INERIS
INSTITUT NATIONAL DE L'ENVIRONNEMENT
INDUSTRIEL ET DES RISQUES

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(2) **Equipment and protection systems intended for use in potentially explosive atmospheres Directive 94/9/EC**

(1) EC-TYPE EXAMINATION CERTIFICATE

(3) Number of the EC type examination certificate: **INERIS 02ATEX0041 X**

(4) Protective system or equipment :

ACTUATOR SERIES ICON2000 TYPE ICON--.../..-...
(The type is completed by numbers and/or letters corresponding to alternatives of execution)

(5) Manufacturer: **BIFFI ITALIA s.r.l**

(6) Address: Loc.Caselle S.Pietro
29017 Fiorenzuola d'Arda (Pc)
ITALY

(7) This protection system or equipment and any other acceptable alternative of this one are described in the annex of this certificate and the descriptive documents quoted in this annex.

(8) The INERIS, notified body and identified under number 0080, in accordance with article 9 of Council Directive 94/9/EC of the 23rd March 1994, certifies that this protection system or equipment fulfils the Essential of Health and Safety Requirements relating to the design and construction of equipment and protection systems intended for use in potentially explosive atmospheres, described in appendix II of the Directive..

The examinations and the tests are consigned in official report N°P42090/02.

(9) The respect of the Essential Health and Safety Requirements is ensured by:

- conformity with:

EN 50 014	of June	1997 + A1 and A2
EN 50 018	of November	2000
EN 50 019	of July	2000
EN 50 020	of August	1994
EN 50 281-1-1	of September	1998

- specific solutions adopted by the manufacturer to meet the Essential Health and Safety Requirements described in the descriptive documents.

(10) Sign X, when it is placed following the Number of the EC type examination certificate, indicates that this equipment and protection system is subjected to the special conditions for safe use, mentioned in the annex of 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 the protection system will have to contain:

⟨Ex⟩ **II 2 GD** **EEx de IIB 135°C (T4) or EEx de ia IIB 135°C (T4)**

Verneuil-en-Halatte, 2002 09 04

X. LEFEBVRE

Engineer at the Laboratory of Certification of Materials ATEX

The Director of the Organisation Certified,
By delegation
B. PIQUETTE
Deputy manager of Certification

ATMOSPHERES EXPLOSIVES ORGANISME NOTIFIE INERIS NOTIFIED BODY EXPLOSIVE ATMOSPHERES

(13) # ANNEX

(14) EC TYPE EXAMINATION CERTIFICATE N° INERIS 02ATEX0041 X

(15) DESCRIPTION OF THE EQUIPMENT OR THE PROTECTION SYSTEM

The enclosure made in light alloy, is intented for receive mainly an electric motor and an electronic part. A version is envisaged with a compartment containing an intrinsic safety element fitted with a battery, this compartment is inside the terminal board.

The terminal board is protected by increased safety.

The motor is fitted with an internal thermal probe put in winding.

The enclosure presents the degrees of protection IP68 according to the European standard EN 60529.

PARAMETERS RELATING TO THE SAFETY

Electrical parameters

Supply voltage	:	from 230 to 480 V
Frequencies	:	50/60 Hz
Power of motors	:	from 0,071 kW to 13,963 kW

The maximum power of motors varies according to the type of the motor and the electric characteristics.

The various powers are specified in the descriptive documents.

Thermal probe characteristic equipping the motor :

Limit of release	:	140 °C ± 5°C.

MARKING

Marking must be readable and indelible; it must comprise the following indications:

A) Actuator without intrinsic safety element :

- **BIFFI ITALIA s.r.l**
  Loc.Caselle S.Pietro
  29017 Fiorenzuola d'Arda (Pc)
  ITALY
- ICON (1)
- INERIS 02ATEX0041 X
- (Serial number)
- (year of construction)
- Ex **II 2 GD**
- EEx de IIB 135°C (T4)
- T.Amb : (*)
- IP68
- DO NOT OPEN ANY COVER WHEN AN EXPLOSIVE GAS ATMOSPHERE MAY BE PRESENT

On the terminal board cover protected by increased safety :

- The code "e"
- (rated voltage and rated current and/or rated power)

(1) Type is completed by numbers and/or letters corresponding to alternatives of execution.

(*) Indication of ambient temperature range when that it is different from -20°C to 40°C.

