



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx FTZU 18.0016** Page 1 of 5 [Certificate history:](#)
Issue 0 (2019-01-31)

Status: **Current** Issue No: 1

Date of Issue: 2021-11-19

Applicant: **Van Houcke NV**
Vlamingveld 32
8490 Jabbeke
Belgium

Equipment: **Three-phase asynchronous motors 1TE1511-..., 1TE1513-..., 1TE1611-..., 1TE1613-..., frame size: : -1A..., -1B..., -1C..., -1D..., -1E..., -2A... (100 to 200)**

Optional accessory:

Type of Protection: **Dust explosion protection by enclosure "tb"**

Marking: Ex tb IIIC T120°C Db
or
Ex tb IIIC T130°C Db

Approved for issue on behalf of the IECEx
Certification Body:

Dipl. Ing. Lukáš Martinák

Position:

Head of Certification Body

Signature:
(for printed version)

Date:
(for printed version)

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Certificate issued by:

**Fyzikálne technický zkušebni ústav
(Physical -Technical Testing Institute)
Pikartská 7, 71607 Ostrava - Radvanice
Czech Republic**





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Manufacturer: **Van Houcke NV**
Vlamingveld 32
8490 Jabbeke
Belgium

Manufacturing
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-31:2013](#) Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[CZ/FTZU/ExTR18.0021/00](#)

[CZ/FTZU/ExTR18.0021/01](#)

Quality Assessment Report:

[GB/CML/QAR18.0038/02](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The electric motors type 1TE1511-..., 1TE1513-..., 1TE1611-... and 1TE1613-... are designed for application in explosive dust atmosphere and have explosion protection by cover "tb".

These electric motors are low voltage asynchronous squirrel cage motors. They have surface cooling with external fan fastened on shaft of electric motor.

The enclosures of electric motor and terminal box are made of cast iron. The external fans are made from steel plate or from aluminium. The axial fan with an aluminium hub and blades made from galvanised steel or aluminium alloy are used. The fan covers are made of steel plate.

The shaft is fastened in roller bearings. The squirrel cage rotor is made from die-cast aluminium, die-cast copper or die-cast aluminium with coppers bars.

The connection design of separate parts and used sealing materials ensure degree of protection provided by cover IP65 or IP66. 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. The shaft sealing of electric motor in enclosure alternatively provides: a DIN3760 shaft sealing ring or V-ring shaft sealing. Material of these sealing rings is normally FPM or HNBR70. For service temperature and ambient temperature below -20°C are used sealing rings from HNBR, NBR or HNBR70. The flange motors designed for assembly on gear boxes use a radial shaft sealing for oil sealing.

The electric connection is made in terminal box that is equipped with connection terminals. Alternatively permanently connected cable can be used. For both variant the entry of cable into the terminal box provide Ex cable glands separately certified for EPL Db and ensure degree of protection IP65 at least.

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 network supply electric motors are given in annex to this certificate.

The electric motors type 1TE1511-..., 1TE1513-..., 1TE1611-..., 1TE1613-... can be alternatively operated with frequency converter type SINAMICS G120, S120, G180 or comparable converters described in the manufacturer documentation. The motor used in frequency converter supply windings is equipped with temperature sensors PTC. Nominal cut-off temperature of the PTC is +130°C.

SPECIFIC CONDITIONS OF USE: NO



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Equipment (continued):

General technical parameters:

Ambient temperature:

- 20°C ≤ Ta ≤ 40°C, or
- 40°C ≤ Ta ≤ 40°C for electrical motors with alternative materials,
- 20°C ≤ Ta ≤ 60°C with decreased output power of electrical motors,
- 40°C ≤ Ta ≤ 60°C for electrical motors with alternative materials and with decreased output power.

Insulation class: F

Degree of protection: IP65, IP66

Motors supplied by voltage with frequency 50 Hz (network supply):

- Voltage: from 200 V to 690 V, voltage tolerances: ±10%
- Outputs: from 0,75 kW to 37 kW
- Duty type: S1
- Number of poles: 2, 4, 6, 8

Motors supplied by voltage with frequency 60 Hz (network supply):

- Voltage: from 220 V to 690 V, voltage tolerances: ± 10%
- Outputs: from 0,86 kW to 41,5 kW
- Duty type: S1
- Number of poles: 2, 4, 6, 8

General technical parameters of motors operated with frequency converter.

