



[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:
CESI 18 ATEX 039 X

[4] Product: **Cable gland 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 series**

[5] Manufacturer: **BARTEC GmbH**

[6] Address: **Max-Eyth-Straße 16
97980 Bad Mergentheim
Germany**

[7] This product and any acceptable variation thereto is specified in the schedule 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 European Parliament and Council of 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 Product 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-B8018229.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

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

except in respect of those requirements listed at item 18 of the Schedule.

[10] If the sign "X" is placed after the certificate number, it indicates that the Product 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 Product in accordance to the Directive 2014/34/EU. 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 Product shall include the following:

- | | | | |
|--|----------------|--|--|
| | I M2 | Ex db I Mb and Ex eb I Mb | (07-9430-12, 07-9430-12..T and 07-9430-51 only) |
| | | IP66/68 | |
| | | and / or | |
| | II 2 GD | Ex db IIC Gb and Ex eb IIC Gb and Ex tb IIIC Db | |
| | | IP66/68 | |

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Date 2018.10.26 - Translation issued the 2018.10.26

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(Roberto Piccin)

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[15] **Description of 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 **07-9430-2** 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** and **07-9430-32..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.

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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 (<i>assessed for Ex eb protection mode only</i>) - M: ISO 261 pitch 1.5 / 2.0 - C: GAS ISO 228-1 <p>Thread size (<i>see Table 1, 2, 3, 4 and 5</i>).</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 (<i>07-9430-.2 types, from M25 up to M75 sizes only</i>) <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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Types and thread sizes of cable glands are listed on the followings [Table 1](#), [2](#), [3](#), [4](#) and [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 ¼"	M 40	12-20	16-26
5**R	1 ¼"	M 40	15-26	20-33
5**0	1 ¼"	M 40	20-32	29-41
6**G	1 ½"	M 50	15-26	20-33
6**M	1 ½"	M 50	20-32	29-41
6**R	1 ½"	M 50	22-35	33-48
6**0	1 ½"	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 ½"	M 75	35-45	43-57
8**R	2 ½"	M 75	40-52	47-60
8**0	2 ½"	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 ½"	-	45-60	54-70
A**0	3 ½"	-	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"½NPT) sizes only.

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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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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

[16] Report n. EX- B8018229.

Routine tests

None.

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

- 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 only are 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 EN 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.

[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”.

[19] **Descriptive documents (prot. EX- B8018234).**

- Technical note 01-9430-650030 (pg. 19)	rev.00	dated	2017.10.26
- Safety, maintenance and mounting instruction 01-9430-6N0001 (pg. 23)	rev.0	dated	2018.05.10
- EU Declaration of Conformity FACSIMILE 01-9430-7C0002 (pg. 1)		dated	2018.10.23
- Drawing 01-9430-650007 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650008 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650009 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650010 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650011 (1 sheet)	rev.00	dated	2018.05.10
- Drawing 01-9430-650012 (1 sheet)	rev.00	dated	2018.05.10
- Drawing 01-9430-650001 (1 sheet)	rev.00	dated	2018.05.10
- Drawing 01-9430-650002 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650003 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650004 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650005 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650006 (1 sheet)	rev.0	dated	2018.05.10

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Descriptive documents, follow:

- Drawing 01-9430-650013 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650014 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650051 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650052 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650023 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650024 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650025 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650015 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650016 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650026 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650017 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650027 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650018 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650028 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650029 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650019 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650020 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650021 (1 sheet)	rev.0	dated	2017.10.26
- Drawing 01-9430-650022 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650031 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650032 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650034 (1 sheet)	rev.00	dated	2018.05.10
- Drawing 01-9430-650035 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650036 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650037 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650038 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650039 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650040 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650041 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650042 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650043 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650044 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650045 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650046 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650047 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650048 (1 sheet)	rev.0	dated	2018.05.10
- Drawing 01-9430-650049 (1 sheet)	rev.00	dated	2018.05.10
- Drawing 01-9430-650050 (1 sheet)	rev.0	dated	2018.05.10
- Manufacturing materials datasheets 01-9430-6A0001 (28 sheets)	rev.00	dated	2018.05.10

One copy of all documents is kept in CESI files.