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CESI

CERTIFICATE

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[1] SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE

[2] **Component intended for use on/in equipment or protective system intended for use in potentially explosive atmospheres Directive 2014/34/EU**

[3] Supplementary EU-Type Examination Certificate number:

CESI 01 ATEX 081U / 03

[4] Component: **Breathing and Draining valves series ECD**

[5] Manufacturer: **EL.FIT S.p.A**

[6] Address: **Via Aquileia, 12 – 34070 Villesse (GO) - ITALY**

[7] This supplementary certificate extends EC–Type Examination Certificate **CESI 01 ATEX 081U** to apply to products designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached 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 Parliament and Council of 26 February 2014, certifies that this component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems 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-C1017972.

[9] In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016.

[10] The sign "U" placed after the certificate number indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment or protective system.

[11] This EU-TYPE EXAMINATION CERTIFICATE relates only to the design, examination, and tests of the specified Component in accordance with the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this Component. These are not covered by this certificate.

[12] The marking of the component shall include the following:

Ex **II 2G Ex db IIB** *or* **IIC Gb** *(for models ECD-1..)*

Ex **II 2G Ex db IIB** *or* **IIC Gb** *and*
II 2G Ex eb IIB *or* **IIC Gb** *and*
II 2D Ex tb IIIC Db *(for models ECD-2..)*

Date 21.12.2021 - Translation issued the 21st of December 2021

Prepared	**Verified**	**Approved**
Vito.Giampietro	Alessandro Fedato	Roberto Piccin

Schema di certificazione

CESI-ATEX

ACCREDIA
PRD N. 018B
Membro degli Accordi di Mutuo Riconoscimento EA, IAF e ILAC
Signatory of EA, IAF and ILAC Mutual Recognition Agreements

[13] **Schedule**

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 01 ATEX 081U / 03**

[15] **Description of the variation to the product**

Variation 3.1: Updating into latest ATEX Directive 2014/34/EU.

Variation 3.2: Standard updating to the following standards: EN IEC 60079-0:2018, EN 60079-1:2014, EN IEC 60079-7:2015/A1:2018 and EN 60079-31:2014.

Variation 3.3: The minimum Ambient temperature is changed from -50°C to -60°C.

Variation 3.4: Marking updating and introduction of the manufacturer trademark of brand CORTEM GROUP.

Description of component

The **ECD..** series of Breathing and Draining valves are designed to be fitted into threaded entries of flameproof Ex db, increased safety Ex eb, or Ex tb protected enclosures, depending on the type, to avoid the formation of moisture and water condensation. The valves are made of Stainless steel or Aluminium alloy and consisting of a male threaded external body containing a pin internally retained to the assembly by a retaining ring. The **ECD-2..** type is characterized by sealing gaskets which guarantee a degree of protection IP66.

The **ECD-1..** type of Breathing and Draining valves are available in the following executions:
- Ex db IIC for an ambient temperature up to +60°C.
- Ex db IIB when intended for use with an ambient temperature up to +150°C.

The **ECD-2..** type of Breathing and Draining valves are available in the following executions:
- Ex db IIC and Ex eb IIC and Ex tb IIIC IP66 for an ambient temperature up to +60°C.
- Ex db IIB and Ex eb IIB and Ex tb IIIC IP66 when intended for use with an ambient temperature up to +150°C.

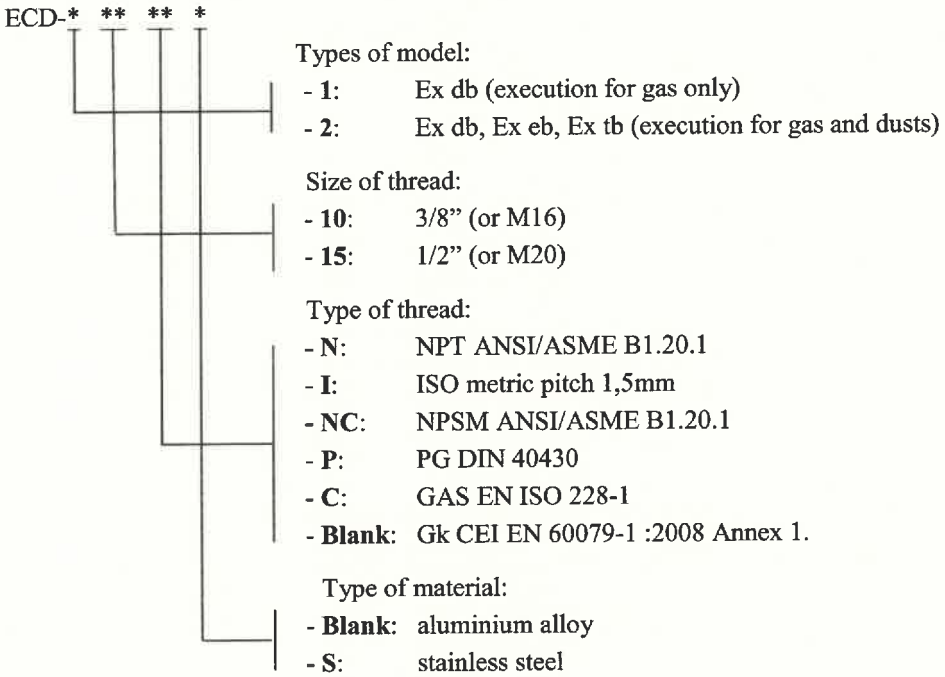
The coupling between the Breathing and Draining valves and the apparatus enclosures is made by means of male threaded joints. The standard available thread is tapered 3/8" or 1/2" NPT ANSI/ASME B1.20.1 or cylindrical ISO Metric 965/1 and ISO 965/3 M16x1.5 or M20x1.5. Other available thread types are Gk CEI EN 60079-1:2008 Annex 1, NPSM ANSI/ASME B1.20.1, PG DIN 40430 and GAS EN ISO 228-1.

