[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: **IMQ 13 ATEX 018 X**

[4] PRODUCT: **Metal cable glands**

TYPE/SERIES: **EBU...; EBM…..; EBMC...; EBS...; EBLS...; EBLQ...; EBLN...; EBMS…..; NBU...; EBU...(axb); EBM…..(axb); EBMC.. .(axb); EBS.. .(axb); EBLS.. .(axb); EBLQ.. .(axb); EBLN.. .(axb); EBMS…..(axb)**

[5] MANUFACTURER: **Bimed Teknik Aletler San ve Tic. A.S.**

[6] Address: **S.S Bakır ve Pirinç Sanayi Sitesi Leylak Cd. No:16 - 34524 Beylikdüzü – Istanbul – Turkey**

[7] This equipment and any acceptable variation thereto are specified in the annex to this certificate and the documents therein referred to.

[8] IMQ, notified body N° 0051, 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 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 Report No.:

AT18-0026023-01

[9] Compliance with Essential Health and Safety Requirements, except in respect of those listed at item 18 of the annex, has been assured by compliance with:

EN 60079-0:2012+A11:2013; EN 60079-1:2014; EN 60079-7:2015; EN 60079-31:2014

[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 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 equipment or protective system shall include the following:

II 2 GD **Ex db IIC Gb**
Ex eb IIC Gb
Ex tb IIIC Db

This document is composed of 9 pages including 1 annex

FIRST ISSUE:	2013 I 12 I 09
CURRENT ISSUE:	2019 I 02 I 19
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B.U. PRODUCT CONFORMITY ASSESSMENT
CERTIFICATION SECTOR – MANAGER

[13] # Annex

[14] EU-type Examination Certificate number: **IMQ 13 ATEX 018 X**

[15] **Description of product:**

The cable glands series EBU...; EBM…..; EBMC...; EBS...; EBLS...; EBLQ...; EBLN...; EBMS….. are suitable for inserting circular cables into Ex db enclosures having threaded entries and Ex eb or Ex tb enclosures having either threaded or plane entries.

Suitability of each model for Ex db, Ex eb and Ex tb execution is shown in following tables.

The cable glands series NBU... are suitable for inserting circular cables into Ex eb or Ex tb enclosures having either threaded or plane entries.

The cable glands series EBU...(axb); EBM…..(axb); EBMC...(axb); EBS...(axb); EBLS...(axb); EBLQ...(axb); EBLN...(axb); EBMS…..(axb) are suitable for inserting flat cables into Ex eb or Ex tb enclosures having either threaded or plane entries.

Cable glands are suitable for not-armoured cables, and are made of metal body (aluminium; stainless steel; brass; galvanized steel; nickel plated brass). Sealing rings are made of silicon or neoprene (chloroprene) for all types of cable glands for circular cables, except for NBU... type in which sealing rings are made of silicone or EPDM rubber. Cable glands for flat cables have sealing rings made of silicone only.

O-ring made of: neoprene, silicone, EPDM rubber, Viton.

Flat washer made of: chloroprene (neoprene), silicone, EPDM rubber, fiber KLINGERSIL® C-4400 (-50÷130 °C), PA washer (-60÷65 °C).

To guarantee the IP 66/68 degree of protection the cable glands with cylindrical threads have a sealing edge machined for fitting an elastomeric gasket, while for all other threads the IP66/68 degree of protection is achieved with sealant put at least on two complete threads engaged of the threaded coupling.

Cable glands are suitable for cable type where sealing and retention is required by gripping the outer sheath (including armoured/screened/braided cables when the armour/screen/braid is clamped inside the terminating equipment).

Cable glands should be also used for intrinsically safe circuits Ex i. These cable glands shall have a light blue painted part.

Cable glands for circular cables can be supplied with tap, commercial called "dome plug", polyamide made, as accessory (BDPX.-.-., available in black, green, blue color), suitable to guarantee IP degree when installed according to manufacturer's instructions.

