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CERTIFICATE

[1] SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE

[2] **Equipment or Protective System intended for use in potentially explosive atmospheres Directive 2014/34/EU**

[3] Supplementary EU-Type Examination Certificate number:

CESI 17 ATEX 007 X /01

[4] Product: **Barrier cable glands KBCTN.., KBCTA.. (CENTAURUS) series**

[5] Manufacturer: **Bimed Teknik Aletler Sanayi Ve Ticaret A.S.**

[6] Address: **S.S Bakir ve Pirinç Sanayi Sitesi Leylak Caddesi no:16 TR - 34524 Beylikdüzü – Istanbul (Turkey)**

[7] This supplementary certificate extends EC–Type Examination Certificate CESI 17 ATEX 007X to apply to products designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to..

[8] CESI, notified body n. 0722 in accordance with Article 17 of the Directive 2014/34/EU of the Parliament and Council of 26 February 2014, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report n. EX-B8012673.

[9] In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016

[10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

[11] This EU-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

[12] The marking of the equipment or protective system shall include the following:

Ex **I M2** **Ex db I Mb** *and* **Ex eb I Mb**
and/or
Ex **II 2 GD** **Ex db IIC Gb** *and* **Ex eb IIC Gb** *and* **Ex tb IIIC Db**
IP66/68

Date 2018.06.17 - Translation issued the 2018.06.17

Prepared	**Verified**	**Approved**
Alessandro Fedato	Mirko Balaz	Roberto Piccin

CESI S.p.A.
Testing & Certification Division
Business Area Certification
Il Responsabile
(Roberto Piccin)

Schema di certificazione CESI-ATEX

ACCREDIA
PRD N. 018B
Membro degli Accordi di Mutuo Riconoscimento EA, IAF e ILAC
Signatory of EA, IAF and ILAC Mutual Recognition Agreements

[13] **Schedule**

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 17 ATEX 007 X /01**

[15] **Description of the variation to the product**

- New sizes for **KBCTN****, **KBCTA**** series have been added.
- Use of alternative flat washers made of Fiber have been added.

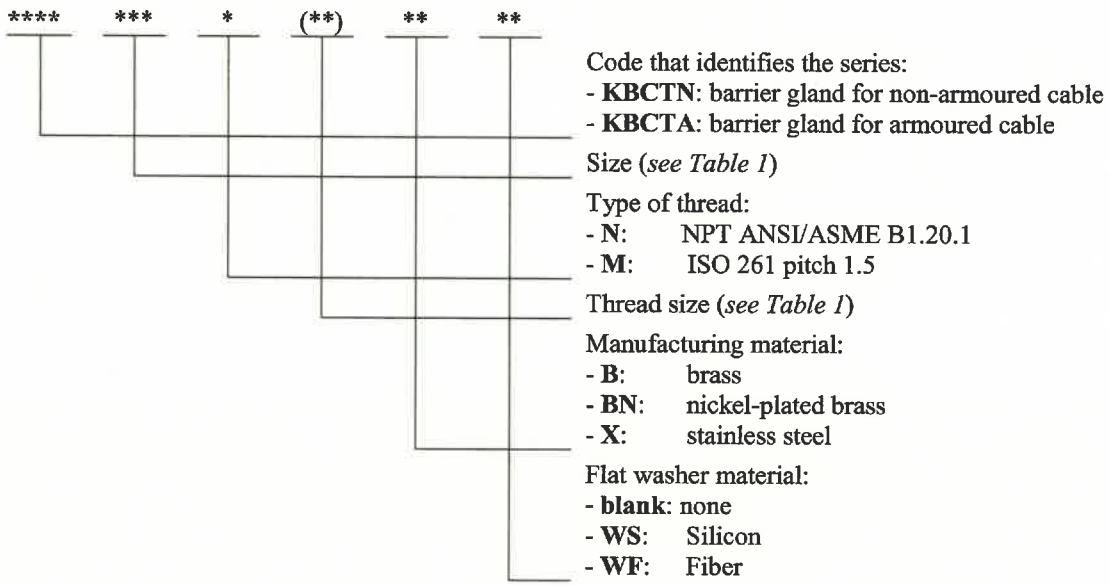
Description of equipment

A Barrier gland is an Ex db cable gland incorporating a compound filled chamber sealing around the individual cores of the cable to maintain the flameproof integrity of the equipment on which it has been fitted.
The Barrier glands **KBCTN****, **KBCTA**** series (commercial gland family named CENTAURUS) are suitable for inserting single cable or multiple circular cores into Ex db enclosures having threaded entries and Ex eb or Ex tb enclosures having either threaded or plane entries. Attachment of the glands to an enclosure is by means of the male threaded portion on the male body. The epoxy filling compound type **EXEP epoxy putty** is used to seal cores and gland body together and to clamp the cables to prevent pulling or twisting forces being transmitted to the conductors connections.
Ingress protection of IP66/68 (50 m for 30 min.) is maintained when the glands are installed in accordance with the manufacturer's instructions.

