IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: IECEx FTZU 18.0019 Issue No: 0

Certificate history:
Issue No. 0 (2019-01-31)

Status: **Current**

Date of Issue: **2019-01-31**

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

Equipment: **Three-phase asynchronous motors 1TE1521-..., 1TE1523-..., 1TE1621-..., 1TE1623-..., 1TE1531-..., 1TE1533-..., 1TE1631-..., 1TE1633-..., frame size: -1A..., -1B..., -1C..., -1D..., -1E..., -2A... (100 to 200)**

Optional accessory:

Type of Protection: **Explosion Protection type "nA" and "tc"**

Marking:

Ex tc IIIB T120°C Dc
or
Ex tc IIIB T130°C Dc
or
Ex nA IIC T3 Gc
or
Ex nA IIB T3 Gc
or
Ex nA 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:

1. This certificate and schedule may only be reproduced in full.
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 the Official IECEx Website.

Certificate issued by:

Fyzikalne technicky zkusebni ustav
(Physical -Technical Testing Institute)
Pikartska 7, 71607 Ostrava - Radvanice
Czech Republic

IECEx Certificate of Conformity

Certificate No: IECEx FTZU 18.0019 Issue No: 0

Date of Issue: **2019-01-31** Page 2 of 3

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

Additional Manufacturing location(s):

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 apparatus 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 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-15 : 2010 Edition:4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

*This Certificate **does not** indicate compliance with electrical 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 Report:

CZ/FTZU/ExTR18.0024/00

Quality Assessment Report:

GB/CML/QAR18.0038/00

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Schedule

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 "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 axial fan with an aluminium hub and blues made from galvanised steel are used.

The connection design of particular parts and used sealing materials ensure degree of protection provided by cover minimally IP 55 for type of protection “nA” and minimally IP 65 for type of protection by cover “tc”. 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 shafts sealing rings or shaft V-rings (FPM, FKM, HNBR, NBR).

The squirrel cage rotor is made from die-cast aluminium, die-cast cooper or die-cast aluminium with coppers bar g. 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.

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.

SPECIFIC CONDITIONS OF USE: NO

Annex:

Attachment_IECE_FTZU_18_0019_00.pdf

Applicant: **Van Houcke NV**

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

Equipment: **Three-phase asynchronous motors types:**
1TE1521-..., 1TE1523-..., 1TE1621-..., 1TE1623-...,
1TE1531-..., 1TE1533-..., 1TE1631-..., 1TE1633-...,
frame size: -1A…, -1B…, -1C…, -1D…, -1E…, -2A… (100 to 200)

General technical parameters:

Ambient temperature:	-20°C ≤ Ta ≤ +40°C,	or
	-40°C ≤ Ta ≤ +40°C	or electrical motors with alternative materials,
	-20°C ≤ Ta ≤ +60°C	with decreased output power of electrical motor,
	-40°C ≤ Ta ≤ +60°C	for electrical motors with alternative materials and with decreased output power.
Insulation class:	F	
Degree of protection:	minimally IP 55 for type of protection “nA”,	
	minimally IP 65 for type of protection “tc”	

Motors supplied by voltage with frequency 50Hz:

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:

Voltage:	from 220V 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:	T3; T120°C

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

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Applicant: **Van Houcke NV**

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

Equipment: **Three-phase asynchronous motors types:**
1TE1521-..., 1TE1523-..., 1TE1621-..., 1TE1623-...,
1TE1531-..., 1TE1533-..., 1TE1631-..., 1TE1633-...,
frame size: -1A..., -1B..., -1C..., -1D..., -1E..., -2A... (100 to 200)

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-poles	(3000 min^{-1}) IE2				(3600 min^{-1})			
1TE15.1-1AA4	3	6,1	2905		3,45	5,8	3505	
1TE15.1-1BA2	4	7,8	2950		4,55	7,5	3550	
1TE15.1-1CA0	5,5	10,5	2950		6,3	10,2	3550	
1TE15.1-1CA1	7,5	14,1	2950		8,6	13,7	3550	
1TE15.1-1DA2	11	20,5	2955		12,6	19,9	3555	
1TE15.1-1DA3	15	27	2955	120 °C	17,3	27,0	3555	120 °C
1TE15.1-1DA4	18,5	33,5	2955		21,3	33,0	3555	
1TE15.1-1EA2	22	40	2940		24,5	39,0	3540	
1TE15.1-2AA4	30	54	2960		33,5	53,0	3560	
1TE15.1-2AA5	37	66	2960		41,5	64,0	3560	

4-poles	(1500 min^{-1}) IE2				(1800 min^{-1})			
1TE15.1-1AB4	2,2	4,65	1455		2,55	4,45	1755	
1TE15.1-1AB5	3	6,2	1455		3,45	6	1755	
1TE15.1-1BB2	4	8,2	1460		4,55	8	1760	
1TE15.1-1CB0	5,5	11,3	1465		6,3	10,9	1765	
1TE15.1-1CB2	7,5	14,7	1465		8,6	14,5	1765	
1TE15.1-1DB2	11	21	1470	120 °C	12,6	20,5	1770	120 °C
1TE15.1-1DB4	15	28	1475		17,3	27,5	1775	
1TE15.1-1EB2	18,5	35	1465		21,3	34	1765	
1TE15.1-1EB4	22	41,5	1465		25,3	40,5	1765	
1TE15.1-2AB5	30	56	1470		34,5	55	1770	

