIIC Db, IP6X
Compliance Standards
ATEX: EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-0, EN 61241-1
IECEx: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-1
Certificate Details
ATEX: Sira 08ATEX1240X
IECEx: IECEx SIR 08.0096X
Temperature
Temperature range dependent on o-ring used
Nitrile: -20°C to +80°C
EPDM: -30°C to +125°C
Neoprene: -20°C to +100°C
Viton: -5°C to +150°C
Silicone: -30°C to +150°C (supplied as standard)
Fluorosilicone: -50°C to +150°C
Ingress protection (IP):
Tested to IP66
Part number:
Please refer to page 10 for part numbering system

Features

- International Ex approvals
- IP66
- Available in brass and stainless steel
- Metric and NPT threads available

Benefits

- Provides method of draining moisture within enclosures
- Allows air within enclosure to breathe with surrounding atmosphere
- Maintains Ex certification
- Maintains IP integrity

Materials

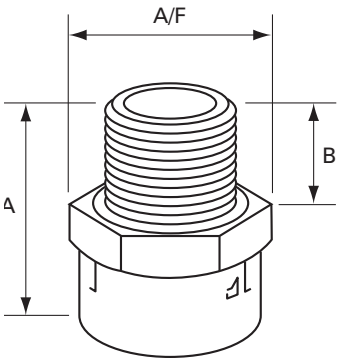
- Brass CZ121
- 316 stainless steel

Threadforms

- Metric
- NPT

Plating options

- Electroless nickel
- Zinc
- Others on application



Dimensions of metric versions

Size	Hex A/F	Overall length (A)	Male thread length (B)
M20	27.00	31.00	16.00
M25	31.75	31.00	16.00
1/2" NPT	27.00	35.00	20.00
3/4" NPT	31.75	35.00	20.00

Type SBU

Technical specification

Code of protection categories
ATEX: II 2 GD, Ex d IIC Gb / Ex e IC Gb Ex tb IIIC IP6X
IECEx: Ex d IIC Gb/ Ex e IIC Gb, Ex tb IIIC Db IP6X
GOST: ExdIICU
INMETRO: BR-Ex d IIC Gb, BR-Ex tD A21 IP 66/67
Compliance standards
ATEX: EN 60079-0, EN 60079-1, EN 60079-7, EN 60079-31
IECEx: IEC 60079-0, IEC 60079-1, IEC 60079-31, IEC 60079-7
Certificate details
ATEX: ITS 12ATEX17707X
IECEx: IECEx ITS 12.0079X
GOST: POCC GB. 06.B01060
Temperature
Temperature range -20°C to +85°C
Ingress protection (IP):
Independently tested to IP66 / IP68 when fitted in accordance to manufacturer's instructions
Part number:
Please refer to page 10 for part numbering system

Features

- International Ex approvals
- IP66
- Available in brass and stainless steel
- Various threadforms available

Benefits

- Seals conductors at entry to enclosure
- Enables compound gland to be converted to barrier gland
- Maintains Ex certification
- Maintains IP integrity

Materials

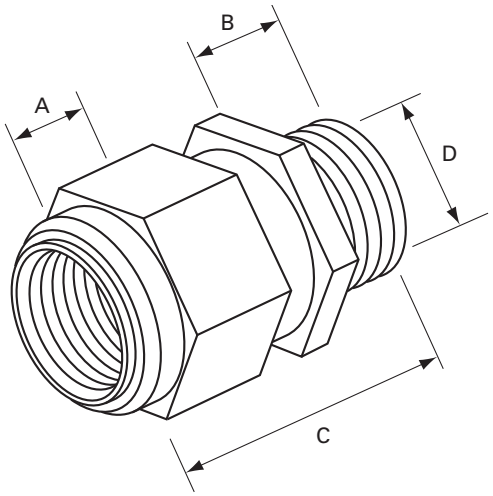
- Brass CZ121
- 316 stainless steel

Threadforms

- Metric
- NPT
- PG
- ISO pipe (BSP)
- ET

Plating options

- Electroless nickel
- Zinc
- Others on application



Dimensions of metric versions

Thread	Bore (D)	Thread length (A, B) min	Overall length (C)
M16	8.30	15.00	59.50
M20	11.30	15.00	56.50
M25	13.40	15.00	59.50
M32	17.70	15.00	64.30
M40	24.40	15.00	70.30
M50	31.80	15.00	67.80
M63	41.60	15.00	70.30

