



# IECEx Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.:	<b>IECEx CES 13.0013X</b>	Page 1 of 4	<u>Certificate history:</u>
Status:	<b>Current</b>	Issue No: 5	Issue 4 (2019-07-31)
Date of Issue:	2021-09-23		Issue 3 (2017-11-22)
Applicant:	<b>Bimed Teknik Aletler Sanayi Ve Ticaret A.Ş.</b> S.S Bakir Piriç Sanayi Sitesi Leylak Caddesi no:16 TR - 34524 Beylikdüzü – Istanbul <b>Turkey</b>		Issue 2 (2015-01-30)
Equipment:	<b>Cable glands, series KBA** (Orion), KBA**-LSK (Orion Lead Sheathed), KBU** (Crater), MKBU** (M-Crater), KBAT** (Taurus) and KBA**LT* (Orion LT)</b>		Issue 1 (2014-06-30)
Optional accessory:			Issue 0 (2013-08-29)
Type of Protection:	<b>Flameproof enclosures 'd'; increased safety 'e'; Dust ignition protection 't'</b>		
Marking:	<b>Ex db I Mb and Ex eb I Mb (KBA and KBA**LT Standard, KBA-LSK, MKBU)</b> <b>Ex db IIC Gb and Ex eb IIC Gb (All types)</b> <b>Ex tb IIIC Db</b> <b>IP66/68</b>		

Approved for issue on behalf of the IECEx  
Certification Body:

**Mirko Balaz**

Position:

**Head of IECEx CB**

Signature:  
(for printed version)

Date:

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Certificate issued by:

**CESI**  
**Centro Elettrotecnico**  
**Sperimentale Italiano S.p.A.**  
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**Italy**

**CESI**



# IECEX Certificate of Conformity

Certificate No.: **IECEX CES 13.0013X**

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Date of issue: 2021-09-23

Issue No: 5

Manufacturer: **Bimed Teknik Aletler Sanayi Ve Ticaret A.Ş.**  
S.S Bakir Piriç Sanayi Sitesi Leylak Caddesi no:16  
TR - 34524 Beylikdüzü – Istanbul  
**Turkey**

Additional  
manufacturing  
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended

## STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

**IEC 60079-0:2017** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

**IEC 60079-1:2014-06** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition:7.0

**IEC 60079-31:2013** Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:2

**IEC 60079-7:2017** Explosive atmospheres - Part 7: Equipment protection by increased safety "e"  
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

## TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[IT/CES/ExTR13.0007/00](#)  
[IT/CES/ExTR15.0002/01](#)

[IT/CES/ExTR14.0015/00](#)  
[IT/CES/ExTR15.0002/02](#)

[IT/CES/ExTR15.0002/00](#)  
[IT/CES/ExTR15.0002/03](#)

Quality Assessment Report:

[IT/CES/QAR12.0003/08](#)



# IECEX Certificate of Conformity

Certificate No.: **IECEX CES 13.0013X**

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Date of issue: 2021-09-23

Issue No: 5

## EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The cable glands series KBU\*\* (commercial gland family named CRATER), MKBU\*\* (commercial gland family named M-CRATER), KBA\*\* (commercial gland family named ORION), KBA\*\*-LSK (commercial gland family named ORION LEAD SHEATHED), KBAT\*\* (commercial gland family named TAURUS) and KBA\*\*LT\*\* (commercial gland family named ORION LT) 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. Attachment of the glands to an enclosure is by means of the male threaded portion on the male body. An elastomeric inner sealing ring is used in each gland type to facilitate sealing between the cable and gland body and to clamp the cable to prevent pulling or twisting forces being transmitted to the conductor 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 cable glands characteristics are further described in the Annexe of this certificate.

## SPECIFIC CONDITIONS OF USE: YES as shown below:

- The coupling of the 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 cable glands are mounted.
- The cable glands shall be mounted at the electrical apparatus in such a way that accidental rotation and loosening will be prevented.
- The KBA\*\*, KBA\*\*-LSK, KBA\*\*LT\*\* and MKBU\*\* cable glands types have to be protected from hydraulic fluids, oils and greases when applied for Group I (mines) applications.
- The KBA\*\* (Standard) and KBA\*\*-LSK cable glands types from M20x1.5 up to M90x1.5 sizes and KBA\*\*LT\*\* (Standard) cable glands types all sizes only are admitted for Group I applications.
- The KBA\*\*-LSK cable glands types M20x1.5 sizes with clamping range  $\varnothing 3.0 \div 8.5$  are admitted for Group II applications only.
- The MKBU\*\* cable glands types M16x1.5 sizes are not admitted for Group I applications.
- The KBA\*\* and KBA\*\*-LSK cable glands types made of Aluminium alloy are not admitted for Group I applications and are available from M25x1.5 up to M75x1.5 sizes only.
- The KBAT\*\* cable glands type are only suitable for fixed installations. The cables must be effectively clamped to prevent pulling and twisting.
- The cable glands shall be installed in such a way that the temperature at the mounting point will remain within the service temperature ranges accordingly to the marking.
- The degree of protection IP 66/68 according to the IEC 60529 standard will be guaranteed for the cable glands if the holes into which cable glands 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.