[15.1] **Models/Series Identification:**

Model EBU …	Suitable for:		Model EBM …..; EBMS …..		Suitable for:		Model EBMC …	Suitable for:	
	Ex db	Ex eb Ex tb			Ex db	Ex eb Ex tb		Ex db	Ex eb Ex tb
EBU 0XS..	no	yes	EBM 0S.0S..	-	no	yes	EBMC 0S..	no	yes
EBU 0S..	no	yes	EBM 0S.01..	-	no	yes	EBMC 01S..	yes	yes
EBU 0..	yes	yes	EBM 01.0S..	-	yes	yes	EBMC 01..	yes	yes
EBU01S..	yes	yes	EBM 01.01..	EBMS 01.01..	yes	yes	EBMC 1S..	yes	yes
EBU 01..	yes	yes	EBM 01.12..	EBMS 01.12..	yes	yes	EBMC 1..	yes	yes
EBU 1S..	yes	yes	EBM 12.01..	EBMS 12.01..	yes	yes	EBMC 12..	yes	yes
EBU 1..	yes	yes	EBM 1.1..	EBMS 1.1..	yes	yes	EBMC 2..	yes	yes
EBU 12..	yes	yes	EBM 12.12..	EBMS 12.12..	yes	yes	EBMC 23..	yes	yes
EBU 2S..	yes	yes	EBM 12.23..	EBMS 12.23..	yes	yes	EBMC 3..	yes	yes
EBU 2..	yes	yes	EBM 23.12..	EBMS 23.12..	yes	yes	EBMC 34.. EBMC 34N.	yes	yes
EBU 23..	yes	yes	EBM 2.2..	EBMS 2.2..	yes	yes	EBMC 4..	yes	yes
EBU 3S..	yes	yes	EBM 23.23..	EBMS 23.23..	yes	yes	EBMC 45..	yes	yes

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EBU 3..	yes	yes	EBM 23.34..	EBMS 23.34..	yes	yes	EBMC 5..	yes	Yes
EBU 34.. EBU 34N.	yes	yes	EBM 34.23..	EBMS 34.23..	yes	yes	EBMC 56.. EBMC 56N.	yes	yes
EBU 4S..	yes	yes	EBM 3.3..	EBMS 3.3..	yes	yes	EBMC 6..	yes	yes
EBU 4..	yes	yes	EBM 34.34..	EBMS 34.34..	yes	yes	EBMC 7..	yes	yes
EBU 45..	yes	yes	EBM 34.45..	EBMS 34.45..	yes	yes	-	-	-
EBU 5S..	yes	yes	EBM 45.34..	EBMS 45.34..	yes	yes	-	-	-
EBU 5..	yes	yes	EBM 4.4..	EBMS 4.4..	yes	yes	-	-	-
EBU 56.. EBU 56N.	yes	yes	EBM 45.45..	EBMS 45.45..	yes	yes	-	-	-
EBU 6S..	yes	yes	EBM 45.56..	EBMS 45.56..	yes	yes	-	-	-
EBU 6..	yes	yes	EBM 56.45..	EBMS 56.45..	yes	yes	-	-	-
EBU 67.. EBU 67N.	yes	yes	EBM 5.5..	EBMS 5.5..	yes	yes	-	-	-
EBU 7S..	yes	yes	EBM 5.45..	EBMS 5.45..	yes	yes	-	-	-
EBU 7..	yes	yes	EBM 56.56..	EBMS 56.56..	yes	yes	-	-	-
EBU 78.. EBU 78N.	yes	yes	EBM 56.67..	EBMS 56.67..	yes	yes	-	-	-
EBU 80M	yes	yes	EBM 67.56..	EBMS 67.56..	yes	yes			
EBU 82M	yes	yes	EBM 6.6..	EBMS 6.6..	yes	yes			
EBU 8S..	yes	yes	EBM 67.67..	EBMS 67.67..	yes	yes	-	-	-
EBU 8..	yes	yes	EBM 67.78..	EBMS 67.78..	yes	yes	-	-	-
EBU 810.. EBU 810N.	yes	yes	EBM 78.67..	EBMS 78.67..	yes	yes	-	-	-
EBU 10S..	yes	yes	EBM 7.7..	EBMS 7.7..	yes	yes	-	-	-
EBU 10..	yes	yes	EBM 78.78..	EBMS 78.78..	yes	yes	-	-	-
EBU 11..	yes	yes	EBM 78.810..	EBMS 78.810..	yes	yes	-	-	-
EBU 115XS..	yes	yes	EBM 80.80..	EBMS 80.80..	yes	yes	-	-	-
EBU 115S..	yes	yes	EBM 82.82..	EBMS 82.82..	yes	yes	-	-	-
EBU 115.. EBU 115N.	yes	yes	EBM 80.8..	EBMS 80.8..	yes	yes	-	-	-
EBU 13.. EBU 13N. EBU 130N.	yes	yes	EBM 82.8..	EBMS 82.8..	yes	yes	-	-	-
-	-	-	EBM 810.78..	EBMS 810.78..	yes	yes	-	-	-
-	-	-	EBM 8.8..	EBMS 8.8..	yes	yes	-	-	-
-	-	-	EBM 810.810..	EBMS 810.810..	yes	yes	-	-	-
-	-	-	EBM 810.10..	EBMS 810.10..	yes	yes	-	-	-
-	-	-	EBM 11.810..	EBMS 11.810..	yes	yes	-	-	-
-	-	-	EBM 10.10..	EBMS 10.10..	yes	yes	-	-	-
-	-	-	EBM 10.810..	EBMS 10.810..	yes	yes	-	-	-
-	-	-	EBM 10.11..	EBMS 10.11..	yes	yes	-	-	-
-	-	-	EBM 11.10..	EBMS 11.10..	yes	yes	-	-	-
-	-	-	EBM 11.11..	EBMS 11.11..	yes	yes	-	-	-

