



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

Certificate No.:	IECEX CES 13.0022X	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 4	Issue 3 (2021-05-26)
Date of Issue:	2022-02-16		Issue 2 (2019-05-20)
Applicant:	Bimed Teknik Aletler Sanayi Ve Ticaret A.S. S.S Bakir Piriñ Sanayi Sitesi Leylak Caddesi no:16 TR - 34524 Beylikdüzü - Istanbul Turkey		Issue 1 (2016-07-29)
Equipment:	Adaptors and Plugs, series B-RA**, B-RB**, B-RM**, B-RN**, B-TS**, NB-TS**, MB-TS**		Issue 0 (2014-03-14)
Optional accessory:			
Type of Protection:	Flameproof enclosures 'd'; increased safety 'e'; Dust ignition protection 't'		
Marking:	Ex db I Mb and Ex eb I Mb Ex db IIC Gb and Ex eb IIC Gb Ex tb IIIC Db IP66/68		

Approved for issue on behalf of the IECEx
Certification Body:

Mirko BALAZ

Position:

Deputy Head of IECEx CB

Signature:
(for printed version)

Date:
(for printed version)

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Certificate issued by:

CESI
Centro Elettrotecnico
Sperimentale Italiano S.p.A.
Via Rubattino 54
20134 Milano
Italy

CESI



IECEX Certificate of Conformity

Certificate No.: **IECEX CES 13.0022X**

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Date of issue: 2022-02-16

Issue No: 4

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

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/ExTR13.0023/00](#)
[IT/CES/ExTR13.0023/03](#)

[IT/CES/ExTR13.0023/01](#)
[IT/CES/ExTR13.0023/04](#)

[IT/CES/ExTR13.0023/02](#)

Quality Assessment Report:

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



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Date of issue: 2022-02-16

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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Adaptors series **B-RA****, **B-RB****, **B-RM**** and **B-RN**** are used to match equipment, pipes and hubs having different threaded entry sizes. Attachment of the Adaptors to an enclosure is by means of the male threaded portion on the male body. Ingress protection of IP66/68 (50 m for 30 min.) is maintained when the Adaptors are installed in accordance with the manufacturer's instructions.

The series of available Adaptors are:

B-RA – they are used to reduce a female hub or increase a male hub.

B-RB – they are used to increase a female hub or reduce a male hub.

B-RM – they are used to vary the diameter of a male hub by transforming it into a female hub.

B-RN – they are used to vary the diameter of a female hub by transforming it into a male hub.

The male Plugs series **B-TS****, **MB-TS**** and **NB-TS**** are suitable for closing female hubs or unused openings on Ex db pipes or Ex db, Ex eb and Ex tb enclosures.

The series of available Plugs are:

B-TS – they are used to close a female hub with cylindrical or tapered threads.

MB-TS – they are used to close a female hub with ISO Metric threads only.

NB-TS – they are used to close a female hub with NPT tapered threads and Ex eb or Ex tb execution only.

The Adaptors and male Plugs M12x1.5 or 1/4"NPT and M16x1.5 or 3/8"NPT thread sizes and all sizes made of Aluminium alloy are not admitted for Group I applications.

The Adaptors and Plugs sizes M12x1.5 (1/4"NPT) and M16x1.5 (3/8"NPT) made of Aluminium alloy are for Ex eb and Ex tb application only.