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## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

### Variation 5.

#### Variation 5.1.

The certified Cable glands types KBA\*\*(Orion), KBU\*\*(Crater), MKBU\*\*(M-Crater), KBAT\*\*(Taurus), KBA\*\*LT\*\*(Orion LT) and KBA\*\*-LSK (Orion Lead Sheathed) previously assessed in compliance to IEC 60079-0:2011 Edition 6 and IEC 60079-7:2015 Edition 5, has been re-assessed on the basis of the Standard IEC 60079-0:2017 Edition 7 and IEC 60079-7:2017 Edition 5.1.

#### Variation 5.2.

Editorial corrections on the following clamping range sizes:

Cable Gland Type	Size ISO Pitch 1,5	Size NPT ANSI B1.20.B1	Cable Diameter Range	
			D min-max	D1 min-max
KBA0SLM	M12x1.5	\\	3.0-7.5	6.0-12.0
KBA0SLN	\\	1/4"	3.0-8.0	6.0-12.0
KBA6LM	M63x1.5	\\	45.0-56.0	54.0-70.0
KBA6LN	\\	2"	45.0-52.0	54.0-70.0

Cable Gland Type	Size ISO Pitch 1,5	Size NPT ANSI B1.20.B1	Cable Diameter Range	
			D min-max	D1 min-max
KBA-LSK6LN	\\	1/4"	45.0-50.0	54.0-70.0

#### Variation 5.3.

In order to use M20 size KBA, KBAO, KBALT, KBAOLT Type, cable glands with an armoured cable having min. 0.7 mm armour; the grounding cone and braid ring dimensions has changed. The .min armoured allowed in previous design was 0.9 mm but now changed as 0.7 mm.

#### Variation 5.4.

Dimensional corrections have been applied to the drawings A4-IEC.65, A4-IEC.57, A4-IEC.56, A4-14-IEC.57 and A4-14-IEC.56.

Unchanged the constructional characteristics of cable glands types KBA\*\*(Orion), KBU\*\*(Crater), MKBU\*\*(M-Crater), KBAT\*\*(Taurus), KBA\*\*LT\*\*(Orion LT) and KBA\*\*-LSK (Orion Lead Sheathed).

### Annex:

[BIMED - IECEX CES 13.0013X Issue 5 ANNEX - Cable glands KBU - MKBU - KBA - KBAT - KBALT and KBA-LSK.pdf](#)



Prot: C1013140

**Annex to certificate:**

**Applicant:**

**Electrical Apparatus:**

## IECEX Certificate of Conformity

**IECEX CES 13.0013X Issue No.:**5 of 2021-09-23

**Bimed Teknik Aletler Sanayi Ve Ticaret A.S.**

**S.S Bakir Piriñ Sanayi Sitesi Leylak Caddesi no:16**

**TR - 34524 Beylikdüzü – Istanbul (Turkey)**

**Cable Glands KBA\*\* (Orion), KBU\*\* (Crater), MKBU\*\* (M-**

**Crater), KBAT\*\* (Taurus), KBA\*\*LT\*\* (Orion LT), KBA-LSK\*\***

**(Orion Lead Sheathed)**

### Description of product

The cable glands series **KBU\*\*** (commercial gland family named CRATER), **MKBU\*\*** (commercial gland family named M-CRATER), **KBA\*\*** (commercial gland family named ORION), **KBA\*\*-LSK** (commercial gland family named ORION LEAD SHEATHED), **KBAT\*\*** (commercial gland family named TAURUS) and **KBA\*\*LT\*\*** (commercial gland family named ORION LT) 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.

Attachment of the glands to an enclosure is by means of the male threaded portion on the male body. An elastomeric inner sealing ring is used in each gland type to facilitate sealing between the cable and gland body and to clamp the cable to prevent pulling or twisting forces being transmitted to the conductor 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 types **KBU\*\*** and **MKBU\*\*** glands are designed for non-armoured cables and are comprised of a male body, inner sealing ring, pressure ring and cap. When the cap is screwed onto the male body, the pressure ring comprises the lower sealing ring onto the outer sheath of the cable and realizes the clamping.

The Standard types **KBA\*\***, **KBA\*\*LT\*\*** and the type **KBAT\*\*** cable glands are suitable for steel wire armoured cables, while the type **KBA\*\*-LSK** is suitable for lead sheathed armoured cables only.

They are comprised of a male body, lower sealing ring, grounding cone, swivel braid retainer, middle body, upper sealing ring and cap. For type **KBA\*\*-LSK** only are used a further contact spring and a metal washer to grounding the lead sheath. When the middle body is screwed onto the male body the cable wire armour is clamped between the swivel braid retainer and the grounding cone and the lower sealing ring is compressed onto the inner sheath of the cable. Sealing of the cable outer sheath is facilitated by the upper sealing ring which is compressed onto the outer sheath when the cap is screwed onto the middle body.