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Model EBS …	Suitable for:		Model EBLN …; EBLS …; EBLQ …			Suitable for:		Model NBU …	Suitable for:	
	Ex db	Ex eb Ex tb				Ex d	Ex e Ex tb		Ex db	Ex eb Ex tb
EBS 01S.	yes	yes	EBLN 02..	EBLS 02..	EBLQ 02..	no	yes	NBU 0XS..	no	yes
EBS 01..	yes	yes	EBLN 01..	EBLS 01..	EBLQ 01..	yes	yes	NBU 01S..	no	yes
EBS 1..	yes	yes	EBLN 1S..	EBLS 1S..	EBLQ 1S..	yes	yes	NBU 1..	no	yes
EBS 2..	yes	yes	EBLN 1..	EBLS 1..	EBLQ 1..	yes	yes	NBU 2..	no	yes
EBS 3..	yes	yes	EBLN 2..	EBLS 2..	EBLQ 2..	yes	yes	NBU 3..	no	yes
EBS 4..	yes	yes	EBLN 3..	EBLS 3..	EBLQ 3..	yes	yes	NBU 4..	no	yes
EBS 5..	yes	yes	EBLN 4..	EBLS 4..	EBLQ 4..	yes	yes	NBU 5..	no	yes
EBS 6..	yes	yes	EBLN 5..	EBLS 5..	EBLQ 5..	yes	yes	NBU 6..	no	yes
EBS 7..	yes	yes	-	-	-	-	-	-	-	-
EBS 8..	yes	yes	-	-	-	-	-	-	-	-
EBS 10..	yes	yes	-	-	-	-	-	-	-	-
EBS 11..	yes	yes	-	-	-	-	-	-	-	-

Key code:

EBU	(1)	(2)	(3)
EBMC	(1)	(2)	(3)
EBS	(1)	(2)	(3)
EBLS	(1)	(2)	(3)
EBLQ	(1)	(2)	(3)
EBLN	(1)	(2)	(3)
NBU	(1)	(2)	(3)

(1): dimensione, in accordo alle relative tabelle / *size, according to related table*

(2): filettatura / *thread type:*
- "N" – NPT ANSI ASME B1.20.1
- "M" – Metric ISO pitch 1,5 (ISO 965/1 and ISO 965/3)
- "P" – PG DIN 40430 (solo per Ex e / *for Ex e only*)
- "C" – GAS UNI ISO 228/1
- "S" – N.P.S.M.
- "G" – GAS UNI ISO 7/1
- "K" – GAS Gk UNI 6125 (solo per Ex e / *for Ex e only*)

(3): material del corpo / *body material:*
- "B" – ottone / *brass*
- "X" – acciaio inox / *stainless steel*
- "A" – aluminio / *aluminium*
- "BN" – ottone nichelato / *Nickel Plated Brass*
- "Z" – acciaio galvanizzato / *Galvanized Steel*

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EBM	(1)	(2)	(3)	(4)	(5)
EBMS	(1)	(2)	(3)	(4)	(5)

(1): dimensione dell'attacco maschio, in accordo alla relative tabella / *male size, according to related table*

(2): filetattura attacco maschio / *male thread type:*
"N" – NPT ANSI ASME B1.20.1
"M" – Metric ISO pitch 1,5 (EN 60423)

(3): dimensione dell'attacco femmina, in accordo alla relative tabella / *female size, according to related table*

(4): filettatura attacco femmina / *female thread type:*
"N" – NPT ANSI ASME B1.20.1
"M" – Metric ISO pitch 1,5 (EN 60423)

(5): materiale del corpo / *body material:*
"B" – brass
"X" – stainless steel
"A" – aluminium
"BN" - Nickel Plated Brass
"Z" - Galvanized Steel