B) Actuator with intrinsic safety element :

- **BIFFI ITALIA s.r.l**
  Loc.Caselle S.Pietro
  29017 Fiorenzuola d'Arda (Pc)
  ITALY
- ICON (1)
- INERIS 02ATEX0041 X
- (Serial number)
- (year of construction)
- Ex **II 2 GD**
- EEx de ia IIB 135°C (T4)
- T.Amb : (*)
- IP68
- DO NOT OPEN ANY COVER WHEN AN EXPLOSIVE GAS ATMOSPHERE MAY BE PRESENT

On the terminal board cover protected by increased safety :

- The code "e"
- (rated voltage and rated current and/or rated power)

(1) Type is completed by numbers and/or letters corresponding to manufacturing variation.

(*) Indication of ambient temperature range when that it is different from -20°C to 40°C.

On the compartment containing the intrinsic safety circuit :
EEx ia IIC T4 - IP66

The whole of marking can be carried out in the language of the country of use.

The protection apparatus or system must also carry the marking normally envisaged by the standards of construction which relate to it.

ROUTINE EXAMINATIONS AND TESTS

According to 16.1 of standard EN 50 018, each example of the flameproof enclosure defined above must have successfully passed before delivery an overpressure test, of a period comprised between 10 and 60 secondes, under 12 bar.

According to 7.1 of standard EN 50 019, each example of the increased safety part of the equipment must undergo a dielectric strength test, carried out in accordance with 6.1 of satndard EN 50 019.

(16) DESCRIPTIVE DOCUMENTS

The technical report is composed of the documents quoted hereafter, constituting the descriptive file of the apparatus, object of this certificate.

-Technical note DT-1432	rev.1 of 2002.08.26	signed on 2002.08.26
-Instruction manual MAN 618	rev.1 of 2002.08.26	signed on 2002.08.26
-Plan n° 50080-12	rev.2 of 2002.08.26	signed on 2002.08.26
-Plan n° 50080-3	rev.3 of 2002.08.26	signed on 2002.08.26
-Plan n° 50080-14	of 2002.08.28	signed on 2002.08.28
-Plan n° PC4736-4		signed on 2000.12.06
-Plan n° PC4736-3		signed on 2000.12.06
-Plan n° PC4736-2		signed on 2000.12.06
-Plan n° PC4736-1		signed on 2000.12.06
-Plan n° DE4736		signed on 2000.12.06
-Plan n° PC4750		signed on 2000.12.06
-Plan n° DE4750-1		signed on 2000.12.06

(17) SPECIAL CONDITIONS FOR SAFE USE

- The actuator variations are intended to be used in an ambient temperatures range of -20°C to 65°C.
- The screws used for the assembly of the various parts of explosion-proof enclosures must be of quality higher or equal to 450 N/mm2.
- All the certified elements equipping the actuators, in particular the cables entries, could be put on the market until June 30 2003. The actuators put on the market after this date will be equipped with elements in conformity with Directive 94/9/EC.

For use in potentially explosive atmospheres due to combustible dust:

- The surface of the differents gaps shall be covered with grease, for example silicone and cable entries shall be of a degree of protection at least IP6X.
- User shall perform a regular cleaning of material to limit dust layers on the material sides.

These special conditions are defined in instruction notice.

(18) ESSENTIAL REQUIREMENTS OF SAFETY AND HEALTH

The respect of the Essential Health and Safety Requirements is ensured by:

- conformity to the European standards EN 50 014, EN 50 018, EN 50 019, EN 50 020 and EN 50 281-1-1
- the whole of the provisions adopted by the manufacturer and described in the descriptive documents.

ADDITION

INERIS 02ATEX0041X/01

ACTUATOR SERIES ICON2000 TYPE ICON-.../..-...

Manufactured by BIFFI

(15) - PURPOSE OF THE ADDITION

- Possibility to use this equipment in a ambient temperature -25°C
- Increase of maximum supply voltage,
- Incorporation of new motors serial TM.

PARAMETERS RELATING TO THE SAFETY

For using in ambient temperatures inferior to -20°C (-25°C maxi), the manufacturing is previewed by the manufacturer under his responsibility.

Type test have been performed under ambient temperature required by standards.

The parameters relating to the safety stipulated by the basic certificate are modified as follows :

Maximum supply voltage : 690 V

Thermal switch characteristic equipping motors serial TM :

Threshold of release : 160 °C ± 5°C with maximum ambient 65°C.

MARKING

The marking defined in the basic basic EC-type examination certificate is unchanged.

ROUTINE EXAMINATIONS AND TESTS

The routine tests stipulated by the basic certificate are unchanged.