For Universal types **KBAU\*\*** and **KBAU\*\*LT\*\*** cable glands the armour reduction ring is used. With this additional ring, they can be used for shielded cables. When the armour reduction ring is taken out, then they can be used for armoured cables. While Offshore types **KBAO\*\*** and **KBAO\*\*LT\*\*** cable glands instead of the grounding cone, shielding cone is used and they are used for shielded cables.

The cable glands **KBA\*\*** Standard type and **KBA\*\*-LSK** (from M20x1.5 up to M90x1.5 sizes and with the exclusion of Aluminium alloy), **KBA\*\*LT\*\*** Standard type (from M20x1.5 up to M130x2 sizes) and **MKBU\*\*** type (M16x1.5 sizes excluded) only are for Group I (mines) executions. While all the cable glands types **KBA\*\***, **KBA\*\*-LSK**, **KBU\*\***, **KBAT\*\*** and **KBA\*\*TL\*\*** are for Group IIC and Group IIIC. The cable glands should be also used for intrinsically safe circuits Ex i and should have a part painted in light blue.

The **KBA\*\*** cable glands series standard threads types are NPT ANSI/ASME B1.20.1 from 1/4" up to 3"½ and cylindrical ISO Metric 965/1 and ISO 965/3 from M12x1.5 up to M110x1.5.

The **KBA\*\*-LSK** cable glands series standard threads types are NPT ANSI/ASME B1.20.1 from 1/2" up to 3" and cylindrical ISO Metric 965/1 and ISO 965/3 from M20x1.5 up to M90x1.5.

The **KBU\*\*** and **MKBU\*\*** cable glands series standard threads types are NPT ANSI/ASME B1.20.1 from 3/8" up to 3" and cylindrical ISO Metric 965/1 and ISO 965/3 from M16x1.5 up to M90x1.5.

For **KBA\*\*LT\*\*** cable glands series standard threads types are cylindrical ISO Metric 965/1 and ISO 965/3 from M20x1.5 up to M130x2 and tapered threads type NPT ANSI/ASME B1.20.1 from 1/2" up to 5", while for **KBAO\*\*LT\*\*** cable glands series standard threads types are cylindrical ISO Metric 965/1 and ISO 965/3 from M20x1.5 up to M32x1.5 and tapered threads type NPT ANSI/ASME B1.20.1 from 1/2" up to 1".

For **KBAT\*\*** cable glands series standard threads types are cylindrical ISO Metric 965/1 and ISO 965/3 from M16x1.5 up to M63x1.5 and tapered threads type NPT ANSI/ASME B1.20.1 from 3/8" up to 2".



Prot: C1013140

**Annex to certificate:**

**Applicant:**

**Electrical Apparatus:**

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**Bimed Teknik Aletler Sanayi Ve Ticaret A.S.**

**S.S Bakir Piriñ Sanayi Sitesi Leylak Caddesi no:16**

**TR - 34524 Beylikdüzü – Istanbul (Turkey)**

**Cable Glands KBA\*\* (Orion), KBU\*\* (Crater), MKBU\*\* (M-**

**Crater), KBAT\*\* (Taurus), KBA\*\*LT\*\* (Orion LT), KBA-LSK\*\***

**(Orion Lead Sheathed)**

Alternative available cylindrical threads are GAS ISO 228/1, NPSM ANSI/ASME B1.20.1 and type PG DIN 40430. Thread type PG DIN 40430 can be used for “Ex eb” execution only.

To guarantee the IP 66/68 degree of protection the cable glands types **KBU\*\***, **MKBU\*\***, **KBA\*\***, **KBA\*\*-LSK**, **KBAT\*\*** and **KBA\*\*LT\*\*** with cylindrical threads have a sealing edge machined for fitting an O-ring, alternatively it is available a flat washer, while for all other threads the IP 66/68 degree of protection is achieved with sealant put at least on two complete threads engaged of the threaded coupling.

In addition, the cable glands can be supplied with an anti-tearing nut, only if specifically required by the purchaser.

The cable glands are generally made in Brass (CuZn39Pb3 EN 12164). The following alternative materials can be supplied on demand: Nickel-plated Brass (CuZn39Pb3 EN 12164), Stainless steel (AISI316, AISI304, AISI303), Galvanized carbon steel (FE36, FE37 UNI 10233/4), Aluminium alloy (EN AW-6026 EN 573-3 for KBA.. type and sizes from M25x1.5 up to M75x1.5 only).

### Constructional characteristics

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

Service temperature range for **KBA\***, **KBA\*-LSK**, **KBU\*** type:

- 40 ÷ + 100 °C for models with sealing rings made of Chloroprene rubber.

- 60 ÷ + 130 °C for models with sealing rings made of Silicon rubber.

Service temperature range for **MKBU\*** type:

- 40 ÷ + 80 °C for models with sealing rings made of Chloroprene rubber.

- 60 ÷ + 80 °C for models with sealing rings made of Silicon rubber.

Service temperature range for **KBAT\*** type:

- 40 ÷ + 80 °C for models with sealing rings made of Chloroprene rubber.

- 60 ÷ + 100 °C for models with sealing rings made of Silicon rubber.

Service temperature range for **KBA\*\*LT\*** type:

- 40 ÷ + 80 °C for models with sealing rings made of Chloroprene rubber.

