# **B&P**Elektromotoren

## ELECTRIC MOTORS AND FANS IN SHIPBUILDING INDUSTRY Marine applications - open deck







#### **ELECTRIC MOTORS**

Končar MES has been present in shipbuilding industry for many years. We have a wealth of experience and quality of products which are subjected to most rigorous tests. As a manufacturer, we can make tests at our premises and in conjunction with the relevant certification agency representatives, this guarantees reliability for the most rigorous and heavy duty working conditions for all types of Marine environments.

All our marine application motors have CRS, BV and RINA agencies type approval. We also have the capability to produce certificate BV mode survey and RINA Scheme II (for motors and drives up to 100kW), this is available for all marine use motors in ATEX, along with CESI and Croatian Ex Agency certificates.

Standard marine application electro motors can be supplied in sizes 63-315 according to IEC / DIN / VDE standards, having tropicalized winding and epoxy paint as standard. We are also able to manufacture in accordance with any specific customer requests. The operational voltages are 440V/60Hz (400V/50Hz) with IP55 as standard (increased protection available on request).

Končar MES as well as supplying standard IEC marine application motors, are able to produce motors with many special options (customer specific powers, worldwide voltages, frequencies, speeds, 2 speed and multi speed motors, various mounting positions, thermal protection, double and extended output shafts, class H insulation, special flanges, with or without fan cover, IC 410 cooling, winding heaters, regreasing nipple, IP56/66 protection degrees and other options according to customers request). Motors can be supplied with specific parts (switches, safety switches and relays, forced ventilation, encoder and various type of measuring devices). Končar MES can deliver marine application electro motors with brakes devices conforming to ATEX.

One other important part of our production program is standard and marine use electrical motors in ATEX. Our whole production program (up to 200 kW) is covered by CESI and Croatian EX Agency certificates. Motors can be of Ex db eb IIC, Ex db IIC, Ex e or Ex nA design.





#### AXIAL AND CENTRIFUGAL FANS

Our production of axial and centrifugal fans further widens our diverse product family. We are entering new markets with our development of air flow devices.

Product family of axial and centrifugal fans may be used for wide application in this field. Whole assortment is extensively applied in ventilation and cooling industry. Main design advantages are optimal efficiency, high air flow and low energy consumption.

We have many exhaust types, casing geometries and thicknesses, materials and rotor types available. Very flexible design and manufacturing line give us opportunity to meet any special demand of our customers.

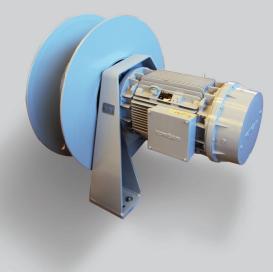
Our production program			
	Axial fans	Centrifugal fans	
Size:	315 – 1600 mm	250 – 1120 mm	
Characteristics:	Air flow up to 70 m³/s, static pressure up to 1400 Pa	Air flow up to 25 m³/s, static pressure up to 10000 Pa	
Drive type:	Direct or belt drive	Direct or belt drive	
Special design:	ATEX, for high temperatures, marine use	ATEX, for high temperatures, marine use	



#### SPECIAL MARINE PRODUCTS – WINCH DRIVES

#### Main characteristic winch drive:

- Anchoring, mooring, tugger, windlass
- Motor sizes up to IEC 315
- bi-direction drive, built in motor brake, frequency inverter duty,
- different overload options, increased mechanical protection
- up to three speed motor drive
- automatic torque control
- certified for marine use
- control equipment for open deck and below deck installation
- other various options according to customer request





	Ambient temp. (°C)	Temp. Rise limit of the winding (K) for thermal class F	Construction supervision for essential drives
BV - Bureau Veritas (France)	45	95 K	>100 kW
CRS – Croatian Registry of Shipping (Croatia)	45	95 K	>20 kW
RMRS - Russian Maritime Register of Ship- ping (Russia)	45	105 K	>100 kW
RRR - Russian River Register (Russia)	50	95 K	>20 kW
RINA - Registro Italiano Navale (Italia)	45	95 K	>=50 kW
BUREAU VERITAS			

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