To guarantee the IP66 degree of protection the ECD-2.. series of Breathing and Draining valves have fitted a silicon O-ring in-between the body and the pin and a plain gasket on the mounting thread.

[13] # Schedule

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 01 ATEX 081U / 03**

Identification of Breathing and Draining valves:



[16] **Report n.** EX-C1017972.

Routine tests

None.

[17] **Schedule of limitations**

- The coupling of the Breathing and Draining valves with the enclosures shall be made as indicated by the manufacturer in the documents annexed to this certificate to respect the type of protection of the electrical apparatus on which Breathing and Draining valves are mounted.
- The Breathing and Draining valves shall be mounted at the electrical apparatus in such a way that accidental rotation and loosening will be prevented.
- The IP66 mechanical protection of the Breathing and Draining valves type ECD-2 is obtained by inserting an O-ring made of silicon rubber in-between the body and the pin and furthermore when the pin is completely screwed as shown into the mounting instruction.
- If the Breathing and Draining valves type ECD-2 are intended for use with dust protection "Ex tb" the holes into which Breathing and Draining valves are mounted shall maintain the ingress protection rating of the enclosure. To this scope the correct positioning of the gaskets, shall be done as indicated in the manufacturer instruction.
- It is the final assemblers/user's responsibility to ensure the threaded joint between the Breathing and Draining valves and the associated enclosure meet all the requirements of the applicable standards for the assembly.

[13] # Schedule

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 01 ATEX 081U / 03**

[17] **Schedule of limitations** *(follows)*

- The Breathing and Draining valves shall be installed in such a way that the temperature at the mounting point will remain within the following service temperature ranges:

Type	Category	Exec.	Materials	Gaskets	Operating temperature range	
					Min. Temp.	Max. Temp.
ECD-1..	II 2 G	Ex db IIC	Stainless steel, Aluminium alloy	Silicon	-60 °C	+60 °C
ECD-1..	II 2 G	Ex db IIB	Stainless steel, Aluminium alloy	Silicon	-60 °C	+150 °C
ECD-2..	II 2 GD	Ex db IIC Ex eb IIC Ex tb IIIC	Stainless steel, Aluminium alloy	Silicon	-60 °C	+60 °C
ECD-2..	II 2 GD	Ex db IIB Ex eb IIB Ex tb IIIC	Stainless steel, Aluminium alloy	Silicon	-60 °C	+150 °C

- The Breathing and Draining valves were mounted and tested for use on:
- enclosures with internal volume up to 157 liters for gas groups IIB and IIB + H_2;
- enclosures with internal volume up to 100 liters for gas group IIC.
- motors with 900 mm of center high for gas group IIB;
- motors with 500 mm of center high for gas group IIC.

Furthermore, the overpressure tests were conducted according to EN 60079-1, section 15.2.3.2 with a test pressure up to 160 bars.

[18] **Essential Health and Safety Requirements**

Compliance with the Essential Health and Safety Requirements has been assured by compliance to the following standards:

EN IEC 60079-0:2018 Explosive atmospheres – Part 0: Equipment - General requirements.
EN 60079-1:2014 Explosive atmospheres – Part 1: Equipment protection by flameproof enclosures "d".
EN IEC 60079-7:2015/A1:2018 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"

[13] # Schedule

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 01 ATEX 081U / 03**

[19] **Descriptive documents** (prot. EX-C1017979)

- *Technical Note No. A4-1133 (pg.4)	rev.1	dated	27.10.2021
- *Drawing No. A3-215 (2 sheets)	rev.2	dated	13.07.2016
- *Mounting Instruction No. A/8 (pg.5)	rev.3	dated	13.07.2016
- *Attestation of Conformity No. 0134		dated	13.07.2016
- Drawing No. A4-5690 (6 sheets)	rev.0	dated	18.05.2012
- Technical Note No. A4-756 (pg.3)	rev.1	dated	13.02.2007
- Drawing No. A3-760	rev.1	dated	03.02.2007
- Technical Note No. A4-757	rev.0	dated	27.05.1999
- Technical Note No. A4-758	rev.0	dated	27.05.1999
- Technical Note No. A4-759	rev.0	dated	27.05.1999
- Technical Note No. A4-760	rev.0	dated	27.05.1999
- Technical Note No. A4-761	rev.0	dated	27.05.1999
- Technical Note No. A4-762	rev.0	dated	27.05.1999

*Note: an * is included before the title of documents that are new or revised.*

One copy of all documents is kept in CESI files.

Certificate history

Issue N°	Issue Date	Summary description of variation
03	21.12.2021	Updating to ATEX Directive 2014/34/EU. Breathing and Draining valves ECD-1.. and ECD-2.. series have been assessed on the basis of the Standards EN IEC 60079-0:2018, EN 60079-1:2014, EN IEC 60079-7:2015/A1:2018 and EN 60079-31:2014. The permitted minimal Ambient temperature is changed from -50°C to -60°C. Marking updating and introduction of the manufacturer trademark of brand CORTEM GROUP.
02	28.07.2014	Breathing and Draining valves ECD-1.. and ECD-2.. series have been assessed on the basis of the Standards EN 60079-0:2012, EN 60079-1:2007, EN 60079-7:2007 and EN 60079-31:2009. Marking updating.
01	21.05.2007	Breathing and Draining valves ECD-1.. and ECD-2.. series have been re-assessed on the basis of the Standards EN 60079-0:2006, EN 60079-1:2004. Marking updating. Introduced breathing and draining valves ECD-2.. with new type of protection. New ambient temperature range.
00	14.11.2001	First issue of the Certificate