- 60 ÷ + 80 °C for models with sealing rings made of Silicon rubber.

**KBA\*\***, **KBA\*-LSK** models made of Aluminium alloy: up to + 80 °C.

Types for **Group I** (mines) execution: up to + 80 °C.

Models supplied with Fiber flat washer: - 50 ÷ + 80 °C for all types.

Models made of Galvanized carbon steel: limited to - 20 °C.



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**Bimed Teknik Aletler Sanayi Ve Ticaret A.S.**

**S.S Bakir Pirinç Sanayi Sitesi Leylak Caddesi no:16**

**TR - 34524 Beylikdüzü – İstanbul (Turkey)**

**Cable Glands KBA\*\* (Orion), KBU\*\* (Crater), MKBU\*\* (M-Crater), KBAT\*\*(Taurus), KBA\*\*LT\*\* (Orion LT), KBA-LSK\*\* (Orion Lead Sheathed)**

The cable gland types, installation Group, manufacturer materials and ambient temperature ranges are reported in the table below:

Type	Exec.	Materials	Seals	Ambient Temp.
KBA** KBA*-LSK	Group I	Brass, Nickel plated brass, Stainless steel	Chloroprene	-40°C ÷ +80°C
			Silicon	-60°C ÷ +80°C
		Galvanised steel	<i>All seals</i>	-20°C ÷ +80°C
	Group IIC Group IIIC	Brass, Nickel plated brass, Stainless steel	Chloroprene	-40°C ÷ +100°C
			Silicon	-60°C ÷ +130°C
		Aluminium alloy	Chloroprene	-40°C ÷ +80°C
Silicon			-60°C ÷ +80°C	
Galvanised steel		Chloroprene	-20°C ÷ +100°C	
	Silicon	-20°C ÷ +130°C		
KBU**	Group IIC Group IIIC	Brass, Nickel plated brass, Stainless steel	Chloroprene	-40°C ÷ +80°C
			Silicon	-60°C ÷ +80°C
		Galvanised steel	<i>All seals</i>	-20°C ÷ +80°C
MKBU**	Group I Group IIC Group IIIC	Brass, Nickel plated brass, Stainless steel	Chloroprene	-40°C ÷ +80°C
			Silicon	-60°C ÷ +80°C
		Galvanised steel	<i>All seals</i>	-20°C ÷ +80°C
KBA**LT**	Group I Group IIC Group IIIC	Brass, Nickel plated brass, Stainless steel	Chloroprene	-40°C ÷ +80°C
			Silicon	-60°C ÷ +80°C
		Galvanised steel	<i>All seals</i>	-20°C ÷ +80°C
KBAT**	Group IIC Group IIIC	Brass, Nickel plated brass, Stainless steel	Chloroprene	-40°C ÷ +80°C
			Silicon	-60°C ÷ +100°C
		Galvanised steel	Chloroprene	-20°C ÷ +80°C
			Silicon	-20°C ÷ +100°C
Restricted use to the ambient temperature range of <b>-50°C ÷ +80°C</b> for all types whit fiber flat washers.				



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S.S Bakir Piriñ Sanayi Sitesi Leylak Caddesi no:16

TR - 34524 Beylikdüzü – Istanbul (Turkey)

**Electrical Apparatus:**

Cable Glands **KBA\*\* (Orion)**, **KBU\*\* (Crater)**, **MKBU\*\* (M-Crater)**, **KBAT\*\* (Taurus)**, **KBA\*\*LT\*\* (Orion LT)**, **KBA-LSK\*\* (Orion Lead Sheathed)**

Identification of cable glands **KBA...**, **KBAT...**, **KBU...**, and **MKBU..** types:

****	*	***	*	(**)	**	*	-	**	
									Code that identifies the type: - <b>KBA</b> : cable gland for armoured or shielded cable - <b>KBAT</b> : cable gland for armoured or shielded cable - <b>MKBU</b> : cable gland for non-armoured cable - <b>KBU</b> : cable gland for non-armoured cable
									Code that identifies the cable type ( <b>KBA** type only</b> ): - <b>Blank</b> : Standard (for armoured cables only) - <b>U</b> : Universal (for armoured or shielded cables) - <b>O</b> : Offshore (for shielded cables only)
									Size (see Table 1, 2, 3 and 4)
									Type of thread: - <b>N</b> : NPT ANSI/ASME B1.20.1 - <b>S</b> : NPSM ANSI/ASME B1.20.1 - <b>P</b> : PG DIN 40430 (assessed for Ex eb protection mode only) - <b>M</b> : ISO 261 pitch 1.5 - <b>C</b> : GAS ISO 228-1
									Thread size (see Table 1, 2, 3 and 4)
									Manufacturing material: - <b>A</b> : Aluminium alloy ( <b>KBA** type and M25 up to M75 sizes only</b> ) - <b>B</b> : brass - <b>BN</b> : nickel-plated brass - <b>X</b> : stainless steel - <b>Z</b> : galvanized carbon steel
									Seals material: - <b>C</b> : Chloroprene (Neoprene) - <b>S</b> : Silicon rubber
									Flat washer - <b>Blank</b> : none - <b>WC</b> : with flat washer in Chloroprene (Neoprene) - <b>WS</b> : with flat washer in Silicon rubber - <b>WF</b> : with flat washer in Fiber

Types and thread sizes of cable glands are listed on the followings Table 1, Table 2, Table 3 and Table 4.