The adaptors and plugs characteristics are further described in the Annexe of this certificate.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The coupling of the Adaptors and Plugs 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 the adaptors and plugs are mounted.
- The Adaptors and Plugs shall be mounted at the electrical apparatus in such a way that accidental rotation and loosening will be prevented.
- The Adaptors and Plugs shall be installed in such a way that the temperature at the mounting point will remain within the following service temperature ranges:
 - -40°C to +100°C for Adaptors and Plugs with Chloroprene O-rings;
 - -60°C to +130°C for Adaptors and Plugs with Silicon O-rings and flat washers;
 - -40°C to +80°C for Adaptors and Plugs with Chloroprene or Fiber flat washers;
 - Restricted use up to -20°C for adaptors and plugs made of galvanized carbon steel;
 - -40°C to +100°C for Adaptors and Plugs made of Aluminium alloy.
- The Adaptors and Plugs made of Aluminium alloy are not admitted for Group I (Mines) applications.
- The Adaptors and Plugs sizes M12x1.5 (1/4"NPT) and M16x1.5 (3/8"NPT) are not admitted for Group I (Mines) applications.
- The Adaptors and Plugs sizes M12x1.5 (1/4"NPT) and M16x1.5 (3/8"NPT) made of Aluminium alloy are for Ex eb and Ex tb applications only.
- The Plugs type NB-TS are not admitted for Group I (Mines) applications and are for Ex eb and Ex tb application only.
- The Adaptors and Plugs sizes M12x1.5 (1/4"NPT) and M16x1.5 (3/8"NPT) made of Aluminium alloy shall be protected from impacts because assessed for low risk only.
- The degree of protection IP 66/68 according to the IEC 60529 standard will be guaranteed for the adaptors and plugs if the holes into which adaptors and plugs 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 4.1:

To the Adaptors and Plugs series, previously assessed in compliance to IEC 60079-7:2015 Edition 5th, has been re-assessed on the basis of the Standard IEC 60079-7:2017, Edition 5.1.

Unchanged the constructional characteristics of other Adaptors and Plugs B-RA**, B-RB**, B-RM**, , B-RN**, B-TS**, MB-TS** and NB-TS** series.

Annex:

[BIMED - IECEx CES 13.0022X Issue 4 - ANNEX - Adaptors and Plugs.pdf](#)



IECEX Certificate of Conformity



Prot: C2001921

Annex to certificate: IECEX CES 13.0022X Issue No: 4 of 2022-02-16

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

Electrical Apparatus: Adaptors and Plugs, series
B-RA**, **B-RB****, **B-RM****, **B-RN****, **B-TS****, **NB-TS****, **MB-TS****

General product information:

The Adaptors series **B-RA****, **B-RB****, **B-RM**** and **B-RN**** are used to match equipment, pipes and hubs having different threaded entry sizes. Attachment of the Adaptors to an enclosure is by means of the male threaded portion on the male body. Ingress protection of IP66/68 (50 m for 30 min.) is maintained when the Adaptors are installed in accordance with the manufacturer's instructions.

The series of available Adaptors are:

B-RA – they are used to reduce a female hub or increase a male hub.

B-RB – they are used to increase a female hub or reduce a male hub.

B-RM – they are used to vary the diameter of a male hub by transforming it into a female hub.

B-RN – they are used to vary the diameter of a female hub by transforming it into a male hub.

The male Plugs series **B-TS****, **MB-TS**** and **NB-TS**** are suitable for closing female hubs or unused openings on Ex db pipes or Ex db, Ex eb and Ex tb enclosures. Attachment of the male plugs to an enclosure is by means of the male threaded portion on the male body. Ingress protection of IP66/68 (50 m for 30 min.) is maintained when the male plugs are installed in accordance with the manufacturer's instructions.

The series of available Plugs are:

B-TS – they are used to close a female hub with cylindrical or tapered threads.

MB-TS – they are used to close a female hub with ISO Metric threads only.

NB-TS – they are used to close a female hub with NPT tapered threads and Ex eb or Ex tb execution only.

The Adaptors and male plugs are generally made in Brass (CuZn39Pb3 CW614N or CuZn42 CW510L).

The following alternative material can be supplied on demand:

- Nickel-plated Brass type CuZn39Pb3 or CuZn42.
- Galvanized carbon steel type FE36; FE37 UNI 10233/4.
- Stainless steel type AISI316; AISI304; AISI303.
- Aluminium alloy EN AW-6026, EN AW-6063 and EN AW-6082.