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Applicant: **Van Houcke NV**

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Equipment: **Three-phase asynchronous motors types:**
1TE1521-..., 1TE1523-..., 1TE1621-..., 1TE1623-...,
1TE1531-..., 1TE1533-..., 1TE1631-..., 1TE1633-...,
frame size: -1A..., -1B..., -1C..., -1D..., -1E..., -2A... (100 to 200)

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-poles	(1000 min^{-1}) IE2				(1200 min^{-1})			
1TE15.1-1AC4	1,5	3,7	970	120 °C	1,75	3,45	1170	120 °C
1TE15.1-1BC2	2,2	5,2	965		2,55	4,75	1165	
1TE15.1-1CC0	3	7	970		3,45	6,6	1170	
1TE15.1-1CC2	4	8,7	970		4,55	8,3	1170	
1TE15.1-1CC3	5,5	12	970		6,3	11,3	1170	
1TE15.1-1DC2	7,5	16,1	975		8,6	15,5	1175	
1TE15.1-1DC4	11	22,5	975		12,6	21,5	1175	
1TE15.1-1EC4	15	31	975		18	31	1170	
1TE15.1-2AC4	18,5	36	978		22	36,5	1175	
1TE15.1-2AC5	22	43	978		26,5	43,5	1175	

8-poles	(750 min^{-1})				(900 min^{-1})			
1TE15.1-1AD4	0,75	2,75	725	120 °C	0,86	2,65	875	120 °C
1TE15.1-1AD5	1,1	4	725	130 °C	1,27	3,7	865	
1TE15.1-1BD2	1,5	4,25	720	120 °C	1,75	4,15	870	
1TE15.1-1CD0	2,2	6,2	725		2,55	5,9	875	
1TE15.1-1CD2	3	8,1	730		3,45	7,7	875	
1TE15.1-1DD2	4	9,7	730		4,55	9,6	880	
1TE15.1-1DD3	5,5	13,3	730		6,3	13,2	880	
1TE15.1-1DD4	7,5	17,3	730		8,6	16,9	880	
1TE15.1-1ED4	11	26	720		13,2	26	865	
1TE15.1-2AD5	15	32	718		18	32,5	865	

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1TE1531-..., 1TE1533-..., 1TE1631-..., 1TE1633-...,
frame size: -1A..., -1B..., -1C..., -1D..., -1E..., -2A... (100 to 200)

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-poles	($3000\ min^{-1}$) IE3				($3600\ min^{-1}$)			
1TE15.3-1AA4	3	5,6	2920		3,45	5,5	3520	
1TE15.3-1BA2	4	7,4	2955		4,55	7,2	3555	
1TE15.3-1CA0	5,5	9,9	2950		6,3	9,7	3545	
1TE15.3-1CA1	7,5	13,1	2950		8,6	13	3550	
1TE15.3-1DA2	11	20	2955		12,6	19,5	3555	
1TE15.3-1DA3	15	27	2960	120 °C	17,3	27	3560	120 °C
1TE15.3-1DA4	18,5	32	2955		21,3	32	3550	
1TE15.3-1EA2	22	38,5	2950		24,5	37,5	3550	
1TE15.3-2AA4	30	53	2955		33,5	52	3555	
1TE15.3-2AA5	37	65	2955		41,5	63,0	3555	

4-poles	($1500\ min^{-1}$) IE3				($1800\ min^{-1}$)			
1TE15.3-1AB4	2,2	4,4	1465		2,55	4,25	1765	
1TE15.3-1AB5	3	5,9	1460		3,45	5,8	1755	
1TE15.3-1BB2	4	7,9	1460		4,55	7,7	1760	
1TE15.3-1CB0	5,5	10,8	1470		6,3	10,6	1770	
1TE15.3-1CB2	7,5	14,3	1465		8,6	13,8	1765	
1TE15.3-1DB2	11	20,5	1475	120 °C	12,6	20	1770	120 °C
1TE15.3-1DB4	15	28,5	1475		17,3	28	1775	
1TE15.3-1EB2	18,5	35	1470		21,3	34,5	1770	
1TE15.3-1EB4	22	41	1470		25,3	41	1770	
1TE15.3-2AB5	30	55	1470		34,5	55,0	1770	

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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-poles	(1000 min^{-1}) IE3				(1200 min^{-1})			
1TE15.3-1AA4	1,5	3,45	970		1,75	3,45	1170	
1TE15.3-1BA2	2,2	4,7	970		2,55	4,75	1170	
1TE15.3-1CA0	3	6,5	970		3,45	6,1	1170	
1TE15.3-1CA1	4	8,4	970		4,55	8,1	1170	
1TE15.3-1DA2	5,5	11,6	970		6,3	11,1	1170	
1TE15.3-1DA3	7,5	15,2	975	120 °C	8,6	14,6	1175	120 °C
1TE15.3-1DA4	11	22	975		12,6	21,5	1175	
1TE15.3-1EA2	15	29,5	975		18	30,5	1170	
1TE15.3-2AA4	18,5	37	978		22	37,5	1175	
1TE15.3-2AA5	22	43,5	978		26,5	44	1175	

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