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TR - 34524 Beylikdüzü – İstanbul (Turkey)

Cable Glands KBA\*\* (Orion), KBU\*\* (Crater), MKBU\*\* (M-Crater), KBAT\*\* (Taurus), KBA\*\*LT\*\* (Orion LT), KBA-LSK\*\* (Orion Lead Sheathed)

Table 1:

KBA**, KBAU**, KBAO** (Orion)					
Cable glands		Thread size		Cable Dia. ranges (mm)	
Type	Size	NPT	ISO pitch 1,5	Inner sheath	Armour sheath
KBA	0S..	1/4"	M 12	2-4	3-5.5
KBA	0SLM	-	M 12	3-7.5	6-12
KBA	0SLN	1/4"	-	3-8	6-12
KBA	01S..	3/8"	M 16	3-8.5	6-12
KBA	01..	3/8"	M 16	6-12	8.5-16
KBA	1S..	1/2"	M 20	3-8.5	6-12
KBA	1..	1/2"	M 20	6-12	8.5-16
KBA	1L..	1/2"	M 20	8.5-14.5	12-20
KBA	2XS..	3/4"	M 25	3-8.5	6-12
KBA	2S..	3/4"	M 25	6-12	8.5-16
KBA	2..	3/4"	M 25	8.5-16	12-21
KBA	2L..	3/4"	M 25	12-20	16-26
KBA	3XS..	1"	M 32	6-12	8.5-16
KBA	3S..	1"	M 32	12-20	16-26
KBA	3..	1"	M 32	15-26	20-33
KBA	4XS..	1 1/4"	M 40	12-20	16-26
KBA	4S..	1 1/4"	M 40	15-26	20-33
KBA	4..	1 1/4"	M 40	20-32	29-41
KBA	5XS..	1 1/2"	M 50	15-26	20-33
KBA	5X..	1 1/2"	M 50	20-32	29-41
KBA	5S..	1 1/2"	M 50	22-35	33-48
KBA	5..	1 1/2"	M 50	27-41	36-52
KBA	6XS..	2"	M 63	22-35	33-48
KBA	6X..	2"	M 63	27-41	36-52
KBA	6S..	2"	M 63	35-45	43-57
KBA	6..	2"	M 63	40-52	47-60
KBA	6LM	-	M 63	45-56	54-70
KBA	6LN	2"	-	45-52	54-70
KBA	7XS..	2 1/2"	M 75	35-45	43-57
KBA	7S..	2 1/2"	M 75	40-52	47-60
KBA	7..	2 1/2"	M 75	45-60	54-70
KBA	8XS..	3"	M 90	40-52	47-60
KBA	8S..	3"	M 90	45-60	54-70
KBA	8..	3"	M 90	60-72	63-80
KBA	9S..	3 1/2"	-	45-60	54-70
KBA	9..	3 1/2"	-	60-72	63-80
KBA	10S..	-	M 110	45-60	54-70
KBA	10..	-	M 110	60-72	63-80

**Note:** Aluminium alloy available from M25x1.5 (1/2"NPT) up to M75x1.5 (2"1/2NPT) sizes only.



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**Table 2:**

KBAT.. (Taurus)					
Cable glands		Thread size		Cable Dia. ranges (mm)	
Type	Size	NPT	ISO pitch 1,5	Inner sheath	Armour sheath
KBAT	01L..	3/8"	M 16	6-11	8-15
KBAT	1..	1/2"	M 20	6-11	8-15
KBAT	1L..	1/2"	M 20	10-15,5	13,5-21
KBAT	2S..	3/4"	M 25	6-11	8-15
KBAT	2..	3/4"	M 25	10-15,5	13,5-21
KBAT	2L..	3/4"	M 25	13,5-20,5	18-27
KBAT	3..	1"	M 32	13,5-20,5	18-27
KBAT	3..	1"	M 32	18-27	23-33
KBAT	4..	1 1/4"	M 40	23-33	29-41
KBAT	5..	1 1/2"	M 50	29-41	35-48
KBAT	6..	2"	M 63	35-48	42-56

**Table 3:**

KBU.. (Crater)				
Cable glands		Thread size		Cable Dia. ranges (mm)
Type	Size	NPT	ISO pitch 1,5	
KBU	01..	3/8"	M 16	3-8,5
KBU	01L..	3/8"	M 16	6-12
KBU	1..	1/2"	M 20	6-12
KBU	1L..	1/2"	M 20	12-14,5
KBU	2S..	3/4"	M 25	6-12
KBU	2..	3/4"	M 25	12-16
KBU	2L..	3/4"	M 25	12-20
KBU	3S..	1"	M 32	12-20
KBU	3..	1"	M 32	15-26
KBU	4S..	1 1/4"	M 40	15-26
KBU	4..	1 1/4"	M 40	20-32
KBU	5S..	1 1/2"	M 50	22-35
KBU	5..	1 1/2"	M 50	27-41
KBU	6S..	2"	M 63	35-45
KBU	6..	2"	M 63	40-52
KBU	7S..	2 1/2"	M 75	40-52
KBU	7..	2 1/2"	M 75	45-60
KBU	8S..	3"	M 90	45-60
KBU	8..	3"	M 90	60-72



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Annex to certificate:

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Electrical Apparatus:

## IECEX Certificate of Conformity



IECEX CES 13.0013X Issue No.:5 of 2021-09-23

Bimed Teknik Aletler Sanayi Ve Ticaret A.S.