Male to female unions and female to female unions (Exd) - UND / UFD Series

Technical specification

Code of protection categories
ATEX: II 2GD, Ex d IIC Gb, Ex tb IIIC Db IP6X
CSA: Ex d IIC IP54, Class I, Division 1and 2; Groups A, B, C, D; Class II, Groups E, F, G; Class III; Enclosure Type 3
GOST: ExdIICU
Compliance standards
ATEX: EN 60079-0, EN 60079-1, EN 61241-0, EN 61241-1
CSA: C22.2 No. 30-M1986 (R2012), CAN/CSA 60079-0-11, CAN/CSA 60079-1-11, CAN/CSA 60079-31:12, UL1203-5th Edition
Certificate details
ATEX: Sira 00ATEX1096X
GOST: TR RU C-GB.GB06.B.00106
CSA: 1248014 (LR 106084)
Temperature
Temperature range: -50°C to +180°C
Ingress protection (IP):
Independently tested to IP66 / IP68 when fitted in accordance to manufacturer's instructions
Part number:
Please refer to page 10 for part numbering system

Features

- International Ex approvals
- Available in brass, stainless steel and aluminium
- Various threadforms available

Benefits

- Provides a running joint
- Eliminates exposed threads
- Maintains Ex certification

Materials

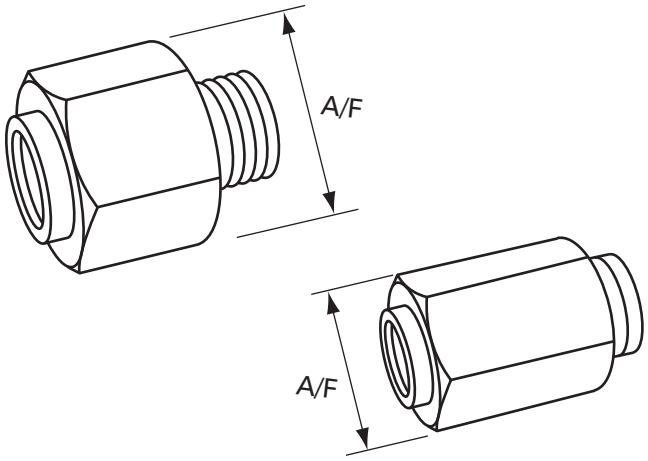
- Brass CZ121
- 316 stainless steel
- Aluminium

Threadforms

- Metric
- NPT
- PG
- ISO pipe (BSP)
- ET

Plating options

- Electroless nickel
- Zinc
- Others on application



Dimensions of metric versions

Male to female unions UN-D

Size	A/F
M20	37.59
M25	42.42
M32	55.88
M40	55.88
M50	80.01
M63	90.17
M75	114.30

Female to female unions UF-D

Size	A/F
M20	37.59
M25	42.42
M32	55.88
M40	55.88
M50	80.01
M63	90.17
M75	114.30

Type AEE

Technical specification

Code of Protection Categories
ATEX: II 2GD, Ex e IIC Gb, Ex tb IIIC Db
IECEx: Ex e IIC Gb, Ex tb IIIC Db
GOST: ExeIIU
CSA: Class I, Division 1 Groups C, D; Class I Division 2; Groups A, B, C, D; Class II, Groups E, F, G; Class III; Enclosure Type 3, Class I, Zone 1, AEx e IIB IP54, Class I, Zone 2, AEx e IIC IP54
Compliance standards
ATEX: EN 60079-0, EN 60079-7, EN 61241-0, EN 61241-1
IECEx: IEC 60079-0, IEC 60079-7, IEC 660079-31
CSA: C22.2 No. 30-M1986 (R2012), CAN/CSA 60079-0-11, CAN/CSA 60079-31:12, UL1203-5th Edition
Certificate details
ATEX: Sira 00ATEX3093X
IECEx: IECEx SIR 12.0016X
CSA: 1248014 (LR 106084)
GOST: TC RUC-G B.ГБ06.B.00105
Temperature
Temperature rating: -20°C to +40°C
Part number:
Please refer to page 10 for part numbering system

Features

- International Ex approvals
- Available in brass, stainless steel, mild steel and aluminium
- Various threadforms available