The Barrier glands KBCTN type are designed for non-armoured cables while the Barrier glands KBCTA** type are designed for steel wire armour cables.**

The Barrier glands **KBCTN****, **KBCTA**** series have an operating temperature range from -60°C up to +100°C, with the limitation at -50°C up to +80°C when with Fiber flat washers, while the ambient temperature range of installation should be from -60°C up to +60°C, limited up to -50°C when with Fiber flat washers.
The Barrier glands standard threads types are cylindrical ISO Metric 965/1 and ISO 965/3 from M20x1.5 up to M90x1.5. Alternative available threads are tapered NPT ANSI/ASME B1.20.1 from 1/2" up to 3".
To guarantee the IP 66/68 (50 m for 30 min.) degree of protection the Barrier glands **KBCTN****, **KBCTA**** series with cylindrical threads employs an O-Ring or a flat washer made of Silicon rubber, while for tapered threads the IP 66/68 degree of protection is achieved with sealant put at least on two complete threads engaged of the threaded coupling.
The Barrier glands are generally made in Brass (CuZn39Pb3 EN 12164) with CW614N grade. The alternative materials Nickel plated brass (CuZn39Pb3 EN 12164) or Stainless steel (type AISI316, AISI304 and AISI303) can be supplied on demand.

*Identification of Barrier cable glands **KBCTN.. and KBCTA.. series:***



[13] **Schedule**

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 17 ATEX 007 X /01**

Types and thread sizes of cable glands are listed on the following Table 1:

Table 1:

Barrier cable glands KBCTN.. and KBCTA.. series							
Size	**Thread size**		**Cable dia. Ranges** (mm)				**Max. cross sectional area of cores admitted** (mm^2)
	ISO 261 pitch 1.5	**NPT**	**Cable / Armour sheath dia.** Min. ÷ Max.	**Over core dia.** Min.	Max.	**Max. No. of cores**	
1S..	M 20	1/2"	6.0 – 13.0	1.5	9.5	9	70.90
1..	M 20	1/2"	8.0 – 15.0	1.5	9.5	9	70.90
1L..	M 20	1/2"	13.5 – 21.0	1.5	12.0	11	113.10
2S..	M 25	3/4"	8.0 – 15.0	1.5	9.5	9	70.90
2..	M 25	3/4"	13.5 – 21.0	1.5	12.0	11	113.10
2L..	M 25	3/4"	18.0 – 27.0	1.5	15.0	22	176.70
3..	M 32	1"	18.0 – 27.0	1.5	15.0	22	176.70
3L..	M 32	1"	23.0 – 33.0	1.5	21.5	36	363.10
4S..	M 40	1" ¼	23.0 – 33.0	1.5	21.5	36	363.10
4..	M 40	1" ¼	29.0 – 40.0	1.5	29.0	55	660.50
5SM	M 50	-	29.0 – 40.0	1.5	29.0	55	660.50
5..	M 50	1" ½	35.0 – 48.0	1.5	37.0	75	1075.20
6SM	M 63	-	35.0 – 48.0	1.5	37.0	75	1075.20
6..	M 63	2"	42.0 – 56.0	1.5	46.0	99	1661.90
7SM	M 75	-	42.0 – 56.0	1.5	46.0	99	1661.90
7..	M 75	2" ½	54.0 – 70.0	1.5	58.0	129	2642.10
8..	M 90	3"	54.0 – 70.0	1.5	58.0	129	2642.10

Constructional characteristics

Degree of protection (EN 60529): IP 66 or IP 68 (50 m for 30 min.).

Ambient temperature range:
- 60 up to + 60 °C for models with Silicon flat washers.
- 50 up to + 60 °C for models with Fiber flat washers.

Service temperature range:
- 60 up to + 100 °C for models with Silicon flat washers.
- 50 up to + 80 °C for models with Fiber flat washers.