To guarantee the IP 66/68 degree of protection the Adaptors series **B-RA****, **B-RB****, **B-RM****, **B-RN**** and male Plugs series **B-TS**** and **MB-TS**** with cylindrical threads have a sealing edge machined for fitting a elastomeric gasket, while for all other threads and for **NB-TS**** Plugs the IP 66/68 degree of protection is achieved with sealant put at least on two complete threads engaged of the threaded coupling.

The Adaptors and male Plugs standard threads types are NPT ANSI/ASME B1.20.1 from 1/4" up to 4" and cylindrical ISO Metric 965/1 and ISO 965/3 from M12x1.5 up to M110x1.5. Alternative available tapered threads are GAS ISO 7/1 while cylindrical threads are ISO Metric 965/1 and ISO 965/3 from M60x2 up to M110x2, GAS ISO 228/1, NPSM ANSI/ASME B1.20.1 and type PG DIN 40430. Threads type PG DIN 40430 can be used for "Ex eb" execution only.

Adaptors and male Plugs M12x1.5 or 1/4"NPT and M16x1.5 or 3/8"NPT thread sizes and all sizes made of Aluminium alloy are not admitted for Group I applications.

The Adaptors and Plugs sizes M12x1.5 (1/4"NPT) and M16x1.5 (3/8"NPT) made of Aluminium alloy are for Ex eb and Ex tb application only.

Constructional characteristics

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

Service temperature ranges:

-40°C and +100°C for Adaptors and male Plugs supplied with Chloroprene O-rings.

-60°C and +130°C for Adaptors and male Plugs supplied with Silicon O-rings or flat washers.

-40°C and +80°C for Adaptors and male Plugs supplied with Chloroprene or Fiber flat washers.

-40°C and +100°C for Adaptors and male Plugs made of Aluminium alloy.

up to -20 °C for models made of Galvanized carbon steel.



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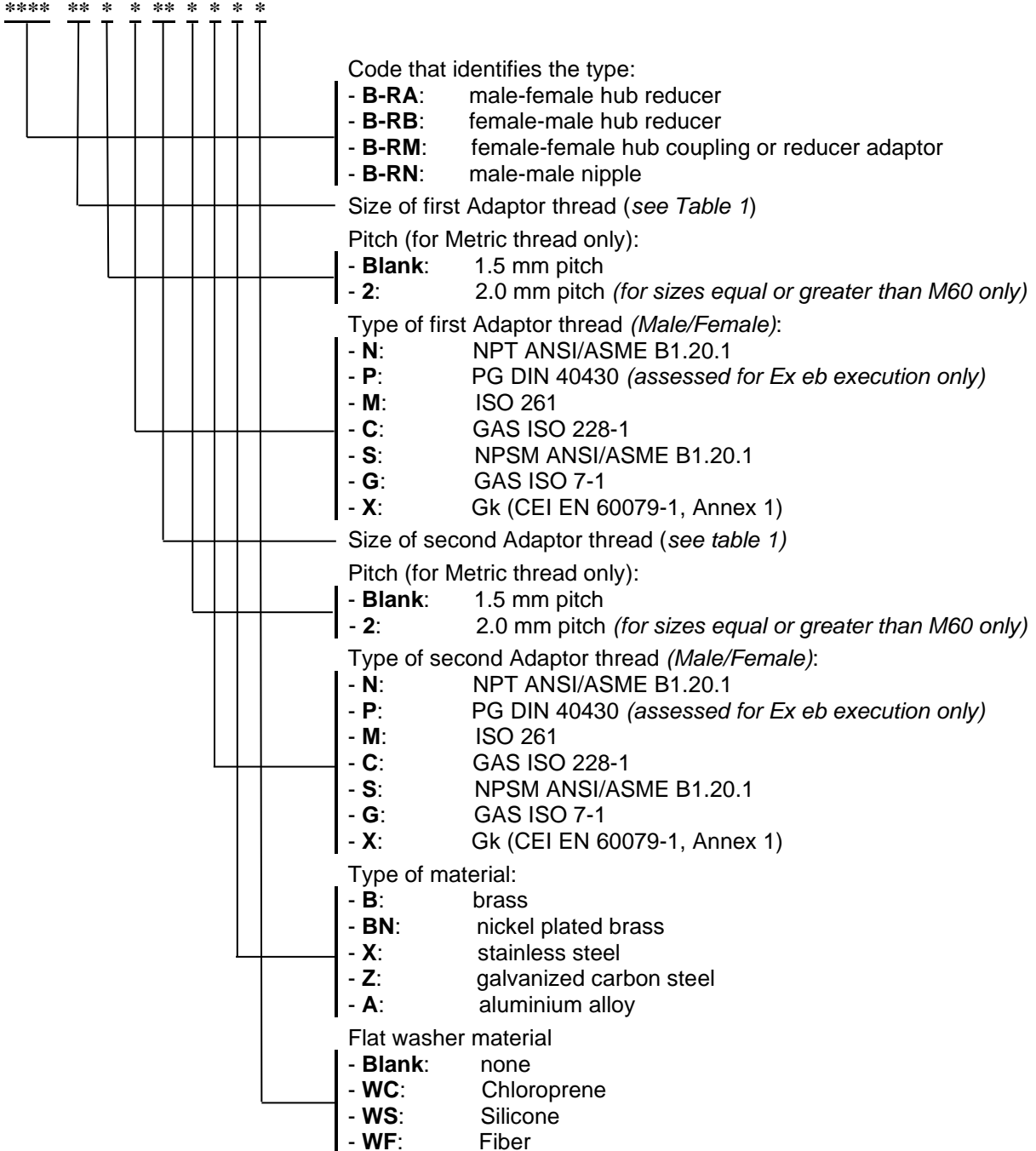
Prot: C2001921