EBU	(1)	(2)	(3)	(axb)
EBMC	(1)	(2)	(3)	(axb)
EBS	(1)	(2)	(3)	(axb)
EBLS	(1)	(2)	(3)	(axb)
EBLQ	(1)	(2)	(3)	(axb)
EBLN	(1)	(2)	(3)	(axb)

(1): dimensione, in accordo alle relative tabelle / *size, according to related table*

(2): filettatura / *thread type:*
"N" – NPT ANSI ASME B1.20.1
"M" – Metric ISO pitch 1,5 (ISO 965/1 and ISO 965/3)
"P" – PG DIN 40430 (solo per Ex e / *for Ex e only*)
"C" – GAS UNI ISO 228/1
"S" – N.P.S.M.
"G" – GAS UNI ISO 7/1
"K" – GAS Gk UNI 6125 (solo per Ex e / *for Ex e only*)

(3): material del corpo / *body material:*
"B" – ottone / *brass*
"X" – acciaio inox / *stainless steel*
"A" – aluminio / *aluminium*
"BN" – ottone nichelato / *Nickel Plated Brass*
"Z" – acciaio galvanizzato / *Galvanized Steel*

(axb): Dimensioni del foro del gommino per cavi piatti / *flat sealing ring hole dimensions*

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EBM	(1)	(2)	(3)	(4)	(5)	(axb)	
EBMS	(1)	(2)	(3)	(4)	(5)	(axb)	

(1): dimensione dell'attacco maschio, in accordo alla relative tabella / *male size, according to related table*

(2): filetattura attacco maschio / *male thread type:* "N" – NPT ANSI ASME B1.20.1

"M" – Metric ISO pitch 1,5 (EN 60423)

(3): dimensione dell'attacco femmina, in accordo alla relative tabella / *female size, according to related table*

(4): filettatura attacco femmina / *female thread type:* "N" – NPT ANSI ASME B1.20.1

"M" – Metric ISO pitch 1,5 (EN 60423)

(5): materiale del corpo / *body material:* "B" – brass

"X" – stainless steel
"A" – aluminium
"BN" - Nickel Plated Brass
"Z" - Galvanized Steel

(axb): Dimensioni del foro del gommino per cavi piatti / *flat sealing ring hole dimensions*

[15.2] **Ratings:** For minimum and maximum diameters of permitted cables and torque values, see tables in drawings DL-AT18-0026023-01

[15.3] **Safety Ratings:** N/A

[15.4] **Ambient temperature and temperature classes:**

Serie:	Ex eb – Ex tb	Ex db
EBU...	Gommini in neoprene / *neoprene sealing ring:* -40°C ÷ +80°C Gommini in silicone / *silicone sealing ring*: -60°C ÷ +140°C	Gommini in neoprene / *neoprene sealing ring*: -40°C ÷ +80°C Gommini in silicone / *silicone sealing ring*: -60°C ÷ +80°C
EBM…..		
EBMC…		
EBS...		
EBLS...		
EBLQ...		
EBLN...		
EBMS…..		
NBU...	Gommini in EPDM / *EPDM sealing ring*: -40°C ÷ +80°C Gommini in silicone / *silicone sealing ring*: -60°C ÷ +80°C	-
EBU...(axb)	Gommini in silicone / *silicone sealing ring*: -60°C ÷ +140°C	-
EBM…..(axb)		
EBMC…(axb)		
EBS...(axb)		
EBLS...(axb)		
EBLQ...(axb)		
EBLN...(axb)		
EBMS…..(axb)		

[15.5] **Degree of protection (IP code):** IP66/68

[15.6] **Warnings:** None

[16] **Report:** AT18-0026023-01

[16.1] **Routine (factory) tests:** None

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[16.2] **Conformity with the documentation:**
The manufacturer shall carry out the verifications or tests necessary to ensure that the product complies with the documentation.
Marking the equipment in accordance with Clause 29 of EN 60079-0, the manufacturer attests on his own responsibility that:

- the equipment has been constructed in accordance with the applicable requirements of the relevant standards in safety matters;
- the routine verifications and routine tests in 28.1 of EN 60079-0 have been successfully completed with positive results.

[16.3] **Installation conditions:**

Above referred equipment is foreseen to be installed in locations where there are environmental conditions, as clearly specified at clause 1, par. 2 of EN 60079-0.

Installation and use in atmospheric and environmental conditions that are out of above mentioned intervals request special considerations and additional measures by the side of installer or user.

These should be specified to the manufacturer by the user; it is not a required by applicable standard listed at [9] in the EU-Type Certificate that the certification body confirm suitability for the adverse conditions.

