

[1] **EC-TYPE EXAMINATION CERTIFICATE**



[2] **Equipment or Protective System intended for use  
in potentially explosive atmospheres  
Directive 94/9/EC**

[3] EC-Type Examination Certificate number:

**CESI 00 ATEX 075**

[4] **Equipment:** Sealed cable glands series FGAB for armoured cables and series FBF, FBN, FB for non-armoured cables.

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

[6] **Address:** Via Aquileia 8, Villesse, Gorizia (Italy)

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[7] This equipment or protective system 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 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system 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-A0/042627.

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

**EN 50014: 1997 + A1...A2    EN 50018: 2000    EN 50019:2000    EN 50281-1-1:1999**

[10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

[11] This EC-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

[12] The marking of the equipment or protective system shall include the following:

**II 2 GD EEx d IIC EEx e II IP 66/67**

This certificate may only be reproduced in its entirety and without any change, schedule included.

**date** December 22<sup>nd</sup>, 2000 - translation issued on December 22<sup>nd</sup>, 2000

**prepared** CERT - M. Balaz

**approved** CERT - U. Colombo

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page 1/3

[13]

## Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE N. CESI 00 ATEX 075**

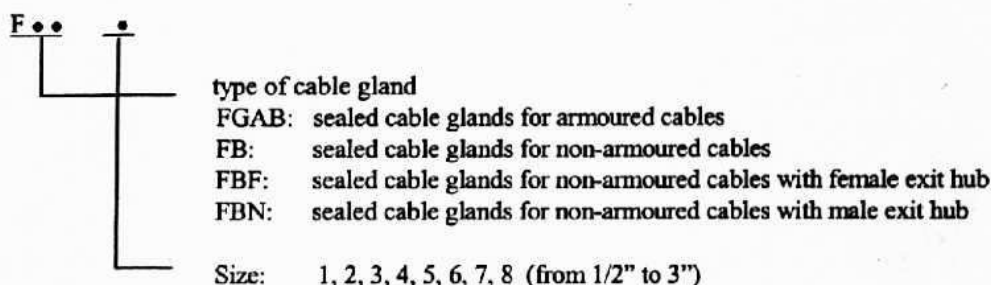
[15] **Description of equipment**

The cable glands series FGAB, FBF, FBN, FB are designed for the type of protection flameproof explosion EEx d IIC and for the type of protection increased safety EEx e II.

The cable glands of all the series above mentioned are also protected against the risk of explosion for the presence of combustible dusts according to the standard EN 50281-1-1.

The cable glands can be used in intrinsic safety EEx i circuits. In this case the cable glands have a part painted light blue.

The various types of cable glands are identified as follows:



Operating temperature range of cable glands:  $-20 \div +80$  °C

### Degree of protection

The cable glands subject of this certificate, when coupled with the enclosures as indicated in the documents annexed to this certificate, are in conformity with the specifications of the standard EN 60529 (1991) for the degree of protection IP 66 and IP 67.

The cable glands shall be coupled with the enclosures as indicated by the manufacturer in the documents annexed to this certificate in order not to jeopardise the type of protection of the electrical apparatus on which the cable glands are installed.

[16] **Report n. EX-A0/042627**

### Routine tests

The manufacturer shall carry out the routine tests prescribed at clause 24 of the EN 50014 standard.

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[13]

## Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE N. CESI 00 ATEX 075**

### Descriptive documents (prot. EX-A0/042629)

- n° A4-689 Rev. 0 (5 p.)	dated 01.06.2000
- n° A4-687 Rev. 0	dated 01.06.2000
- n° A4-796 Rev. 0	dated 01.06.2000
- n° A4-797 Rev. 0	dated 01.06.2000
- n° A3-216 Rev. 0	dated 01.06.2000
- n° A3-225 Rev. 0	dated 01.06.2000
- n° A3-226 Rev. 0	dated 01.06.2000
- n° A3-227 Rev. 0	dated 01.06.2000
- n° A3-217 Rev. 0	dated 01.06.2000
- n° A3-218 Rev. 0	dated 01.06.2000
- n° A3-178 Rev. 0	dated 01.06.2000
- n° A4-690 Rev. 0	dated 01.06.2000
- n° A4-691 Rev. 0	dated 01.06.2000
- n° A4-692 Rev. 0	dated 01.06.2000
- n° A4-693 Rev. 0	dated 01.06.2000
- n° A4-694 Rev. 0	dated 01.06.2000
- n° A4-695 Rev. 0	dated 01.06.2000
- n° A4-697 Rev. 0	dated 01.06.2000
- n° A4-698 Rev. 0	dated 01.06.2000
- n° A4-699 Rev. 0	dated 01.06.2000
- n° A4-700 Rev. 0	dated 01.06.2000
- n° A4-701 Rev. 0	dated 01.06.2000
- n° A4-766 Rev. 0	dated 01.06.2000
- n° A4-767 Rev. 0	dated 01.06.2000
- n° A3-175 Rev. 0	dated 01.06.2000
- n° A3-176 Rev. 0	dated 01.06.2000
- n° A3-177 Rev. 0	dated 01.06.2000
- Mounting instructions Annexe A/15 Rev. 0 (4 p.)	dated 01.06.2000
- EC declaration of conformity n° CE/002	dated 08.08.2000

One copy of all documents is kept in CESI files.

[17] **Special conditions for safe use**

None.

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

Covered by standards.

## EXTENSION n. 01/02

to EC-Type Examination Certificate CESI 00 ATEX 075



Equipment: Sealed cable glands series FGAB for armoured cables and series FBF, FBN, FB for non-armoured cables.

Manufacturer: **EL.FIT S.p.A.**

Address: Via Aquileia 12, Villesse (Gorizia), Italy

### Admitted variation

- modification of the conditions of installation of the cable glands on increased safety enclosures

Report n. EX-A2/011338

Descriptive documents (prot. EX-A2/011334)

- Technical note n° A4-689 rev. 1 (5 p.) dated 29.11.2001
- Drawing n° A4-796 rev. 1 dated 29.11.2001
- Drawing n° A4-797 rev. 1 dated 29.11.2001

This extension and annexed descriptive documents must be annexed to the EC-Type Examination Certificate CESI 00 ATEX 075.


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date April 11<sup>th</sup>, 2002 - translation issued on April 11<sup>th</sup>, 2002

prepared CERT - M. Balaz 

approved CERT - U. Colombo

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page 1/1

Prot. A2/011358 P: 1  
Keywords 13010R 24030K 48010M 48020T 66540E

## EXTENSION n. 02/05



to EC-Type Examination Certificate CESI 00 ATEX 075

Equipment: Sealed cable glands series FGAB for armoured cables and series FBF, FBN, FB for non-armoured cables.

Manufacturer: **ELFIT S.p.A.**

Address: Via Aquileia 12, Villesse, Gorizia (Italy)

### Admitted variation

- Alternative service temperature from  $-40^{\circ}\text{C}$  up to  $+110^{\circ}\text{C}$  for new models FGABt for armoured cables and FBFt, FBNt, FBt for non-armoured cables.
- Added sealed cable glands with capillaries.
- Modification of same part codes (parts of cable glands).

The results of verifications and tests are reported in the confidential report EX-A5060533.

### Identification and description of the equipment

The new models of sealed cable glands FGABt for armoured cables and FBFt, FBNt, FBt for non-armoured cables are made with new type of resin. The mounting of cables into gland and coating of resin can be made only by manufacturer due to the fact that resin requires a special polymerisation processing.

The service temperature of cable glands FGABt, FBFt, FBNt and FBt is  $-40^{\circ}\text{C} \div +110^{\circ}\text{C}$ .

The capillaries can be used only with cable glands size  $\frac{1}{2}$ " and  $\frac{3}{4}$ " type FB1, FB2, FBF1, FBF2, FBN1, FBN2 and type FBt1, FBt2, FBFt1, FBFt2, FBNt1, FBNt2. Inside of cable gland can be mounted from one to three capillaries (diameter 1,5 – 1,6 mm).

This extension and annexed descriptive documents must be annexed to the EC-Type Examination Certificate CESI 00 ATEX 075.

