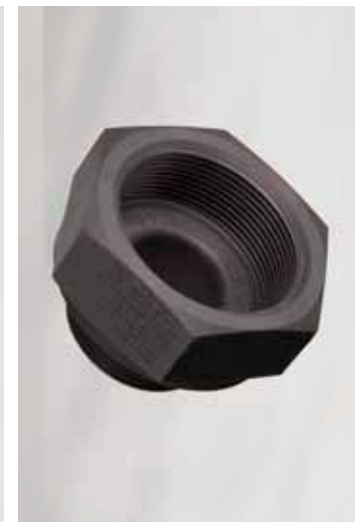


Redapt thread conversion products

# 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 **EAT•N**



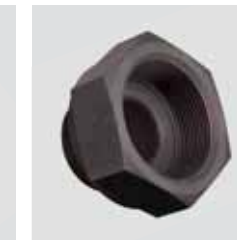
# The safety you rely on.

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**



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The product information published in our catalogues and literature is not guaranteed. It has been compiled with care and is sufficiently accurate for most purposes. It is subject to change without notice. Occasionally, it may be necessary to modify the materials, finishes or other components of the product. These changes will in no way reduce the performance or function for which the product is intended.

All statements, technical information and recommendations contained herein are based on information and tests we believe to be reliable. The accuracy or completeness thereof are not guaranteed. In accordance with Eaton's Crouse-Hinds' Terms and Conditions of Sale, and since conditions of use are outside our control, the purchaser should determine the suitability of the product for his/her intended use and assumes all risk and liability whatsoever in connection therewith.

All sales of Eaton's Crouse-Hinds products are specifically subject to the Terms and Conditions of Sale as shown in Eaton's Crouse-Hinds distributor price sheets.





## 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.**



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

		<b>IECEX</b>				
		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						





### **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
<b>Adaptors &amp; reducers</b>		
14-17	<b>AD</b>	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
<b>Stopping Plugs</b>		
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
<b>Breather Drains</b>		
31	DP	Breather drain (Exe)
32	BD	Breather drain (Exde)
<b>Accessories</b>		
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
<b>U</b>	Exd I and IIC & Exe I and IIC
D	Exd I and IIC
E	Exe I and IIC
Z	Industrial

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

Plating	Digit 5
0	Unplated
<b>1</b>	Electroless nickel
2	Zinc
6	Chromatise

## Example

Digits 1 & 2	Digit 3	Digit 4	Digit 5	Digits 6 & 7	Digits 8 & 9
<b>AD</b>	<b>- U</b>	<b>- 1</b>	<b>- 1</b>	<b>- 29</b>	<b>- 04</b>
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	<b>29 1/2" NPT</b>	42 1/2" NPSM	55 1/2" BSPP	68 1/2" BSPT	79 PG7
<b>04 M20</b>	18 3/4" ET	30 3/4" NPT	43 3/4" NPSM	56 3/4" BSPP	69 3/4" 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 1 1/4" ET	32 1 1/4" NPT	45 1 1/4" NPSM	58 1 1/4" BSPP	71 1 1/4" BSPT	82 PG13.5
07 M40	21 1 1/2" ET	33 1 1/2" NPT	46 1 1/2" NPSM	59 1 1/2" BSPP	72 1 1/2" 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 2 1/2" ET	35 2 1/2" NPT	48 2 1/2" NPSM	61 2 1/2" BSPP	74 2 1/2" 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 3 1/2" NPT	50 3 1/2" NPSM	63 3 1/2" BSPP	76 3 1/2" 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
<b>SHZ</b>	<b>- R</b>	<b>- B</b>	<b>- 04</b>	<b>- 00</b>	<b>- S005</b>
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
<b>SHZ</b>	<b>- V</b>	<b>- R</b>	<b>- 07</b>	<b>- 00</b>	<b>- S008</b>
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 1/2" NPT	S1 15mm	3 Holes	Without
				30 3/4" 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					
<b>DP</b>	<b>-</b>	<b>E</b>	<b>-</b>	<b>3</b>	<b>-</b>	<b>0</b>	<b>-</b>	<b>04</b>	<b>-</b>	<b>S1</b>