The motors of the above mentioned models series cover the following max. rated data:

- Rated voltage: max. 690V ±10% (input of converter)
- Outputs: max. 41.5 kW
- Duty type S9
- Frequency from 2 Hz to 100 Hz
- Maximum surface temperature: T120°C

Motors for converter supply will be equipped with second name plate with converter and load data.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 1:

Evaluation according latest requirements of standard IEC 60079-0:2017.
Update of documentation.

Annex:

[Annex_to_IECEX_FTZU_18_0016_01.pdf](#)



Annex to Certificate of Conformity
IECEx FTZU 18.0016 issue No.: 1



Applicant: **Van Houcke NV**

Address: **Vlamingveld 32, 8490 Jabbeke, Belgium**

Electrical Apparatus: **Three-phase asynchronous motors types:**
1TE1511-..., 1TE1513-..., 1TE1611-..., 1TE1613-...
frame size: -1A..., -1B..., -1C..., -1D..., -1E..., -2A... (100 to 200)

Rated parameters of basic versions of electric motors **Ex tb IIIC Tx°C Db:**

Type	400 V 50Hz				460 V 60Hz			
	Output [kW]	Current [A]	Speed [min ⁻¹]	Tx	Output [kW]	Current [A]	Speed [min ⁻¹]	Tx
2-poles	(3000 min ⁻¹) IE2				(3600 min ⁻¹)			
1TE1511-1AA4	3	6,1	2905	120°C	3,45	5,8	3505	120°C
1TE1511-1BA2	4	7,8	2950		4,55	7,5	3550	
1TE1511-1CA0	5,5	10,5	2950		6,3	10,2	3550	
1TE1511-1CA1	7,5	14,1	2950		8,6	13,7	3550	
1TE1511-1DA2	11	20,5	2955		12,6	19,9	3555	
1TE1511-1DA3	15	27	2955		17,3	27,0	3555	
1TE1511-1DA4	18,5	33,5	2955		21,3	33,0	3555	
1TE1511-1EA2	22	40	2940		24,5	39,0	3540	
1TE1511-2AA4	30	54	2960		33,5	53,0	3560	
1TE1511-2AA5	37	66	2960		41,5	64,0	3560	

4-poles	(1500 min ⁻¹) IE2			(1800 min ⁻¹)				
1TE1511-1AB4	2,2	4,65	1455	120°C	2,55	4,45	1755	120°C
1TE1511-1AB5	3	6,2	1455		3,45	6,0	1755	
1TE1511-1BB2	4	8,2	1460		4,55	8,0	1760	
1TE1511-1CB0	5,5	11,3	1465		6,3	10,9	1765	
1TE1511-1CB2	7,5	14,7	1465		8,6	14,5	1765	
1TE1511-1DB2	11	21	1470		12,6	20,5	1770	
1TE1511-1DB4	15	28	1475		17,3	27,5	1775	
1TE1511-1EB2	18,5	35	1465		21,3	34,0	1765	
1TE1511-1EB4	22	41,5	1465		25,3	40,5	1765	
1TE1511-2AB5	30	56	1470		34,5	55,0	1770	

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frame size: -1A..., -1B..., -1C..., -1D..., -1E..., -2A... (100 to 200)**

Rated parameters of basic versions of electric motors **Ex tb IIIC Tx°C Db:** - continuation:

Type	400 V 50Hz				460 V 60Hz			
	Output [kW]	Current [A]	Speed [min ⁻¹]	T _x	Output [kW]	Current [A]	Speed [min ⁻¹]	T _x
6-poles	(1000 min ⁻¹) IE2				(1200 min ⁻¹)			
1TE1511-1AC4	1,5	3,7	970	120°C	1,75	3,45	1170	120°C
1TE1511-1BC2	2,2	5,2	965		2,55	4,75	1165	
1TE1511-1CC0	3	7	970		3,45	6,6	1170	
1TE1511-1CC2	4	8,7	970		4,55	8,3	1170	
1TE1511-1CC3	5,5	12	970		6,3	11,3	1170	
1TE1511-1DC2	7,5	16,1	975		8,6	15,5	1175	
1TE1511-1DC4	11	22,5	975		12,6	21,5	1175	
1TE1511-1EC4	15	31	975		18,0	31,0	1170	
1TE1511-2AC4	18,5	36	978		22,0	36,5	1175	
1TE1511-2AC5	22	43	978		26,5	43,5	1175	

