1 # EU - TYPE EXAMINATION CERTIFICATE

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU**

3 EU - Type Examination Certificate Number: **Baseefa16ATEX0004X**

4 Product: **Type ABG Cable Glands (Barrier Type)**

5 This certificate is held by: **ABTECH Limited**

6 Address: **199 Newhall Road, Sheffield, South Yorkshire, S9 2QJ**

7 This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 SGS Baseefa, Notified Body number 1180, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Report No. **GB/BAS/ExTR16.0019/00**

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2012 **EN 60079-1:2007** **EN 60079-7:2007** **EN 60079-31:2009**

except in respect of those requirements listed at item 18 of the Schedule.

10 If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

11 This EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of the product shall include the following :

⟨Ex⟩ **II 2GD Ex d IIC Gb,**
Ex e IIC Gb,
Ex tb IIIC Db
(-60°C ≤ Ta ≤ +100°C) IP66/67

SGS Baseefa Customer Reference No. **6376** Project File No. **15/0966**

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pp R S SINCLAIR
TECHNICAL MANAGER
On behalf of SGS Baseefa Limited

13 **Schedule**

14 **Certificate Number Baseefa16ATEX0004X**

15 Description of Product

The ABG Cable Glands are intended for use with armoured or braided (screened) cable and comprise the following components :-

a. An entry component, in the size range (M20 to M63)
b. A ferrule (for compound filling)
c. A two part epoxy filling compound
d. A combined retaining spigot and armour clamping cone
e. An armour clamping ring for steel wire armour cable
f. An armour clamping ring for steel basket weave armour or braided(screened) cable
g. A middle nut
h. An outer displacement seal
i. A back nut

The glands may be manufactured in brass or stainless steel which may be nickel plated to suit the application. The glands may be supplied with metric entry threads (as noted), or an alternative NPT entry thread of equivalent size

Variation 0.1

Alternative ABLG Cable Gland assembly for use with lead sheathed cables incorporating a spring contact clip within the retaining spigot/armour clamp cone (item d.)

16 Report Number

GB/BAS/ExTR16.0019/00

17 Specific Conditions of Use

1. When used with unarmoured or braided cables, the cables shall be clamped and/or cleated to prevent pulling and twisting.
2. When used in dust environments the entry thread shall be sealed (in accordance with EN60079-14) to maintain the ingress protection rating of the associated enclosure.
3. The spring contact clip of the ABLG gland assembly is a supplementary connection to the lead sheath and shall not form the sole earth connection on which the type of protection relies.

18 Essential Health and Safety Requirements

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9.

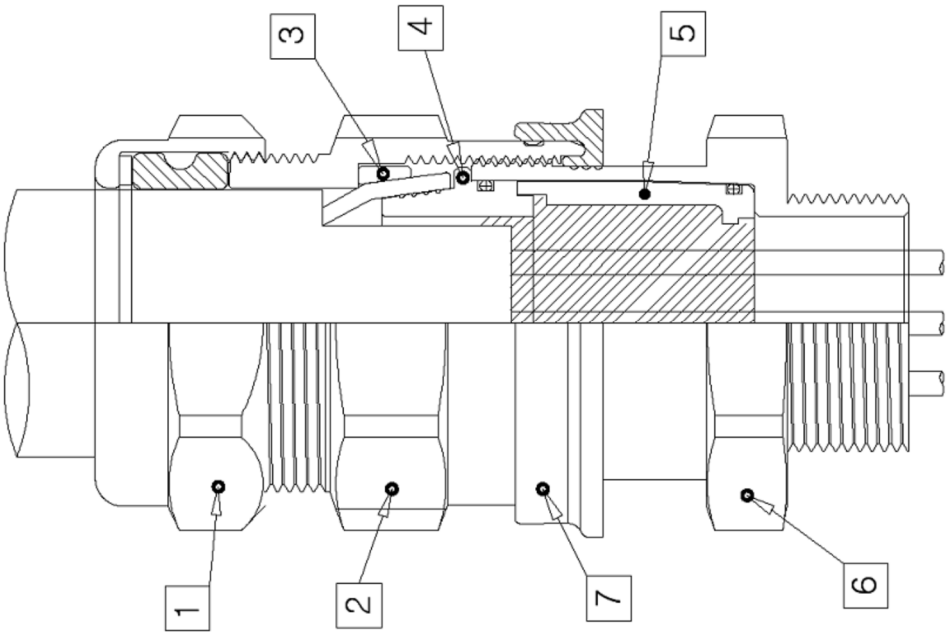
19 Drawings and Documents

Number	Sheet	Issue	Date	Description
BSA-CG10-ABG/LG-000-0-(3)	1	0	16/09/26	Marking Detail
Baseefa11ATEX0004X	--	--	15/05/13	DNCEX Cable Glands (Barrier Type)

