



AC Induction marine and navy motors



DESIGNED AND MANUFACTURED IN ITALY



110.000
motors delivered per year

25.000 m²
of manufacturing premises

150 ea
group employees

POWER SUSTAINABILITY
thanks to solar panels

Aerial view of HQ and main production plant in Beverate di Brivio, LC (Lake of Como)

Electro Adda S.p.A. at a glance

Established in 1948, Electro Adda remains a family company with 75+ years of experience in AC Low voltage motors and generators engineered and made in Italy.

Through a global sales service and distribution network – including after sales – we are serving 73 countries with a power range up to 1.5MW

Electro Adda is a totally independent market player active in all major segments (industrial, marine and navy, metals, lifting & material handling, hoists, defense, automotive, renewable energy, O&G, railways)

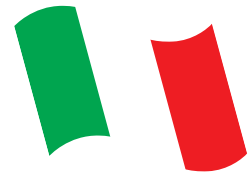
While design activities are developed by the internal technical department, manufacturing process is fully performed inside our factories.

A large test bay is capable to conduct functional tests – including tests on load.

MADE IN ITALY

From design to manufacturing, the whole process is **made in Italy** in our headquarters in Beverate di Brivio, LC Lake of Como Area in Northern Italy. Engineered the product, from raw material our internal production creates punched laminations, machining (shaft & frames), electrical and assembly department create the finished unit. Our testing laboratory will check and confirm performance before delivery.

FROM
1948



100% Italian family business



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ea WINDING & PRODUCTION
The motor in our hands

W&P – production of electrical winding

COMPLIANCE WITH DEMANDING

- Designed and built taking into account vessel inclinations (static & dynamic)
- Certified painting systems
- Deck and offshore (wet environments) and below deck (dry environments)
- Mounting configurations, speeds, protection degree and enclosures can be adapted to meet specific vessel installation constraints
- Shock capability up to 300g
- Low magnetic signature

Certification

Quality is endorsed by third party accreditations ISO 9001-2015, UL (#E340019-E247839), Atex (#CESI03Atex286Q), Marine, Naval, CSA (#201661) and project identified bodies. Compliance with appointed classification societies is achieved for marine and naval applications:



MARINE & NAVAL APPLICATIONS

- DEF and MIL Standards
- LOW EMC
- Structural borne noise measurement
- 1/3 octave band vibrations and noise readings
- BV & LR type approval
- Functional test



Customer oriented solutions for marine and naval duties

*Depending on the specific duty and location (above or below deck),
the Electro Adda product portfolio is flexible in terms of protection
degree and cooling as follows:*

A series

Steel frame

Power 200÷2000 kW Continuous or
intermittent duty (S1 or S2 30 minutes)

Frame sizes 250÷560

Insulation Class F - Option H

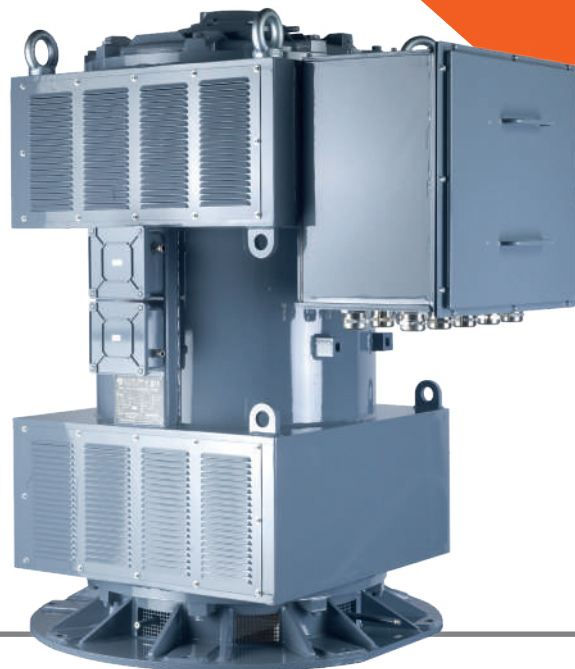
Air cooling (IC01, IC06)