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Date 23<sup>rd</sup> December 2005 translation issued on 23<sup>rd</sup> December 2005

Prepared CERT – M. Balaz

Approved CERT – U. Colombo

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page 1/2

## EXTENSION n. 02/05

to EC-Type Examination Certificate CESI 00 ATEX 075

### Descriptive documents (prot. EX-A5060536)

- n. A4-689 Rev. 02 (5 pg.)	dated	10.01.2005
- n. A4-1040 Rev. 0	dated	10.01.2005
- n. A4-1013 Rev. 0	dated	10.01.2005
- n. A4-690 Rev. 1	dated	13.06.2003
- n. A4-691 Rev. 1	dated	13.06.2003
- n. A4-692 Rev. 1	dated	13.06.2003
- n. A4-695 Rev. 1	dated	13.06.2003
- n. A4-699 Rev. 1	dated	13.06.2003
- n. A4-766 Rev. 1	dated	13.06.2003
- n. A4-767 Rev. 1	dated	13.06.2003
- n. A3-176 Rev. 1	dated	13.06.2003
- Technical sheets of resin (3 pg.)	dated	18.11.2005
- Safety instructions Annexe A/15 Rev. 1 (13 pg.)	dated	18.11.2005

One copy of the above mentioned documents is kept in CESI files.

### Essential Health and Safety Requirements

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

**EN 50014: 1997 + A1..A2** – General requirements

**EN 50018: 2000 + A1** - Flameproof enclosures "d"

**EN 50019: 2000** – Increased safety "e"

**EN50281-1-1: 1998 + A1** – Electrical apparatus for use in the presence of combustible dust. Part 1-1: Electrical apparatus protected by enclosures – Construction and testing.

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## EXTENSION n. 03/07



to EC-Type Examination Certificate CESI 00ATEX 075

Equipment: Sealed cable glands for armoured cables series: FGAB  
and for unarmoured cables series: FBF, FBN, FB.

Manufacturer: EL.FIT S.p.A.

Address: Via Aquileia 12, Villesse (GO)

### Admitted variation


- Upgrade to EN 60079-0 (2006), EN 60079-1 (2004), EN 60079-7 (2003), EN 61241-0 (2006), EN 61241-1 (2004) Standards
- Upgrade of nameplate

### Equipment identification

The cable glands type FGAB, FBF, FBN, FB, shall include the following markings:

 II 2GD      Ex d IIC, Ex e II, Ex tD A21 IP66/67

The cable glands type FGABt, FBFt, FBNt, FBt, shall include the following markings:

 II 2GD      Ex d IIC, Ex e II, Ex tD A21 IP66/67 T-40

### Operating temperature range of cables glands

Sealed cable glands type FGAB, FBF, FBN, FB: - 20 °C ÷ + 80 °C

Sealed cable glands type FGABt, FBFt, FBNt, Ft: - 40 °C ÷ + 110 °C

The assembling of cables and coating resin into gland type. FGABt, FBFt, FBNt, Ft, can be made only by manufacturer due to the special polymerisation process required

This extension and annexed descriptive documents must be annexed to the EC-Type Examination Certificate CESI 00ATEX075.

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date 17/05/2007 - translation issued the 17/05/2007

prepared Sergio Mezzetti

verified Mirko Balaz

approved Fiorenzo Bregani

**CESI**

Centro Elettrotecnico Sperimentale Italiano  
Giacinto Motta SpA

page 1/2

## EXTENSION n. 03/07

to EC-Type Examination Certificate CESI 00ATEX 075

Report n. EX-A7013662

### Routine tests

The manufacturer shall carry out the routine tests prescribed at par. 27 of the EN 60079-0 (2006) and at par. 24 of the EN 61241-0 (2006) Standards.

### Descriptive documents (prot. EX-A7013668)

- Technical Note A4-689 (4 pg.)	Rev. 03	dated	29/01/2007
- Drawing n°. A4-1040	Rev. 01	dated	06/04/2007
- Drawing n°. A4-1130	Rev. 00	dated	06/04/2007
- Drawing n°. A4-1131	Rev. 00	dated	06/04/2007
- EC Declaration of Conformity		dated	06/04/2007
- Safety Instruction A15 (13 pg.)	Rev. 02	dated	06/04/2007

One copy of all documents is kept in CESI files.

### Essential Health and Safety Requirements

The Health and Safety Requirements are assured by compliance with the following Standards:

- EN 60079-0 : 2006: Electrical apparatus for explosive gas atmospheres.  
General requirements
- EN 60079-1 : 2004 Flamoproof enclosures "d".
- EN 60079-7: 2003 Increased safety "e"
- EN 61241-0 : 2006 Electrical apparatus for use in the presence of combustible dust.  
General requirements
- EN 61241-1 : 2004 Protection by enclosures "tD"

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