



Marine & Offshore

Certificate number: 75155/A0 BV

File number: ACM 130/2347/1

Product code: 1315I

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

ELWA Elektro-Wärme GmbH & Co. KG

Maisach - GERMANY

for the type of product

PLATE HEAT EXCHANGERS

type: 4700

Requirements:

BUREAU VERITAS Rules for the Classification of Steel Ships

BUREAU VERITAS Rules for the Classification of Offshore Units

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: 25 Jul 2028

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 25 Jul 2023,

Heiko Lange

This certificate was created electronically and is valid without signature



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 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

Plate heat exchanger, type: 4700

Identification and technical data:

Type	Volume [L]	Max. working pressure [bar]	Max. working Temperature [°C]	Max. design Temperature [°C]
4701evo	1	6	100	120
4702evo	1.5	6	100	120
4703evo	2	6	100	120
4704evo	2.5	6	100	120
4705evo	3	6	100	120
4706evo	3.5	6	100	120
4707evo	4	6	100	120
4708evo	4.5	6	100	120
4709evo	5	6	100	120
4710evo	5.5	6	100	120
4711evo	6	6	100	120
4712evo	6.5	6	100	120
4713evo	7	6	100	120

2. DOCUMENTS AND DRAWINGS:

According to following drawing:

Drawing no.	Rev.	Designation
40448_4700 Zulassungszeichnung (sheet 1 – 3)	-	Elektro-Durchlauferhitzer Type 4700 evo
19800_WT (sheet 1 of 3)	5	ZB_WärmetauscherS08_V9
19798_Konsole (sheet 1)	2	KEH-4700evo Konsole komplett
19798_Konsole (sheet 2)	-	Konsole Grundplatte
19798_Konsole (sheet 3)	-	Konsole Seitenteil_1
19798_Konsole (sheet 4)	-	Konsole Seitenteil_2
19900_Zu-Ablaufrohr	5	KEH-4700evo Zu-Auslaufrohr mit ø6,5 Bohrungen
19800_WT (sheet 2 of 3)	5	Wärmetauscher_V9 oben
19800_WT (sheet 3 of 3)	5	Wärmetauscher_V9 unten
19991_Seitenblech kpl	5	KEH-4700evo Seitenteil komplett
20992_Frontblech kpl (sheet 1 of 2)	10	KEH-4700evo Frontblech komplett
20992_Frontblech kpl (sheet 2 of 2)	9	KEH-4700evo Zentrierplatte-Verdrehsicherung
40248_KEH 4700 evo	-	Elektro-Durchlauferhitzer Type 4700 evo_Version II

3. TEST REPORTS:

3.1 Burst pressure test performed at ELWA Elektro-Wärme GmbH & Co. KG, Maisach / GERMANY, dd. 02.08.2021, witnessed by an IACS member.

4. APPLICATION / LIMITATION:

4.1 The heat exchangers are intended as part of an electric heater. All electric components are not covered by this Type Approval Certificate.

4.2 These heat exchangers may be used with the following media:
Lubricating oil, heating oil, diesel oil, marine diesel oil, heavy fuel oil, bio-fuels, emulsion (hydraulic oils) and emulsion.

4.3 The heat exchangers are classed as per BUREAU VERITAS Rules.

- 4.4 On board installation and maintenance requirements have to be in accordance with the BUREAU VERITAS Rules requirements and the manufacturer's recommendations.
- 4.5 Materials are to comply with the Society's Rules and to be suitable for the used media.

5. PRODUCTION SURVEY REQUIREMENTS:

- 5.1 The heat exchangers are to be supplied by **ELWA Elektro-Wärme GmbH & Co. KG** in compliance with the type and the requirements described in this certificate.
- 5.2 This type of product is within the category IBV of BUREAU VERITAS Rule Note NR320.
- 5.3 BUREAU VERITAS product certificate is required.
- 5.4 For information, **ELWA Elektro-Wärme GmbH & Co. KG** has declared to BUREAU VERITAS the following production site:
ELWA Elektro-Wärme GmbH & Co. KG, Maisach / GERMANY
- 5.5 Materials certificate as per BUREAU VERITAS Rules.
- 5.6 Each heat exchanger is to be hydraulic pressure tested to 1.5 times the maximum design pressure under witnessing of a Society's Surveyor.

6. MARKING OF PRODUCT:

Each heat exchanger should be marked with:

- Manufacturer's name or logo
- Type designation
- Capacity
- Maximum working pressure
- Test pressure
- Maximum operating temperature
- BUREAU VERITAS' marks

7. OTHERS:

- 7.1 It is **ELWA Elektro-Wärme GmbH & Co. KG**'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 ***