



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx CES 18.0041X

Issue No: 0

Certificate history:

Issue No. 0 (2018-11-09)

Status: **Current**

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Date of Issue: **2018-11-09**

Applicant: **BARTEC GmbH**
Max-Eyth-Straße 16
97980 Bad Mergentheim
Germany

Equipment: **Cable Glands 07-9430-41, 07-9430-51, 07-9430-12, 07-9430-32, 07-9430-22, 07-9430-12**T, 07-9430-32**T, 07-9430-22**T series.**

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 (07-9430-12 and 07-9430-12**T Standard and 07-9430-51 only)**
Ex db IIC Gb
Ex eb IIC Gb
Ex tb IIIC Db
IP66/68

*Approved for issue on behalf of the IECEx
Certification Body:*

Mirko Balaz

Position:

Head of IECEx CB

*Signature:
(for printed version)*

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

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



IECEX Certificate of Conformity

Certificate No: IECEX CES 18.0041X Issue No: 0

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Manufacturer: **BARTEC GmbH**
Max-Eyth-Straße 16
97980 Bad Mergentheim
Germany

Additional Manufacturing location(s):

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 apparatus 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 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2015 Edition:5.0	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

*This Certificate **does not** indicate compliance with electrical 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 Report:

[IT/CES/ExTR18.0042/00](#)

Quality Assessment Report:

[DE/TUN/QAR06.0017/10](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The series of Cable glands covered by this certificate is composed by the following types: 07-9430-41, 07-9430-51, 07-9430-12, 07-9430-32, 07-9430-22, 07-9430-12**T, 07-9430-32**T and 07-9430-22**T. These cable glands 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 07-9430-12, 07-9430-12**T and 07-9430-51 cable glands types have to be protected from hydraulic fluids, oils and greases when applied for Group I (mines) applications.
- The 07-9430-12 (Standard) cable glands types from M20x1.5 up to M90x1.5 sizes and 07-9430-12**T (Standard) cable glands types all sizes, are only admitted for Group I applications.
- The 07-9430-51 cable glands types M16x1.5 sizes are not admitted for Group I applications.
- The 07-9430-*2 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 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.

Annex:

[IECEX CES 18.0041X Issue 0 ANNEX- Cable glands 07-9430 BARTEC.pdf](#)



IECEx Certificate of Conformity

CESI

Prot: B8023015

Annex to certificate: IECEx CES 18.0041X Issue No.:0 of 2018-11-09

Applicant: BARTEC GmbH
Max-Eyth-Straße 16 - 97980 Bad Mergentheim – Germany

Apparatus: Cable Glands 07-9430-41, 07-9430-51, 07-9430-12, 07-9430-32,
07-9430-22, 07-9430-12**T, 07-9430-32**T, 07-9430-22**T series.

Description of the equipment:

The series of Cable glands covered by this certificate is composed by the following types: **07-9430-41, 07-9430-51, 07-9430-12, 07-9430-32, 07-9430-22, 07-9430-12**T, 07-9430-32**T and 07-9430-22**T.**

These cable glands 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 **07-9430-41** and **07-9430-51** 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 **07-9430-12** and **07-9430-12**T** cable glands are suitable for steel wire armoured cables. They are comprised of a male body, lower sealing ring, grounding cone, swivel braid retainer, middle body, upper sealing ring and cap. 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 **07-9430-32** and **07-9430-32**T** 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 **07-9430-22** and **07-9430-22**T** cable glands instead of the grounding cone, shielding cone is used and they are used for shielded cables.

The cable glands **07-9430-12** Standard type (from M20x1.5 up to M90x1.5 sizes and with the exclusion of Aluminium alloy), **07-9430-12**T** Standard type (from M20x1.5 up to M130x2 sizes) and **07-9430-51** type (M16x1.5 sizes excluded) only are for Group I (mines) executions too. While all the cable glands types **07-9430-*2, 07-9430-41, 07-9430-51** and **07-9430-*2**T** 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 **07-9430-12**T** and **07-9430-32**T** 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 **07-9430-41** and **07-9430-51** 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 **07-9430-12**T** 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 **07-9430-22**T** 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".

