



Marine & Offshore

Certificate number: 66172/A1 BV

File number: MPA2102082

Product code: 2572H

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
MECC ALTE SPA
 Creazzo (VI) - ITALY

for the type of product
ALTERNATING CURRENT GENERATORS (Power below 100kW)
 Type ECP

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships, Offshore Units, Naval Ships and Yachts.
 IEC 60034-1 (2010)

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: 14 Apr 2027

For Bureau Veritas Marine & Offshore,

At BV VENEZIA, on 25 Jul 2022,
 Sandro BRUSEGAN

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.

The electronic version is available at: <https://www.veristarm.com/veristarnb/jsp/viewPublicPdfTypepec.jsp?id=dvgcvgabjk>

BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

Three phases synchronous A.C. Generators - Type ECP

1.1 - Specifications:

Number of poles:	4
Rated frequency:	50/60Hz
Voltage:	Up to 690V
Enclosure class:	IP23/45
Duty type:	S1
Temperature rise:	B, F or H

1.2 - Approval's range for Class H (kVA) at Amb. 45°C:

	50Hz			60Hz				
	380V	400V	415V	440V	450V	460V	480V	690V
ECP32-1S4C	36	36	36	41.3	42.3	43.2	43.2	43.2
ECP32-2S4C	43.2	43.2	40.3	48	49.9	51.8	51.8	51.8
ECP32-1M4C	48	48	38	57.6	57.6	57.6	57.6	57.6
ECP32-2M4C	60	60	60	69.6	70.8	72	72	72
ECP32-1L4C	72	72	72	78.7	82.6	86.4	86.4	86.4
ECP32-2L4C	79.2	79.2	79.2	92.2	94.1	96	96	96

	50Hz		
	380V	400V	415V
ECP34-1S4C	84	84	84
ECP34-2S4C	96	96	96

For class B rating temperature rises, multiply class H rating by 0,792

For degree of protection IP45 (fitting an air inlet filter and air outlet filter), multiply class H rating by 0,74.

For 50°C ambient temperature multiply class H rating (or class F, or class B) by 0.97

1.3 - Approval's range for Class F (kVA) at Amb. 45°C:

	50Hz			60Hz				
	380V	400V	415V	440V	450V	460V	480V	690V
ECP32-1S4C	33.6	33.6	33.6	39.4	40.4	41.3	41.3	41.3
ECP32-2S4C	39.4	39.4	37.4	46.1	48.0	49.9	49.9	49.9
ECP32-1M4C	46.1	46.1	46.1	55.7	55.7	55.7	55.7	55.7
ECP32-2M4C	57.1	57.1	57.1	67.2	67.9	68.6	68.6	68.6
ECP32-1L4C	64.3	64.3	64.3	76.8	78.3	79.7	79.7	79.7
ECP32-2L4C	70.3	70.3	70.3	85.4	86.9	88.3	88.3	88.3

	50Hz			60Hz				
	380V	400V	415V	440V	450V	460V	480V	690V
ECP34-1S4C	75.8	75.8	75.8	91.2	91.2	91.2	91.2	91.2
ECP34-2S4C	86.4	86.4	86.4					

2. DOCUMENTS AND DRAWINGS:

Drawing for ECP32C overall dimensions B3B14, rev.03, dated 23 Sep 2021.

Drawing for ECP32C overall dimensions MD35, rev.03, dated 23 Sep 2021.

Drawing for ECP32C shaft B3B14, rev.03, dated 29 Sep 2021.

Drawing for ECP32C shaft MD35, rev.03, dated 29 Sep 2021.

Technical guide for ECP32C, rev.04.

Drawing for ECP34C overall dimensions B3B14, rev.04, dated 23 Sep 2021.

Drawing for ECP34C overall dimensions MD35, rev.04, dated 23 Sep 2021.

Drawing for ECP34C shaft B3B14, rev.02, dated 03 May 2019.

Drawing for ECP34C shaft MD35, rev.03, dated 27 May 2020.

Technical guide for ECP34C, rev.04.

3. TEST REPORTS:**MECC ALTE SPA:**

- Test report N° 16500201, dated 22 Apr 2021.
- Test report N° 16500205, dated 29 Apr 2021.
- Test report N° 15600201, dated 19 Jul 2021
- Test report N° 15600206, dated 02 Aug 2021.

KIWA CREIVEN S.R.L.:

- Test reports N° 499/21/01405/BT and 499/21/01416/BT, dated 22 Nov 2021.

CREI Ven S.c.a.r.l.:

- Test report N° 234/19/192185BT, dated 09 Oct 2019.

4. APPLICATION / LIMITATION:

- 4.1 - According to BV Rules for the Classification of Steel Ships, Offshore Units, Naval Ships and Yachts.
- 4.2 - For products intended to Naval Ships, production survey is to be conducted in accordance with §5.4.

5. PRODUCTION SURVEY REQUIREMENTS:

- 5.1 - The above products are to be supplied by **MECC ALTE SPA** in compliance with the type described in this certificate.
- 5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.
- 5.3 - **MECC ALTE SPA** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.
- 5.4 - According to BV Rules for the Classification of Naval Ships (NR483), all machines of 50 kVA and over, intended for essential services are within category IBV and are to be surveyed by the Society during testing and, if appropriate, during manufacturing.
- 5.5 - For information, **MECC ALTE SPA** has declared to Bureau Veritas the following production sites:

**MECC ALTE SPA
Via Roma 20,
I-36051 Creazzo (VI)
ITALY**

**Mecc Alte UK Ltd
6 Lands End Way
LE15 6RF Oakham
Rutland
UNITED KINGDOM**

6. MARKING OF PRODUCT:

- 6.1 - Trade name.
- 6.2 - Date of manufacture and serial number.
- 6.3 - Equipment type or model identification under which it was type-tested

7. OTHERS:

- 7.1 - It is **MECC ALTE SPA**'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.
- 7.2 - This certificate supersedes the Type Approval Certificate N° 66172/A0 BV issued on 14 Apr 2022 by the Society.

*** END OF CERTIFICATE ***