[13] **Schedule**

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 17 ATEX 007 X /01**

[16] **Report n.** EX- B8012673.

Routine tests
None.

[17] **Special conditions for safe use (X)**

- The coupling of the Barrier cable glands with the enclosures shall be made as indicated by the manufacturer in the documents annexed to this certificate in order to respect the type of protection of the electrical apparatus on which Barrier cable glands are mounted.
- The Barrier cable glands shall be mounted at the electrical apparatus in such a way that accidental rotation and loosening will be prevented.
- When the cores will be fitted inside the sealing pot by filling compound, the mounting should guarantee a sufficient quantity of compound around each single core to ensure the clamping of the cemented joint. This shall be done as indicated in the manufacturer instructions.
- The Barrier cable glands **KBCTN**** and **KBCTA**** series have to be protected from hydraulic fluids, oils and greases when applied for Group I (mines) use.
- The Barrier cable glands should be installed within the following service temperature ranges:
  - **from - 60°C up to + 100°C for models with Silicon flat washers;**
  - **from - 50°C up to + 80°C for models with Fiber flat washers.**
- The degree of protection IP 66/68 according to the EN 60529 standard will be guaranteed for the Barrier cable glands if the holes into which they are mounted are suitably sealed. To this scope the correct positioning of the gaskets (for cylindrical threads) or the application of sealant on the threads (for tapered threads), shall be done as indicated in the manufacturer instruction.

[18] **Essential Health and Safety Requirements**
Compliance with the Essential Health and Safety Requirements has been assured by compliance to the following standards:

EN 60079-0: 2012 Explosive atmospheres – Part 0: Equipment - General requirements;

EN 60079-0/A11: 2013 Explosive atmospheres – Part 0: Equipment - General requirements;

EN 60079-1: 2014 Explosive atmospheres – Part 1: Equipment protection by flameproof enclosure "d";

EN 60079-7: 2015 Explosive atmospheres – Part 7: Equipment protection by increased safety "e";

EN 60079-31: 2014 Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t".

[13] # Schedule

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 17 ATEX 007 X /01**

[19] **Descriptive documents** (prot. EX- B8012676).

- Technical note CA4-TN (7 pg.)	rev.1	dated	2018.04.06
- Safety and mounting instructions CA4-MI (13 pg.)	rev.1	dated	2018.04.06
- Drawing A3-KBCTA (M) (1 sheet)	rev.1	dated	2018.04.06
- Drawing A3-KBCTA (NPT) (1 sheet)	rev.1	dated	2018.04.06
- Drawing A3-KBCTN (M) (1 sheet)	rev.1	dated	2018.04.06
- Drawing A3-KBCTN (NPT) (1 sheet)	rev.1	dated	2018.04.06
- Drawing A3-IEC.150 (M) (1 sheet)	rev.1	dated	2018.04.06
- Drawing A3-IEC.151 (1 sheet)	rev.1	dated	2018.04.06
- Drawing A3-IEC.152 (1 sheet)	rev.1	dated	2018.04.06
- Drawing A3-IEC.153 (1 sheet)	rev.1	dated	2018.04.06
- Drawing A3-IEC.154 (1 sheet)	rev.1	dated	2018.04.06
- Drawing A3-IEC.155 (1 sheet)	rev.1	dated	2018.04.06
- Drawing A3-IEC.156 (1 sheet)	rev.1	dated	2018.04.06
- Drawing A3-IEC.157 (1 sheet)	rev.00	dated	2016.06.10
- Drawing A3-IEC.158 (1 sheet)	rev.00	dated	2016.06.10
- Drawing A3-IEC.159 (1 sheet)	rev.1	dated	2018.04.06
- Drawing A3-IEC.160 (1 sheet)	rev.1	dated	2018.04.06
- Drawing A3-IEC.161 (1 sheet)	rev.1	dated	2018.04.06
- Drawing A3-IEC.162 (1 sheet)	rev.1	dated	2018.04.06
- Drawing A3-IEC.163 (1 sheet)	rev.1	dated	2018.04.06

One copy of all documents is kept in CESI files.

Certificate history

Issue nr	Issue Date	Summary description of variation
01	2018.06.17	New sizes for KBCTN**, KBCTA** series have been added. Use of alternative flat washers made of Fiber have been added.
00	2017.05.22	First Issue of the Certificate.