

# CERTIFICATE OF CONFORMITY



1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
2. **Certificate No:** FM19US0129X
3. **Equipment:** F02/EPI<sub>2</sub>/SCE300 Series Quarter-Turn Electric Actuators  
(Type Reference and Name)
4. **Name of Listing Company:** Biffi Italia SRL
5. **Address of Listing Company:** Strada Biffi 165  
29017 Fiorenzuola d'Arda (PC)  
Italy
6. The examination and test results are recorded in confidential report number:  
3028291 dated 29<sup>th</sup> June 2007
7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:  
FM Class 3600:2018, FM Class 3810:2018, ANSI/UL 61010-1:2012; ANSI/ISA 60079-0:2013;  
ANSI/UL 60079-1:2015; ANSI/UL 60079-7:2017; ANSI/NEMA 250:2008; ANSI/IEC 60529:2004
8. If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.
9. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.
10. **Equipment Ratings:**  
**F02/EPI<sub>2</sub>/SCE300 Series (excluding F02-2000, EPI<sub>2</sub>-E171 & SCE300-2000):** Flameproof with increased safety for Class I, Zone 1, Group IIB T5; Dust-ignitionproof for Class II, Division 1, Groups E, F, and G, T4; and Dust-ignitionproof for Class III, Division 1, T4 hazardous (classified) locations, indoors and outdoors ratings Type 4, 4X, 6, and IP66.  
**F02-2000, EPI<sub>2</sub>-E171 & SCE300-2000 only:** Flameproof with increased safety for Class I, Zone 1, Group IIB T5, hazardous (classified) locations, indoors and outdoors ratings Type 4, 4X, 6, and IP66/68.  
The ambient temperature rating is -40°C to +65°C.

## Certificate issued by:

J.E. Marquedant  
VP, Manager - Electrical Systems

23 October 2019

Date

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

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# SCHEDULE



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11. The marking of the equipment (as appropriate) shall include:

**F02/EPI<sub>2</sub>/SCE300 Series (excluding F02-2000, EPI<sub>2</sub>-E171 & SCE300-2000):**

Class I, Zone 1, AEx db eb IIB T5 Gb  
Class II, Division 1, Groups E, F & G; Class III; T4  
Tamb = -40°C / +65°C; NEMA Type 4, 4X, 6 – IP66

**F02-2000, EPI<sub>2</sub>-E171 & SCE300-2000 only:**

Class I, Zone 1, AEx db eb IIB T5 Gb  
Tamb = -40°C / +65°C; NEMA Type 4, 4X, 6 – IP66/68

12. **Description of Equipment:**

The F02/EPI<sub>2</sub>/SCE3000 Series identifies a Series of Electric Actuator designed to operate any kind of quarter-turn industrial valves such as, Butterfly, Ball, Plug, etc.,

The Electric Actuator converts the input power of an electric motor into a low speed/high torque output power, which is used to operate a valve.

The F02/EPI<sub>2</sub>/SCE3000 Series comprises four different enclosure sizes with five different nominal output torques:

- 063/125 (E6/E13) with nominal torques equal respectively to 63 Nm (558 Lbs-in) and 125 Nm (1107 Lbs-in).
- 250/500 (E25/E51) with nominal torques equal respectively to 250 Nm (2213 Lbs-in) and 500 Nm (4425 Lbs-in).
- 1000 (E91) with nominal torque equal to 1000 Nm (8850 Lbs-in).
- 2000 (E171) with nominal torque equal 2000 Nm (17700 Lbs-in).

The model F02-2000/ -E171 Series Quarter-Turn Electric Actuators is the combination of the F02-1000/ EPI<sub>2</sub>-E91 Series Quarter-Turn Electric Actuators and a mechanical gear.

The SCE300 Quarter-Turn Actuators have the same configuration as the F02/EPI<sub>2</sub>.

**Electrical data:**

The voltage ranges of the F02/EPI<sub>2</sub>/SCE300 Series Quarter-Turn Electric Actuators are:

Low Voltage range (LV): 24 to 48V ± 10% (DC or AC 1-phase).

High Voltage range (HV): 100 to 240V ± 10% (DC or AC 1-phase).

3-phase range: 208 to 575V ± 10% (AC).

The AC frequency rating is 50/60Hz ± 2%

The model structure of the F02/EPI<sub>2</sub>/SCE3000 Series Electric Valve Actuators is as follows.

**F02-a, EPI<sub>2</sub>-b, SCE300-a. Quarter-Turn Electric Actuators.**

a = Model 063, 125, 250, 500, or 1000

b = Model E6, E13, E25, E51, or E91

***F02-2000, EPI<sub>2</sub>-E171, SCE300-2000. Quarter-Turn Electric Actuators.***

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### 13. Specific Conditions of Use:

1. Refer to the manufacturer for flamepath dimensions.
2. To reduce the risk of static ignition, only use antistatic cloth for cleaning.
3. The replacement cover screws shall be a SS AISI 316 Class A4 Grade 80, with minimum yield strength of 600 N/mm<sup>2</sup>. The replacement screws for the assembly of other various parts of the enclosures shall be a SS AISI 316 Class A4 Grade 70, with minimum yield strength of 450 N/mm<sup>2</sup>.
4. During the installation, the user shall take into consideration that the electric actuator F02-2000, EPI2-E171 and SCE300-2000 were only assessed at a low energy impact risk of 2J.

### 14. Test and Assessment Procedure and Conditions:

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

### 15. Schedule Drawings

A copy of the technical documentation has been kept by FM Approvals.

### 16. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
12 February 2019	Original Issue.
23 <sup>rd</sup> October 2019	<u>Supplement 1</u> : Report Reference: – PR454189 dated 23 <sup>rd</sup> October 2019. Description of the Change: 1. Addition of Bettis SCE300 Series 2. Control Circuit Boards 3. CDL update

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