



(2) **Equipment and protective 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 14ATEX0008X**

(4) Equipment or protective system:

ENCLOSURES TYPE CCF... or CCV...

(5) Manufacturer: **COELBO srl**

(6) Address: **Via Santa Margherita 83
I-20861 Brugherio (MB)**

(7) This equipment or protective system 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) INERIS, notified body and identified under number 0080, in accordance with article 9 of Council Directive 94/9/EC of the 23rd March 1994, and accredited by COFRAC under number 5-0045 for certification of products and services (scope of accreditation available on the website www.cofrac.fr) certifies that this equipment or protective system fulfils the Essential of Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, described in annex II of the Directive.

The examinations and the tests are consigned in report No 029023/14.

The rules of certification are available on the website www.ineris.fr.


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

- conformity with:

EN 60079-0 : 2012/A11:2013
EN 60079-1 : 2007
EN 60079-11 : 2012
EN 60079-31 : 2009

- 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 protective 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 protective system will have to contain:

 II 2 GD or II 2(1) GD

Verneuil-en-Halatte, 2014.12.11



The Chief Executive Officer of INERIS
By delegation
T. HOUeix
Ex Certification Officer



(13) **ANNEX**

(14) **EC TYPE EXAMINATION CERTIFICATE N° INERIS 14ATEX0008X**

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

Range of flameproof enclosures made in Aluminum light alloy EN AB/AC 43100 AlSi10.

These enclosures are intended to contain mainly electrical and/or electronic "NIS" components, they can also contain "IS" elements covered by a separated ATEX certificate.

These enclosures can be fitted with the command and signaling units covered by the certificate INERIS 14ATEX9009U and window specified in manufacturer's descriptive documentation.

The versions containing intrinsic safety associated apparatus have to respect power limits reported in table 2, otherwise the enclosure shall be equipped with an internal thermal probe.

These enclosures get the degree of protection IP66 or IP65 in accordance with EN 60529.

PARAMETERS RELATING TO THE SAFETY

For enclosure without intrinsic safety element:

Enclosure CCF or CCV	Minimum Temperature	Maximum Temperature	Gas Group
All except 16, 16A and 16B	-20°C or -50°C	+40°C or +50°C or +60°C	IIB or IIB+H ₂
Only 16, 16A, 16B	-20°C or -40°C	+40°C or +50°C or +60°C	IIB or IIB+H ₂
Only 16, 16A, 16B	-50°C	+40°C or +50°C or +60°C	II(H ₂)

Maximum supply voltage : 1000 Vac or Vdc

Maximum dissipated powers are defined in the Table 1.

For enclosure with intrinsic safety element:

This version is intended to use in range of ambient temperatures from:

-20°C to +40°C or +50°C or +60°C.

Maximum supply voltage for Non 'IS' elements : 1000 Vac or Vdc

Maximum supply voltage for "IS" elements : 250 V

Maximum dissipated powers are defined in the Table 2, for enclosures without thermal probes.

Maximum dissipated powers are defined in the Table 1, for enclosures with thermal probes.

The maximum threshold of thermal probe shall be:

(maximum barrier's temperature -5°C)±5°C

MARKING

Marking has to be readable and indelible; it has to include the following indications:

A. Enclosures without intrinsic safety element:

All enclosures except 16, 16A and 16B versions:

COELBO

I-20861 Brugherio (MB)

CCF... or CCV...(*)

INERIS 14ATEX0008X

(Serial number)

(Year of construction)

⊕ II 2 GD

Ex d IIB or IIB+H2 T6 or T5 or T4 or T3 Gb

Ex tb IIIC T85°C or T100°C or T135°C or T200°C Db IP65 or IP66

...°C < Tamb < ...°C (**)

T.Cable : (***)

WARNINGS:

DO NOT OPEN IF AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT

(*) Type is completed by numbers and/or letters corresponding to different versions of the enclosure.

(**) See parameters relating to the safety.

(***) See Table 1.

Only 16, 16A and 16B versions:

COELBO


I-20861 Brugherio (MB)

CCF... or CCV...(*)

INERIS 14ATEX0008X

(Serial number)

(Year of construction)

 II 2 GD

Ex d IIB or IIB+H2 or II(H2) T6 or T5 or T4 or T3 Gb (**)

Ex tb IIIC T85°C or T100°C or T135°C or T200°C Db IP65 or IP66

...°C < Tamb < ...°C (**)

T.Cable : (***)

WARNINGS:

DO NOT OPEN IF AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT

(*) Type is completed by numbers and/or letters corresponding to different versions of the enclosure.