Annex to certificate: IECEX CES 13.0022X Issue No: 4 of 2022-02-16

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

Electrical Apparatus: Adaptors and Plugs, series
B-RA**, B-RB**, B-RM**, B-RN**, B-TS**, NB-TS**, MB-TS**

The Adaptors are identified by a code as follows:



The Adaptors type **B-RM** and **B-RN** have both NPT threads or both Metric threads or coupling NPT-Metric threads.

The Adaptors **B-RB****, **B-RM**** and **B-RN**** may be made with two different thread types and sizes combinations or with the same thread types and sizes combinations.



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Prot: C2001921

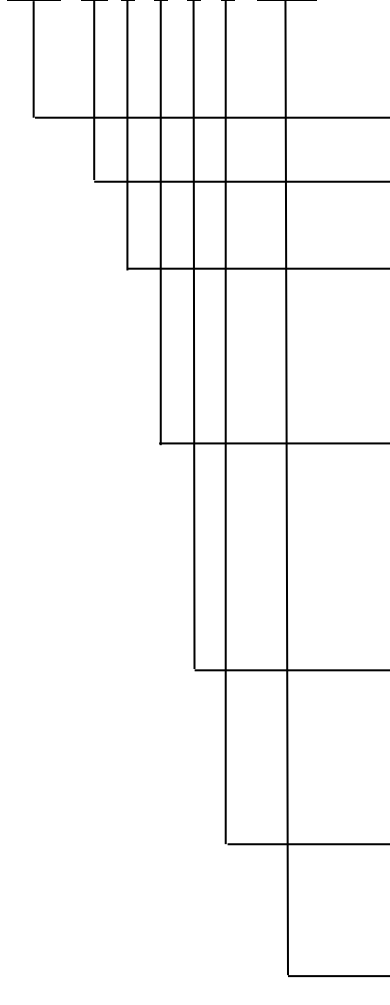
Annex to certificate: IECEX CES 13.0022X Issue No: 4 of 2022-02-16

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

Electrical Apparatus: Adaptors and Plugs, series
B-RA**, B-RB**, B-RM**, B-RN**, B-TS**, NB-TS**, MB-TS**

The male Plugs are identified by a code as follows:

**** ** * * * * (TL**)



Code that identifies the male Plug type:

- **B-TS:** male plug with cylindrical or tapered thread
- **MB-TS:** ISO Metric threaded male plug
- **NB-TS:** NPT threaded male plug (*assessed for Ex eb, Ex tb exec. only*)

