

**POTVRDA O TIPNOM ODOBRENJU**
TYPE APPROVAL CERTIFICATE

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| Br /No | 03-001274/030943 |
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Potvrđuje se da je ovaj proizvod, u skladu s Pravilima za klasifikaciju brodova, Dio 1. - Opći propisi, Odjeljak 3. - Tipno odobrenje proizvoda, odobren za ugradnju na brodove i postrojenja pod nadzorom Hrvatskog registra brodova.

This is to certify that this product, on the basis of the Rules for the classification of ships, Part 1 - General requirements, Chapter 3 - Type approval of products, is approved for use on board ships and installations under supervision of the Croatian Register of Shipping.

TIP I OPIS PROIZVODA:*TYPE AND DESCRIPTION OF PRODUCT:***TROFAZNI ASINKRONI KAVEZNI MOTORI BRODSKE ZATVORENE IZVEDBE** **7ABZ 132-315**
*SHIP'S USE THREE-PHASE ASYNCHRONOUS CAGE MOTORS CLOSED CONSTRUCTION***PROIZVOĐAČ:***MANUFACTURER:***KONČAR-MES d.d.***Fallerovo šetalište 22**10000 ZAGREB • HRVATSKA - CROATIA***PROIZVOD UDOVOLJAVA SLJEDEĆIM PRAVILIMA/PROPISIMA:***THE PRODUCT MEETS FOLLOWING RULES/REGULATIONS:***RULES FOR THE CLASSIFICATION OF SHIPS: PART 12- ELECTRICAL EQUIPMENT**

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| IEC 60034-1 | Electrical rotating machines, rating and general requests |
| IEC 60034-2 | Methods for determination of losses and utilities |
| IEC 60034-5 | Degrees of protection of electrical rotating machines |
| IEC 60034-6 | Cooling methods of electrical rotating machines |
| IEC 60034-7 | Mounting arrangements and assembly layouts |
| IEC 60034-8 | Terminal markings and direction of rotation |
| IEC 60034-9 | Noise limits |
| IEC 60034-11 | Thermal protection |
| IEC 60034-14 | Mechanical vibrations in machines of frame sizes ≥ 56 |
| IEC 60034-18-1 | Insulation systems |
| IEC 60038 | IEC standard voltages |
| IEC 60072 | Mounting dimensions in relation to ratings of electrical rotating machines of frame sizes 56 to 400 |
| IEC 60085 | Thermal evaluation and classification of insulation systems |

DETALJI O PROIZVODU I UVJETIMA CERTIFIKACIJE DANI SU NA POLEDINI.*FURTHER DETAILS OF THE PRODUCT AND CONDITIONS FOR CERTIFICATION ARE GIVEN OVERLEAF.***ODOBRENJE VRIJEDI DO: 2015-09-29***APPROVAL IS VALID UNTIL:***Mjesto i datum: Split, 2011-10-06***Place and date:***M.P.***(Seal)***Goran Begović, dipl.ing.**

NAPOMENA: Ova potvrda nije valjana ako se proizvod ili način njegove proizvodnje promijenio u odnosu na tipno ispitani proizvod. Proizvođač treba obavijestiti Hrvatski registar brodova o bilo kojoj izmjeni na proizvodu kako bi ishodio valjanu potvrdu.

NOTE: This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify Croatian Register of Shipping of any modification or changes to the product in order to obtain a valid certificate.

PODROBNIJI OPIS PROIZVODA:
DETAILED PRODUCT DESCRIPTION:

- 3 fazni kavezni indukcionni brodski motori/ 3 phase cage Induction MARINE motors – totally enclosed
- Materijal kućišta: lijevano željezo/ Cast iron frame
- Tip 7ABZ 132 do 7ABZ 315/ Type 7ABZ 132 to 7ABZ 315
- Hlađenje: zrak – metoda hlađenja IC411/ Cooling: Air – Cooling method IC 411
- Rotor: kratkospojni/ Rotor: Squirrel cage
- Napajanje – nazivni napon: 220 do 690 V/ Power supply – Rated voltage: 220 to 690 V
- Frekvencije: 50 Hz i 60 Hz/ Frequency: 50 Hz and 60 Hz
- Sinkrona brzina: 750 do 3600 RPM/ Synchronous speed: 750 to 3600 RPM
- Broj polova: 2 do 8/ Number of poles: 2 to 8
- Tip službe S1 do S10 u skladu s IEC normom/ Duty type S1 to S10 according to IEC standard
- Klasa izolacije: F/ Insulation class: F
- Temperaturna klasa: B ili F/ Temperature rise class: B or F
- Temperatura okoline: 40°C do 50°C/ Ambient temperature: 40 °C to 50 °C
- Nazivna snaga za S1 službu: 4 kW do 180 kW/ Rated power at S1 duty: 4 kW to 180 kW
- Stupanj mehaničke zaštite: IP55 – IP65-IP56-IP66/ Degree of protection: IP55 – IP65 – IP56 – IP66

PODRUČJE PRIMJENE / POSEBNI GRANIČNI UVJETI:
APPLICATION / LIMITATIONS:

Motori su namijenjeni za ugradnju na brodove u skladu s HRB Pravilima za klasifikaciju brodova.
The motors intended for ship's use according to CRS Rules for Classification of Ships.

DOKUMENTACIJA ZA TIPNO ODOBRENJE:
TYPE APPROVAL DOCUMENTATION:

A44690, A44690/I, A44689/4, A44620, A44689/3, A68557, A68558, A44689/B1, A44689/B2, A44689/B3, A44689/B4, A44689/B5, A44689/B6, A44689/B7

OZNAČAVANJE PROIZVODA:
MARKING OF PRODUCT:

Ova potvrda vrijedi za veličine 132, 160, 180, 200, 225, 250, 280 i 315 za sljedeće izvedenice osnovne serije: 7ABZ, 7ABZA, 7ABZP, 7ABZPA, 7ABZK, 7ABZKA, 7ABZPK i 7ABZPKA.

This Certificate covers sizes 132, 160, 180, 200, 225, 250, 280 and 315 for following derivatives of the basis series: 7ABZ, 7ABZA, 7ABZP, 7ABZPA, 7ABZK, 7ABZKA, 7ABZPK i 7ABZPKA.

UVJETI ZA CERTIFIKACIJU:
CONDITIONS FOR CERTIFICATION:

Za el. strojeve bitnih službi mora se izvršiti pojedinačno ispitivanje u skladu s radnim uputama HRB QW-48.

For el. machines intended for essential services shall be carried out routine test according to CRS working instruction QW-48.

Raščlana

12.01.02

Zamjenjuje potvrdu

03-001104/030737