



Potvrda br.  
Certificate No.

03-001794/031497

## POTVRDA O TIPNOM ODOBRENJU TYPE APPROVAL CERTIFICATE

Potvrđuje se da ovaj proizvod udovoljava Pravilima za klasifikaciju brodova, Dio 1. - Opći propisi, Odjeljak 3. - Tipno odobrenje proizvoda.  
This is to certify that this product complies with the Rules for the classification of ships, Part 1 - General requirements, Chapter 3 - Type approval of products.

TIP I OPIS PROIZVODA:  
TYPE AND DESCRIPTION OF PRODUCT:

**TROFAZNI BRODSKI ASINKRONI KAVEZNI MOTORI U PROTUEKSPLOZIJSKOJ IZVEDBI**  
**THREE-PHASE SQUIRREL-CAGE EXPLOSION PROOF INDUCTION MARINE MOTORS**

**7 ABT 90-315**

PROIZVOĐAČ:  
MANUFACTURER:

**KONČAR-MES d.d.**  
Fallerovo šetalište 22  
10000 Zagreb  
HRVATSKA - CROATIA

PROIZVOD UDOVOLJAVA SLJEDEĆIM PRAVILIMA/PROPISIMA:  
THE PRODUCT MEETS FOLLOWING RULES/REGULATIONS:

**HRB PRAVILA ZA KLASIFIKACIJU BRODOVA, Dio 12 – Električna oprema**  
**CRS RULES FOR THE CLASSIFICATION OF SHIPS, Part 12 – Electrical equipment**

**IEC 60034 series, EN 60079-0 (2012), EN 60079-1 (2014), EN 60079-7 (2015), EN 60079-31 (2014)**

DETALJI O PROIZVODU I UVJETIMA CERTIFIKACIJE DANI SU NA POLEĐINI.  
FURTHER DETAILS OF THE PRODUCT AND CONDITIONS FOR CERTIFICATION ARE GIVEN OVERLEAF.

ODOBRENJE VRIJEDI DO: **2023-10-06**  
APPROVAL IS VALID UNTIL:

Mjesto i datum: Split, 2021-02-02  
Place and date:

M.P.  
(Seal)

Marinko Popović, 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.**

**PODROBNJI OPIS PROIZVODA:**  
*DETAILED PRODUCT DESCRIPTION:*

**Trofazni brodski asinkroni kavezni motori u protueksplozivnoj izvedbi tip 7 ABT 90 do 315**  
*Three-phase power squirrel-cage explosion proof induction marine motors type 7 ABT 90 to 315*

**Tehnički podaci / Specifications:**

**Tipovi zaštite/ Type of protection:**

- motor Ex db i spojna kutija Ex db ili Ex eb / motor Ex db and terminal box Ex db or Ex eb  
- motor Ex db sa stalno spojenim kabelima / motor Ex db with permanently connected cables

**Materijal kućišta: lijevano željezo / Frame material: Cast iron frame**

**Tip: 7 ABT 90 do 7 ABT 315 / Type: 7 ABT 90 to 7 ABT 315**

**Veličina – osna visina: IEC 90 – 100 – 112 – 132 – 160 – 180 – 200 – 225 – 250 – 280 – 315**  
*Frame sizes – Shaft height motors: IEC 90 – 100 – 112 – 132 – 160 – 180 – 200 – 225 – 250 – 280 – 315*

**Hlađenje: zrak – metoda hlađenja IC411 -IC410 i IC416 / Cooling: Air – Cooling method IC411-410 and IC416**

**Rotor: kratkospojni / Rotor: Squirrel cage**

**Napajanje – nazivni napon: do 750 V / Power supply – Rated voltage: up to 750 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, višepolni i polno preklopivi / Number of poles: 2 to 8, multi poles and multi speed**

**Tip službe S1 do S10 u skladu s IEC normom / Duty type S1 to S10 according to IEC standard**

**Klasa izolacije: F-H / Insulation class: F-H**

**Temperaturna klasa: B / Temperature rise class: B**

**Temperatura okoline: -20°C do +60°C / Ambient temperature: -20°C to +60°C**

**Nazivna snaga za S1 službu do 225 kW / Rated power at S1 duty up to 225 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.**  
*Motors intended for ship's use according to CRS Rules for the classification of ships.*

**Ova potvrda o tipnom odobrenju ne pokriva ex-certifikaciju.**  
*Ex-certification is not covered by this certificate.*

**DOKUMENTACIJA ZA TIPNO ODOBRENJE:**  
*TYPE APPROVAL DOCUMENTATION:*

**KONČAR-MES Tehnički opis s pripadajućim dokumentima, nacrt br. A524200 s izmjenama do dodoatka 9, nacrt br. A524200 datuma 01/2017.**  
*KONCAR-MES Technical description with belonging documents, drawing no. A524200 with changes up to Annex 9, drawing no. A524200 dated 01/2017.*

**Potvrda o ispitivanju CESI 03 ATEX 280X/09 datuma 28/02/2017.**  
*Examination certificate CESI 03 ATEX 280X/09 dated 28/02/2017.*

**OZNAČAVANJE PROIZVODA:**  
*MARKING OF PRODUCT:*

**Natpisna pločica u skladu s IEC 60034-1.**  
*Name plate according to IEC 60034-1.*

**Dodatno označavanje / Additional marking**  
**II 2G Ex db IIB T3 Gb or II 2G db eb IIB T3 Gb**  
**II 2G Ex db IIC T5, T4, T3 Gb or II 2G Ex db eb IIC T5, T4, T3 Gb**  
**II 2D Ex tb IIC T130°C, T160°C Db**

**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.*