(**) See parameters relating to the safety.

(***) See Table 1.

B. Enclosures with intrinsic safety element:

COELBO


I-20861 Brugherio (MB)

CCF... or CCV...(*)

INERIS 14ATEX0008X

(Serial number)

(Year of construction)

 II 2(1) GD

Ex d[ia IIC or IIB Ga] IIB or IIB+H2 T6 or T5 or T4 or T3 Gb

Ex tb[ia Da] IIIC T85°C or T100°C or T135°C or T200°C Db IP65 or IP66

...°C < Tamb < ...°C (**)

T.Cable : (***)

WARNINGS:

DO NOT OPEN IF AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT

(*) Type is completed by numbers and/or letters corresponding to different versions of the enclosure.

(**) See parameters relating to the safety.

(***) See Table 1 and 2.

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.

Table 1: Enclosure without intrinsic safety element

	T6 for ambient:			T5 for ambient:			T4 for ambient:			T3 for ambient:		
	40 °C	50 °C	60 °C	40 °C	50 °C	60 °C	40 °C	50 °C	60 °C	40 °C	50 °C	60 °C
	P[W]	P[W]	P[W]	P[W]	P[W]	P[W]	P[W]	P[W]	P[W]	P[W]	P[W]	P[W]
CCF0	23	17	10	33	27	20	57	50	43	90	83	77
CCF1	31	22	13	44	35	26	75	66	57	119	110	101
CCF1A	35	25	15	50	40	30	86	76	66	136	126	116
CCF2	57	41	24	82	65	49	139	122	106	220	204	188
CCF3	70	50	30	100	80	60	170	150	130	270	250	230
CCF3A	91	65	39	130	104	78	221	195	169	351	325	299
CCF4	51	37	18	74	55	42	125	111	92	199	139	129
CCF4A	66	48	24	96	72	54	161	143	120	257	179	167
CCF5	81	59	30	118	89	66	199	177	148	318	222	207
CCF5A	99	72	36	144	108	81	243	216	180	387	270	252
CCF6	90	66	33	131	99	74	222	197	164	353	246	230
CCF6A	110	80	40	160	120	90	269	239	199	429	299	279
CCF7	112	82	41	164	123	92	276	245	205	440	307	286
CCF7A	136	99	49	198	148	111	334	297	247	532	371	346
CCF8	110	80	40	160	120	90	270	240	200	430	300	280
CCF8A	146	105	64	210	169	129	351	310	269	555	514	473
CCF9	139	100	61	201	162	123	335	296	257	530	491	452
CCF9A	169	121	74	243	196	148	405	358	310	641	594	547
CCF10	167	120	73	240	194	147	401	354	307	634	588	541
CCF10A	200	144	88	288	232	176	480	424	368	760	704	648
CCF10B	233	168	103	335	270	205	559	494	429	885	820	755
CCF11	220	159	97	317	256	194	529	467	405	837	775	714
CCF11A	256	184	113	368	297	225	614	542	471	972	900	829
CCF11B	291	210	128	419	338	256	699	618	536	1107	1025	944
CCF12	250	180	110	360	290	220	600	530	460	950	880	810
CCF12A	289	208	127	416	335	254	694	613	532	1099	1018	937
CCF12B	328	236	144	473	381	289	788	696	604	1247	1156	1064
CCF13	72	52	32	103	83	63	172	152	132	273	253	233
CCF14	111	80	49	160	129	98	267	236	205	422	391	360
CCF16	402	290	177	579	467	354	965	853	740	1528	1416	1303
CCF16A	461	332	203	664	535	406	1107	978	849	1753	1624	1495
CCF16B	521	375	229	750	604	458	1249	1103	958	1978	1832	1686
CCF20	142	103	63	205	165	125	342	302	262	541	501	462
CCF20A	194	140	86	280	226	171	467	412	358	739	685	630
CCF20B	257	185	113	370	298	226	616	545	473	976	904	832
T.CABLE	80 °C			95 °C			130 °C			175 °C		

