4016

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
Ex COMPONENT CERTIFICATE

Certificate No.: **IECEx CES 15.0005U**

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Certificate history:
Issue 0 (2015-06-18)

Status: **Current**

Issue No: 1

Date of Issue: 2023-08-21

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

Ex Component: Nipples, Couplings and Elbow, series NP.., EM.., ELF.., ELM.. and ELMF..

This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).

Type of Protection: **Flameproof enclosure "d", Increased safety "e", Dust ignition protection 't'**

Marking: **Ex db IIC Gb**

Ex eb IIC Gb

Ex tb IIIC Db

IP 66/67

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) 2023-08-21

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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 15.0005U**

Date of issue: 2023-08-21

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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 component 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 Explosive atmospheres - Part 0: General requirements
Edition:6.0

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 component listed has successfully met the examination and test requirements as recorded in:

Test Reports:

IT/CES/ExTR15.0008/00 IT/CES/ExTR15.0008/01

Quality Assessment Reports:

IT/CES/QAR06.0002/17 IT/CES/QAR13.0001/10

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Ex Component(s) covered by this certificate is described below:

The Nipples, Couplings and Elbow fittings series **EM..**, **NP..**, **ELF..**, **ELM..**, **ELMF..** are suitable to be mounted on cable conduits, on flameproof enclosures and on increased safety enclosures.

They are identified by a code as below:

- **EM**: Coupling female-female;
- **NP**: Nipple male-male;
- **ELF**: Elbow female-female;
- **ELMF**: Elbow male-female;
- **ELM**: Elbow male-male.

The Nipples, Couplings and Elbow fittings can be made in brass, stainless steel, galvanised steel ASTM A105 or ASTM A203 or in aluminium alloy.

The Nipples, Couplings and Elbow fittings standard threads types are NPT/ANSI ASME B1.20.1 from 1/4" up to 6" for types **EM..** and **NP..** and from 1/4" up to 4" for types **ELF..**, **ELMF..** and **ELM...** Alternative available tapered threads are Gk CEI EN 60079-1, Annex 1. While for cylindrical threads are ISO Metric 965/1 and ISO 965/3, NPSM ANSI/ASME B1.20.1 and GAS ISO 228/1.

Identification of fittings:

**** ** *

**** *Code which identifies the series:*

- **EM:** Coupling female-female
- **NP:** Nipple male-male
- **ELF:** 90° Elbow female-female
- **ELMF:** 90° Elbow male-female (ELF elbow + NP nipple coupling)
- **ELM:** 90° Elbow male-male (NP nipple + ELF elbow + NP nipple coupling)

** *Size of fitting* (see table 1)

* *Type of material:*

- **A:** Aluminium alloy
- **B:** Brass
- **S:** Stainless steel
- **G:** Galvanized carbon steel standard
- **GL:** Galvanized steel for low temperatures

All the comprised size codes are listed on the table 1.

SCHEDULE OF LIMITATIONS:

"Schedule of Limitations" for Ex Components - see on next page.

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Date of issue: 2023-08-21 Issue No: 1

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Details of change *(for issues 1 of certificate IECEx CES 15.0005U):*

Variation 1.1

The Nipples, Couplings and Elbow fittings series EM.., NP.., ELF.., ELM.., ELMF.. originally assessed in compliance with IEC 60079-0: 2011, IEC 60079-1:2007, IEC 60079-7:2006 and IEC 60079-31:2008, have been re-assessed on the basis of the Standards:

- IEC 60079-0: 2011 - Electrical apparatus for explosive atmospheres - Part 0: general requirements.
- IEC 60079-1: 2014 - Part 1: Equipment protection by flameproof enclosures "d"
- IEC 60079-7 : 2015 - Part 7: Equipment protection by increased safety "e"
- IEC 60079-31:2013- Electrical apparatus for use in the presence of combustible dust Part 31: protection by enclosures "t".

Upgraded the marking of the components in compliance to the new Standards assessed, including the equipment protection level (EPL) "Gb" and "Db".

Variation 1.2

Upgrade of marking label

Variation 1.3

Upgrade minimum ambient temperature from -50°C to -60°C;

Variation 1.4

Added brand ELFIT S.p.A. as "Additional Manufacturing location".

Unchanged the other constructional characteristics of these Nipples, Couplings and Elbow fittings

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Additional information:
All the comprised size codes are listed on the following table 1.

Table 1.

Fittings type	Size code	NPT Thread	Gk Thread	ISO pitch 1,5 Thread
EM.., NP.., ELF.., ELMF.., ELM..	02	1/4"	--	M 12
	01	3/8"	--	M 16
	1	1/2"	1/2	M 20
	2	3/4"	3/4	M 25
	3	1"	1	M 32
	4	1¼"	1¼	M 40
	5	1½"	1½	M 50
	6	2"	2	M 63
	7	2½"	2½	M 75
	8	3"	3	M 90
	10	4"	4	M 100
EM.., NP..	12	5"	--	--
	14	6"	--	--

"Schedule of Limitations" :

- The coupling of the fittings with the conduits or the enclosures shall be made as indicated by the manufacturer in the documents annexed to this certificate in order respect the type of protection of the electrical apparatus on which the fittings are mounted.
- The fittings shall be mounted in the electrical apparatus in such a way that accidental rotation and loosening will be prevented.
- Fittings with diameter lower than ø3/4" (25mm) made of Aluminium alloy cannot be used.
- The fittings shall be installed in such a way that the temperature at the mounting point will remain within the following service temperature ranges:

Fittings type	Materials	Min. Temperature	Max. Temperature
EM.., NP..	Galvanised steel ASTM A105, brass, Aluminium alloy, Stainless steel.	-20 °C	+80 °C
EM.., NP..	Galvanised steel ASTM A203, brass, Aluminium alloy, Stainless steel.	-40 °C	+150 °C
EM.., NP..	Stainless steel.	-60 °C	+150 °C
ELF..	Aluminium alloy.	-60 °C	+150 °C
ELM.., ELMF..	Aluminium alloy (ELF..) + Stainless steel (NP..).	-60 °C	+150 °C

- The degree of protection IP 66/67 according to the IEC 60529 standard is guaranteed for the fittings if the holes into which fittings 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.