



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 18.0017** 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: : -2B..., -2C..., -2D..., -3A... (225 to 315)**

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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2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



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
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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/ExTR18.0022/00](#)

[CZ/FTZU/ExTR18.0022/01](#)

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 "t".

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 fans and fan covers are made of steel plate. The axial fans are made from aluminium alloy. The shaft is fastened in roller bearings. The squirrel cage is made from die-cast of aluminium.

The connection design of separate parts and used sealing materials ensure degree of protection provided by cover IP 65 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. For service temperature and ambient temperature below -20°C are used sealing rings from HNBR, NBR or HNBR70. The shaft sealing V-ring is protected with additional stainless steel cover. 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. The application of heaters type RSV that are certified Ex components with type of protection – increased safety "e", certificate IECEx SIR 10.0151U was verified.

Electrical parameters of basic versions of network supply electric motors are given in annex to the certificate.

The electric motors type 1TE1511-..., 1TE1513-..., 1TE1611-... and 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 or alternatively 155°C..

SPECIFIC CONDITIONS OF USE: NO



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Equipment (continued):

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.

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: $\pm 10\%$

Outputs: from 18,5 kW to 200 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: $\pm 10\%$

Outputs: from 22 kW to 230 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 $\pm 10\%$ (input of converter)

Outputs: max. 230 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 to standard EN IEC 60079-0:2018.
Nominal cut off temperature of built-in PTC sensors is alternatively 155 °C.
Modification of fan hood.
New type of anti-condensation heating is alternatively used.
New power deratings factors for operation with frequency converter are verified.
The 8 pole motors with efficiency class IE3 are added.
Documentation was updated.

Annex:

[Annex_to_IECEX_FTZU_18_0017_01.pdf](#)

Applicant: **Van Houcke NV**

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

Electrical Apparatus: **Three-phase asynchronous motors types:
1TE1511-..., 1TE1513-..., 1TE1611-..., 1TE1613-...
frame size: -2B..., -2C..., -2D..., -3A... (225 to 315)**

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)			
1TE1511-2BA	45	79	2965	120°C	51	78	3565	120°C
1TE1511-2CA	55	96	2970		62	94	3570	
1TE1511-2DA	75	133	2978		84	128	3578	
1TE1511-2DA	90	157	2975		101	151	3575	
1TE1511-3AA	110	187	2982		123	182	3582	
1TE1511-3AA	132	220	2982		148	215	3582	
1TE1511-3AA	160	265	2982		180	255	3580	
1TE1511-3AA	200	330	2982		224	320	3580	

4-poles	(1500 min ⁻¹) IE2				(1800 min ⁻¹)			
1TE1511-2BB	37	65	1470	120°C	42,5	65	1770	120°C
1TE1511-2BB	45	80	1475		52	80	1775	
1TE1511-2CB	55	100	1480		63	99	1780	
1TE1511-2DB	75	132	1485		86	130	1785	
1TE1511-2DB	90	159	1486		104	158	1785	
1TE1511-3AB	110	195	1490		127	195	1788	
1TE1511-3AB	132	230	1490		152	230	1788	
1TE1511-3AB	160	280	1490		184	275	1788	
1TE1511-3AB	200	350	1490		230	350	1790	

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frame size: -2B..., -2C..., -2D..., -3A... (225 to 315)**

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
6-poles	(1000 min ⁻¹) IE2				(1200 min ⁻¹)			
1TE1511-2BC	30	57	980	120°C	36	59	1175	120°C
1TE1511-2CC	37	70	982		44,5	73	1180	
1TE1511-2DC	45	83	985		54	87	1185	
1TE1511-2DC	55	99	985		66	104	1185	
1TE1511-3AC	75	138	988		90	143	1186	
1TE1511-3AC	90	165	988		108	171	1186	
1TE1511-3AC	110	196	988		132	200	1186	
1TE1511-3AC	132	235	988		158	240	1188	
1TE1511-3AC	160	285	988		192	290	1188	

8-poles	(750 min ⁻¹)			(900 min ⁻¹)				
1TE1511-2BD	18,5	38,5	730	120°C	22	38,5	880	120°C
1TE1511-2BD	22	44	730		26,5	45	880	
1TE1511-2CD	30	59	732		36	60	880	
1TE1511-2DD	37	75	736		44,5	76	885	
1TE1511-2DD	45	89	738		54	91	885	
1TE1511-3AD	55	107	740		66	110	890	
1TE1511-3AD	75	143	738		90	147	888	
1TE1511-3AD	90	167	740		108	174	890	
1TE1511-3AD	110	205	740		132	215	888	
1TE1511-3AD	132	250	740		158	255	888	



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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
2-poles	(3000 min ⁻¹) IE3				(3600 min ⁻¹)			
1TE1513-2BA	45	78	2960	120°C	51	77	3560	120°C
1TE1513-2CA	55	95	2975		62	92	3575	
1TE1513-2DA	75	128	2975		84	125	3575	
1TE1513-2DA	90	152	2975		101	149	3575	
1TE1513-3AA	110	183	2982		123	179	3582	
1TE1513-3AA	132	220	2982		148	215	3582	
1TE1513-3AA	160	265	2982		180	255	3582	
1TE1513-3AA	200	330	2982		224	320	3582	

4-poles	(1500 min ⁻¹) IE3			(1800 min ⁻¹)				
1TE1513-2BB	37	66	1478	120°C	42,5	66	1778	120°C
1TE1513-2BB	45	80	1478		52	81	1778	
1TE1513-2CB	55	96	1482		63	97	1782	
1TE1513-2DB	75	133	1485		86	131	1785	
1TE1513-2DB	90	157	1485		104	158	1785	
1TE1513-3AB	110	191	1488		127	191	1788	
1TE1513-3AB	132	230	1490		152	225	1788	
1TE1513-3AB	160	275	1490		184	275	1788	
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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)			
1TE1513-2BC	30	56	982	120°C	36	58	1180	120°C
1TE1513-2CC	37	67	985		44,5	69	1182	
1TE1513-2DC	45	82	988		54	84	1186	
1TE1513-2DC	55	99	988		66	104	1186	
1TE1513-3AC	75	136	990		90	142	1190	
1TE1513-3AC	90	161	990		108	170	1189	
1TE1513-3AC	110	199	991		132	205	1190	
1TE1513-3AC	132	240	991		158	245	1190	
1TE1513-3AC	160	290	991		192	300	1190	

8-poles	(750 min ⁻¹) IE3				(900 min ⁻¹)			
1TE1513-2BD	18,5	40	732	120°C	22	39,5	882	120°C
1TE1513-2BD	22	46	732		26,5	46	882	
1TE1513-2CD	30	60	735		36	61	882	
1TE1513-2DD	37	75	736		44,5	76	885	
1TE1513-2DD	45	88	738		54	90	886	
1TE1513-3AD	55	106	740		66	108	888	
1TE1513-3AD	75	144	738		90	146	888	
1TE1513-3AD	90	168	740		108	174	890	
1TE1513-3AD	110	205	740		132	210	888	
1TE1513-3AD	132	250	740	130°C	158	255	888	130°C