S.S Bakir Pirinç Sanayi Sitesi Leylak Caddesi no:16

TR - 34524 Beylikdüzü – İstanbul (Turkey)

Cable Glands KBA\*\* (Orion), KBU\*\* (Crater), MKBU\*\* (M-Crater), KBAT\*\*(Taurus), KBA\*\*LT\*\* (Orion LT), KBA-LSK\*\* (Orion Lead Sheathed)

Table 4:

MKBU.. (M-Crater)				
Cable glands Type	Cable glands Size	Thread size		Cable Dia. ranges (mm)
		NPT	ISO pitch 1,5	
MKBU	01M2..	3/8"	M 16	3-8.5
MKBU	01LM1..	3/8"	M 16	6-9
MKBU	01LM2..	3/8"	M 16	9-12
MKBU	1M1..	1/2"	M 20	6-9
MKBU	1M2..	1/2"	M 20	9-12
MKBU	1LM1..	1/2"	M 20	8.5-11.5
MKBU	1LM2..	1/2"	M 20	11.5-14.5
MKBU	2SM1..	3/4"	M 25	6-9
MKBU	2SM2..	3/4"	M 25	9-12
MKBU	2M1..	3/4"	M 25	8.5-12.5
MKBU	2M2..	3/4"	M 25	12.5-16
MKBU	2LM1..	3/4"	M 25	12-16
MKBU	2LM2..	3/4"	M 25	16-20
MKBU	3SM1..	1"	M 32	12-16
MKBU	3SM2..	1"	M 32	16-20
MKBU	3M1..	1"	M 32	15-20
MKBU	3M2..	1"	M 32	20-26
MKBU	4SM1..	1 1/4"	M 40	15-20
MKBU	4SM2..	1 1/4"	M 40	20-26
MKBU	4M1..	1 1/4"	M 40	20-26
MKBU	4M2..	1 1/4"	M 40	26-32
MKBU	5SM1..	1 1/2"	M 50	22-28
MKBU	5SM2..	1 1/2"	M 50	28-35
MKBU	5M1..	1 1/2"	M 50	27-35
MKBU	5M2..	1 1/2"	M 50	34-41
MKBU	6SM1..	2"	M 63	35-40
MKBU	6SM2..	2"	M 63	40-45
MKBU	6M1..	2"	M 63	40-46
MKBU	6M2..	2"	M 63	46-52
MKBU	7SM1..	2 1/2"	M 75	40-46
MKBU	7SM2..	2 1/2"	M 75	46-52
MKBU	7M1..	2 1/2"	M 75	45-52
MKBU	7M2..	2 1/2"	M 75	52-60
MKBU	8SM1..	3"	M 90	45-52
MKBU	8SM2..	3"	M 90	52-60
MKBU	8M1..	3"	M 90	60-66
MKBU	8M2..	3"	M 90	66-72



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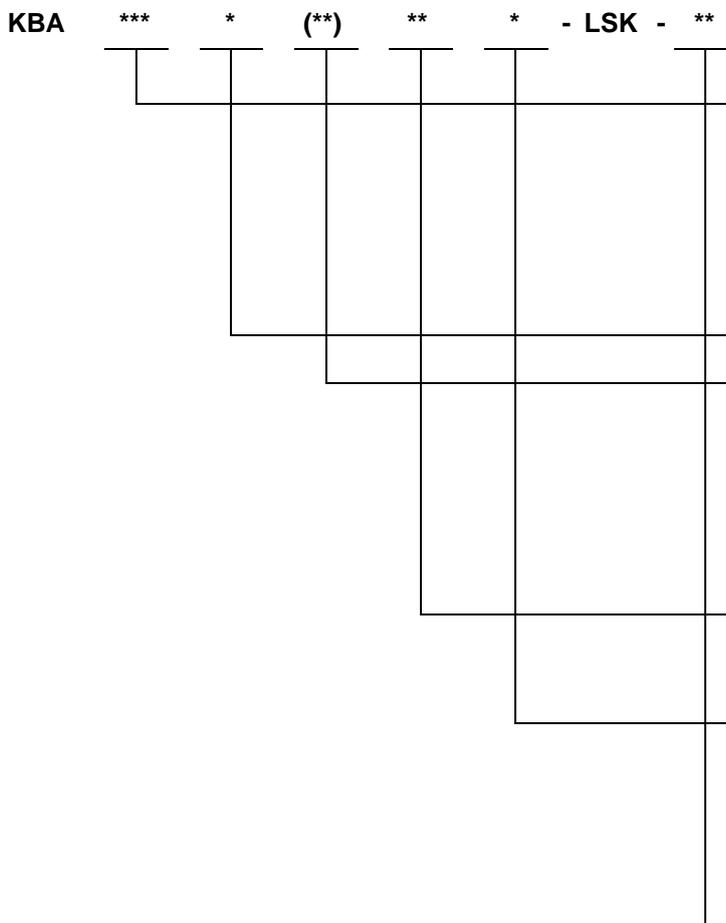


