Certificate no.:
TAE000057R

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Electric Motor

with type designation(s)
EM 375 - 200W

issued to
Transfluid S.p.A.
Gallarate, VA, Italy

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	**IP65**
Insulation class	**F**
Temp. class (°C)	**A**
Voltage (V)	**294**
Power (kW)	**140**
Frequency (Hz)	**variable**
Speed (RPM)	**2300**

Issued at **Høvik** on **2026-04-17**

This Certificate is valid until **2031-04-16**.

for **DNV**

DNV local unit: **Italy/Malta CMC**

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.

Product description

3-phase synchronous double stator winding liquid cooled motor with permanent-magnet excitation controlled by frequency converter.

Duty type:	S1
Peak power P_{peak} [kW]	260
Environmental parameters according to DNV CG-0339:	
IP Rating	IP65
Temperature	Class A
Humidity	Class A

Application/Limitation

1. Electrical machine is not designed to meet redundancy type 3 concept requirements given in DNV Rules Pt.4 Ch.8 Sec.5.
2. This machine is certified for motor mode applications.
3. When integrated in propulsion line, relevant documentation must be submitted for approval within product certification, as guided in DNV Rules for Ships Pt.4 Ch.8 Sec.1 Table 8 (certification of shafts), additional Class notations requirements.

Type Approval documentation

Tests carried out

According to DNV Rule for Ships Pt.4 Ch.8 Sec.5, DNV Class Guidance CG-0339.

Marking of product

Type designation - technical data including rated voltage - RPM, rated power - ambient temperature - rated current - rated frequency - insulation class - IP class

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.

Manufactured by:

Transfluid S.p.A.
Via Guido Rossa 4, 21013 Gallarate (VA) Italy

END OF CERTIFICATE