



Marine & Offshore
Division

Certificate number: 09691/C0 BV

File number: ACE 4/400/3

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)
Marine Flameproof Motors type 5ABT 71 to 112.

Requirements:

BV Rules for the Classification of Steel Ships,
IEC 60034 series (2010), IEC 60079-0 (2013), IEC 60079-1 (2014), IEC 60079-7 (2007), IEC 60079-31 (2014).

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:

1.1 - Approval range:

Marine ATEX Motors - Explosion proof enclosure

3-phase cage induction MARINE motors totally enclosed

Series 5ABT

Type of protection:

Ex d IIC (motor and terminal box "d" or motor "d" with permanently connected cables

Ex de IIC (motor and terminal box "d" or motor "e")

Frame material	Die cast alloy aluminium
Number of poles	2 to 8
Frame sizes	71- 90 - 90 - 100 - 112 mm
Cooling	Air –Cooling method IC 411 or IC 410
Degree of protection of enclosures	IP 55 - IP 56 – IP 65 and IP 66
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
Duty service	S1 to S10 according to IEC standard
Ambient temperature	50°C
Rated power at S1 duty*	

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
5ABT 71A	0,37	0,4	0,25	0,3	0,18	0,2	0,09	0,09
5ABT 71B	0,55	0,6	0,37	0,4	0,25	0,3	0,12	0,12
5ABT 80A	0,75	0,8	0,55	0,6	0,37	0,4	0,18	0,2
5ABT 80B	1,1	1,2	0,75	0,8	0,55	0,6	0,25	0,3
5ABT 90S	1,5	1,7	1,1	1,2	0,75	0,8	0,37	0,4
5ABT 90L	2,2	2,5	1,5	1,7	1,1	1,2	0,55	0,6
5ABT 100LA	/	/	2,2	2,5	/	/	0,75	0,8
5ABT 100LB	/	/	3	3,4	/	/	1,1	1,2
5ABT 100L	3	3,4	/	/	1,5	1,7	/	/
5ABT 112M	4	4,5	4	4,5	2,2	2,5	1,5	1,7

* 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 as per KONCAR-MES documentation N° A69192-D0 dated 11 2005

Assembly drawing N° A69192

Data and list of positions N° A69192-S

Drawing with all dimensions of protective gag N° A69192 -11, -12, -13, -14 and -15

Terminal box “e” with group bushing insulator + terminal block N° A69192-2

Terminal box “d” cable adapter with cable N° A69192-“

Terminal box “e” and “d” with bushing insulator + terminal block N° A69192-41 and 42

For C0 version:

Technical description ref. A69192-DO, dated 31.Mar.2016.

3. TEST REPORTS:

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

EC Type Examination Certificate N° CESI 05 ATEX 110X dated 29/12/2005 and extension N° 01/09 to CESI 05 ATEX 110X dated 26/05/2009

For C0 version:**Ex-Agencija:**

- EC type examination certificate no. EXA 16 ATEX 0002U

CESI:

- EU-type examination certificate ref. CESEI 05 ATEX 110 X /05, dated 27.May.2016.

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

4.3 - Ex-certification is not covered by this certificate, Applications in hazardous areas are to be approved in each case according to the Rules and Conditions for Safe Use specified in a valid Ex-Certificate issued by a Notified or Recognised Certification Body.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The 5 ABT series 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:

6.1 - Name plate according to IEC 60034-1

6.2 - Additional marking:

II 2G Ex db IIB T3 Gb or II 2G db e IIB T3 Gb

II 2G Ex db IIC T4, T3 Gb or II 2G Ex db e IIC T4, T3 Gb

II 2D Ex tb IIIC T130°C, T160°C Db IP6X

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° 09691/B0 BV issue on 11.May.2011. by the Society.

*** END OF CERTIFICATE ***