## 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 1/2" NPT	D3 Viton
				30 3/4" 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					
<b>BD</b>	<b>-</b>	<b>U</b>	<b>-</b>	<b>3</b>	<b>-</b>	<b>0</b>	<b>-</b>	<b>04</b>	<b>-</b>	<b>S1</b>

## 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					
<b>FAZ</b>	<b>-</b>	<b>3</b>	<b>-</b>	<b>B</b>	<b>-</b>	<b>04</b>	<b>-</b>	<b>00</b>	<b>-</b>	<b>S010</b>
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					
<b>FEZ</b>	<b>-</b>	<b>R</b>	<b>-</b>	<b>G</b>	<b>-</b>	<b>07</b>	<b>-</b>	<b>00</b>	<b>-</b>	<b>S050</b>
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
1/2"	21.34	14.00
3/4"	26.67	14.00
1"	33.40	11.50
1 1/4"	42.16	11.50
1 1/2"	48.26	11.50
2"	60.33	11.50
2 1/2"	73.03	8.00
3"	88.90	8.00
3 1/2"	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	<b>BSP</b> Parallel or Taper BS2279 (BS21)
Europe	<b>G</b> (Parallel) <b>GK</b> (Taper) <b>R</b> (Parallel) <b>RK</b> (Taper)
Japan	<b>PF</b> (Parallel) JIS B 303
CIS	<b>K mpy</b> (Taper)

## BSP ISO pipe thread

### ISO R/7; UNI 6125

Size	Pipe Dia.	TPI
3/8"	16.66	19.00
1/2"	20.96	14.00
3/4"	26.44	14.00
1"	33.25	11.00
1 1/4"	41.91	11.00
1 1/2"	47.80	11.00
2"	59.61	11.00
2 1/2"	75.18	11.00
3"	87.88	11.00

## ET imperial conduit

### BS31

Size	Major dia.	TPI
5/8"	15.88	18.00
3/4"	19.05	16.00
1"	25.40	16.00
1 1/4"	31.75	16.00
1 1/2"	38.10	14.00
2"	50.80	14.00
2 1/2"	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	-	5/8"
M20	1/2"	11, 13.5	1/2"	3/4"
M25	3/4"	16	3/4"	1"
M32	1"	21	1"	1 1/4"
M40	1 1/4"	29	1 1/4"	1 1/2"
M50	1 1/2"	36	1 1/2"	2"
M63	2"	42, 48	2"	2 1/2"
M75	2 1/2"	-	2 1/2"	3"
M90 x 2.0	3"	-	3"	-
M100 x 2.0	3 1/2"	-	-	-
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

## Available thread sizes and corresponding bore size

Metric	Bore	NPT	Bore	ISO Pipe	Bore	ET	Bore	PG	Bore
M16	10.00	-	-	3/8"	10.00	5/8"	10.00	PG7	8.00
M20	14.00	1/2"	15.00	1/2"	15.00	3/4"	14.00	PG9	10.00
M25	18.00	3/4"	19.00	3/4"	19.00	1"	18.00	PG11	13.50
M32	24.00	1"	25.00	1"	25.00	1 1/4"	24.00	PG13.5	14.00
M40	32.00	1 1/4"	32.00	1 1/4"	32.00	1 1/2"	32.00	PG16	16.00
M50	41.00	1 1/2"	38.00	1 1/2"	38.00	2"	41.00	PG21	21.00
M63	53.00	2"	49.00	2"	49.00	2 1/2"	53.00	PG29	29.00
M75	64.00	2 1/2"	60.00	2 1/2"	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	3 1/2"	88.00	3 1/2"	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								

## 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, ExdeIIICU, 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





Type ADE4

## 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

## 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

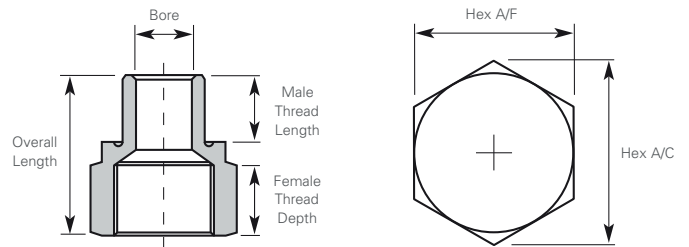
No o-ring: -20°C to +40°C Viton o-ring: -5°C to +40°C