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 **07-9430-41, 07-9430-51, 07-9430-12, 07-9430-32, 07-9430-22, 07-9430-12**T, 07-9430-32**T** and **07-9430-22**T** 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.

Prot: B8023015

Annex to certificate: IECEx CES 18.0041X Issue No.:0 of 2018-11-09

Applicant: **BARTEC GmbH**
Max-Eyth-Straße 16 - 97980 Bad Mergentheim – Germany

Apparatus: **Cable Glands 07-9430-41, 07-9430-51, 07-9430-12, 07-9430-32, 07-9430-22, 07-9430-12**T, 07-9430-32**T, 07-9430-22**T series.**

The cable glands are generally made in Brass (CuZn39Pb3 EN 12164). The following alternative materials can be supplied on demand:

- Nickel-plated Brass type CuZn39Pb3 EN 12164.
- Stainless steel type AISI316; AISI304; AISI303.
- Galvanized carbon steel type FE36; FE37 UNI 10233/4.
- Aluminium alloy EN AW-6026 EN 573-3 (07-9430-12 type and sizes from M25x1.5 up to M75x1.5 only).

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

Service temperature ranges:

Models with sealing rings made of Chloroprene rubber:

- 40 ÷ + 100 °C for type **07-9430-*2**;
- 40 ÷ + 100 °C for type **07-9430-41**;
- 40 ÷ + 80 °C for type **07-9430-51**;
- 40 ÷ + 80 °C for type **07-9430-*2**T**.

Models with sealing rings made of Silicon rubber:

- 60 ÷ + 130 °C for type **07-9430-*2**;
- 60 ÷ + 130 °C for type **07-9430-41**;
- 60 ÷ + 80 °C for type **07-9430-51**;
- 60 ÷ + 80 °C for type **07-9430-*2**T**.

07-9430-*2 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 up to - 20 °C.

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

Type	Exec.	Materials	Seals	Ambient Temp.
07-9430-*2	Group I	Brass, Nickel plated brass, Stainless steel	Chloroprene	-40°C ÷ +80°C
			Silicon	-60°C ÷ +80°C
		Galvanised steel	All seals	-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			
07-9430-41	Group IIC Group IIIC	Brass, Nickel plated brass, Stainless steel	Chloroprene	-40°C ÷ +80°C
			Silicon	-60°C ÷ +80°C
		Galvanised steel	All seals	-20°C ÷ +80°C
07-9430-51	Group I Group IIC Group IIIC	Brass, Nickel plated brass, Stainless steel	Chloroprene	-40°C ÷ +80°C
			Silicon	-60°C ÷ +80°C
		Galvanised steel	All seals	-20°C ÷ +80°C
07-9430-*2**T	Group I Group IIC Group IIIC	Brass, Nickel plated brass, Stainless steel	Chloroprene	-40°C ÷ +80°C
			Silicon	-60°C ÷ +80°C
		Galvanised steel	All seals	-20°C ÷ +80°C

Restricted use to the ambient temperature range of **-50°C ÷ +80°C** for all types whit fiber flat washers.

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Apparatus: **Cable Glands 07-9430-41, 07-9430-51, 07-9430-12, 07-9430-32, 07-9430-22, 07-9430-12**T, 07-9430-32**T, 07-9430-22**T series.**

Identification of cable glands 07-9430-*2, 07-9430-*2**T, 07-9430-41 and 07-9430-51 types:

