Certificate no.:
TAE000050U

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Electric Motor

with type designation(s)
MDD SW 250

issued to
VASCAT, S.A.
TORELLO, Spain, Spain

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

Application:

Product approved by this certificate is accepted for installation on all vessels classed by DNV.

Degree of protection	**56**
Insulation class	**F**
Temp. class (°C)	**n/a**
Voltage (V)	**690**
Power (kW)	**89,7**
Frequency (Hz)	**variable (frequency converter driven)**
Speed (RPM)	**1245**

Issued at **Høvik** on **2025-01-23**

This Certificate is valid until **2030-01-22**.

for **DNV**

DNV local unit: **Area NB/CMC Iberia**

Approval Engineer: **Georgy Abramenko**

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 USD 300 000.

Manufactured by:
VASCAT S.A
C/ESQUIROL, S/N 08570 TORELLO SPAIN

Product description
3-phase synchronous motor type MDD SW 250 S with permanent-magnet excitation controlled by frequency converter.

General data	
Type of machine	MDD SW 250 S
Duty type:	S1
IP Rating:	56
Ambient air temperature:	45 °C
Insulation class:	F
Cooling method:	Liquid cooling, IC97W
Rated speed (no load):	1245 1/min
Rated power Pn:	89,7 kW
Rated voltage Un:	690 V
Rated current In:	124,1 A

Application/Limitation
Product is suitable for use in open deck gangway hoisting application.

Coolant recommendations given by manufacturer shall be followed.

Excess torque- and over current capabilities as RU-SHIP Pt.4 Ch.8 Sec.5 [1.2.4]. Motor characteristics and load requirements to be coordinated in the project application.

Type Approval documentation

Tests carried out
Visual inspection, IP degree, Overspeed, Resistance measurements of windings, Withstand voltage test, Measurement of winding resistance, Insulation resistance, Overload test, Temperature rise test, Environmental tests.

Marking of product
VASCAT MDD SW 250 S CR942427

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