Protection degree IP 23

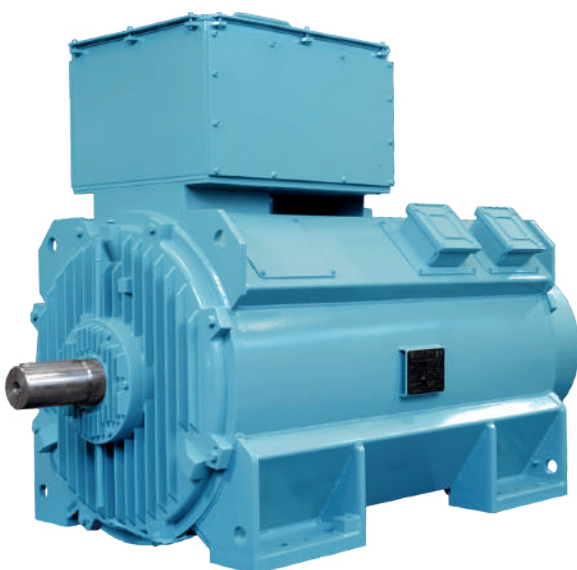
50, 60Hz and variable speed

Advantages:

- Smaller overall dimensions and lighter motors
- High power density



W series



Steel frame

Power 11÷2000 kW Continuous or
intermittent duty (S1 or S2 30 minutes)

Frame sizes 132÷560

Insulation Class F - Option H

Water cooling (IC7 A1W7)

Protection degree IP 55 (IP 56 on request)

50, 60Hz and variable speed

Advantages:

- Smaller overall dimensions and lighter motors
- Lower heat release into the working environment
- Lower noise
- No power reduction even at high ambient temperatures
- They can be used at a wide speed range at constant torque without derating
- Suitable for installation in harsh environments
- High power density



C series

Nodular Cast Iron & Steel frame

Power 0.75÷1200 kW

Frame sizes 71 up to 500

Designed to withstand high shock load on all directions

Insulation Class F - Option H

Efficiency class IE2/IE3/IE4

2, 4, 6, 8 pole motors and multi speed motors

Protection degree – cooling:

- IP 55 – IC 411 self-ventilated
- IP 55 – IC 416 forced ventilation

Suitable for inverter supply

IEC60034-1 MIL Standards BVNR483

LOW EMC

Marine and naval rules

LR & BV type approvals – including naval constructions



FECCL series

With DC electromagnetic disc brake

Power 0.13÷280 kW

Frame sizes 63÷355

Insulation Class F - Option H

Protection degree IP 55

Cooling type

- IC 411 self-ventilated
- IC 416 with forced ventilation

Suitable for inverter supply

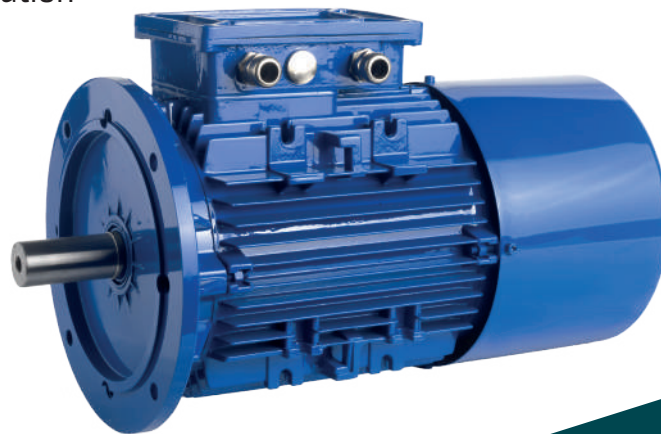
IEC 60034-1 Standards

EAC Certification (on request)

UL/CSA certification for USA and Canada markets

Marine construction LR approved

IE3 efficiency class



BV and LR Type Approval



DESIGN AND BUILT TO LAST

Electro Adda marine & navy motors are subject to a dedicated manufacturing process which will included:

Detailed design which may include FEM calculations (electrical and mechanical) to confirm compliance with requirements

Selection and traceability of materials – where applicable

In house punching and slotting of electrical steel

Bespoke quality control plan which will reflect class and client's specification as far as applicable

REV	DESCRIPTION/DESCRIPTION	DATE/DATE	DESIGNED BY/DESIGNED BY
1	ADDU P100 FOR WATER INLET/OUTLET. CHANGED POSITION OF WATER INLET/OUTLET (SAME SIDE OF 1 & 2)	10/11/2022	HA
2	DELETED SHIPYARD REFERENCES	10/11/2022	HA
3	UPDATED RATED OUTPUT 1 37.5kW INSTEAD 39kW 1	10/12/2022	HA
4	CHANGED SHAFT MATERIAL (FROM C45-EN10083/2 TO 316LN-C45-EN10083/2)	12/13/2023	HA