ABG Cable Glands

Installation Procedure

ABG Cable Gland Range
Baseefa 16ATEX0004X
IECEx BAS 16.0011X
Installation, Operation and Maintenance Instructions



Material: Brass/ Brass with Nickel plated and Stainless Steel 316

1. Back Nut
2. Middle Nut
3. Armour Clamp Ring (*)
4. Armour Cone
5. Compound Sleeve
6. Outer Surface Seal
7. Entry Adaptor

(*) : Marked 'W' is for single wire armoured
(**): Marked deluge seal shall be provided where required over IP66/ IP67

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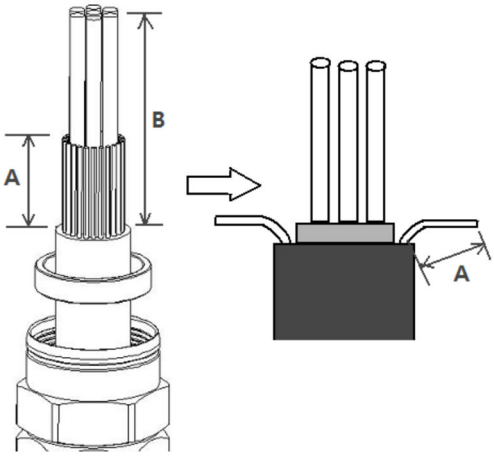
Special Conditions for Safe Use

1. When used with unarmoured or braided cables, the cables shall be clamped and/ or cleated to prevent pulling and twisting.
2. When used in dust environments the entry thread shall be sealed (in accordance with IEC60079-14) to maintain the ingress protection rating of the associated enclosure.
3. The spring contact clip of the ABLG gland assembly is a supplementary connection to the lead sheath and shall not form the sole earth connection on which the type of protection relies.

ABG Cable gland assembly

Fitting Installation procedure

1. Cable Preparation



Gland Size	Dimension 'A'
20a up to 20b	12~13
20d	16~18
25a up to 32	18~20
40	23~25
50	23~25
63	28~30

*Cut and strip the cable to suit and expose the armour/ braid 'A'

2. Place a sealing washer on the entry adaptor (7).
   Assemble the entry adaptor (7) in the enclosure and remove the compound sleeve (5).

M25 Washer

Compound Sleeve removal

3. Push the cable through the armour cone (4).
   Spread armour/ braid over the armour cone (4) until the end of the armour/ braid is up against the shoulder of the armour cone (4).

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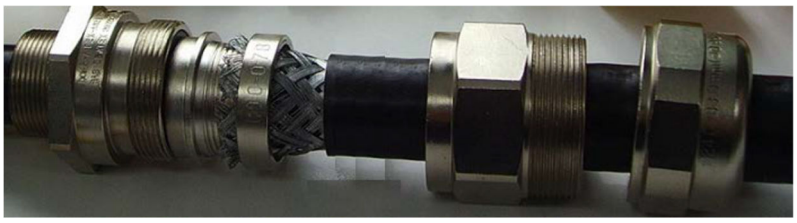

Marked ‘X’ for wire braid armour ring (3)

Marked ‘W’ for single wire armour ring (3)

Hold the entry adaptor (7) in place with a spanner or wench to prevent rotation. Hand tighten the middle nut (2) and rotate a further ¾ with a spanner.

Unscrew the middle nut (2) and visually inspect that the armour/ braid has been clamped between the cone (4) and the armour clamp ring (3).
NB. If unsuccessful repeat step 3.

4. Epoxy Compound Preparation.

- Gloves must be worn.
- Mix compound activator and base together until both colours have blended into one colour (there must be no streaks).

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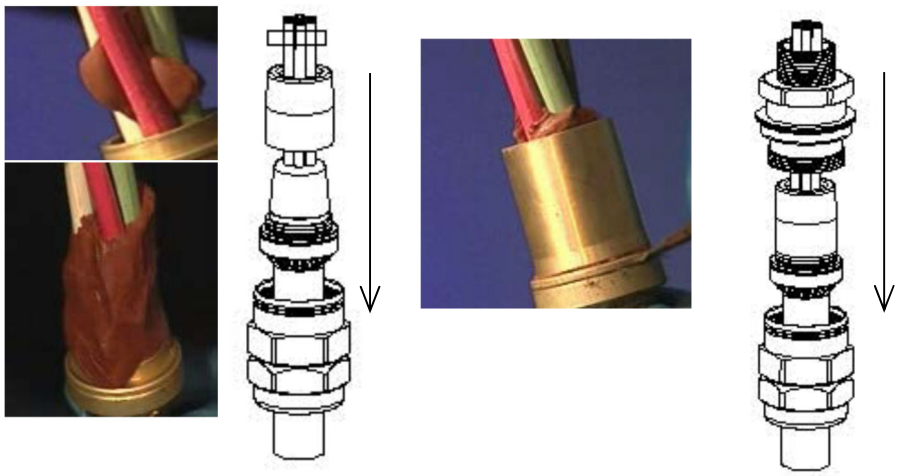
Base – Red
Activator - White

Caution!

