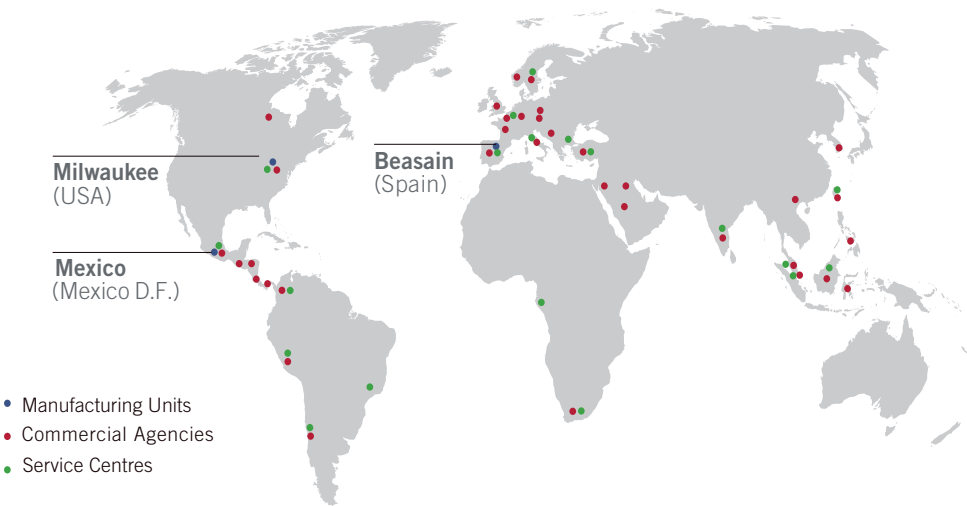


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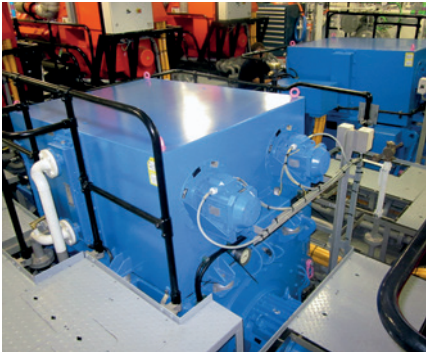
Indar



Your driving force

Indar Electric, S.L.
www.indar.net

We respect the silence of nature by
PIONEERING THE SILENT TECHNOLOGY



MARINE
RESEARCH VESSELS
LOW NOISE PROPULSION MOTORS

Indar
Ingeteam Group

INDAR Low Noise Motors for Research Vessels

100% Customized Motors

Why INDAR?

The sea is part of our culture. We feel proud of everything we build. We believe in thinking differently because breaking molds is our motto.

We break molds by making our motors robust in design, reliable in performance, made to purpose and silent.

Our Values

ONE TEAM 100% MARINE THINKING. We make electric propulsion motors with passion as one unique team, **PERFECTION is not good enough.**

Our Philosophy

100% marine oriented: cooperation and partnership with the ship owners, shipyards and propulsion system integrators forms part of our philosophy, with a personalized and unique treatment in the relationship, and with a clear purpose: Hard work and long term partnering funded in trust.

Experience = INDAR

We don't just supply electric motors, but we give advice and create them. Since 1940, the INDAR brand motors have been rotating on board worldwide and ship owner trust is built upon reliability.

World class testing facilities

Quality is not at stake in INDAR, It is a must for us to guarantee the reliability of any single motor to be delivered. To this respect our test bench is one of the best in the world. The main capabilities are:

- On load test all our power range.
- Back to back load test with PWM drives.
- Electrical and thermal insulation ageing.
- Tests of extreme ambient condition (climatic chamber from -30 °C to 80 °C).

Marine Certifications

Any INDAR Propulsion motor is approved and compliant to the classification society given for the vessel.



SILENT PERFORMANCE YOU CAN RELY ON



OUR PROPOSAL

- Induction Motor
- Compact Design
- Maintenance Free
- Easy Commissioning
- Witnessed Test
- Sea Trials

Fishery Research Vessel
BIPO Inapesca
Photo courtesy of ARMON

More than 75 years rotating at your service



SCOPE OF SUPPLY

- Output Power up to 5,000 kW
- Direct Drive
- Rigid or Resilient Mounting
- Degree of Protection up to IP44
- Color alternatives
- High Corrosion Resistant

SOME REFERENCES

- ICE 209 / DNV Silent Class R
- Celtic Explorer - Ireland (2002)
- Miguel Oliver - Spain (2007)
- Ramón Margalef - Spain (2011)
- Ángeles Alvariño - Spain (2012)
- Simon Stevin - Belgium (2012)
- RV Investigator - Australia (2013)
- BIPO Inapesca - Mexico (2014)

Underwater Noise Level (dB at 1m)	
Large Tank Ship	180-190 [dB]
Supply Ship	150-180 [dB]
Research Vessel	110-130 [dB]
Submarine	100-130 [dB]

Structureborne noise Level on Propulsion Motor

