



Marine & Offshore
Division

Certificate number: 09692/C0 BV

File number: ACE 4/400/4

Product code: 2584H

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

KONCAR-MES d.d.

Zagreb - CROATIA

for the type of product

ASYNCHRONOUS MACHINES (Power below 100kW)

5.XABZ series.

Requirements:

BV Rules for the Classification of Steel Ships.

IEC 60034 series (2010).

This certificate is issued to attest that BUREAU VERITAS 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: 20 Mar 2022

For BUREAU VERITAS,

At BV RIJEKA, on 20 Mar 2017,

Slaven Celic



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. 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 Division 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 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 October 2014

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

The **5.XABZ series** are electric motors for Marine applications.

1.1 - Specifications:

Frame material	Die castes aluminium alloy
Number of poles	2 to 8 and multi poles
Shaft height motors:	from 63 to 160 mm
Cooling	Air –Cooling method IC 411
Degree of protection of enclosures	IP 54 - IP 55 - IP 56 - IP 66 - IP 65
Rotor	squirrel cage
Power supply	220 to 690 V
Frequency	50 Hz and 60 Hz
Speed	750 to 3600 RPM
Insulation class	F
Temperature rise class	B or F
Duty service	S1 to S10 according to IEC standard
Ambient temperature	40°C to 50°C

1.2 - Approval range:

Motor type	kW 2 poles 50 Hz	kW 2 poles 60 Hz	kW 4 poles 50 Hz	kW 4 poles 60 Hz	kW 6 poles 50 Hz	kW 6 poles 60 Hz	kW 8 poles 50 Hz	kW 8 poles 60 Hz
5.XABZ 63A	0,18	0,2	0,12	0,12	0,07	0,07	/	/
5.XABZ 63B	0,25	0,3	0,18	0,2	0,12	0,12	0,06	0,06
5.XABZH 63B	0,37	0,4	0,25	0,3	/	/	/	/
5.ABZH63C	0,37	0,4	/	/	/	/	0,09	0,09
5.XABZ 71A	0,37	0,4	0,25	0,3	0,18	0,2	0,09	0,09
5.XABZ 71B	0,55	0,6	0,37	0,4	0,25	0,3	0,12	0,12
5.XABZH 71B	0,75	0,8	0,5	0,55	/	/	/	/
5.ABZH71C	/	/	0,55	0,6	/	/	0,18	0,2
5.XABZ 80A	0,75	0,8	0,55	0,6	0,37	0,4	0,18	0,2
5.XABZ 80B	1,1	1,2	0,75	0,8	0,55	0,6	0,25	0,3
5.XABZH 80B	1,5	1,7	1	1,1	/	/	/	/
5.XABZH 80C	/	/	1,1	1,2	0,75	0,8	/	/
5.XABZ 90S	1,5	1,7	1,1	1,2	0,75	0,8	0,37	0,4
5.XABZ 90L	2,2	2,5	1,5	1,7	1,1	1,2	0,55	0,6
5.XABZH 90LC	/	/	2,2	2,5	/	/	0,75	0,8
5.XABZ 100L	3	3,4	/	/	1,5	1,7	/	/
5.XABZ 100LA	/	/	2,2	2,5	/	/	0,75	0,8
5.XABZ 100LB	/	/	3	3,4	/	/	1,1	1,2
5.XABZH 100LB	/	/	3,5	4	/	/	/	/
5.XABZH 100L	4	4,5	/	/	/	/	/	/
5.XABZ 112M	4	4,5	4	4,5	2,2	2,5	1,5	1,7
5.XABZH 112M	5,5	6,2	5,5	6,2	/	/	/	/
5.XABZH112MA	/	/	/	/	3	3,4	2,2	2,5
5.XABZ 132S	/	/	5,5	6,2	3	3,4	2,2	2,5
5.XABZ 132SA	5,5	6,2	/	/	/	/	/	/
5.XABZ 132SB	7,5	8,5	/	/	/	/	/	/
5.XABZ 132M	9,5	11	7,5	8,5	/	/	3	3,4
5.XABZH 132M	11	12,5	/	/	/	/	/	/
5.XABZ 132MA	/	/	9,5	11	4	4,5	/	/
5.XABZH 132MA	/	/	11	12,5	/	/	/	/
5.XABZ 132MB	/	/	/	/	5,5	6,2	/	/
5.XABZ 160M	/	/	11	12,5	7,5	8,2	/	/
5.XABZ 160MA	11	12,5	/	/	/	/	4	4,5
5.XABZ 160MB	15	17	/	/	/	/	5,5	6,2
5.XABZ 160L	18,5	21	15	17	11	12,5	7,5	8,5
5.XABZH 160L	22	25	/	/	/	/	/	/

* The power indicated in this table can be modified according to ambient temperature, duty type and other factors as per customer request

2. DOCUMENTS AND DRAWINGS:

Technical description, Out-line drawings, Assembly drawing, Data and list of position as per KONCAR-MES documentation N° A44689/A dated 07/2005 and KONCAR MES Catalogue 0.K.E.10.00 and 1.K.E.10.00.

For C0 version:

Technical description ref. A44689/C, dated 25.Aug.2015.

3. TEST REPORTS:

Type tests carried out according to BV Rules Pt C, Ch 2, Sec 4, Table 1

Review of type tests reports N° 573106 – 687211 – 586662- 684615 – 684449 – 628884 – 714500 – 592927 -714546 – 714594 -664943 – 684947

4. APPLICATION / LIMITATION:

4.1 - Application / Limitation of use

According to BV Rules for the Classification of Steel Ships and IEC 60092 series

4.2 - On board installation & Maintenance requirements

According to BV Rules for the Classification of Steel Ships and IEC 60092 series

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above motors are to be supplied by **KONCAR-MES d.d.** 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 - **KONCAR-MES d.d.** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

6. MARKING OF PRODUCT:

Name plate according to IEC 60034-1.

7. OTHERS:

7.1 - It is **KONCAR-MES d.d.** 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° 09692/B0 BV issue on 30.May.2011. by the Society.

*** END OF CERTIFICATE ***