



Type Examination Certificate

(1)

(2)

Equipment Intended for use
in Potentially Explosive Atmospheres
Directive 94/9/EC

(3) Type Examination Certificate Number:

FTZÚ 15 ATEX 0132

(4) Equipment:

Three-Phase Asynchronous Motor type:
1TE1521-..., 1TE1523-..., 1TE1621-..., 1TE1623-...,
1TE1531-..., 1TE1533-..., 1TE1631-..., 1TE1633-...,
frame size: -2B..., -2C..., -2D..., -3A... (225 to 315)

(5) Manufacturer: **Exico Electric Motors Limited**

(6) Address: **4 Stanton Close, Finedon Road Industrial Estate, Wellingborough NN8 4HN, United Kingdom**

(7) This equipment or protective system and any of acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) The Physical Technical Testing Institute, 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 Category 3 equipment, which is intended for use in potentially explosive atmospheres given in Annex II to the Council Directive 94/9/EC.

The examination and test results are recorded in confidential Report N°

15/0132 dated 3 July 2015

(9) Compliance with Essential Health and safety requirements has been assured by compliance with:

EN 60079-0:2012; EN 60079-31:2009; EN 60079-15:2010

(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 TYPE EXAMINATION CERTIFICATE relates only to the design, examination and testing 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 following:

 **II 3D Ex tc IIIB T120°C Dc or Ex tc IIIB T130°C Dc or**
 **II 3G Ex nA IIC T3 Gc or Ex nA IIB T3 Gc or**
 **II 3GD Ex nA IIC T3 Gc**
Ex tc IIIB T120°C Dc or Ex tc IIIB T130°C Dc

This Type Examination Certificate is valid till: **15.11.2018**

Responsible person:


Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 09.07.2015

Page: 1/3
Annex: No. 1 (4 pages)

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Physical Technical Testing Institute
Ostrava-Radvanice

(13)

Schedule

(14) **Type Examination Certificate No. FTZÚ 15 ATEX 0132**

(15) Description of Equipment:

The electric motors type 1TE1521-..., 1TE1523-..., 1TE1621-... and 1TE1623-... are designed for application in explosive dust atmosphere and have explosion protection by cover "tc".

The electric motors type 1TE1531-..., 1TE1533-..., 1TE1631-... and 1TE1633-... are designed for application in gas explosive atmosphere with "nA" type of protection. These motors are alternatively designed to match requirements of both types of protections "nA" and "tc".

Electric motors are low voltage asynchronous squirrel cage motors. They have surface cooling with external fan fastened on shaft of electric motor. Basic materials for mechanical parts of motor are cast iron (housing, terminal box, bearing end shields) and steel (shaft, fan cover). The shaft is fastened in roller bearings. The fans are made of plastic or steel plate or aluminium alloy.

The connection design of particular parts and used sealing materials ensure degree of protection provided by cover minimally IP 55. For sealing of contact surfaces of electric motor body and terminal box and detachable parts of terminal box are used gaskets or special profile silicone sealing. For sealing of shaft of electric motor are alternatively used radial shaft sealing rings or shaft V-rings (FPM, FKM, HNBR, NBR).

Squirrel cage is made of aluminium by die casting. Insulation system matches thermal class F.

The electric connection is made in terminal box that is equipped with connection terminals. Alternatively permanently connected cable can be used. For both variants the entry of cable into the terminal box provide Ex cable glands.

The electric motor windings could be optionally equipped with temperature sensors PTC, KTY, or resistance temperature sensors. Inside of electric motor can be also installed heating units for prevention of wet air condensation when the electric motor is switched off.

Electrical parameters of basic versions of electric motors are given in annex to this certificate.

General technical parameters:

Ambient temperature: $-20^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$, or
 $-40^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$ for electrical motors with alternative materials,
 $-20^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$ with decreased output power of electrical motors
 $-40^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$ for electrical motors with alternative materials and with decreased output power.

