DNV·GL

Certificate No:
TAE00003UG

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Electric Motor

with type designation(s)
1TZ900, 1TZ950, 1TZ550, 1TZ560, 1PC10, 1PC15, 1PC55

Issued to
Van Houcke NV
Jabbeke, Belgium

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Degree of protection	**IP55, IP56, IP65, IP66**
Insulation class	**155 (F), 180(H)**
Temp. class (°C)	**155 (F), 180(H)**
Voltage (V)	**200 V up to 690 V**
Power (kW)	**0,09 kW up to 580 kW**
Frequency (Hz)	**50 Hz, 60 Hz**
Speed (RPM)	**725 1/min up to 3600 1/min**

Issued at **Høvik** on **2019-12-19**
This Certificate is valid until **2022-09-25**.
DNV GL local station: **Belgium CMC**

Approval Engineer: **Georgy Abramenko**

for **DNV GL**

Trond Sjåvåg
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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Job Id: **262.1-032761-1**
Certificate No: **TAE00003UG**

Product description

AC induction motors

Place of manufacturing.
Nadrazni 25, 789 85 Mohelnice, Czech Republic
Markova 952, 744 01 Frenstat, Czech Republic

Types:
1TZ9003 – Aluminium motor, self-ventilated
1TZ9503, 1TZ5503, 1TZ5603 – Cast iron motor, self-ventilated
1PC100 - Aluminium motor, non-ventilated (without fan)
1PC150, 1PC550 - Cast iron motor, non-ventilated (without fan)

1TZ9003, 1TZ9503, 1TZ5503, 1TZ5603, 1PC100, 1PC150, 1PC550	**Technical Data**
Size	63, 71, 80, 90, 100, 112, 132, 160, 180, 200, 225, 250, 280, 315, 355
Rated Power	S1, 0,09 up to 580 kW
Rated Voltage	220 V up to 690 V
Rated Frequency	50 Hz, 60 Hz, Converter operation ≤690V
No. of poles	2, 4, 6, 8 and pole changing
Ambient Temperature	+45 °C, +50°C, -50°C with special measures
Thermal Class	155 (F), 180 (H)
Degree of Protection	IP55, IP56, IP65, IP66
Standard	IEC 60034-1 / 2017-05

The motors are intended for installaton below deck, in case of IP56 or higher application on deck and optional with built-in units e.g. brakes, external fans, encoders.

Application/Limitation

This Type Approval Certificate does not replace the requirement to DNV GL Product Certificate.
A Product Certificate is required for motors ≥300kW.

Type Approval documentation

Tests carried out

According to IEC 60034-1:2017-05, IEC 60092-301-3rd ed. 1980 + Amd 1-1994 + Amd 2-1995

Marking of product

According to IEC 60034-1, clause 10.2

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

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END OF CERTIFICATE