Table 2: Enclosure with intrinsic safety element

	Ambient temperature of the enclosure:								
	40 °C			50 °C			60 °C		
	Maximum ambient temperature of IS barriers :			Maximum ambient temperature of IS barriers :			Maximum ambient temperature of IS barriers :		
	60 °C	70 °C	80 °C	60 °C	70 °C	80 °C	60 °C	70 °C	80 °C
P[W]	P[W]	P[W]	P[W]	P[W]	P[W]	P[W]	P[W]	P[W]	
CCF0	7	10	17	-	7	10	-	-	7
CCF1	9	13	22	-	9	13	-	-	9
CCF1A	10	15	25	-	10	15	-	-	10
CCF2	16	24	41	-	16	24	-	-	16
CCF3	20	30	50	-	20	30	-	-	20
CCF3A	26	39	65	-	26	39	-	-	26
CCF4	14	28	42	-	14	28	-	-	14
CCF4A	18	36	54	-	18	36	-	-	18
CCF5	22	44	66	-	22	44	-	-	22
CCF5A	27	54	81	-	27	54	-	-	27
CCF6	25	49	74	-	25	49	-	-	25
CCF6A	30	60	90	-	30	60	-	-	30
CCF7	31	61	92	-	31	61	-	-	31
CCF7A	37	74	111	-	37	74	-	-	37
CCF8	30	60	90	-	30	60	-	-	30
CCF8A	47	82	111	-	47	82	-	-	47
CCF9	45	78	106	-	45	78	-	-	45
CCF9A	54	94	128	-	54	94	-	-	54
CCF10	53	93	127	-	53	93	-	-	53
CCF10A	64	112	152	-	64	112	-	-	64
CCF10B	75	130	177	-	75	130	-	-	75
CCF11	70	123	167	-	70	123	-	-	70
CCF11A	82	143	194	-	82	143	-	-	82
CCF11B	93	163	221	-	93	163	-	-	93
CCF12	80	140	190	-	80	140	-	-	80
CCF12A	93	162	220	-	93	162	-	-	93
CCF12B	105	184	249	-	105	184	-	-	105
CCF13	23	40	55	-	23	40	-	-	23
CCF14	36	62	84	-	36	62	-	-	36
CCF16	129	225	306	-	129	225	-	-	129
CCF16A	148	258	351	-	148	258	-	-	148
CCF16B	167	291	396	-	167	291	-	-	167
CCF20	46	80	108	-	46	80	-	-	46
CCF20A	62	109	148	-	62	109	-	-	62
CCF20B	82	144	195	-	82	144	-	-	82

ROUTINE EXAMINATIONS AND TESTS

Each apparatus defined above has to have successfully passed; before delivery:

Enclosures from 800cm³ to 4700cm³:

In accordance with clause 16.1 of the EN 60079-1 standard, an overpressure test of a period comprised between 10 and 60 seconds under:

10.2 bar for -20°C.

13.4 bar for -50°C.

Enclosures from 4701cm³ to 17700cm³:

In accordance with clause 16.1 of the EN 60079-1 standard, an overpressure test of a period comprised between 10 and 60 seconds under

11.6 bar for -20°C.

14.6 bar for -50°C.

Enclosures from 17701cm³ to 80500cm³:

In accordance with clause 16.1 of the EN 60079-1 standard, an overpressure test of a period comprised between 10 and 60 seconds under

13.7 bar for -20°C.

16.7 bar for -50°C.

Enclosures from 80501cm³ to 160600cm³:

In accordance with clause 16.1 of the EN 60079-1 standard, an overpressure test of a period comprised between 10 and 60 seconds under

15.6 bar for -20°C.

17.7 bar for -40°C and -50°C.

(16) DESCRIPTIVE DOCUMENTS

The descriptive document quoted hereafter constitutes the technical documentation of the equipment, subject of this certificate.

Certification file COELBO 32 rev.1 of 2014.11.24 (63 rubrics)

signed on 2014.11.24

(17) SPECIAL CONDITIONS FOR SAFE USE

- The width of the flameproof joints is greater than the values specified in the EN 60079-1 standard.
- The cover and the body shall be fixed by stainless steel screws quality A2-70 or better.

The other conditions are stipulated in the instructions.

(18) ESSENTIAL SAFETY AND HEALTH REQUIREMENTS

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

- Conformity to the standards quoted in clause (9).
- All provisions adopted by the manufacturer and defined in the descriptive documents.