### 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



## 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

Male	Metric												NPT								PG																
	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	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	310	211			
M75	311	311	311	311	311	311	311	212	261	213	213				311	311	311	311	311	311	311	311	311	311	311	311	311	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	312	312	312	312	312	312	312	312	312	312	312	312	312	312		
M100	313	313	313	313	313	313	313	313	313	313	313	215	215	262	263										313	313	313	313	313	313	313	313	313	313	313	313	
M110	325	325	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	326	263	263																						

NPT	Metric										NPT										PG													
	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	319	319	319	319
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	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	321	321	321
3 1/2"	322	322	322	322	322	322	322	322	322	244		322	322	322	322	322	322	322	322	322	255	256		322	322	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	323	256	264		323	323	323	323	323	323	323	323	323	323
5"	-	-	-	-	-	-	-	-	-	-		327	327	327	327	327	327	327	327	327	327	327	-		-	-	-	-	-	-	-	-	-	-

PG	Metric							NPT					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	209	210	211			
42	324	324	324	324	324	210	211		324	324	324	324	324	226		324	324	324	324	324	324	210	211		
48	310	310	310	310	310	211	211		310	310	310	310	310	226	227		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



## 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

## 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

## 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, ExdIIICU, 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):

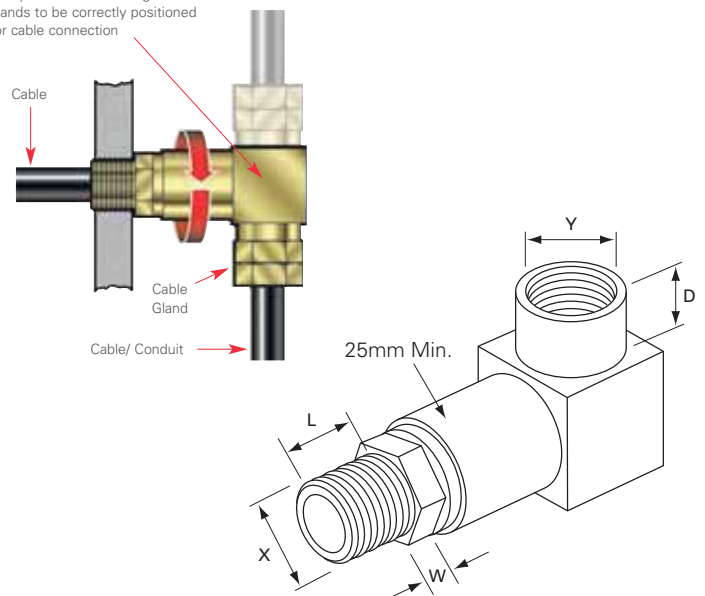
Independently tested to IP66 / IP68 when fitted in accordance to manufacturer's instructions

### Part number:

Please refer to page 10 for part numbering system

## 90° Swivel Adaptor

This part rotates enabling the cable glands to be correctly positioned for cable connection





Type AYU

## 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

## 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

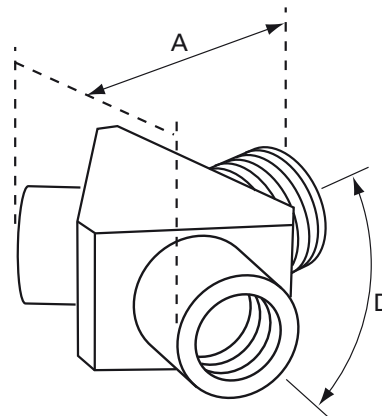
The item is classified as a component and therefore metallic products are not given an operating temperature range