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**Bimed Teknik Aletler Sanayi Ve Ticaret A.S.**  
**S.S Bakir Pirinç Sanayi Sitesi Leylak Caddesi no:16**  
**TR - 34524 Beylikdüzü – İstanbul (Turkey)**

**Cable Glands KBA\*\* (Orion), KBU\*\* (Crater), MKBU\*\* (M-Crater), KBAT\*\* (Taurus), KBA\*\*LT\*\* (Orion LT), KBA-LSK\*\* (Orion Lead Sheathed)**

Identification of cable glands KBA\*\*-LSK type:





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S.S Bakir Pirinç Sanayi Sitesi Leylak Caddesi no:16

TR - 34524 Beylikdüzü – İstanbul (Turkey)

Cable Glands KBA\*\* (Orion), KBU\*\* (Crater), MKBU\*\* (M-Crater), KBAT\*\* (Taurus), KBA\*\*LT\*\* (Orion LT), KBA-LSK\*\* (Orion Lead Sheathed)

Table 5:

KBA**-LSK (Orion Lead Sheathed)					
Cable glands		Thread size		Cable Dia. ranges (mm)	
Type	Size	NPT	ISO pitch 1.5	Inner sheath	Armour sheath
KBA-LSK	1S..	1/2"	M 20	3-8	6-12
KBA-LSK	1..	1/2"	M 20	6-11.5	8.5-16
KBA-LSK	1L..	1/2"	M 20	8.5-14	12-20
KBA-LSK	2XS..	3/4"	M 25	3-8	6-12
KBA-LSK	2S..	3/4"	M 25	6-11.5	8.5-16
KBA-LSK	2..	3/4"	M 25	8.5-15	12-21
KBA-LSK	2L..	3/4"	M 25	12-19	16-26
KBA-LSK	3XS..	1"	M 32	6-11.5	8.5-16
KBA-LSK	3S..	1"	M 32	12-19	16-26
KBA-LSK	3..	1"	M 32	15-25	20-33
KBA-LSK	4XS..	1 1/4"	M 40	12-19	16-26
KBA-LSK	4S..	1 1/4"	M 40	15-25	20-33
KBA-LSK	4..	1 1/4"	M 40	20-31	29-41
KBA-LSK	5XS..	1 1/2"	M 50	15-25	20-33
KBA-LSK	5X..	1 1/2"	M 50	20-31	29-41
KBA-LSK	5S..	1 1/2"	M 50	22-34	33-48
KBA-LSK	5..	1 1/2"	M 50	27-40	36-52
KBA-LSK	6XS..	2"	M 63	22-34	33-48
KBA-LSK	6X..	2"	M 63	27-40	36-52
KBA-LSK	6S..	2"	M 63	35-44	43-57
KBA-LSK	6..	2"	M 63	40-50	47-60
KBA-LSK	6L..	2"	M 63	45-50	54-70
KBA-LSK	7XS..	2 1/2"	M 75	35-44	43-57
KBA-LSK	7S..	2 1/2"	M 75	40-50	47-60
KBA-LSK	7..	2 1/2"	M 75	45-58	54-70
KBA-LSK	8XS..	3"	M 90	40-50	47-60
KBA-LSK	8S..	3"	M 90	45-68	54-70
KBA-LSK	8..	3"	M 90	60-70	63-80

