



Certificate No. 02-003063/025109

## TYPE APPROVAL CERTIFICATE

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.

TYPE AND DESCRIPTION OF PRODUCT:

### STEERING GEAR COMPONENTS

MANUFACTURER:



MARSILI ALDO & C. sas  
Via Nino Bixio, 63  
62012 Civitanova Marche (MC)  
ITALY

THE PRODUCT MEETS FOLLOWING RULES/REGULATIONS:

**CRS: Rules for the classification of ships, Part 9. - Machines.**

FURTHER DETAILS OF THE PRODUCT AND CONDITIONS FOR CERTIFICATION ARE GIVEN OVERLEAF.

APPROVAL IS VALID UNTIL: **2023-06-10**

Place and date: Split, 2020-10-15

Seal

Marinko Popović, dipl.ing.

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.

**DETAILED PRODUCT DESCRIPTION:**

- Hydraulic hand pump** C7/68, C7/80, C9/105, C9/120, C9/150
- Hydraulic power pack** CC-14A.V – 1kW – 24V DC; MWP 100 bar; 6,3 l/min  
 CC-14A.V – 1,1kW – 220/380V 50Hz; MWP 100 bar; 6,3 l/min  
 CC-14V – 0,55kW – 24V DC; MWP 100 bar; 3,3 l/min  
 CC-14V – 0,55kW – 220/380V 50 Hz; MWP 100 bar; 3,3 l/min
- Stop, by-pass and relief valve** V.E.I.S.-A 1/2"

Hydraulic cylinder	Model	Design pressure, bar	Nominal stroke, mm	Bore diameter, mm
single cylinder	CL.0-100N	125	250	90
	CL.0-150N	137,5	250	100
	CL.0-200N	125	320	110
two cylinders synchronized	CL.2-B 151	137,5	220	70
	CL.2-B 201	137,5	220	80
	CL.2-B 301	137,5	265	90
	CL.2-B 401	125	300	100
	CL.2-B 632	125	460	100
	CL.2-B 914	162,5	421	125

**APPLICATION / LIMITATIONS:**

Intended for steering gear application.

Test pressure defined as 1,5 x design pressure. Maximum working pressure is 80% of design pressure.

**TYPE APPROVAL DOCUMENTATION:**

Drawings and calculations approved by CRS with letters:

135/TSE/IA/024241 (2018-01-30)  
 190/TSE/IA/024241 (2018-01-30)  
 1566/TSE/IA/024697 (2019-06-10)  
 2182/TSE/DL/025109 (2020-10-15)

**MARKING OF PRODUCT:**

- manufacturer's mark
- location and year of manufacture

**CONDITIONS FOR CERTIFICATION:**

Steering gear components shall be installed onboard according approved ship specific documentation. Alarms and emergency steering shall be subject to CRS approval in each particular case.