

# 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.

<b>Manufacturer</b>	<b>Electro Adda spa</b>
<b>Address</b>	Via Nazionale 8, Beverate Di Brivio Lc, 23883, Italy
<b>Type</b>	Electric Motors
<b>Description</b>	Three phase asynchronous motors IE2 (High), IE3 (Premium), IE4 (Super-premium) efficiency classes
<b>Trade Name</b>	C2A, C3A, C4 (horizontal shaft line) and FC2A, FC3A, FC4 (vertical shaft line)
<b>Application</b>	Marine, Offshore and Industrial use.
<b>Specified Standard</b>	IEC 60034-1:2017 IEC 60034-2-1:2014 IEC 60034-6:1991 IEC 60034-30-1:2014 Lloyd's Register Rules and Regulation for the Classification of Ships (2020), Part 6, Chapter 2, Section 9 Lloyd's Register Rules and Regulation for the Classification of Naval Ships (2020), Volume 2, Part 9

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### Ratings

Rated Power [kW]:	0.75 ÷ 200
Rated Voltage [V]:	220 ÷ 690
Rated Frequency [Hz]:	50 / 60 or variable up to 200kW
Efficiency Classes:	IE2 (C2A, FC2A) IE3 (C3A, FC3A) IE4 (C4, FC4)
Shaft height [mm]:	80 ÷ 315
Poles Number:	2 - 4 - 6 - 8
Insulation Class:	F
Degree of Protection:	IP55 or IP56
Duty Type:	S1
Frame:	Aluminium or Cast Iron fabricated steel
Cooling Codes:	IC411 and IC416
Reference Ambient Temperature:	45°C

### Other Conditions

- Temperature Rise for Lloyd's Register application have to be within insulation class F limits, as per Lloyd's Register Rules and Regulation for the Classification of Ships, 2015 - Part 6, Chapter 2, Section 9.
- Temperature Rise for Power Frequency applications satisfies class B limits, except for C2A 225 MT 2 poles, within class F limit.
- Motors suitable for Inverted-Fed application, without any needs of power de-rating. Temperature Rise within class F limits.
- Motors rated 100 kW and above intended for Lloyd's Register application have to satisfy the additional requirements as specified in the LR Rules and Regulation for the Classification of Ships, Part 6, Chapter 2.

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## Type Approval Certificate

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.

**Previous Version:** The present certificate is intended as renewal and amendment of Certificate 16/00038 (E1).

The Design Appraisal Document LR2024948DA-01 and its supplementary Type Approval Terms and Conditions form part of this Certificate.