Benefits

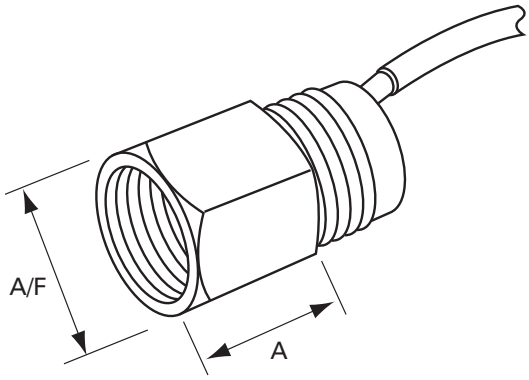
- Provides a method of bonding cable gland or termination to a grounding or earth point
- Maintains Ex certification

Materials

- Brass CZ121
- 316 stainless steel
- Aluminium
- Mild steel

Threadforms

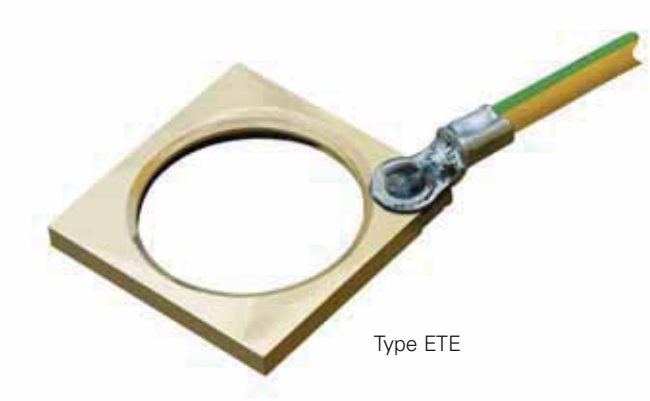
- Metric
- NPT
- PG
- ISO pipe (BSP)
- ET



Dimensions of Metric Versions

Size	Body Length (A)	A/F
M16	21.50	23.37
M20	21.50	30.48
M25	21.50	37.59
M32	21.50	47.24
M40	21.50	55.88
M50	21.50	70.10
M63	21.50	90.17

Earth plates (Exe) - ETE Series



Type ETE

Technical specification

Code of protection categories
ATEX: II 2GD, Ex e II
Compliance standards
ATEX: EN 50014, EN 50018, EN 50019, EN 50281-1-1
Certificate Details
ATEX: Sira 00ATEX1073U
Temperature
The item is classified as a component and is therefore not given a temperature rating
Part number:
Please refer to page 10 for part numbering system

Features

- International Ex approvals
- Brass CZ121 material
- Supplied with earth lead
- Various threadforms available

Benefits

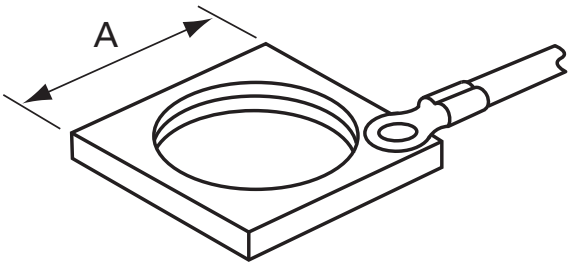
- Ensures earth continuity when terminating brass glands into non-metallic enclosures

Materials

- Brass CZ121

Threadforms

- Metric
- PG
- ET



Dimensions of metric versions

Size	Material size (A)	Earth lead x 300mm (mm^2)
M16	22.00	2.50
M20	30.00	2.50
M25	32.00	4.00
M32	38.00	6.00

Type EPZ

Technical specification

Part number: Please refer to page 10 for part numbering system

Features

- Available in brass, stainless steel and aluminium
- Various threadforms available

Benefits

- Provides an earthbound connection for an entry component

Materials

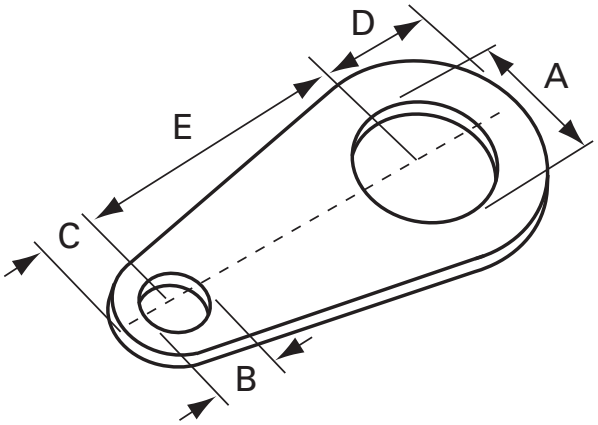
- Brass CZ121
- 316 stainless steel
- Aluminium

Threadforms

- Metric
- NPT
- NPSM
- PG
- ISO pipe (BSP)
- ET

Plating options

- Electroless nickel
- Zinc
- Others on application



Dimensions of metric versions

*For information only - shape of product / outer diameters may change.

