



TYPE APPROVAL CERTIFICATE

Certificate No:
TAE00002K6
Revision No:
1

This is to certify:

That the Accommodation Heater

with type designation(s)
ELEKTRA

Issued to

VEAB Heat Tech AB
Hässleholm, Skåne Län, Sweden

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.

Rated power 3000W - 6000W
Rated voltage 230V - 440V
Enclosure IP44

Issued at **Høvik** on **2023-01-05**

for **DNV**

This Certificate is valid until **2027-12-31**.

DNV local unit: **Malmö**

Approval Engineer: **Nicolay Horn**

Frederik Tore Elter
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

Fan heater with the following types and sizes:

Type:	Power	Voltage	Frequency	Ingress Protection
ELV331	3000W	230V 1 ph	50 / 60Hz	IP 44
ELV3333	3000W	400V 3 ph	50 / 60Hz	IP 44
ELV3344	3600W	440V 3 ph	50 / 60Hz	IP 44
ELV5323	5000W	230V 3 ph	50 / 60Hz	IP 44
ELV5333	5000W	400V 3 ph	50 / 60Hz	IP 44
ELV6344	6000W	440V 3 ph	50 / 60Hz	IP 44

Application/Limitation

For dry and wet accommodation spaces. Only for fixed installation. Installation is to be considered in each case. If not constructed with an inclined top plate, a perforated plate of incombustible material inclined about 30° shall normally be mounted above each heater.

Type Approval documentation

Technical info:
"Frico Elektra V"

Test certificates:
Intertek Certificate for European Product Safety no. 1906596 dated 2019-06-16.

Test reports:
Intertek Test Report no. 1905256STO-001 dated 2019-06-04. Intertek test report no. 1402511STO-001 dated 2014-03-27. SEMKO type test report no. 304902-01 dated 2004-04-26.
PACFORSK report "VEAB and FRICO fan – Vibration testing", report no. 274 210 dated 2004-05-11. Letter from VEAB to DNV dated 2004-05-13 with technical data included.

Tests carried out

Type tests in according to IEC 60335-2-30, Vibration test.

Marking of product

FRICO – ELEKTRA – type designation

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval is 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 Routines (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.

Assessment to be performed at 2 and 3.5 year and at renewal.

END OF CERTIFICATE