### Ingress protection (IP):

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

### Part number:

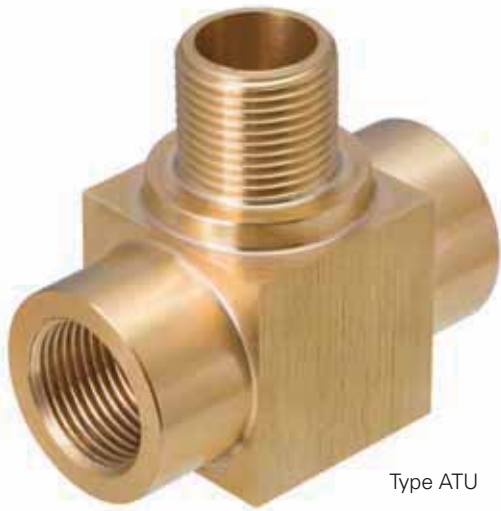
Please refer to page 10 for part numbering system



## 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

## 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

## 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

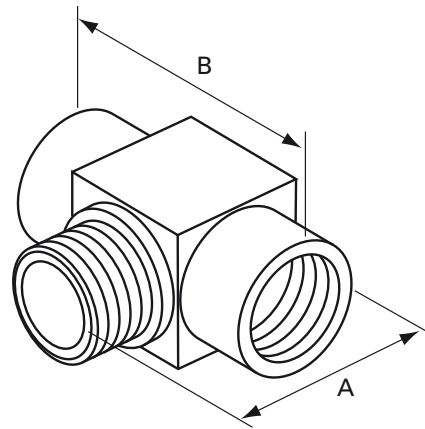
The item is classified as a component and therefore metallic products are not given an operating temperature range

### 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



## 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

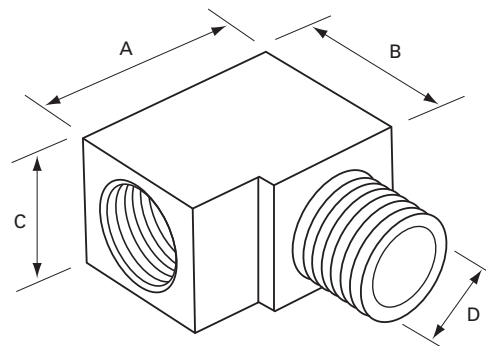
- Brass CZ121
- 316 stainless steel
- Aluminium

## 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

## 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

## 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: ExdIIICU

### 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

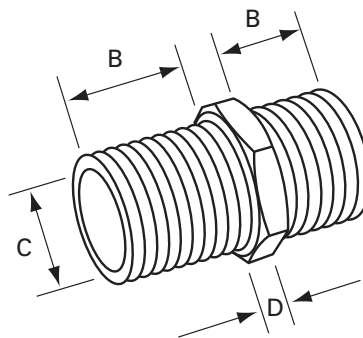
Temperature range: -50°C to +180°C

### Ingress protection (IP):

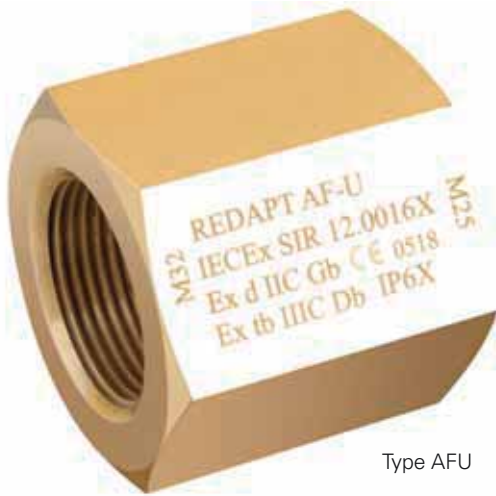
Independently tested to IP66 / IP68 when fitted in accordance to manufacturer's instructions