07-9430-	*	*	*	*	*	*	*	
								<p>Type of cable gland:</p> <ul style="list-style-type: none"> - 1: Standard (armoured cable) - 2: Offshore (shielded cable) - 3: Universal (armoured and shielded cable) - 4: non-armoured cable - 5: non-armoured cable for mining exec.
								<p>Sealing system:</p> <ul style="list-style-type: none"> - 1: Single compression/non-armoured cable - 2: Double compression/armoured cable
								<p>Type of thread:</p> <ul style="list-style-type: none"> - N: NPT ANSI/ASME B1.20.1 - S: NPSM ANSI/ASME B1.20.1 - P: PG DIN 40430 (assessed for Ex eb protection mode only) - M: ISO 261 pitch 1.5 / 2.0 - C: GAS ISO 228-1
								<p>Thread size (see Table 1, 2, 3, 4 and 5).</p>
								<p>Manufacturing material:</p> <ul style="list-style-type: none"> - 0: Nickel-plated brass - 1: Brass - 2: Stainless steel - 3: Galvanized carbon steel - 4: Aluminium alloy (07-9430-*2 types, from M25 up to M75 sizes only)
								<p>Seals material:</p> <ul style="list-style-type: none"> - 0: Silicon rubber - 1: Chloroprene (Neoprene)
								<p>Sealing area:</p> <ul style="list-style-type: none"> - 0: Standard - G: Greatly reduced - R: Reduced - M: Medium - L: Large
								<p>Other:</p> <ul style="list-style-type: none"> - none: Standard temperature range - T: Low temperature range

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Apparatus: Cable Glands 07-9430-41, 07-9430-51, 07-9430-12, 07-9430-32,
07-9430-22, 07-9430-12**T, 07-9430-32**T, 07-9430-22**T series.

Types and thread sizes of cable glands are listed on the followings Table 1, Table 2, Table 3, Table 4, and Table 5.

Table 1:

07-9430-12 Standard, 07-9430-22 Offshore, 07-9430-32 Universal				
Cable glands Size	Thread size		Cable Dia. ranges (mm)	
	NPT	ISO pitch 1.5	Inner sheath	Armour sheath
0**R	1/4"	M 12	2-4	3-5.5
0**0	1/4"	M 12	3-7.5	6-12
1**R	3/8"	M 16	3-8.5	6-12
1**0	3/8"	M 16	6-12	8.5-16
2**R	1/2"	M 20	3-8.5	6-12
2**0	1/2"	M 20	6-12	8.5-16
2**L	1/2"	M 20	8.5-14.5	12-20
3**G	3/4"	M 25	3-8.5	6-12
3**R	3/4"	M 25	6-12	8.5-16
3**0	3/4"	M 25	8.5-16	12-21
3**L	3/4"	M 25	12-20	16-26
4**G	1"	M 32	6-12	8.5-16
4**R	1"	M 32	12-20	16-26
4**0	1"	M 32	15-26	20-33
5**G	1 1/4"	M 40	12-20	16-26
5**R	1 1/4"	M 40	15-26	20-33
5**0	1 1/4"	M 40	20-32	29-41
6**G	1 1/2"	M 50	15-26	20-33
6**M	1 1/2"	M 50	20-32	29-41
6**R	1 1/2"	M 50	22-35	33-48
6**0	1 1/2"	M 50	27-41	36-52
7**G	2"	M 63	22-35	33-48
7**M	2"	M 63	27-41	36-52
7**R	2"	M 63	35-45	43-57
7**0	2"	M 63	40-52	47-60
7**L	2"	M 63	45-56	54-70
8**G	2 1/2"	M 75	35-45	43-57
8**R	2 1/2"	M 75	40-52	47-60
8**0	2 1/2"	M 75	45-60	54-70
9**G	3"	M 90	40-52	47-60
9**R	3"	M 90	45-60	54-70
9**0	3"	M 90	60-72	63-80
A**R	3 1/2"	-	45-60	54-70
A**0	3 1/2"	-	60-72	63-80
B**R	-	M 110	45-60	54-70
B**0	-	M 110	60-72	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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Apparatus: Cable Glands 07-9430-41, 07-9430-51, 07-9430-12, 07-9430-32,
07-9430-22, 07-9430-12**T, 07-9430-32**T, 07-9430-22**T series.

