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 24.0012X**

Certificate history:

Status: **Current**

Issue No: 0

Date of Issue: 2024-07-08

Applicant: **CORTEM S.p.A**
Via Aquileia, 10
I - 34070 Villesse (GO)
Italy

Equipment: **Cable glands, Series NEVCF****

Optional accessory:

Type of Protection: **Flameproof enclosures ‘d’; increased safety 'e'; Dust ignition protection 't'**

Marking: Ex db IIC Gb

Ex eb IIC Gb

Ex tb IIIC Db

IP66/68

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

Position: **Head of IECEx CB**

Signature:
(for printed version)

Date:
(for printed version)

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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 www.iecex.com or use of this QR Code.

Certificate issued by:

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

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Certificate No.: **IECEx CES 24.0012X**

Date of issue: 2024-07-08

Manufacturer: **CORTEM S.p.A**
Via Aquileia, 10
I - 34070 Villesse (GO)
Italy

Manufacturing locations: **CORTEM S.p.A**
Via Aquileia, 10
I - 34070 Villesse (GO)
Italy

ELFIT S.p.A.
Via Aquileia, 12
I-34070 Villesse (GO)
Italy

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 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 60079-7:2015 Explosive atmospheres – Part 7: Equipment protection by increased safety "e"
Edition:5.0

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 Report:

IT/CES/ExTR24.0009/00

Quality Assessment Reports:

IT/CES/QAR06.0002/18 IT/CES/QAR13.0001/11

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

Cable glands, Series **NEVCF****

The cable glands type **NEVCF** 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 diaphragm ring is used to realize sealing between the cable and the gland body. To prevent pulling or twisting forces being transmitted to the conductor connections, the cable glands retain the cable armour or the cable braid by specific clamping device. Ingress protection of IP66 and IP68 (50 m for 30 min.) is maintained when the glands are installed in accordance with the manufacturer's instructions.

The Cable glands NEVCF type are designed for steel wire armoured, shielded and braided cables.

Cable glands **NEVCF** series standard threads are cylindrical ISO 261 from M16x1.5 up to M100x1.5 and tapered NPT ANSI/ASME B1.20.1 from 3/8" up to 4".

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.

The cable glands can be also used for intrinsically safe circuits "Ex i" and should have a part painted in light blue.

The cable glands characteristics are further described in the Annex 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 cable glands are for steel wire armoured cables, shielded or braided cables.
- The cable glands for use with shielded or braided cables 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 and IP68 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:

CORTEM - IECEx CES 24.0012X Issue 0 ANNEX - Cable glands series NEVCF.pdf

IECEx Certificate of Conformity

Prot: C4006837

Annex to certificate: **IECEx CES 24.0012X Issue No.:0** of 2024-07-08

Applicant: **Cortem SpA**
Via Aquileia, 10 - 34070 Villesse (GO) - Italy

Electrical Apparatus: **Cable Glands NEVCF**

Description of product

The cable gland type **NEVCF** is 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 diaphragm ring is used to realize sealing between the cable and the gland body. To prevent pulling or twisting forces being transmitted to the conductor connections, the cable glands retain the cable armour or the cable braid by specific clamping device. Ingress protection of IP66 and IP68 (50 m for 30 min.) is maintained when the glands are installed in accordance with the manufacturer's instructions.

The Cable glands NEVCF type are designed for steel wire armoured, shielded and braided cables suitable for Groups IIC and IIIC.

NEVCF type cable glands are comprised of a male lower body, an upper body, a union diaphragm seal, a lower insert, a grounding cone, a reversible braid ring, an O-Ring seal and a cap. The elastomeric inner diaphragm seal is specialized to reduce the pressure on the cables inner sheath. When the upper body is screwed onto the lower body, the armour of the cable is clamped between the grounding cone and the braid ring. The lower insert allows the diaphragm seal to expand elastically according to the cable diameter.

Cable glands **NEVCF** series standard threads series are cylindrical ISO 261 from M16x1.5 up to M100x1.5 and tapered series NPT ANSI/ASME B1.20.1 from 3/8" up to 4".

To guarantee the IP 66 and IP 68 degree of protection the Cable glands **NEVCF** series with cylindrical threads uses a flat washer placed between the male threaded gland body and the enclosure wall, while for tapered threads the IP66 and IP68 degree of protection is achieved with sealant on at least two complete threads engaged of the threaded coupling.

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.

The cable glands can be also used for intrinsically safe circuits "Ex i" and should have a part painted in light blue.

Constructional characteristics

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

Ambient/service temperature ranges:

All the models are admitted for: -60°C ÷ +80°C.
Models made of galvanized carbon steel: -20°C ÷ +80°C.

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Applicant: **Cortem SpA**
Via Aquileia, 10 - 34070 Villesse (GO) - Italy

Electrical Apparatus: **Cable Glands NEVCF**

Identification of cable glands **NEVCF** type:

NEVCF 1 2 3	1: Thread sizes:		*See following table*
	2: Thread type:	I	Metric ISO 261
		N	NPT ANSI ASME B1.20.1
	3: Body material:	BB	Brass
		B	Nickel Plated Brass
		S	Stainless Steel
		G	Galvanized Carbon Steel

Size Code		Thread size		Cable Dia. ranges (mm)	
NPT	ISO	NPT	ISO pitch 1.5	Inner sheath	Armour sheath
01S	16S	3/8”	M 16	3.5-8	6.5-12
01	16	3/8”	M 16	6-11	9-16
1SS	20SS	1/2”	M 20	3.5-8	6.5-12
1S	20S	1/2”	M 20	6-11	9-16
1	20	1/2”	M 20	8.5-14.5	12-20
2S	25S	3/4”	M 25	8.5-14.5	12-20
2	25	3/4”	M 25	12-20	16-26
3S	32S	1”	M 32	12-20	16-26
3	32	1”	M 32	17-26	20-33
4S	40S	1 ¼”	M 40	17-26	20-33
4	40	1 ¼”	M 40	23-32	29-41
5S	50S	1 ½”	M 50	23-32	29-41
5	50	1 ½”	M 50	29-41	36-52
6S	63S	2”	M 63	29-41	36-52
6	63	2”	M 63	40-56	50-65
7S	75S	2 ½”	M 75	40-56	50-65
7	75	2 ½”	M 75	54.5-68	61-78
8S	80S	3“	M 80	54.5-68	61-78
8	80	3“	M 80	67-73	75-89
9	90	3 ½”	M 90	67-77	75-89
10	100	4”	M 100	75-91	88-104