Size A	Thickness	B	C	D	E
M16	1.40	7.00	7.00	13.50	35.30
M20	1.40	7.00	7.00	13.50	35.30
M25	1.40	10.50	10.00	18.50	41.40
M32	1.40	12.00	13.00	23.30	53.90
M40	1.40	14.00	17.50	26.30	60.00
M50	1.40	14.00	17.50	32.10	76.10
M63	1.40	14.00	17.50	39.50	84.00
M75	1.40	14.00	17.50	44.00	94.50

Locknuts - LNZ Series

Type LNZ

Technical specification

Plating: Electroless Nickel, Zinc, other on application
Part number: Please refer to page 10 for part numbering system

Features

- Available in brass, mild steel, stainless steel, aluminium and nylon 6
- Various threadforms available

Benefits

- Provides a method for securing a threaded entry component into a piece of equipment

Materials

- Brass CZ121
- 316 stainless steel
- Aluminium
- Mild steel
- Nylon 6

Threadforms

- Metric
- NPT
- NPSM
- PG
- ISO pipe (BSP)
- ET

Earthing locknuts - LEZ Series

Type LEZ

Features

- Available in brass and stainless steel
- Metric and NPT threadforms available

Benefits

- An alternative method of earthing when terminating metallic cable glands into a thin steel wall enclosure
- Cutting teeth on one surface cut into enclosure on tightening, securing the nut

Technical specification

Plating: Electroless nickel, zinc
Part number: Please refer to page 10 for part numbering system

Dimensions of metric versions

Size	A/F
M12	14.00
M16	18.00
M20	23.00
M25	28.00
M32	36.00
M40	44.00
M50	54.00
M63	70.00

Materials

- Brass CZ121
- 316 Stainless steel

Threadforms

- Metric
- NPT

Nipples

N Series nipples are supplied 50mm long as standard; alternative lengths can be supplied as required. Nipples are available in a variety of threadforms and materials, including brass, mild steel, stainless steel and aluminium. Metallic finishes can be plated to requirements.

Couplers

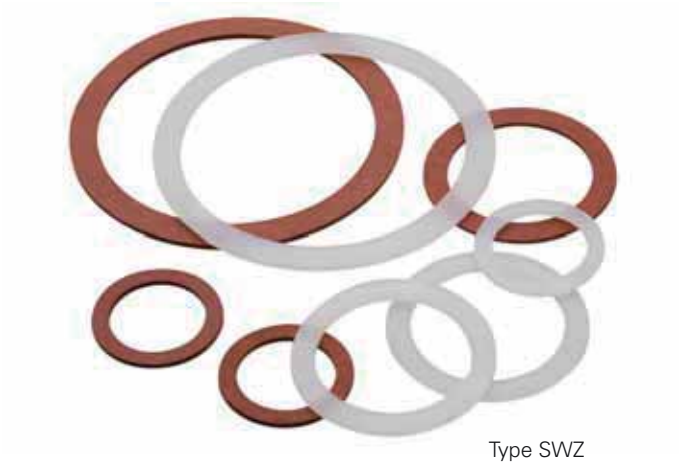
COZ Series couplers are available in a wide combination of threadforms and sizes and materials, including brass, mild steel, stainless steel and aluminium. Couplers can be plated to requirements.

Bushes

M Series bushes are available in a variety of male and female threadforms. Materials include brass, mild steel, stainless steel and aluminium, and may be plated to requirements.

Please note these products are not certified.

IP sealing washers - SWZ Series



Type SWZ

Technical specification

Part number: Please refer to page 10 for part numbering system

Dimensions of metric versions

*For information only - shape of product / outer diameters may change.

Size	O/D	Thickness
M16	26.00	1.50
M20	30.50	1.50
M25	38.00	1.50
M32	42.60	1.50
M40	56.00	1.50
M50	64.00	1.50
M63	78.00	1.50
M75	90.00	1.50

Materials

- Nylon
- Red fibre
- Teflon (PTFE)
- Neoprene

Threadforms

- Metric
- NPT
- NPSM
- PG
- ISO pipe (BSP)
- ET

Serrated washers - SRZ Series

Type SRZ

Features

- Serrated washers available in stainless steel and zinc plated steel
- IP sealing washers available in nylon, red fibre, Teflon (PTFE) and neoprene
- Various threadforms available

Benefits

- IP sealing washers are fitted between entry components and the equipment to maintain ingress protection
- Serrated washers can be used to provide additional fixing security in bonding an entry component to the equipment

Technical specification

Part number: Please refer to page 10 for part numbering system

Dimensions of metric versions

*For information only - shape of product / outer diameters may change.

