

**TYPE APPROVAL CERTIFICATE****This is to certify:****That the Accommodation Heater**with type designation(s)  
**ELEKTRA**

Issued to

**VEAB Heat Tech AB**  
**HÄSSLEHOLM, Sweden**

is found to comply with

**Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards****Application :****Electric fan heaters**

<b>Rated power</b>	<b>3000W - 6000W</b>
<b>Rated voltage</b>	<b>230V - 500V</b>
<b>Enclosure</b>	<b>IP44</b>

This Certificate is valid until **2017-12-31**.Issued at **Høvik** on **2015-05-08**DNV GL local station: **Malmö**Approval Engineer: **Nicolay Horn**for **DNV GL**

Digitally Signed By: Laumann, Marit

Location: DNV GL Høvik, Norway

Signing Date: 2015-05-22

**Marit Laumann**  
**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.

Certificate No: **E-14063**  
File No: **826.20**  
Job Id: **262.1-014988-2**

## Product description

Fan heater with the following types and sizes:

Type:	Power	Voltage	Frequency	Ingress Protection
ELV3331	3000W	230V 1 ph	50 / 60 Hz	IP 44
ELV3333	3000W	400V 3 ph	50 / 60 Hz	IP 44
ELV3344	3600W	440V 3 ph	50 / 60 Hz	IP 44
ELV5323	5000W	230V 3 ph	50 / 60 Hz	IP 44
ELV5333	5000W	400V 3 ph	50 / 60 Hz	IP 44
ELV6344	6000W	440V 3 ph	50 / 60 Hz	IP 44
ELV650	6000W	500V 3 ph	50 / 60 Hz	IP 44

## Application/Limitation

For dry and wet accommodation spaces. Only for fixed installation. Shall normally be protected with a top plate in accordance with DNV Rule Pt.4 Ch.8 Sec. 8 A303. Installation is to be considered in each case.

## Type Approval documentation

Technical info:  
"Frico Elektra V"

Test reports:  
Intertek Certificate no. 1310876 dated 2014-06-04. 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 survey are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Production Sample Tests (PST) and Routines (RT) checked (if not available tests according to PST and 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.

Survey to be performed at least every second year.

END OF CERTIFICATE