### Part number:

Please refer to page 10 for part numbering system







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

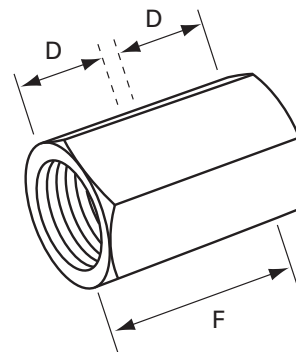
- Brass CZ121
- 316 stainless steel

## 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



Type AID

## Features

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

## Benefits

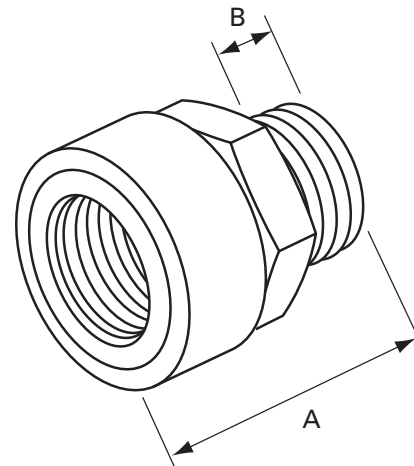
- Provides method of insulating connection device from the equipment
- Allows armour current to be controlled in a positive manner
- Inspection of grounding made easy

## Materials

- Brass CZ121
- 316 stainless steel
- Aluminium

## Threadforms

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



## 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

## 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.

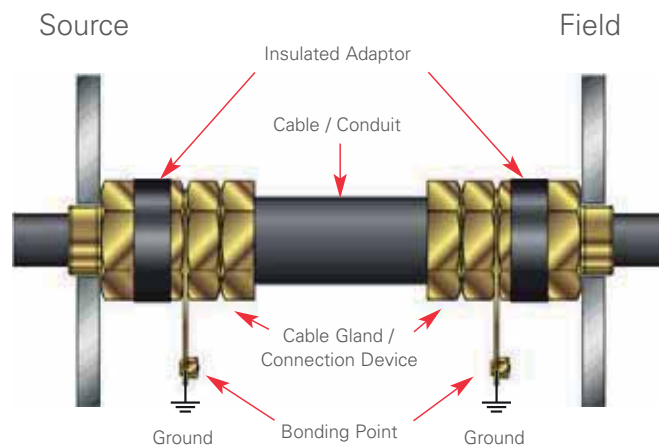
## Single point grounding

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.

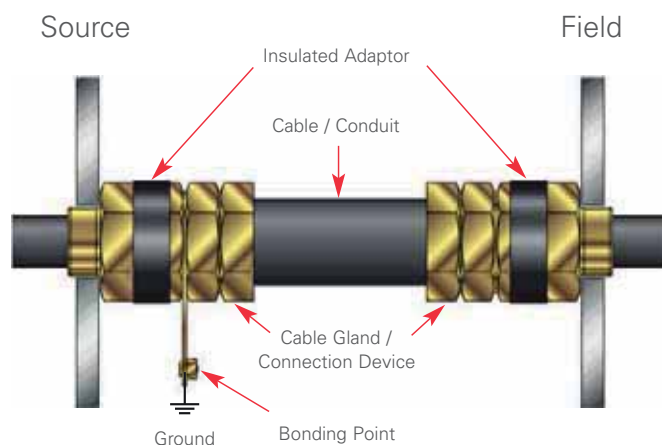
Single point grounding can:

- 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

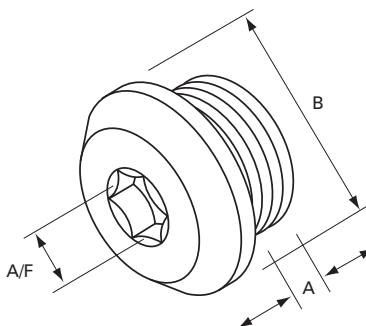
- Metric
- NPT
- NPSM
- PG
- ISO pipe (BSP)
- ET

## Plating options

- Electroless nickel
- Zinc
- Others on application

## 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



## 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, ExdeIIICU, 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

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



Type PDE4

## Features

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

## Benefits

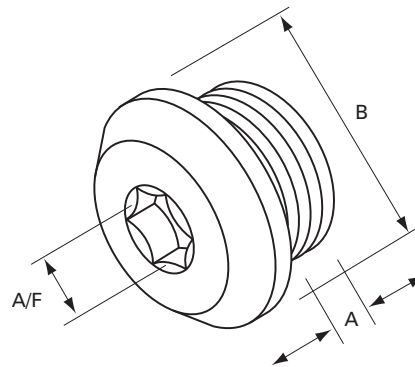
- Provides method of filling unused entries in equipment
- Maintains increased safety certification
- Maintains IP integrity