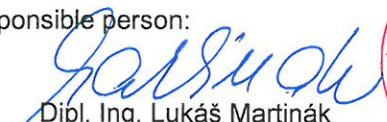
Motors supplied by voltage with frequency 50 Hz:

Voltage: from 200 V to 690 V; voltage tolerances $\pm 10\%$
Outputs: from 18.5 kW do 200 kW
Duty type: S1
Number of poles: 2, 4, 6, 8

Motors supplied by voltage with frequency 60 Hz:

Voltage: from 200 V to 690 V; voltage tolerances $\pm 10\%$
Outputs: from 22 kW do 230 kW
Duty type: S1
Number of poles: 2, 4, 6, 8

Responsible person:


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Head of Certification Body



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Page: 2/3
Annex: No. 1 (4 pages)

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(13)

Schedule

(14) **Type Examination Certificate No. FTZÚ 15 ATEX 0132**

(16) Report No.: 15/0132

(17) Special conditions for safe use: No conditions.

(18) Essential Health and Safety Requirements:

They are included in standards, which are mentioned in clause (9) of this certificate. The product was approved in accordance with above mentioned standards.

(19) List of documentation

Instruction for use (49 pages)		19.06.2015
Technical description electric motors series 1TE1531..., 1TE1533..., 1TE1631..., 1TE1633..., 1TE1521..., 1TE1523..., 1TE1621..., 1TE1623..., FS 100 to 200		18.10.2013
Winding data printout, under the list in annex of technical description No. 1.1 and 1.2		--
Catalogue electric motor data 1TE15x1..., 1TE15x3...		
Drawings No.	Ex000037.02 (2 sheets)	02.07.2015
	59018225200000_AA	05.04.2013
	59018280200000_AA	10.07.2013
	59018225212000_AA	07.03.2013
	59018280212000_AA	20.05.2013
	59018315212000_AA	07.05.2013
	59018225216000_AA	29.04.2013
	59018280216000_AA	07.06.2013
	59018315216000_AA	03.06.2013
	59018315216001_AA	02.09.2013
	59018000212000_AA	29.05.2013
	59018225212001_-	12.07.2013
	59018280212001_-	12.07.2013
	59018315212001_-	12.07.2013
	59018225212002_AA	01.10.2013
	59018180290000_AA	04.10.2013
	5_901_82252_90_000_-	03.10.2013
	5_901_82252_90_001_-	03.10.2013
	5_901_82252_90_002_-	03.10.2013
	5_901_82252_90_003_-	03.10.2013
	5_901_82252_90_004_-	03.10.2013
	5_901_82252_90_005_-	03.10.2013
	5_901_82252_90_006_-	03.10.2013
	3_228_7_4_135_792_00_A z 26.1.2009	03.05.2002
	3_228_7_4_235_205_00_-	14.07.2009
	3_228_7_4_235_182_00_-	09.02.2009
	59018225230000_-	31.10.2013
Description of the insulation system No.	56501331000040	28.06.2010
Instruction for use No.	56100000002002	05/2013
Table	Overview of terminal boxes	30.10.2013
	Radial air gap	03.07.2013
Production process No.	N7-07.007	01.09.2011
	WB0027	14.02.2013

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Page: 3/3
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Physical Technical Testing Institute
Ostrava-Radvanice

ANNEX No. 1

to Type Examination Certificate N° FTZÚ 15 ATEX 0132

Manufacturer: Exico Electric Motors Limited
Address: 4 Stanton Close, Finedon Road Industrial Estate, Wellingborough NN8 4HN, UK
Equipment: Three-Phase Asynchronous Motor type
1TE1521-..., 1TE1523-..., 1TE1621-..., 1TE1623-...,
1TE1531-..., 1TE1533-..., 1TE1631-..., 1TE1633-...,
frame size: -2B..., -2C..., -2D..., -3A... (225 to 315)

