



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 18.0020** Page 1 of 4 [Certificate history:](#)
Issue 0 (2019-01-31)

Status: **Current** Issue No: 1

Date of Issue: 2021-11-15

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

Equipment: **Three-phase asynchronous motors 1TE1521-..., 1TE1523-..., 1TE1621-..., 1TE1623-..., 1TE1531-..., 1TE1533-..., 1TE1631-..., 1TE1633-..., frame size: -2B..., -2C..., -2D..., -3A..., (225 to 315)**

Optional accessory:

Type of Protection: **Type of Protection "ec" and "tc"**

Marking: Ex tc IIIB T120°C Dc or Ex tc IIIB T130°C Dc
or
Ex ec IIC T3 Gc or Ex ec IIB T3 Gc
or
Ex ec IIC T3 Gc and Ex tc IIIB T120°C Dc or Ex tc IIIB T130°C Dc

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

[IEC 60079-7:2017](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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/ExTR18.0025/00](#)

[CZ/FTZU/ExTR18.0025/01](#)

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 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 "ec" type of protection.

These motors are alternatively designed to match requirements of both types of protections "ec" 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, HNBR70). 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 network supply electric motors are given in annex to this certificate.

The electric motors type 1TE1521-..., 1TE1523-..., 1TE1621-..., 1TE1623-..., 1TE1531-..., 1TE1533-..., 1TE1631-..., 1TE1633-... 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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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 1:

Evaluation according latest requirements of standards IEC 60079-0:2017 and IEC 60079-7:2017

Equipment Ex marking is changed from "nA" to "ec" according to IEC 60079-7:2017

Modification of fan hood.

Nominal cut of temperature of built-in PTC sensors is alternatively 155°C.

New type of anti-condensation heating is alternatively used.

New type of bearing sensor is alternatively used for motors with "ec" type of protection.

New power deratings factors for operation with frequency converter are verified.

The 8 pole motors with efficiency class IE3 are added.

Group II motors can be alternatively equipped with non-metallic fan impeller.

Maximum ambient temperature range for the motors with new non-metallic fan impeller is from -30°C to +60°C.

Alternative material for insulating of the bearing can be used.

Mains supplied motors can be designed with reduced starting current 700% or 600% Ia/In.

Active parts of 4 motors of efficiency class IE3 were modified.

The documentation was updated.

Annex:

[Annex_to_IECEX_FTZU_18_0020_01.pdf](#)



Annex to Certificate of Conformity
IECEx FTZU 18.0020 issue No.: 1



Applicant: **Van Houcke NV**

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

Electrical Apparatus: **Three-phase asynchronous motors types:**
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 ec 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]	"ec": T3 "tc": Tx	Output [kW]	Current [A]	Speed [min ⁻¹]	"ec": T3 "tc": Tx
2-poles	(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-poles	(1500 min ⁻¹) IE2				(1800 min ⁻¹)			
	Output [kW]	Current [A]	Speed [min ⁻¹]	120 °C	Output [kW]	Current [A]	Speed [min ⁻¹]	120 °C
1TE15.1-2BB0	37	65	1470		42,5	65	1770	
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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 1TE1531-..., 1TE1533-..., 1TE1631-..., 1TE1633-...,
 frame size: -2B..., -2C..., -2D..., -3A... (225 to 315)**

Rated parameters of basic versions of electric motors **Ex ec 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]	"ec": T3 "tc": Tx	Output [kW]	Current [A]	Speed [min ⁻¹]	"ec": 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)			
	Output [kW]	Current [A]	Speed [min ⁻¹]	"ec": T3 "tc": Tx	Output [kW]	Current [A]	Speed [min ⁻¹]	"ec": T3 "tc": Tx
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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1TE1531-..., 1TE1533-..., 1TE1631-..., 1TE1633-...,
frame size: -2B..., -2C..., -2D..., -3A... (225 to 315)**

Rated parameters of basic versions of electric motors **Ex ec 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]	"ec": T3 "tc": Tx	Output [kW]	Current [A]	Speed [min ⁻¹]	"ec": T3 "tc": Tx
2-poles	(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-poles	(1500 min ⁻¹) IE3				(1800 min ⁻¹)			
	Output [kW]	Current [A]	Speed [min ⁻¹]	"ec": T3 "tc": Tx	Output [kW]	Current [A]	Speed [min ⁻¹]	"ec": T3 "tc": Tx
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	
1TE15.3-3AB5	200	340	1488		230	345	1788	

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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 ec 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]	"ec": T3 "tc": Tx	Output [kW]	Current [A]	Speed [min ⁻¹]	"ec": T3 "tc": Tx
6-poles	(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	

8-poles	(750 min ⁻¹) IE3				(900 min ⁻¹)			
1TE15.3-2BD0	18,5	40	732	120°C	22	39,5	882	120°C
1TE15.3-2BD2	22	46	732		26,5	46	882	
1TE15.3-2CD2	30	60	735		36	61	882	
1TE15.3-2DD0	37	75	736		44,5	76	885	
1TE15.3-2DD2	45	88	738		54	90	886	
1TE15.3-3AD0	55	106	740		66	108	888	
1TE15.3-3AD2	75	144	738		90	146	888	
1TE15.3-3AD4	90	168	740		108	174	890	
1TE15.3-3AD5	110	205	740		132	210	888	
1TE15.3-3AD6	132	250	740	130°C	158	255	888	130°C