## Materials

- Glass filled nylon

## Threadforms

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



## 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

## 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

## 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

## 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: ExdIIICU

### 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

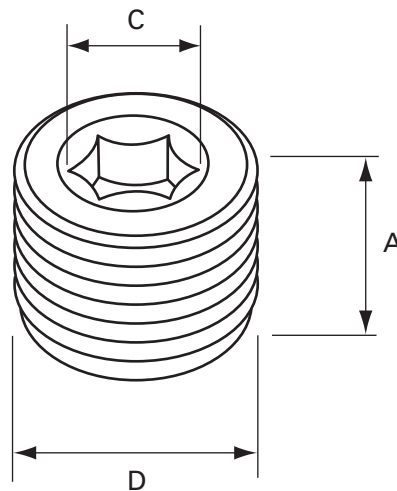
Temperature range: -50°C to +180°C

### 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



## 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

## Features

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

## Benefits

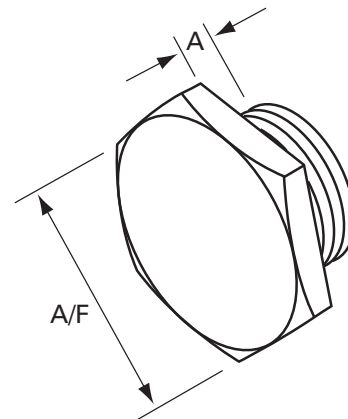
- Provides method of filling unused entries in equipment
- Maintains increased safety certification
- Maintains IP integrity

## Materials

- Brass CZ121
- 316 stainless steel
- Aluminium

## Threadforms

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



## 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: ExellCU

### 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

## 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

## 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

## 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, ExdeIIICU, 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

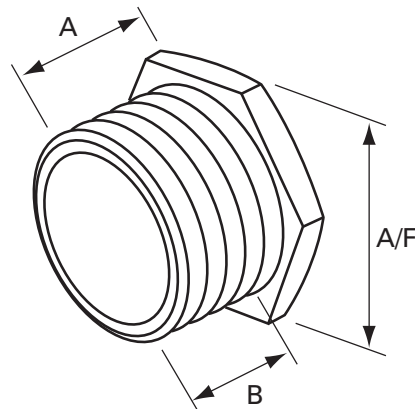
Temperature range: -50°C to +180°C

### Ingress protection (IP):

Tested to IP68

### Part number:

Please refer to page 10 for part numbering system



## 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

## 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)

## 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/II Mb/Gb, Ex tb IIIC Db, IP66, Ex e IIC Gb, Ex tb Db IP66

GOST: ExelU. Nylon, ExelIU 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

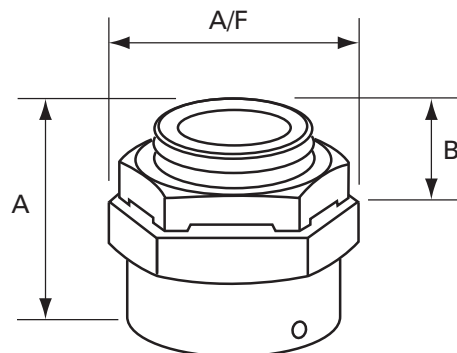
Fluorosilicone: -70°C to +150°C

### Ingress protection (IP):

Tested to IP66

### Part number:

Please refer to page 10 for part numbering system



# Flameproof (Exde) breather drains - BDU Series



Type BDU

## 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

## 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/II Mb/Gb, Ex d I/II 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)