Rated parameters of basic versions of electric motors Ex nA IIC T3 Gc, Ex tc IIIB Tx°C Dc:

Type	400 V 50 Hz				460 V 60 Hz			
	Output [kW]	Current [A]	Speed [min ⁻¹]	"nA": T3 "tc": Tx	Output [kW]	Current [A]	Speed [min ⁻¹]	"nA": T3 "tc": Tx
2-pole	(3000 min ⁻¹) IE2				(3600 min ⁻¹)			
1TE15.1-2BA2	45	79	2965	120 °C	51	78	3565	120 °C
1TE15.1-2CA2	55	96	2970		62	94	3570	
1TE15.1-2DA0	75	133	2978		84	128	3578	
1TE15.1-2DA2	90	157	2975		101	151	3575	
1TE15.1-3AA0	110	187	2982		123	182	3582	
1TE15.1-3AA2	132	220	2982		148	215	3582	
1TE15.1-3AA4	160	265	2982		180	255	3580	
1TE15.1-3AA5	200	330	2982		224	320	3580	

4-pole	(1500 min ⁻¹) IE2				(1800 min ⁻¹)			
1TE15.1-2BB0	37	65	1470	120 °C	42,5	65	1770	120 °C
1TE15.1-2BB2	45	80	1475		52	80	1775	
1TE15.1-2CB2	55	100	1480		63	99	1780	
1TE15.1-2DB0	75	132	1485		86	130	1785	
1TE15.1-2DB2	90	159	1486		104	158	1785	
1TE15.1-3AB0	110	195	1490		127	195	1788	
1TE15.1-3AB2	132	230	1490		152	230	1788	
1TE15.1-3AB4	160	280	1490		184	275	1788	
1TE15.1-3AB5	200	350	1490		230	350	1790	

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Page: 1/4

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ANNEX No. 1

to Type Examination Certificate N° FTZÚ 15 ATEX 0132

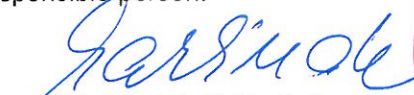
Equipment: Three-Phase Asynchronous Motor type
1TE1521-..., 1TE1523-..., 1TE1621-..., 1TE1623-...,
1TE1531-..., 1TE1533-..., 1TE1631-..., 1TE1633-...,
frame size: -2B..., -2C..., -2D..., -3A... (225 to 315)

Rated parameters of basic versions of electric motors Ex nA IIC T3 Gc, Ex tc IIIB Tx°C Dc: - continuation

Type	400 V 50 Hz				460 V 60 Hz			
	Output [kW]	Current [A]	Speed [min ⁻¹]	"nA": T3 "tc": Tx	Output [kW]	Current [A]	Speed [min ⁻¹]	"nA": T3 "tc": Tx
6-pole	(1000 min ⁻¹) IE2				(1200 min ⁻¹)			
1TE15.1-2BC2	30	57	980	120 °C	36	59	1175	120 °C
1TE15.1-2CC2	37	70	982		44,5	73	1180	
1TE15.1-2DC0	45	83	985		54	87	1185	
1TE15.1-2DC2	55	99	985		66	104	1185	
1TE15.1-3AC0	75	138	988		90	143	1186	
1TE15.1-3AC2	90	165	988		108	171	1186	
1TE15.1-3AC4	110	196	988		132	200	1186	
1TE15.1-3AC5	132	235	988		158	240	1188	
1TE15.1-3AC6	160	285	988		192	290	1188	

