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 02ATEX0018**

(4) Protection apparatus or system:

CABLE GLANDS TYPE TOR 60 and TOR 90

(5) Manufacturer: **ITALKRANE.**

(6) Address: Via Monza, 13
20060 BUSSERO (MI)
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/CE 23th 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°16012/02.

(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 50 281-1-1	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 d IIC / EEx e II or EEx d IIB / EEx e II IP66**

Verneuil-en-Halatte, 2002 03 14

X. LEFEBVRE

Engineer at the Laboratory of Certification of Materials ATEX

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

ATMOSPHERES EXPLOSIVES
ORGANISME NOTIFIÉ
INERIS
NOTIFIED BODY
EXPLOSIVE ATMOSPHERES

(13) # ANNEX

(14) EC TYPE EXAMINATION CERTIFICATE N° INERIS 02ATEX0018

(15) **DESCRIPTION OF THE EQUIPMENT OR THE PROTECTION SYSTEM**

These cable glands are protected by flameproof enclosure and by increased safety, and they are foreseen, only, for flat cables.

These cable glands have a protection degree IP66 according to European standard EN 60 529.

PARAMETERS RELATING TO THE SAFETY

Cable characteristics

Entry type	Number of conductors and section	Cable dimensions (mm)	Maximum rated current (A)
TOR 60	4 x 2,5 mm^2	22 x 8	10
TOR 60	4 x 4 mm^2	24 x 8	16
TOR 60	4 x 6 mm^2	30 x 9	25
TOR 90	4 x 10 mm^2	37 x 14	40
TOR 90	4 x 16 mm^2	45 x 15	63
TOR 90	8 x 1,5 mm^2	39 x 6	6
TOR 90	8 x 2,5 mm^2	39 x 7	
TOR 90	12 x 1,5 mm^2	49 x 7	10
TOR 90	12 x 1,5 mm^2 + 12 x 1,5 mm^2	49 x 13	6
TOR 90	4 x 25 mm^2	49 x 15	100

MARKING

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

ITALKRANE.
Via Monza, 13
20060 BUSSERO (MI)
ITALY

- TOR 60 or TOR 90
- INERIS 02ATEX0018
- (Serial number)
- (year of construction)
- Ⓔx II 2 GD
- EEx d IIB/EEx e II or EEx d IIC/EEx e II
- T.Amb : -20°C at 80°C
- 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

None.

(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 n°TOR/ATEX (2 pages) signed on 2001.11.12
- Safety note TOR rév. 0 (3 pages) signed on 2001.11.12
- Plan n°10371 rev.1 of 12.11.2001 signed on 2001.11.12

(17) SPECIAL CONDITIONS FOR SAFE USE

The 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 and EN 50 281-1-1

- the whole of the provisions adopted by the manufacturer and described in the descriptive documents.

ADDITION

INERIS 02ATEX0018/01

CABLE GLANDS TYPE TOR 60 and TOR 90

Manufactured by ITALKRANE

(15) - PURPOSE OF THE ADDITION

Increase in maximum voltage.

Modification of cables characteristic (section and number of conductors)

PARAMETERS RELATING TO THE SAFETY

The parameters relating to the safety stipulated by the basic certificate are completed as following :

Maximum voltage : 750 V

The maximum cable dimensions are :

Type of cable gland	Maximum thickness of the cable (mm)	Maximum breadth of cable (mm)
TOR 60	10	30
TOR 90	15	50

MARKING

The marking defined in the basic certificate is unchanged.

ROUTINE EXAMINATIONS AND TESTS

The routine and examinations 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 n°TOR/ATEX rev.1 of 2002.09.17 (2 pages)
- Safety note TOR rev.1 of 2002.09.17 (3 pages)

These documents were signed on 2002.09.17

(17) - SPECIFIC PARAMETERS OF THE TYPES OF PROTECTION CONCERNED

None.

(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, 2002 09 19

C. PETITFRERE

Engineer at the Laboratory of Certification of Materials ATEX

Director of the Certifying Body,
By delegation
C. MICHOT
Certification Manager

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ADDITION

(3) INERIS 02ATEX0018/02

(4) CABLE GLAND TYPE TOR 60 and TOR 90

(5) Made by ITALKRANE

(15) PURPOSE OF THE ADDITION

- Application of new standards
  EN 60079-0 : 2006 EN 60079-1 : 2007 EN 60079-7 : 2007
  EN 61241-0 : 2006 EN 61241-1 : 2004
- Possibility to use this apparatus at ambient temperature of -50°C.
- Addition of a new type TOR100.

PARAMETERS RELATING TO THE SAFETY

The parameters relating to the safety are completed as follow:

Type of cable gland	Number of conductors and section	Cable dimensions (mm)	Maximum rated current (A)	Maximum thickness of cable (mm)	Maximum of the cable (mm)
TOR 100	4 x 35 mm^2	70 x 21	140	22	70
TOR 100	12 x 1.5 mm^2	60 x 6	6	22	70

MARKING

The marking is modified as follow:

ITALKRANE
I - 20060 Bussero (MI)
TOR (*)
INERIS 02ATEX0018
(Serial number)
(Year of construction)
Ex II 2 GD
Ex d IIB/Ex e II or Ex d IIC/Ex e II
Ex tD A21 IP66
Using temperature : -50°C to +115°C

(*) One of the following type: TOR 60, TOR 90 or TOR 100.

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

None.

(16) DESCRIPTIVE DOCUMENTS

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

-	Technical note n°TOR/ATEX	rev.3 (2 pages)	of 2008.10.28
-	Safety note n°TOR	rev.1 (4 pages)	of 2008.10.18
-	Drawing n°10371	rev.3	of 2008.10.08
-	Drawing n°10363/2	rev.1	of 2008.10.28

All documents were signed on 2009.09.25

(17) SPECIAL CONDITIONS FOR SAFE USE

None.

(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, 2009 10 26

ATMOSPHERES EXPLOSIVES ORGANISME NOTIFIE INERIS NOTIFIED BODY EXPLOSIVE ATMOSPHERES

Director of the Certifying Body,
By delegation
T. HOUEIX
Certification Officer
Certification Division