Size	O/D	Thickness	
		Min	Max
M16	25.50	1.00	2.50
M20	32.50	1.50	3.00
M25	39.50	1.50	3.75
M32	49.50	1.50	4.50
M40	64.50	1.50	4.50
M50	70.80	1.50	4.50
M63	100.00	1.50	4.50
M75	112.00	1.50	4.50

Materials

- 316 stainless steel

Threadforms

- Metric
- NPT
- NPSM
- PG
- ISO pipe (BSP)
- ET

Type SHZ

Technical specification

Part number: Please refer to page 10 for part numbering system

Features

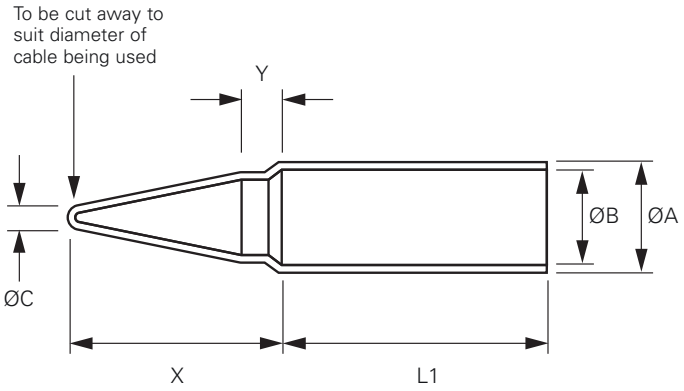
- A range of shrouds are available
- Available in black PCP and standard, flame retardant (FR) and low smoke and fume (LSF) variations of PVC
- PVC shrouds are also available in blue, red, grey (standard only) and white (FR/LSF)

Benefits

- Can be used to minimise the risk of dirt/foreign substances gathering on the cable body
- End of gland can be cut away to suit diameter being used

Materials

- PCP
- PVC
- Flame retardant (FR) PVC
- Low smoke and fume (LSF) PVC



Product dimensions

*For information only - shape of product / outer diameters may change.

Size	ØA	ØB	ØC	X	Y	L1
5	19.90	16.50	2.50	40.00	9.00	57.00
5A	23.80	20.00	2.50	50.00	10.00	60.00
6	25.20	20.00	2.50	50.00	10.00	78.00
7	31.50	26.00	8.00	50.00	10.00	80.00
8	43.00	36.00	11.00	50.00	12.00	78.00
8B	38.80	32.00	11.00	50.00	12.00	80.00
9	49.50	40.00	15.00	50.00	12.00	83.00
10	57.80	48.00	20.00	60.00	14.00	91.00
11	67.20	60.00	25.00	70.00	14.00	105.00
12	75.60	68.00	31.00	75.00	13.00	90.00
12E	84.00	70.00	34.00	75.00	13.00	115.00
13	89.30	75.00	37.00	75.00	13.00	110.00

Flexible conduit barrier (Exde) stopper boxes - FXU Series

Type FXU

Technical specification

Code of protection categories
ATEX: II 2 GD, Ex d IIC Gb / Ex e IC Gb Ex tb IIIC IP6X
IECEx: Ex d IIC Gb/ Ex e IIC Gb, Ex tb IIIC Db IP6X
GOST: ExdIICU
INMETRO: BR-Ex d IIC Gb, BR-Ex tD A21 IP 66/67
Compliance standards
ATEX: EN 60079-0, EN 60079-1, EN 60079-7, EN 60079-31
IECEx: IEC 60079-0, IEC 60079-1, IEC 60079-31, IEC 60079-7
Certificate details
ATEX: ITS 12ATEX17707X
IECEx: IECEx ITS 12.0079X
Temperature
Temperature range -20°C to +85°C
Ingress protection (IP):
Independently tested to IP66 / IP68 when fitted in accordance to manufacturer's instructions
Part number:
Please refer to page 10 for part numbering system

Features

- ATEX Exd/Exe certification
- IP6X, CSA Enclosure Type (NEMA) 3
- Available in nickel-plated brass and stainless steel
- Supplied with compound, making off instructions and gloves