- Mixed compound has a working life of 30 minutes.
- Do not allow contact with skin, if the material comes into contact with skin, rinse with hand cleaner immediately.
- Installation of the compound should be performed at room temperature.
- Store material at room temperature.

5. Spread out the cable cores and pack the compound between the cores and strands. Fill all gaps and voids and bring the conductors back together.
Tape the conductors together to prevent disturbance to the compound.
Pass the compound sleeve (5) over the armour cone (4) and remove any surplus compound.



Replace the entry adaptor (7) over the compound sleeve (5), then re-assemble the middle nut (2) to the entry adaptor (7).

Notes: The cable must not be moved for a minimum of 4 hours.
Allow the compound to cure (see below Fig. 1).

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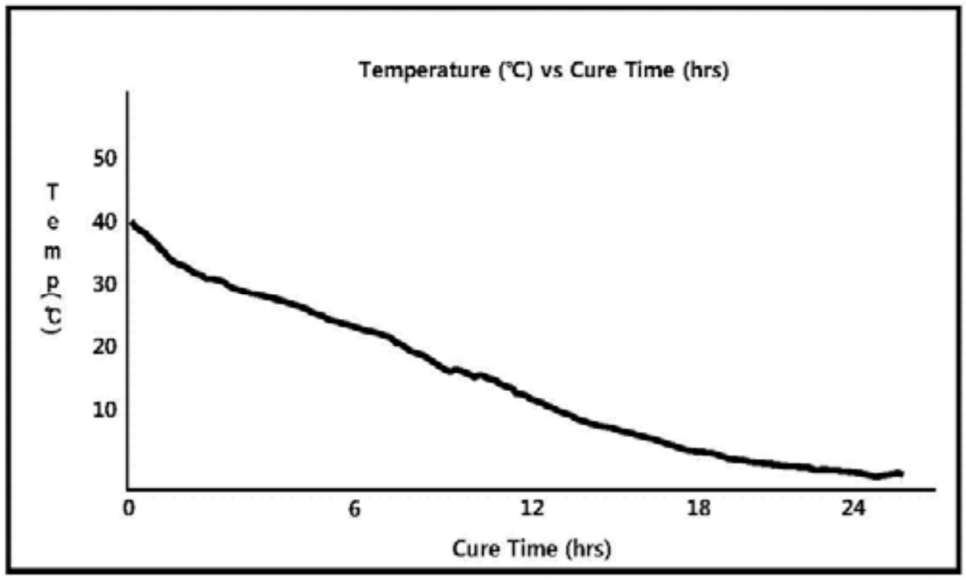
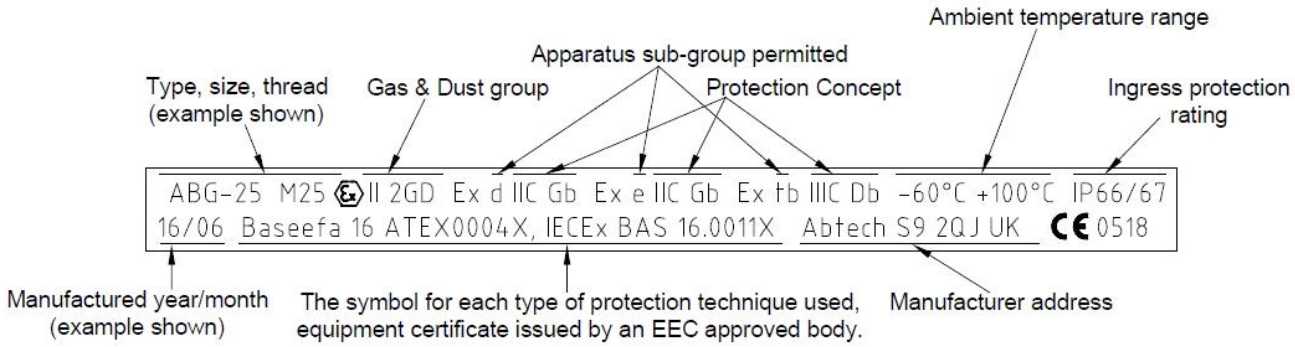


6. Tighten the middle nut (2) using a spanner until resistance is felt.

7. Tighten up the back nut (1) using a spanner until resistance is felt.
   - Tighten a further ¾ turn,
   - Ensure the middle nut (2) does not rotate when tightening the back nut (1).

