



Marine & Offshore

Certificate number: 62272/A0 BV

File number: ACE4/900/2

Product code: 2584H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

Van Houcke N.V.

Jabbeke - BELGIUM

for the type of product

ASYNCHRONOUS MACHINES (Power below 100kW)

Types: 1TZ9 and 1PC1 series

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships and Offshore Units.
IEC 60034-1 (2017)

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 21 Sep 2025

For Bureau Veritas Marine & Offshore,

At BV ANTWERP, on 21 Sep 2020,

Nele Appels



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 2 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

The **1TZ90** and **1TZ95** series are self-ventilated or forced-air cooled 3-phase asynchronous motors.
The **1PC10** and **1PC15** series are naturally cooled 3-phase asynchronous motors without external fan.

1.1 - Main characteristics:

Number of poles:	2, 4, 6, 8
Rated voltage:	200V to 690V
Rated frequency:	50Hz, 60Hz
Rated power:	Below 100kW
Duty type:	S1, S2 ... S9 according to IEC standard
Insulation class:	F or H
Temperature rise:	Class F
Ambient temperature:	45°C (50°C with derating)
Degree of protection:	IP55 (standard), IP56
Housing material:	1TZ90, 1PC10 series - aluminum frame 1TZ95, 1PC15 series - cast iron frame

2. DOCUMENTS AND DRAWINGS:

Technical data, dated 28 Aug 2018.

3. TEST REPORTS:

Siemens AG:

- Test reports N° T14100L-062-2 and T14200L-064-8, dated 04 Feb 2014.
- Test report N° 29989-1A, dated 06 Feb 2014.
- Test reports N° R&D33-02361i, R&D33-02362i, R&D33-02363i and R&D33-02364i, dated 13 Feb 2014.
- Test report N° T19200L-077-4, dated 29 Jan 2019.

4. APPLICATION/LIMITATION:

- 4.1 - Bureau Veritas Rules and Regulations for the Classification of Steel Ships and Offshore Units.
- 4.2 - The motors are intended for installation in enclosed spaces.
- 4.3 - Brakes and encoders are either type-approved or design-appraised on a case by case basis.
- 4.4 - Equipment is to be supplied with manual(s) for installation, use and maintenance.

5. PRODUCTION SURVEY REQUIREMENTS:

- 5.1 - The above products are to be supplied by **Van Houcke N.V.** in compliance with the type described in this certificate.
- 5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.
- 5.3 - **Van Houcke N.V.** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.
- 5.4 - For information, **Van Houcke N.V.** has declared to Bureau Veritas the following production sites:

Siemens s.r.o. - Odstepny zavod Elektromotory Mohelnice
Nadrazni 25
78985 Mohelnice
CZECH REPUBLIC

Siemens s.r.o., Works Elektromotory Frenstat
Markova 952
744 01 Frenstat pod Radhostem
CZECH REPUBLIC

6. MARKING OF PRODUCT:

- According to IEC 60034 specification

7. OTHERS:

It is **Van Houcke N.V.**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

*** END OF CERTIFICATE ***