**Note:** Aluminium alloy available from M25x1.5 (1/2"NPT) up to M75x1.5 (2"1/2"NPT) sizes only.



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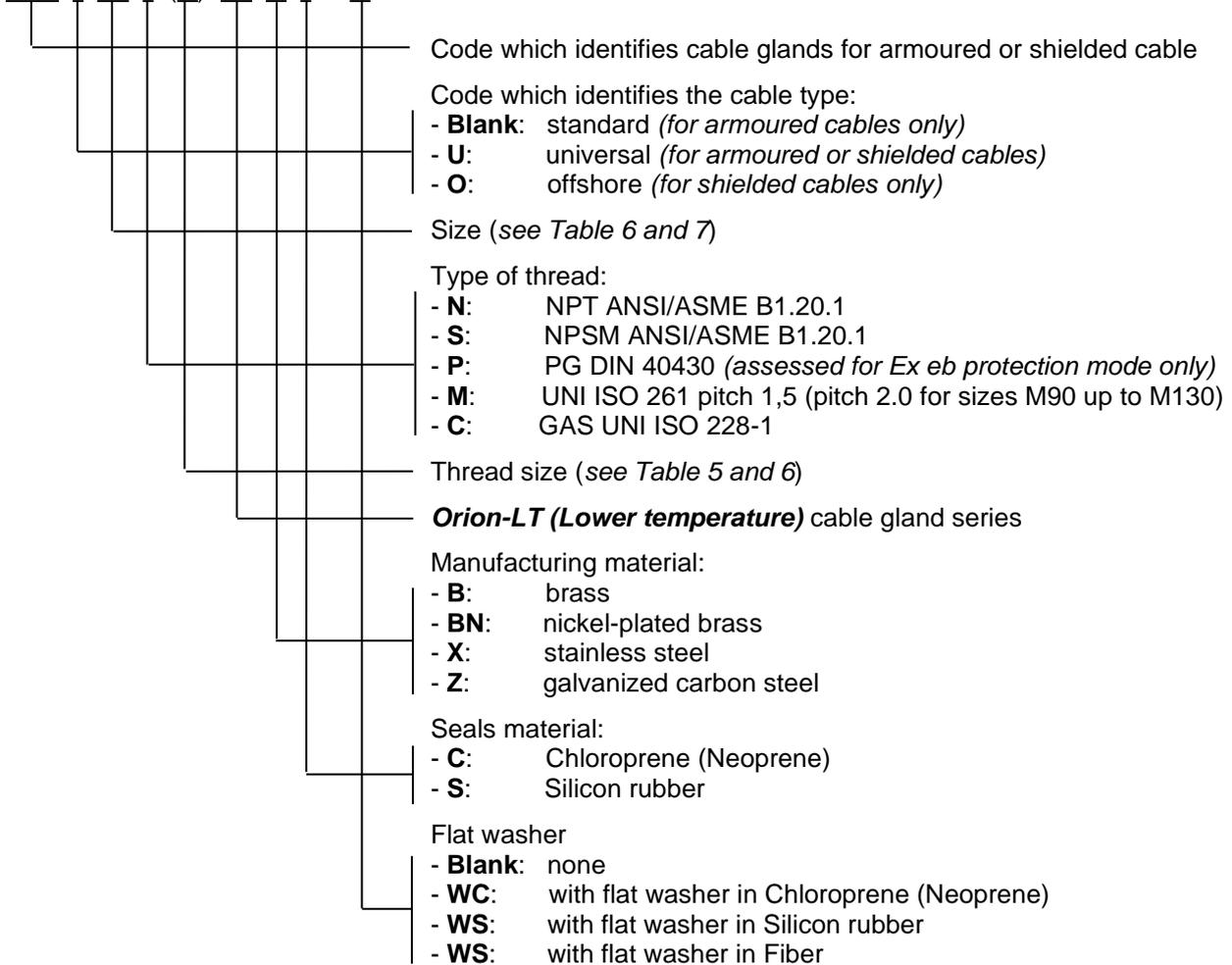
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S.S Bakir Piring Sanayi Sitesi Leylak Caddesi no:16  
TR - 34524 Beylikdüzü – Istanbul (Turkey)

Cable Glands KBA\*\* (Orion), KBU\*\* (Crater), MKBU\*\* (M-Crater), KBAT\*\* (Taurus), KBA\*\*LT\*\* (Orion LT), KBA-LSK\*\* (Orion Lead Sheathed)

### Identification of type KBALT cable gland

KBA \* \*\*\* \* (\*\* ) LT \*\* \* - \*\*





Prot: C1013140

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S.S Bakir Piriñ Sanayi Sitesi Leylak Caddesi no:16  
TR - 34524 Beylikdüzü – Istanbul (Turkey)

Cable Glands KBA\*\* (Orion), KBU\*\* (Crater), MKBU\*\* (M-Crater), KBAT\*\* (Taurus), KBA\*\*LT\*\* (Orion LT), KBA-LSK\*\* (Orion Lead Sheathed)

**Table 6:**

KBA..LT.. and KBAU..LT.. (Orion LT)						
Cable glands		Thread size			Cable Dia. ranges (mm)	
Type	Size	NPT	ISO pitch 1.5	ISO pitch 2.0	Inner sheath	Armour sheath
KBA**LT	1	1/2"	M 20	-	8.5-14.5	12-20
KBA**LT	2X	3/4"	M 25	-	8.5-14.5	12-20
KBA**LT	2	3/4"	M 25	-	8.5-16	12-21
KBA**LT	3X	1"	M 32	-	8.5-16	12-21
KBA**LT	9	3" 1/2	-	M 90	70-82	78-90
KBA**LT	10S	4"	-	M 100	80-92	88-100
KBA**LT	10	4"	-	M 110	90-101	98-110
KBA**LT	11S	5"	-	M 130	100-115	109-123

**Table 7:**

KBAO..LT.. (Orion LT)					
Cable glands		Thread size		Cable Dia. ranges (mm)	
Type	Size	NPT	ISO pitch 1,5	Inner sheath	Armour sheath
KBA**LT	1	1/2"	M 20	8.5-14.5	12-20
KBA**LT	2X	3/4"	M 25	8.5-14.5	12-20
KBA**LT	2	3/4"	M 25	8.5-16	12-21
KBA**LT	3X	1"	M 32	8.5-16	12-21