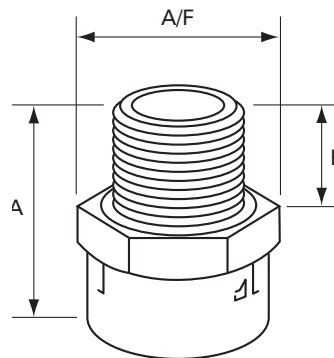
Fluorosilicone: -50°C to +150°C

### Ingress protection (IP):

Tested to IP66

### Part number:

Please refer to page 10 for part numbering system



## 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

## 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

## 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: ExdIIICU

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

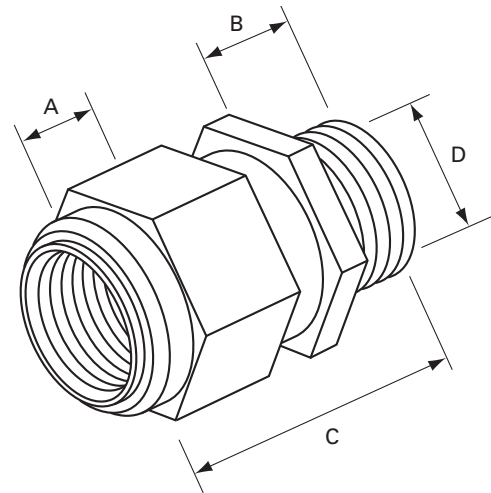
Temperature range -20°C to +85°C

### 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



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



Type UND

Type UFD

## 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

## 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 1 and 2; Groups A, B, C, D; Class II, Groups E, F, G; Class III; Enclosure Type 3

GOST: ExdIIICU

### 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

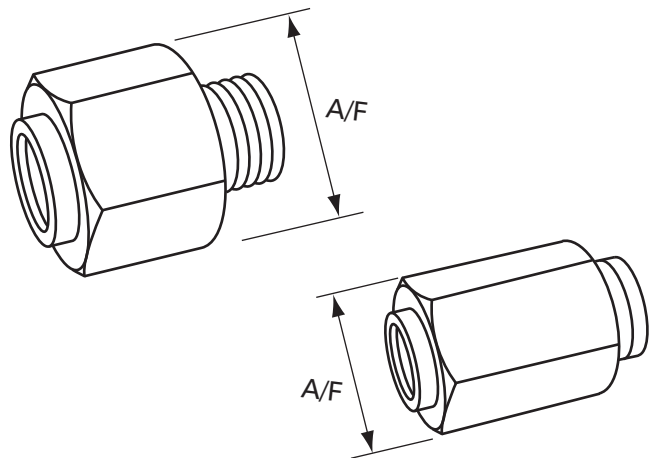
Temperature range: -50°C to +180°C

### 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



## 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

## 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

## 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: ExellU

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)

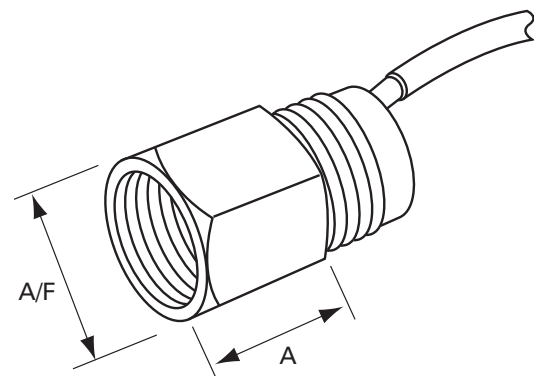
GOST: TC RUC-G B.ГБ06.B.00105

### Temperature

Temperature rating: -20°C to +40°C

### Part number:

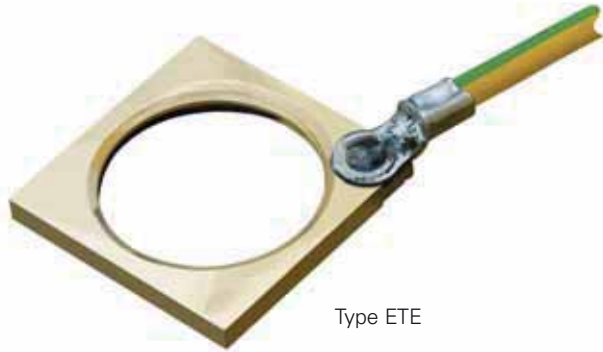
Please refer to page 10 for part numbering system



