Certificate No: LR22428577TA
Issue Date: 10/10/2022
Expiry Date: 09/10/2027

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer	**MZ Electronic S.r.l.**
Address	Via Bainsizza, 2, Monza -MB -, 20900, Italy
Place of Production	MZ Electronic S.r.l. Via Bainsizza, 2, Monza -MB -, 20900, Italy
Type	Windlass with Chain Stopper
Description	Windlass ARADO/NV with Chain Stopper CHST
Trade Name	ARADO/NV-19A w/ CHST; ARADO/NV-20A w/ CHST; ARADO/NV-22A w/ CHST
Application	Deck Machinery
Specified Standard	Lloyd's Register's Rules and Regulations for the Classification of Ships, July 2022, Part 3, Chapter 13
Ratings	**ARADO/NV-19A w/ CHST** Working Load: 17.15 kN Maximum Load: 25.72 kN Brake Holding Load: 135.41 kN Chain diameter / Grade: 16 up to 19 mm / U3 Output Speed: 12.2 – 13.2 rpm Input Power: Min. 4.4 kW Motor Type: Electric

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Daniel Rodrigues

Senior Specialist to Lloyd's Register EMEA
A member of the Lloyd's Register group

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ARADO/NV-20A w/ CHST
Working Load: 19.96 kN
Maximum Load: 29.94 kN
Brake Holding Load: 157.19 kN
Chain diameter / Grade: 20.5mm / U3
Output Speed: 13.2 rpm
Input Power: Min. 5.1 kW
Motor Type: Electric

ARADO/NV-22A w/ CHST
Working Load: 22.99 kN
Maximum Load: 34.49 kN
Brake Holding Load: 180.52 kN
Chain diameter / Grade: 22 mm / U3
Output Speed: 11.4 rpm
Input Power: Min. 5.1 kW
Motor Type: Electric

Additional Tests	Compliance with approved drawings Continuous Duty Pull Temporary Overload
Other Conditions	Working Load and Chain speed are related to tests made at manufacturer's premises.

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document LR22428577TA and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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