



TYPE APPROVAL CERTIFICATE

Certificate No:
TAE00003UG
Revision No:
1

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, West-Vlaanderen, Belgium

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

Application :

Products approved by this certificate are accepted for installation on all vessels classed by DNV.

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 **2023-03-03**

This Certificate is valid until **2027-09-25**.

DNV local unit: **Belgium CMC**

Approval Engineer: **Georgy Abramenko**

for **DNV**

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Marta Alonso Pontes
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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

AC induction motors

Place of manufacturing.

Nadrazni 25, 789 85 Mohelnice, Czech Republic
 Markova 952, 744 01 Frenstat, Czech Republic

Types:

1TZ900 – Aluminium motor, self-ventilated

1TZ950, 1TZ550, 1TZ560 – Cast iron motor, self-ventilated

1PC100 - Aluminium motor, non-ventilated (without fan)

1PC150, 1PC550 - Cast iron motor, non-ventilated (without fan)

1TZ900, 1TZ950, 1TZ550, 1TZ560, 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, <i>converter operation ≤690V</i>
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 installation 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 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.

END OF CERTIFICATE