

**POTVRDA O TIPNOM ODOBRENJU**
TYPE APPROVAL CERTIFICATE**Br/No** **03-001582/031289**

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:***Alpha Cylinder Lubricator System**

- Sastoji se od :
- Pumpne stanice na motoru ili u strojarnici,
 - Lubrikatora,
 - Alpha Lubricator upravljačka jedinica ALCU,
 - Taho sustav sa index davačem.
- Consisting of :
- Pump station mounted on the engine or in the engine room,
 - Lubricator unit,
 - Alpha Lubricator Control Unit ALCU,
 - Tacho systems and index transmitter.

PROIZVOĐAČ:*MANUFACTURER:*

MAN Diesel & Turbo
Teglholmsgade 41
DK - 2450 Copenhagen SV
DENMARK

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

Hrvatski registar brodova : **Pravila za tehnički nadzor pomorskih brodova, Dio 13**
Croatian Register of Shipping: *Rules for the Technical Supervision of Sea-Going Ships, Part 13*

*IACS UR E10***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: **2021-05-15**
APPROVAL IS VALID UNTIL:

Mjesto i datum: **Split, 2017-05-16**
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:**Sustav upravlja ubrizgavanjem cilindričnog ulja za podmazivanje dvotaktnih diesel motora.***The purpose of the system is to control the injection of cylinder lubrication oil on two-stroke diesel engines.*

Alpha Lubricator Control Unit	1144783-2
Master Control Unit	1881610-7, 3156343-1
Backup Control Unit	1211636-9, 1225881-4
Switch Board Unit	3157168-7, 1225882-6
HMI Panel	3171197-4, 679445-1, 3171157-9
Incremental Shaft Encoder	GHM912/5G59+5G59/01024/G3
Incremental Shaft Encoder	RI 58
Incremental Shaft Encoder	GHM912/5G59/01024/G3A015

PODRUČJE PRIMJENE / POSEBNI GRANIČNI UVJETI:
APPLICATION / LIMITATIONS:

*Design Update Note LDC/RAS/PLB/DUN.25.2016 dated 26 September 2016,
Release note for ME-B-1403 release 3094005-6 dated 2016-08-28,
ME-B-SW Version Overview 3093051-6 dated 2016-08-28.*

DOKUMENTACIJA ZA TIPNO ODOBRENJE:
TYPE APPROVAL DOCUMENTATION:

*Test Reports are stated in the MAN Diesel & Turbo Info. No. 300047 – List of electronic components for ECS,
No. 3093398-0 rev.09, dated 2016-08-26:*

*No. 27: Test Report – SP Technical Research Institute of Sweden P802867 dated 2008-10-16,
No. 28: Test Report – SP Technical Research Institute of Sweden P802867-01a, P802867-01b, dated 2008-06-24,
No. 33: Test Report – SP Technical Research Institute of Sweden SP05971, dated 2016-02-24,
No. 34: Test report – DANAK – 1910646, dated 2009-10-05,
No. 35: Test report – DANAK – 195967, dated 2002-01-08,
No. 36: Test report – DANAK – K251364-1, dated 2000-05-16,
No. 37: Test report – DANAK – 194940, dated 2000-02-21.*

OZNAČAVANJE PROIZVODA:
MARKING OF PRODUCT:

*In accordance with IEC60945 – Marking and identification:
(The Manufacturer name and Type Designation of the product, serial number, date of manufacture, supply voltage, other particulars and software version...).*

UVJETI ZA CERTIFIKACIJU:
CONDITIONS FOR CERTIFICATION:

Za svaku primjenu na brodovima klase HRB-a, potrebno je dostaviti kompletnu tehničku dokumentaciju s nacrtima na pregled i odobrenje prije postavljanja na brod. Značajnije izmjene u software-u moraju biti odobrene prije primjene na brodu.

Pojedinačni prihvata motora obvezno mora uključiti provjeru funkcionalnosti Alpha Cylinder Lubricator sustava upravljanja.

For each application on board CRS classed vessels complete technical documentation and drawings shall be submitted for examination and approval prior installation on board. Major changes in the software are to be approved before on board application.

Each engine FAT test must include Alpha Cylinder Lubricator System integration with particular engine.