Table 2:

07-9430-12**T Standard and 07-9430-32**T Universal					
Cable glands Size	Thread size			Cable Dia. ranges (mm)	
	NPT	ISO pitch 1.5	ISO pitch 2.0	Inner sheath	Armour sheath
2**0	1/2"	M 20	-	8.5-14.5	12-20
3**M	3/4"	M 25	-	8.5-14.5	12-20
3**0	3/4"	M 25	-	8.5-16	12-21
4**M	1"	M 32	-	8.5-16	12-21
9**L	3" 1/2	-	M 90	70-82	78-90
A**0	4"	-	M 100	80-92	88-100
B**0	4"	-	M 110	90-101	98-110
D**0	5"	-	M 130	100-115	109-123

Table 3:

07-9430-22**T Offshore				
Cable glands Size	Thread size		Cable Dia. ranges (mm)	
	NPT	ISO pitch 1.5	Inner sheath	Armour sheath
2**0	1/2"	M 20	8.5-14.5	12-20
3**M	3/4"	M 25	8.5-14.5	12-20
3**0	3/4"	M 25	8.5-16	12-21
4**M	1"	M 32	8.5-16	12-21

Table 4:

07-9430-41			
Cable glands Size	Thread size		Cable Dia. ranges (mm)
	NPT	ISO pitch 1.5	
1**0	3/8"	M 16	3-8.5
1**L	3/8"	M 16	6-12
2**0	1/2"	M 20	6-12
2**L	1/2"	M 20	12-14.5
3**R	3/4"	M 25	6-12
3**0	3/4"	M 25	12-16
3**L	3/4"	M 25	12-20
4**R	1"	M 32	12-20
4**0	1"	M 32	15-26
5**R	1 1/4"	M 40	15-26
5**0	1 1/4"	M 40	20-32
6**R	1 1/2"	M 50	22-35
6**0	1 1/2"	M 50	27-41
7**R	2"	M 63	35-45
7**0	2"	M 63	40-52
8**R	2 1/2"	M 75	40-52
8**0	2 1/2"	M 75	45-60
9**R	3"	M 90	45-60
9**0	3"	M 90	60-72

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Apparatus: Cable Glands 07-9430-41, 07-9430-51, 07-9430-12, 07-9430-32,
 07-9430-22, 07-9430-12**T, 07-9430-32**T, 07-9430-22**T series.

Table 5:

07-9430-51			
Cable glands Size	Thread size		Cable Dia. ranges (mm)
	NPT	ISO pitch 1.5	
M1**R	3/8"	M 16	3-8.5
M1**0	3/8"	M 16	6-9
M1**L	3/8"	M 16	9-12
M2**R	1/2"	M 20	6-9
M2**0	1/2"	M 20	9-12
M2**M	1/2"	M 20	8.5-11.5
M2**L	1/2"	M 20	11.5-14.5
M3**G	3/4"	M 25	6-9
M3**L	3/4"	M 25	9-12
M3**0	3/4"	M 25	8.5-12.5
M3**M	3/4"	M 25	12.5-16
M3**SL	3/4"	M 25	12-16
M3**L	3/4"	M 25	16-20
M4**R	1"	M 32	12-16
M4**0	1"	M 32	16-20
M4**M	1"	M 32	15-20
M4**L	1"	M 32	20-26
M5**R	1 1/4"	M 40	15-20
M5**0	1 1/4"	M 40	20-26
M5**M	1 1/4"	M 40	20-26
M5**L	1 1/4"	M 40	26-32
M6**R	1 1/2"	M 50	22-28
M6**0	1 1/2"	M 50	28-35
M6**M	1 1/2"	M 50	27-35
M6**L	1 1/2"	M 50	34-41
M7**R	2"	M 63	35-40
M7**0	2"	M 63	40-45
M7**M	2"	M 63	40-46
M7**L	2"	M 63	46-52
M8**R	2 1/2"	M 75	40-46
M8**0	2 1/2"	M 75	46-52
M8**M	2 1/2"	M 75	45-52
M8**L	2 1/2"	M 75	52-60
M9**R	3"	M 90	45-52
M9**0	3"	M 90	52-60
M9**M	3"	M 90	60-66
M9**L	3"	M 90	66-72