(16) - DESCRIPTIVE DOCUMENTS

The documents referred to below, constitute the file describing the modifications of the apparatus and forming the subject of the present addition.

- Descriptive note DT-1432	rev.2	of 2003.07.22
- Instruction manual MAN 618	rev.4	of 2003.09.10
- Drawing n° 50080-12	rev.3	of 2003.07.22
- Drawing n° 50080-3	rev.4	of 2003.07.22

These documents were signed on 2004.03.12

(17) - SPECIAL CONDITIONS FOR SAFE USE

The special condition, relating to the range of ambient temperature, defined in the basic certificate is modified as follows :

The actuator are intended to be used in an ambient temperatures range from -25°C to 65°C.

(18) ESSENTIAL REQUIREMENTS OF SAFETY AND HEALTH

The respect of the Essential Health and Safety Requirements defined in the basic certificate is unchanged.

Verneuil-en-Halatte, 2004 03 16

C.PETITFRERE

Engineer at the Laboratory of Certification of ATEX Equipment

Director of the Certifying Body,
By delegation
B. PIQUETTE
Deputy manager of Certification

ATMOSPHERES EXPLOSIVES ORGANISME NOTIFIE INERIS NOTIFIED BODY EXPLOSIVE ATMOSPHERES

ADDITION

INERIS 02ATEX0041X/02

ACTUATOR SERIES ICON2000 TYPE ICON-.../..-...

Manufactured by BIFFI ITALIA srl

(15) - PURPOSE OF THE ADDITION

- Replacement of existing battery pack by the battery pack constituted by 3 LS 14250 SAFT cells
- Change of infallible components fuse, resistance included in the battery compartment

PARAMETERS RELATING TO THE SAFETY

The battery pack to be used is SAFT LS14250 - 9V - 1,0 Ah

The other parameters relating to the safety stipulated by the addition 01 are unchanged.

MARKING

On the compartment containing the intrinsic safety circuit, the marking becomes :

EEx ia IIC T4 up to Tamb 65°C - IP66

Or EEx ia IIC T3 up to Tamb 85°C - IP66

" DO NOT OPEN IN PRESENCE OF EXPLOSIVE GAS ATMOSPHERE "

ROUTINE EXAMINATIONS AND TESTS

The routine tests stipulated by the basic certificate are unchanged.

(16) - DESCRIPTIVE DOCUMENTS

The documents referred to below, constitute the file describing the modifications of the apparatus and forming the subject of the present addition.

- Descriptive note DT-1432-1	rev.0	du 2005.11.28
- Drawing DE5713	rev.1	du 2005.08.26
- Drawing PC 5713-1	rev.1	du 2005.10.12
- Instruction Manual MAN 618	rev.7	du 2005.10.10
- Drawing n° 50080-12	rev.4	du 2005.10.10
- Interface circuit DE5700	rev.1	du 2005.10.12
- Printed circuit PC 5700-1	rev.1	du 2005.10.12
- Printed circuit PC 5700-2	rev.1	du 2005.10.12

- Printed circuit PC 5700-3 rev.1 du 2005.10.12
- Printed circuit PC 5700-4 rev.1 du 2005.10.12

These documents are signed on 2005.12.01

(17) - **SPECIAL CONDITIONS FOR SAFE USE**

The special condition, defined in the basic certificate and the addition 01 are unchanged.

(18) **ESSENTIAL REQUIREMENTS OF SAFETY AND HEALTH**

The respect of the Essential Health and Safety Requirements defined in the basic certificate is unchanged.

Verneuil-en-Halatte, 2005 12 05

ATMOSPHERES EXPLOSIVES ORGANISME NOTIFIE INERIS NOTIFIED BODY EXPLOSIVE ATMOSPHERES

T. DELBAERE

Engineer at the Laboratory of Certification of ATEX Equipment

Director of the Certifying Body,
By delegation
B. PIQUETTE
Deputy manager of Certification

ADDITION

(3) INERIS 02ATEX0041X/03

(4) ACTUATOR SERIES ICON2000 TYPE ICON-.../..-...

(5) Made by BIFFI ITALIA srl

(15) PURPOSE OF THE ADDITION

- Application of standards :

EN 60079-0	: 2009	IEC 60079-0	: 2011
EN 60079-1	: 2007	IEC 60079-1	: 2007
EN 60079-7	: 2007	IEC 60079-7	: 2006
EN 60079-11	: 2012	IEC 60079-11	: 2011
EN 60079-31	: 2009	IEC 60079-31	: 2008
EN 13463-1	: 2009	EN 13463-5	: 2003

- Modification of the range of ambient temperature
- Addition of protection degree IPX6 according to IEC/EN 60529.