MOTOR DATA	
OUTPUT - x REV. No	375.5 kW x 500 rpm
HALE CORPORATION CLASS	3P
CURRENT TYPICAL COSφ	0.85
WATER INLET (DIMENSION Ø&S)	Ø" FEMALE
WATER OUTLET (DIMENSION Ø&S)	Ø" FEMALE
WYE/DELTA	Y
WINDING	Y
CABLE BRANDS	WIT PATENTED
WATER LEAKAGE DETECTOR	190.0. 10.523-20.0000
GROUNDING WING Ø&S	AEGIS SGR-105.5-244.0
INSULATION	1000 V 200
SPACE HEATERS	2&3 P1700
THERMAL PROTECTION-WINDING	11 P1700
THERMAL PROTECTION-BEARINGS	11 P1700
THERMAL PROTECTION-WATER	11 P1700
SHAFT	316LN-C45-EN10083/2
SHIELD Ø&S	CAST IRON
SHIELD N&E	CAST IRON
ROTOR L&R&S	ALUMINIUM 2124 - 50
ROTOR TERMINAL BOX (ON RIGHT)	322-A7 (Ø&S 47&S)
LEARNING Ø&S	322-A7 (Ø&S 47&S)
BLIND N&E	322-M2 (Ø&S 47&S)
SERVO	MO&S-2-ROTOR-500



VPI impregnation process & partial discharge readings for enhanced insulation system check



In house CNC shaft machining



Functional test in our laboratory including tests on load



Water Jacket motor under functional test

FROM STANDARD MARINE TO TAILOR MADE

SERVICE: Main propulsion, Auxiliary and PTO/PTI/PTH hybrid propulsion

Starting from a clean compact design, the unit can be configured based on application to meet specific requirements with customized design and options:

- Winding and bearing temperature detectors
- Space heaters
- Class H insulation
- Insulated bearing and shaft grounding brush
- Cable glands
- Vibration sensors
- Special painting cycle per ISO 12944
- Special shaft and/or double shaft extension
- Encoder
- Brake
- Type test

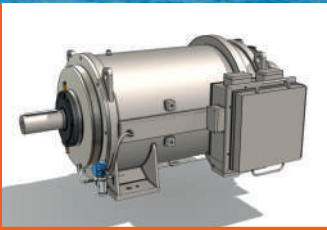
Compliance with major classification societies is available upon request



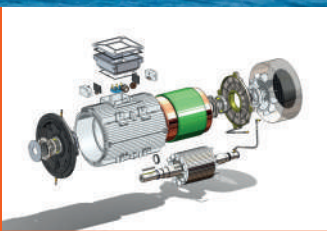
Main propeller drive motors



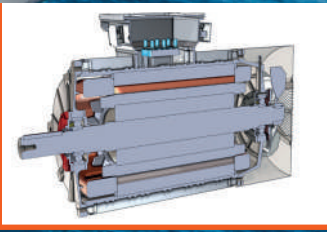
Thruster and positioning motors



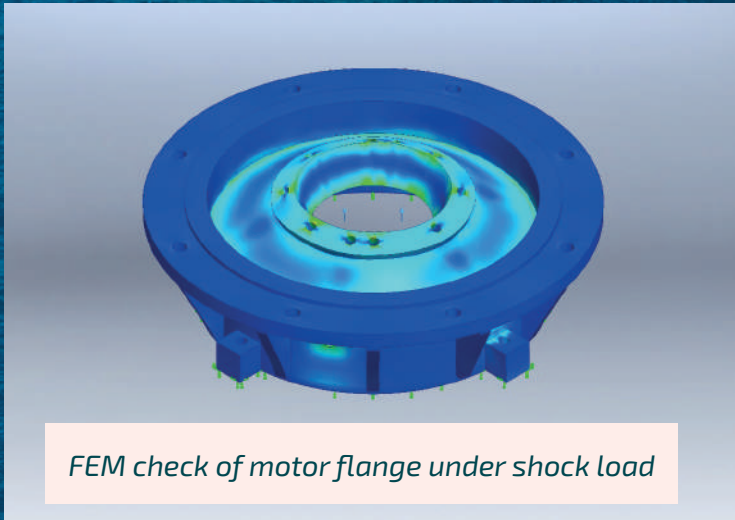
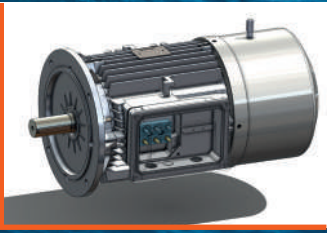
Lifeboat and service boat lowering motors