ATEX and IECEx Marking Details



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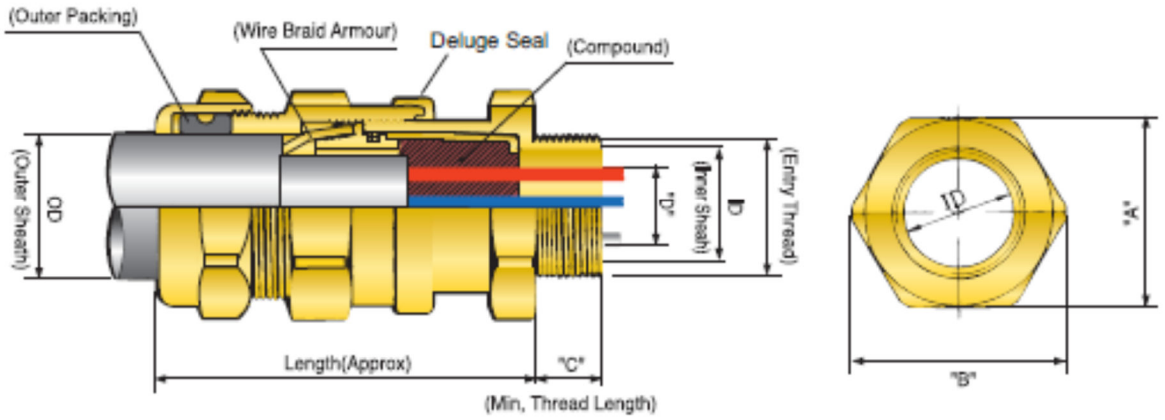
Cable Gland Selection Chart



Part Code	Entry Thread		Cable Acceptance Range							Hex Dimensions		Thread Length	
	Metric	NPT	Inner Sheath			Outer Sheath		Armour Type		Flats (A)	Corners (B)	Metric (C)	NPT (C)
			D Max	ID Max	No. Of Cores	OD Min	OD Max	W Min/ Max	X Min/ Max				
ABG-20a	M20	½"	8.9	10.0	6	7.0	12.0	0.9/1.25	0/0.7	24.0	26.8	15	20
ABG-20b	M20	½"	8.9	10.0	6	11.0	16.0	0.9/1.25	0/0.7	24.0	26.8	15	20
ABG-20d	M20	½"	11.0	12.5	10	14.3	20.0	0.9/1.25	0/0.7	30.0	33.5	15	20
		¾"											20
ABG-25	M25	¾"	16.5	18.3	21	18.5	26.0	1.25/1.6	0/0.7	36.0	40.5	15	20
		1"											25
ABG-32	M32	1"	22.0	24.5	42	24.0	33.0	1.6/2.0	0/0.7	45.8	51.2	15	25
		1 1/4"											25.6
ABG-40a	M40	1 1/4"	26.5	29.5	60	28.0	35.0	1.6/2.0	0/0.7	55.0	61.5	15	25.6
		1 ½"											26
ABG-40	M40	1 1/4"	26.5	29.5	60	30.0	41.0	1.6/2.0	0/0.7	55.0	61.5	15	26
		1 ½"											27
ABG-50a	M50	1 ½"	37.0	41.7	80	36.0	45.0	1.8/2.5	0/1.0	65.0	72.8	15	26
		2"											27
ABG-50	M50	1 ½"	37.0	41.7	80	42.0	52.6	1.8/2.5	0/1.0	65.0	72.8	15	26
		2"											27
ABG-63a	M63	2"	47.8	53.5	100	46.0	56.0	1.8/2.5	0/1.0	80.0	89.5	15	27
		2 ½"											40
ABG-63	M63	2"	47.8	53.5	100	52.0	65.5	1.8/2.5	0/1.0	80.0	89.5	15	27
		2 ½"											40

Certification Details:

Certificate Number: -	Baseefa 16ATEX0004X, IECEx BAS 16.0011X
Coding: -	II 2GD Ex d IIC Gb Ex e IIC Gb Ex tb IIIC Db
Ambient Temperature: -	-60ºC ≤ Tamb ≤ +100ºC
Ingress Protection: -	IP 66/67

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