8-poles	(750 min ⁻¹)				(900 min ⁻¹)			
1TE1511-1AD4	0,75	2,75	725	120°C	0,86	2,65	875	120°C
1TE1511-1AD5	1,1	4	725	130°C	1,27	3,7	865	
1TE1511-1BD2	1,5	4,25	720	120°C	1,75	4,15	870	
1TE1511-1CD0	2,2	6,2	725		2,55	5,9	875	
1TE1511-1CD2	3	8,1	730		3,45	7,7	875	
1TE1511-1DD2	4	9,7	730		4,55	9,6	880	
1TE1511-1DD3	5,5	13,3	730		6,3	13,2	880	
1TE1511-1DD4	7,5	17,3	730		8,6	16,9	880	
1TE1511-1ED4	11	26	720		13,2	26,0	865	
1TE1511-2AD5	15	32	718		18,0	32,5	865	

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frame size: -1A..., -1B..., -1C..., -1D..., -1E..., -2A... (100 to 200)**

Rated parameters of basic versions of electric motors **Ex tb IIIC Tx°C Db** - continuation:

Type	400 V 50Hz				460 V 60Hz			
	Output [kW]	Current [A]	Speed [min ⁻¹]	Tx	Output [kW]	Current [A]	Speed [min ⁻¹]	Tx
2-poles	(3000 min ⁻¹) IE3				(3600 min ⁻¹)			
1TE1513-1AA4	3,0	5,6	2920	120°C	3,45	5,5	3520	120°C
1TE1513-1BA2	4,0	7,4	2955		4,55	7,2	3555	
1TE1513-1CA0	5,5	9,9	2950		6,3	9,7	3545	
1TE1513-1CA1	7,5	13,1	2950		8,6	13,0	3550	
1TE1513-1DA2	11,0	20,0	2955		12,6	19,5	3555	
1TE1513-1DA3	15,0	27,0	2960		17,3	27,0	3560	
1TE1513-1DA4	18,5	32,0	2955		21,3	32,0	3550	
1TE1513-1EA2	22,0	38,5	2950		24,5	37,5	3550	
1TE1513-2AA4	30,0	53,0	2955		33,5	52,0	3555	
1TE1513-2AA5	37,0	65,0	2955		41,5	63,0	3555	

4-poles	(1500 min ⁻¹) IE3			(1800 min ⁻¹)				
1TE1513-1AB4	2,2	4,4	1465	120°C	2,55	4,25	1765	120°C
1TE1513-1AB5	3,0	5,9	1460		3,45	5,8	1755	
1TE1513-1BB2	4,0	7,9	1460		4,55	7,7	1760	
1TE1513-1CB0	5,5	10,8	1470		6,3	10,6	1770	
1TE1513-1CB2	7,5	14,3	1465		8,6	13,8	1765	
1TE1513-1DB2	11,0	20,5	1475		12,6	20,0	1770	
1TE1513-1DB4	15,0	28,5	1475		17,3	28,0	1775	
1TE1513-1EB2	18,5	35,0	1470		21,3	34,5	1770	
1TE1513-1EB4	22,0	41,0	1470		25,3	41,0	1770	
1TE1513-2AB5	30,0	55,0	1470		34,5	55,0	1770	



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frame size: -1A..., -1B..., -1C..., -1D..., -1E..., -2A... (100 to 200)

Rated parameters of basic versions of electric motors **Ex tb IIIC Tx°C Db** - continuation:

Type	400 V 50Hz				460 V 60Hz			
	Output [kW]	Current [A]	Speed [min ⁻¹]	T _x	Output [kW]	Current [A]	Speed [min ⁻¹]	T _x
6-poles	(1000 min ⁻¹) IE3				(1200 min ⁻¹)			
1TE1513-1AC4	1,5	3,45	970	120°C	1,75	3,45	1170	120°C
1TE1513-1BC2	2,2	4,7	970		2,55	4,75	1170	
1TE1513-1CC0	3,0	6,5	970		3,45	6,1	1170	
1TE1513-1CC2	4,0	8,4	970		4,55	8,1	1170	
1TE1513-1CC3	5,5	11,6	970		6,3	11,1	1170	
1TE1513-1DC2	7,5	15,2	975		8,6	14,6	1175	
1TE1513-1DC4	11,0	22,0	975		12,6	21,5	1175	
1TE1513-1EC4	15,0	29,5	975		18,0	30,5	1170	
1TE1513-2AC4	18,5	37,0	978		22,0	37,5	1175	
1TE1513-2AC5	22,0	43,5	978		26,5	44,0	1175	