The coupling of the cable glands to the enclosure and torque values of cap clamping 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 cable glands are mounted.

The cable gland installation shall be done according to safety manufacturer instructions to maintain degree of protection.

The cable gland installation shall be done in such a way that the temperature at the mounting point will remain within the service temperature ranges declared in this certificate.

[17] **Special Condition of use (X):**

The cable glands are only suitable for fixed installations. Cables shall be effectively clamped to prevent pulling or twisting.

When cable glands are installed with polyamide insert (BDPX.-.-.), mechanical risk have to be taken into account, depending on cable gland and insert tap. The upper operating temperature is limited to 70 °C. When insert tap is removed in order to install the proper cable, the integrity of sealing rings have to be checked, in order to guarantee the correct tightness. If necessary, sealing rings have to be replaced with new ones (original spare parts only). Precautions shall be taken in order to guarantee protection against risk of mechanical damage is provided, when insert taps are suitable for low mechanical risk (4J) only.

Cable glands for non circular cables shall be fitted with proper cables, suitable for sealing ring, according to manufacturer's instruction.

[18] **Essential Health and safety Requirements:**
This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed in [9].
This Certificate **does not** cover hazards coming from environmental conditions different from those clearly and precisely indicated and covered in clause 1 of EN 60079-0.

ESHR 1.2.7 According Annex VIII of the Directive
ESHR 1.4 Not verified.

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ESHR 1.5 Not verified.
ESHR 3 Not applied.

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at [9], the following are considered relevant to this product, and conformity is demonstrated in the report:
n/a

[19] **Descriptive documents:**
DL- AT18-0026023-01, rev.0 dated 2019-01-22.

[20] **Certification Validity Conditions:**
The use of this Certificate is subject to the Certification Scheme and to the Regulation applicable to holders of IMQ Certificates.
The validity of this certificate is subject to the condition that the manufacturer complies with the results of the document review and of the pertinent requirement if any included, recorded in the relevant copy of documentation as per 19.
One copy of the mentioned documentation is kept in IMQ file.

[21] In accordance with Article 41 of Directive 2014/34/EU, 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. New issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016.

[22] **Variations:**

<u>43AO00020 – rev. 1:</u>

- Standard updating to IEC 60079-0:2011, 6th Edition
- Adding of mode of protection Ex d for types already included in IT/IMQ/ExTR13.0006/00: EBU... (from size EBU01.. to size EBU11..); EBM..... (from size EBM01.01... to size EBM11.11...); EBMC... (from size EBMC01.. to size EBMC7..); EBS... (all sizes); EBLS... (from size EBLS01.. to size EBLS5..); EBLQ... (from size EBLQ01.. to size EBLQ5..); EBLN... (from size EBLN01.. to size EBLN5..). Limitation of temperature range with silicone sealing ring if these cable glands types are in execution Ex d.
- Adding new model EBU01S. included as execution Ex d, Ex e and Ex tb.
- Adding new type EBMS..... derived from already mentioned cable glands types: differences have no effects on protection mode.
- Adding new type NBU... in execution Ex e and Ex tb.
- Adding KLINGERSIL® C-4400 as material used for additional gasket between cable gland and enclosure.

<u>AT15A0453108-02 – rev. 2:</u>

- Standard updating to IEC 60079-0:2011, 6th Edition and IEC 60079-31:2013, 2nd edition
- New models EBU (axb), EBM (axb), EBS (axb), EBMC (axb), EBLN (axb), EBLQ (axb), EBLS (axb), EBMS (axb) for non circular (flat cables) for M20 and M25 threads, silicone sealing ring only (-60÷140°C), Ex e Ex tb execution only
- For Ex e Ex tb execution only: upgrade upper temperature for silicone sealing rings from 100 °C to 140 °C, for the series EBU, EBM, EBS, EBMC, EBLN, EBLQ, EBLS, EBMS
- Dome plug in polyamide, black colour, for sizes M16 ... M63.
- Insert PA gasket and metal (carbon steel or stainless steel) serrated washer

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AT16A0608408-01 – rev. 3:

- Standard updating to EN 60079-7:2015
- Change in length for some sizes
- Adding new intermediate sizes and new bigger sizes for EBU, EBMC, EBS series
- Insert green version of polyamide dome plug
- Insert Viton O-ring (COT: -17÷230 °C).

AT18-0026023-01 – rev.4:

- New sizes M80x1,5 and M80x2,0 were added to EBU, EBM and EBMS type cable glands.