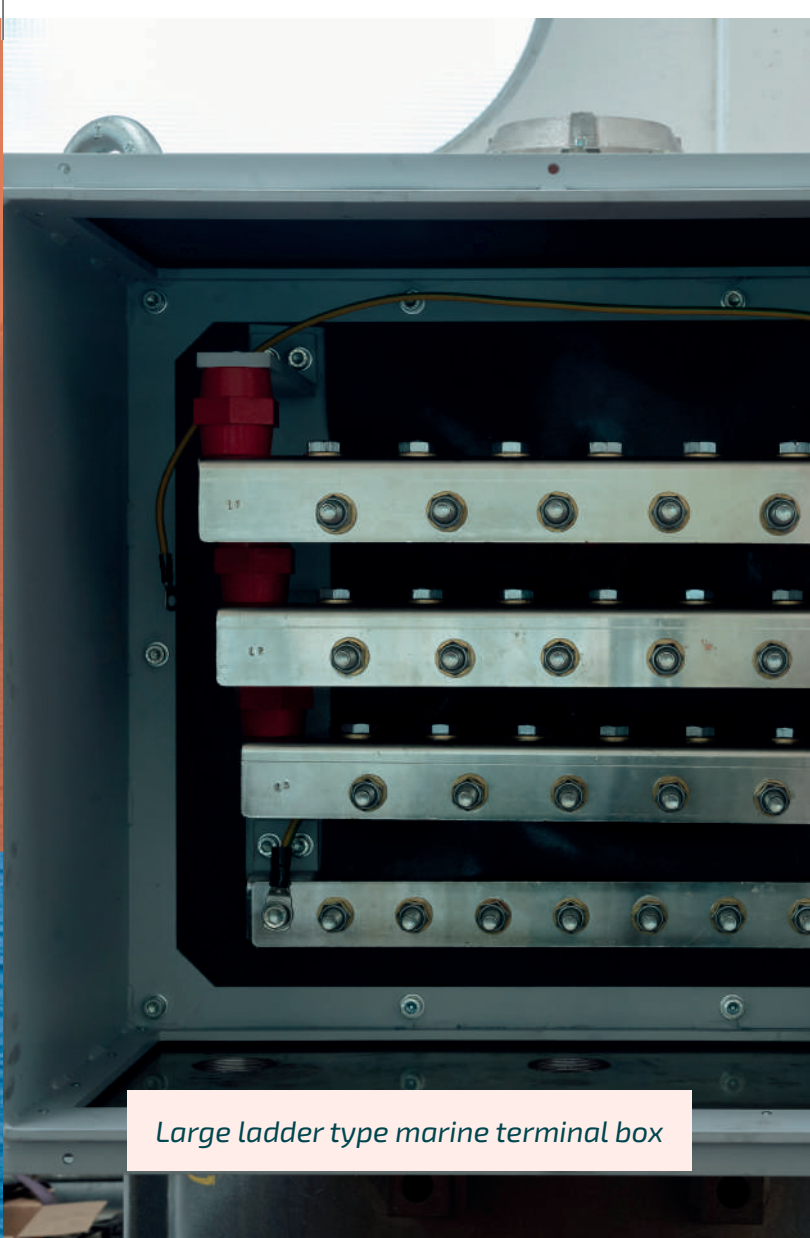
Anchor winch motors



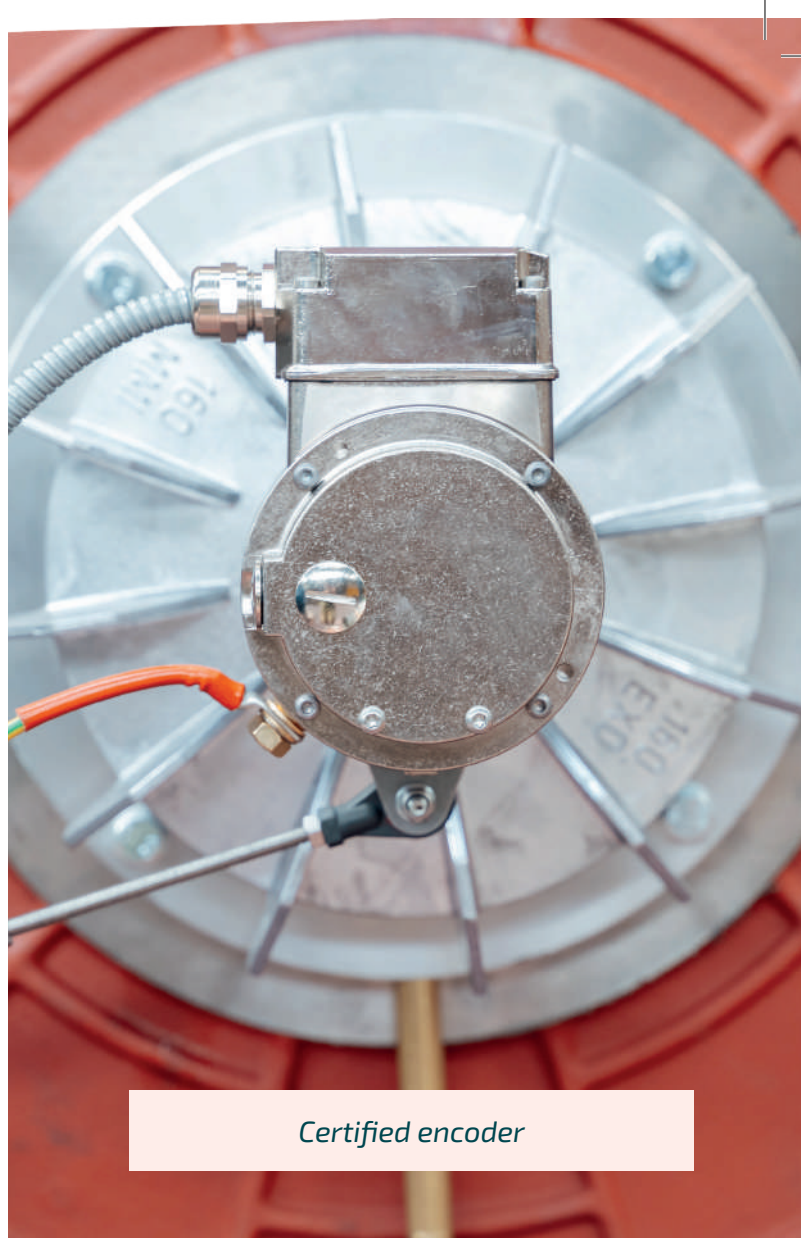
Winch motors



FEM check of motor flange under shock load



Large ladder type marine terminal box

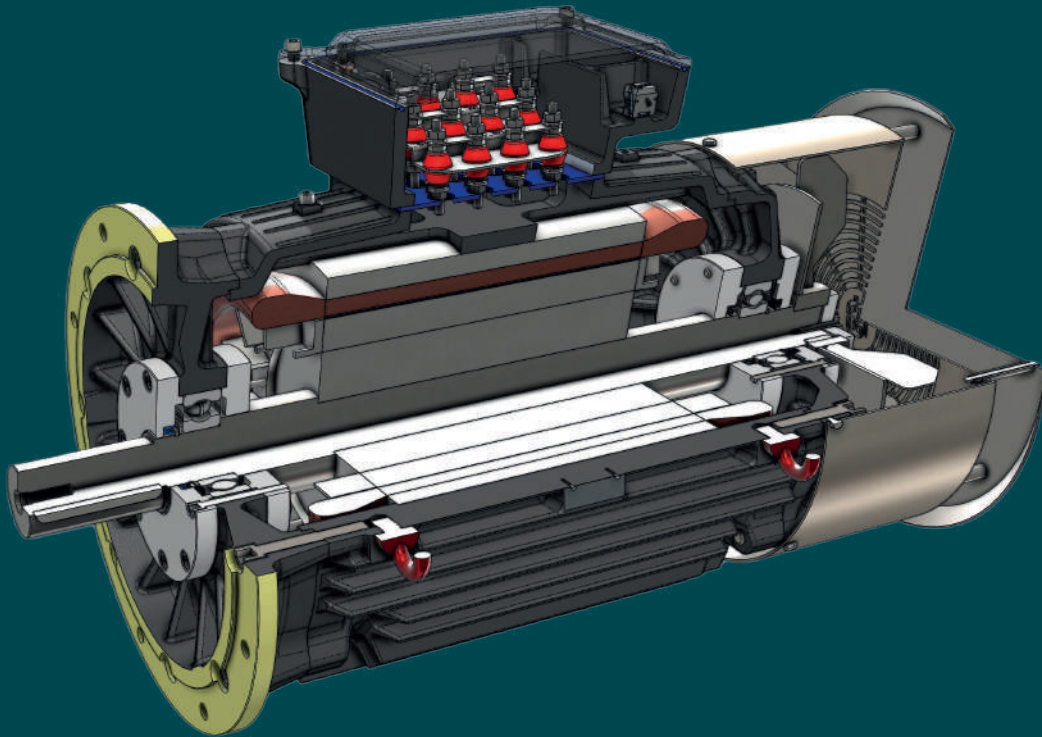


Certified encoder



IP23 ODP propulsion motor in service

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ea ELECTRO ADDA
IL MOTORE CHE FA LA DIFFERENZA

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