Size of male plug thread (*see table 2*)

Pitch (for Metric thread only):

- **Blank:** 1.5 mm pitch
- **2:** 2.0 mm pitch (*for sizes equal or greater than M60 only*)

Type of thread (*Male*):

- **N:** NPT ANSI/ASME B1.20.1
- **P:** PG DIN 40430 (*assessed for Ex eb execution only*)
- **M:** ISO 261
- **C:** GAS ISO 228-1
- **S:** NPSM ANSI/ASME B1.20.1
- **G:** GAS ISO 7-1
- **X:** Gk (CEI EN 60079-1, Annex 1)

Type of material:

- **B:** brass
- **BN:** nickel plated brass
- **X:** stainless steel
- **Z:** galvanized carbon steel
- **A:** aluminium alloy

Flat washer material

- **Blank:** none
- **WC:** Chloroprene
- **WS:** Silicone
- **WF:** Fiber

Code for **B-TS** male plug with tapered thread only.

- **Blank:** assessed for Ex db, Ex eb, Ex tb executions
- **TL**:** plug length (*assessed for Ex eb, Ex tb execution only*)

Example of Adaptor coding:

- **B-RA 2 N 1 M B** male-female hub reducer type B-RA, male thread 3/4"NPT, female thread M20x1.5, made in brass.

Example of Plug coding:

- **MB-TS 6 2 M BN** male-plug, thread M60x2, made in nickel plated brass.

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

Electrical Apparatus: Adaptors and Plugs, series
B-RA**, B-RB**, B-RM**, B-RN**, B-TS**, NB-TS**, MB-TS**

The sizes and thread types of the Adaptors and Plugs are listed on the tables below:

Table 1: B-RA, B-RB**, B-RM** and B-RN** Adaptors sizes and threads type list.**

Adaptor thread size	Thread dimension				
	NPT ANSI/ASME B1.20.1	ISO		ISO 7-1 or 228/1	PG DIN 40430
		pitch 1.5	pitch 2.0		
02	1/4"	M 12	-	1/4"	-
01	3/8"	M 16	-	3/8"	-
1	1/2"	M 20	-	1/2"	7
2	3/4"	M 25	-	3/4"	9
3	1"	M 32	-	1"	11
4	1 ¼ "	M 40	-	1 ¼ "	13.5
5	1 ½ "	M 50	-	1 ½ "	16
60	-	M 60	M 60	-	-
6	2"	M 63	M 63	2"	21
70	-	M 70	M 70	-	-
7	2 ½ "	M 75	M 75	2 ½ "	29
80	-	M 80	M 80	-	-
85	-	M 85	M 85	-	-
8	3"	M 90	M 90	3"	36
9	3 ½ "	M 100	M 100	-	42
10	4"	M 110	M 110	4"	48

Table 2: B-TS, MB-TS** and NB-TS** sizes and threads type list for Plugs.**

Male plugs thread size	Thread dimension				
	B-TS**				
	NB-TS**	MB-TS**		ISO 7-1 or 228/1	PG DIN 40430
NPT ANSI/ASME B1.20.1	ISO				
		pitch 1.5	pitch 2.0		
02	1/4"	M 12	-	1/4"	-
01	3/8"	M 16	-	3/8"	-
1	1/2"	M 20	-	1/2"	7
2	3/4"	M 25	-	3/4"	9
3	1"	M 32	-	1"	11
4	1 ¼ "	M 40	-	1 ¼ "	13.5
5	1 ½ "	M 50	-	1 ½ "	16
60	-	M 60	M 60	-	-
6	2"	M 63	M 63	2"	21
70	-	M 70	M 70	-	-
7	2 ½ "	M 75	M 75	2 ½ "	29
80	-	M 80	M 80	-	-
85	-	M 85	M 85	-	-
8	3"	M 90	M 90	3"	36
9	3 ½ "	M 100	M 100	-	42
10	4"	M 110	M 110	4"	48