Benefits

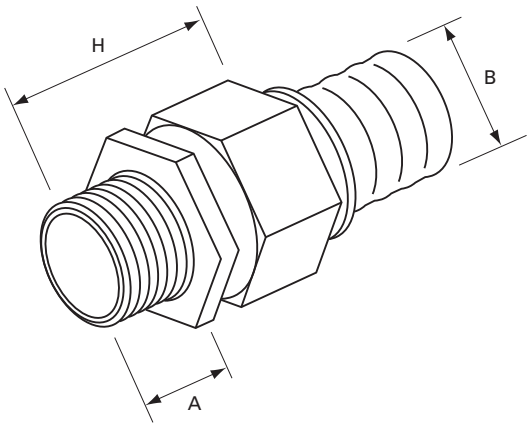
- Provides a flameproof connection for liquidtight and braided flexible conduit by means of compound barrier between individual insulated cable conductors
- Maintains Ex certification
- Maintains IP integrity

Materials

- Nickel-plated brass
- 316 stainless steel

Threadforms

- Metric



Dimensions of Metric Versions

Stopper box size	Thread A min	Ø B nominal	Length H
M20	15.00	21.10	44.50
M25	15.00	26.40	46.00
M32	15.00	33.10	51.50
M40	15.00	41.80	52.50
M50	15.00	47.90	58.50
M63	15.00	59.70	61.50

Features

- Range of flexible conduit suitable for various applications
- IP66, IP67, IP68 (5 bar)
- Temperature ranges: -20°C to +105°C (FEZ, FFZ, FGZ)
  -45°C to +135°C (FDZ, FAZ)
- Available in various materials

Benefits

- Provides impact and environmental protection for cables in outdoor/indoor installations

Materials

- 316 stainless steel
- Galvanised steel

Threadforms

- Metric

Technical specification

Conduit type FEZ	
Description:	Galvanised steel, helically wound, flexible conduit with smooth oil-resistant and high temperature PVC cover
Application:	Machine tools or outdoor installations where liquidtight 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
Temperature:	-20°C to +105°C
IP rating:	IP66, IP67, IP68 (5 bar)
Approvals:	Lloyd's Register Type Approval

Conduit type FDZ	
Description:	Galvanised steel, helically wound, flexible conduit with smooth thermoplastic rubber cover. ONLY AVAILABLE IN BLACK
Application:	Machine tools or outdoor installations where liquidtight 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
Temperature:	-45°C to +135°C
IP rating:	IP66, IP67, IP68 (5 bar)

Conduit type FFZ	
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 liquidtight 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
Temperature:	-20°C to +105°C
IP rating:	IP66, IP67, IP68 (5 bar)

Dimensions - FEZ, FDZ, FFZ

Nominal size	Outside dia.	Inside dia.	Inside bend rad.	Inside bend rad. FFZ only
10	11.80	7.00	35.00	–
12	14.20	10.00	40.00	–
16	17.80	12.60	45.00	–
20	21.10	16.00	65.00	65.00
25	26.40	21.00	100.00	100.00
32	33.10	26.50	135.00	120.00
40	41.80	35.40	175.00	140.00
50	47.90	40.40	230.00	180.00
63	59.70	51.60	280.00	–

Flexible conduit

Technical specification

Conduit type FGZ	
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 liquidtight 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
Temperature:	-20°C to +105°C
IP Rating:	IP66, IP67, IP68 (5 bar)

Conduit type FAZ	
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
Temperature:	-45°C to +135°C
IP Rating:	IP66, IP67, IP68 (5 bar)

Conduit support P clips type FZZ	
Description:	Type FZZ plated steel P clip with PVC liner
Application:	P clips to support flexible conduit Types FAZ, FDZ and FEZ

Conduit Support P Clips Type FYZ	
Description:	Type FYZ stainless steel P clip
Application:	P clips to support flexible conduit Type FAZ, FDZ, FEZ, FFZ and FGZ

Dimensions - FGZ

Nominal size	Outside dia.	Inside dia.	Inside bend rad.
10	11.80	7.00	35.00
12	14.20	10.00	40.00
16	17.80	12.60	45.00
20	21.10	16.00	65.00
25	26.40	21.00	100.00
32	33.10	26.50	135.00
40	41.80	35.40	175.00
50	47.90	40.40	230.00
63	59.70	51.60	280.00

Dimensions - FAZ

Nominal size	Outside dia.	Inside dia.	Inside bend rad.
16	19.30	12.60	45.00
20	22.60	16.00	65.00
25	27.90	21.00	100.00
32	34.60	26.50	135.00

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