8-pole	(750 min ⁻¹)				(900 min ⁻¹)			
1TE15.1-2BD0	18,5	38,5	730	120 °C	22	38,5	880	120 °C
1TE15.1-2BD2	22	44	730		26,5	45	880	
1TE15.1-2CD2	30	59	732		36	60	880	
1TE15.1-2DD0	37	75	736		44,5	76	885	
1TE15.1-2DD2	45	89	738		54	91	885	
1TE15.1-3AD0	55	107	740		66	110	890	
1TE15.1-3AD2	75	143	738		90	147	888	
1TE15.1-3AD4	90	167	740		108	174	890	
1TE15.1-3AD5	110	205	740		132	215	888	
1TE15.1-3AD6	132	250	740	130 °C	158	255	888	130 °C

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Page: 2/4

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Equipment: Three-Phase Asynchronous Motor type
1TE1521-..., 1TE1523-..., 1TE1621-..., 1TE1623-...,
1TE1531-..., 1TE1533-..., 1TE1631-..., 1TE1633-...,
frame size: -2B..., -2C..., -2D..., -3A... (225 to 315)

Rated parameters of basic versions of electric motors Ex nA IIC T3 Gc, Ex tc IIIB Tx°C Dc: - continuation

Type	400 V 50 Hz				460 V 60 Hz			
	Output [kW]	Current [A]	Speed [min ⁻¹]	"nA": T3 "tc": Tx	Output [kW]	Current [A]	Speed [min ⁻¹]	"nA": T3 "tc": Tx
2-pole	(3000 min ⁻¹) IE3				(3600 min ⁻¹)			
1TE15.3-2BA2	45	78	2960	120 °C	51	77	3560	120 °C
1TE15.3-2CA2	55	95	2975		62	92	3575	
1TE15.3-2DA0	75	128	2975		84	125	3575	
1TE15.3-2DA2	90	152	2975		101	149	3575	
1TE15.3-3AA0	110	183	2982		123	179	3582	
1TE15.3-3AA2	132	220	2982		148	215	3852	
1TE15.3-3AA4	160	265	2982		180	255	3582	
1TE15.3-3AA5	200	330	2982		224	320	3582	

4-pole	(1500 min ⁻¹) IE3				(1800 min ⁻¹)			
1TE15.3-2BB0	37	66	1478	120 °C	42,5	66	1778	120 °C
1TE15.3-2BB2	45	80	1478		52	81	1778	
1TE15.3-2CB2	55	96	1482		63	97	1782	
1TE15.3-2DB0	75	133	1485		86	131	1785	
1TE15.3-2DB2	90	157	1485		104	158	1785	
1TE15.3-3AB0	110	191	1488		127	191	1788	
1TE15.3-3AB2	132	230	1490		152	225	1788	
1TE15.3-3AB4	160	275	1490		184	275	1788	
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Page: 3/4

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Equipment: **Three-Phase Asynchronous Motor type**
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1TE1531-..., 1TE1533-..., 1TE1631-..., 1TE1633-...,
frame size: -2B..., -2C..., -2D..., -3A... (225 to 315)

Rated parameters of basic versions of electric motors **Ex nA IIC T3 Gc, Ex tc IIIB Tx°C Dc**: - continuation

Type	400 V 50 Hz				460 V 60 Hz			
	Output [kW]	Current [A]	Speed [min ⁻¹]	"nA": T3 "tc": Tx	Output [kW]	Current [A]	Speed [min ⁻¹]	"nA": T3 "tc": Tx
6-pole	(1000 min ⁻¹) IE3				(1200 min ⁻¹)			
1TE15.3-2BC2	30	56	982	120 °C	36	58	1180	120 °C
1TE15.3-2CC2	37	67	985		44,5	69	1182	
1TE15.3-2DC0	45	82	988		54	84	1186	
1TE15.3-2DC2	55	99	988		66	104	1186	
1TE15.3-3AC0	75	136	990		90	142	1190	
1TE15.3-3AC2	90	161	990		108	170	1189	
1TE15.3-3AC4	110	199	991		132	205	1190	
1TE15.3-3AC5	132	240	991		158	245	1190	
1TE15.3-3AC6	160	290	991		192	300	1190	

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Page: 4/4

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