PARAMETERS RELATING TO THE SAFETY

The parameters relating to the safety are unchanged.

MARKING

The marking is modified as follows:

A) Actuator without intrinsic safety element :

BIFFI ITALIA s.r.l
I - 29017 Fiorenzuola d'Arda (PC)
ICON (*)
INERIS 02ATEX0041X
(Serial number)
(Year of construction)
Ex II 2 GD
c Ex d e IIB T4 Gb
c Ex tb IIIC Db IP66/68 T135°C
T.Amb : (**)
FOR CABLE ENTRIES DIMENSIONS SEE INSTALLATION MANUAL.

WARNINGS:

DO NOT OPEN WHEN ENERGIZED
DO NOT OPEN ANY COVER IF AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT

(*) Type is completed by numbers and/or letters corresponding to alternatives of execution.

(**) Indication of the range of temperature ambient if it is different from -20°C to 40°C: -25°C to 60°C.

B) Actuator with intrinsic safety element :

BIFFI ITALIA s.r.l
I - 29017 Fiorenzuola d'Arda (PC)
ICON (*)
INERIS 02ATEX0041X
(Serial number)
(Year of construction)
⟨Ex⟩ II 2 GD
c Ex d e ia IIB T4 Gb
c Ex tb IIIC T135°C Db IP66/68
T.Amb. : (**)
FOR CABLE ENTRIES DIMENSIONS SEE INSTALLATION MANUAL.

WARNINGS :
DO NOT OPEN WHEN ENERGIZED
DO NOT OPEN ANY COVER IF AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT

On the compartment containing the intrinsic safety circuit, the marking:

"ia"

(*) Type is completed by numbers and/or letters corresponding to alternatives of execution.

(**) Indication of the range of temperature ambient if it is different from -20°C to 40°C: -25°C to 60°C.

Marking may be carried out in the language of the country of use.

The protective system or equipment has also to carry the marking normally stipulated by its construction standards.

ROUTINE EXAMINATIONS AND TESTS

The routine tests are modified as follows:

In accordance with 16.1 of standard EN/IEC 60079-1, each sample of the flameproof enclosure defined above must have successfully passed before delivery an overpressure test, of a period comprised between 10 and 60 seconds, under 19.2 bar.

In accordance with clause 7.1 of the EN/IEC 60079-7 standard, a dielectric test strength on each of the different circuits of the connection units, performed according to the relevant standards, the supply voltage shall applied during one minute.

(16) DESCRIPTIVE DOCUMENTS

The descriptive documents quoted hereafter constitute the technical documentation describing the modification of the equipment, subject of this present addition.

-	Descriptive notice DT 1432	rev.3	of 2012.10.08
-	Annex 1 DT_2001	rev.0	of 2012.10.12
-	Instructions MAN 618 Addendum E	rev.0	of 2012.09.26
-	Drawing n°50080-3	rev.5	of 2012.09.25
-	Drawing n°50080-12	rev.5	of 2012.09.25
-	Drawing n°50080-14	rev.2	of 2012.10.08

All documents were signed on 2012.10.29

(17) SPECIAL CONDITIONS FOR SAFE USE

The special conditions are replaced by the following:

- The screws used for the assembly of the various parts of explosion-proof enclosures must be with yield strength higher or equal to 450 N/mm^2.
- The equipment is intended to be used in an ambient temperature range from -25°C to 60°C.
- The gap and diametrical clearances are less than the values specified in the table of the EN/IEC standard.
- The width of the flameproof joints is superior to the values specified in the tables of the EN/IEC 60079-1 standards.

The other conditions are stipulated in the instructions.

(18) ESSENTIAL SAFETY AND HEALTH REQUIREMENTS

The respect of the Essential Health and Safety Requirements is completed as follows:

- Conformity to the standards quoted on page 1, clause (15).
- All provisions adopted by the manufacturer and defined in the descriptive documents.

Verneuil-en-Halatte, 2012.11.26

Dominique CHARPENTIER
Certification Division
Manager

ATMOSPHERES EXPLOSIVES ORGANISME NOTIFIE INERIS NOTIFIED BODY EXPLOSIVE ATMOSPHERES

The Chief Executive Officer,
By delegation
T. HOUEIX
Ex Certification Officer