## 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

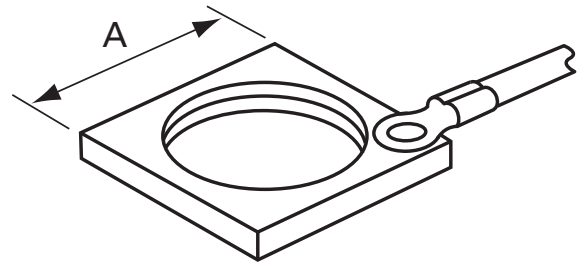
- Ensures earth continuity when terminating brass glands into non-metallic enclosures

## Materials

- Brass CZ121

## Threadforms

- Metric
- PG
- ET



## Dimensions of metric versions

Size	Material size (A)	Earth lead x 300mm (mm <sup>2</sup> )
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

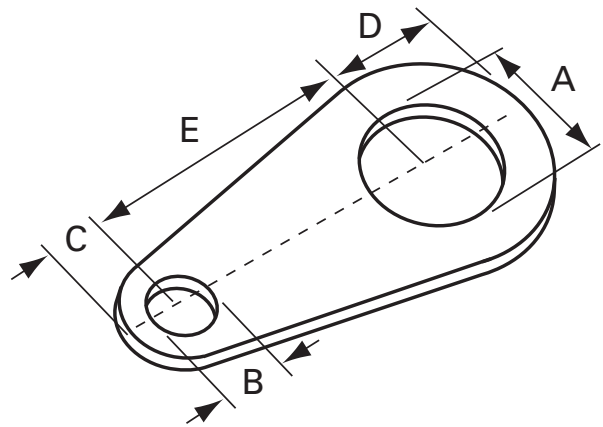
- Brass CZ121
- 316 stainless steel
- Aluminium

### 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

### 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

### 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

### 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

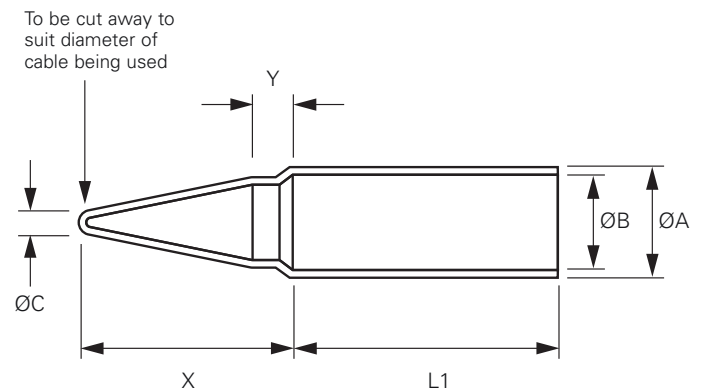
- A range of shrouds are available
- Available in black PCP and standard, flame retardant (FR) and low smoke and fume (LSF) variations of PVC
- PVC shrouds are also available in blue, red, grey (standard only) and white (FR/LSF)

### 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: ExdIIICU

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

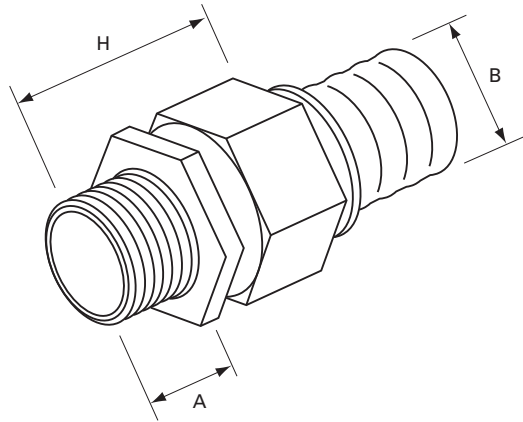
- Provides a flameproof connection for liquidtight and braided flexible conduit by means of compound barrier between individual insulated cable conductors
- Maintains Ex certification
- Maintains IP integrity

## 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	-



## 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











Eaton's Crouse-Hinds

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