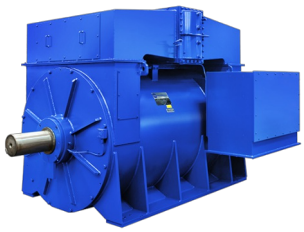
MarelliMotori Marine



B4V

Model	B4V
Power	Up to 10.000 kW
Voltages	Up to 690 V
Frame	355 ± 1.000
Poles	4, 6, 8, 10 and 12
Cooling	IC 81W / IC 86W
IP	IP 44/54/55/56
Other applications	Thrusters, Fi-Fi system, Auxiliaries
Enclosure	TEWAC – Totally Enclosed Water to Air Cooled
Main Applications	Dredge, Hybrid machine, Propulsion, PTO-PTI system, Winch
Sector	Marine

Poles	**4 Poles**	**6 Poles**	**8 Poles**	**10 Poles**	**12 Poles**
| kW | 60 Hz	7.000	10.000	9.000	7.500	

Certificates and testing	
Certificate	Marine Survey Certificate supplied with the machine. Shaft, housing (propulsion) and exchanger are certified by the Marine Classification Society.

Main components	
Housing	Rigid frame, rugged welded steel fabrication (EN 10025 - S235 JR). Frame is provided with side ribs to increase the strength. Marelli Motori motors for continuous duty operation are designed to meet vibration levels per IEC 60034-14, ISO 10816-1 and BS 5000-3.
Shield	Made of grey cast-iron (EN 1561 – GJL 200) up to 500 frame size motors. Made of hot-rolled structural steel (EN 10025 – S235 JR) from size 560 and above.
Shaft	General data Made in carbon steel (EN 10083 – 2 C40 – TN) up to 450 frame and hot-rolled structural steel from 500 frame (EN 10025 – S355 JR). Shaft design Cylindrical shaft with key.
Main terminal box	Mounted on side (right or left to be selected). Made of formable steels EN 10130.
Internal Fan	Made of aluminum alloy up to 400 frame. Made of hot-rolled structural steel above (EN 10025 – S235 JR).
Heat Echanger	Construction mounted on top of the machine double tube made of CuNi 90/10 copper fins housing equipped with water leakage detector certified by registers of shipping in compliance with Rules for Classification of Ship coolant can be both fresh or sea water suitable to be treated with corrosion inhibitors, PH regulators and anti freeze as appropriate to site conditions. Exchanger data designed pressure 6 bar test pressure 10 bar max glycol: 30% type of water: fresh water or marine (salt) water flanges: PN6 – PN10 – Special (ANSI).

Construction	
Cooling System	IC 81W as per IEC60034-6. Primary fluid (water) is flowing by external water system. Internal air is flowing by a fan mounted on the shaft of the generator at the driven side.
Degree of protection	IP 44 as per IEC60034-5. (Available up to IP 56)
Mounting	IM B3, V1 and V10 as per IEC60034-7.
Technical data	
Stator/Rotor core	Laminated and enamel-insulated on both sides to minimise eddycurrent losses. The stator winding is made of flat copper or round copper wire depending on the machine size. The completely wound stator pack is thereby impregnated in an epoxyresin VPI. The subsequent heat treatment hardens the resin.
Rotor	Squirrel cage rotor type. Depending on machine size, the rotor construction is either a solid shaft or welded ribbed shaft. The rotor winding can be either a pressure die cast aluminum or a copper bar construction.

Bearing

General data

Antifriction bearings grease lubricated (ball or roller type) or oil lubricated sleeve bearing.

The theoretical lifetime of bearings, L10h according to ISO 281/1 standard, of standard horizontal construction generators, without external forces (radial and / or axial) is in excess of 50.000 hours. On request, the lifetime of bearings, L10h can be in excess of 100.000 hours.

Locating bearings are on the D end side and floating bearings on the ND end side.

Both bearings are fitted with a regreasing system.

The used grease is removed through a valve locked in the outer bearing cover. Sleeve bearings available as an option.

On request special bearings are designed where high radial and axial forces are applied. All configurations are designed to withstand the following marine inclination.

Static		Dynamic	
List	15°	Rolling	±22.5°
Trim	5°	Pitch	±7.5°

Dedicated constructions available for different values.

Impregnation system

Stator and rotor are VPI treated with an unsaturated polyester amide resin which is polymerisation in oven.

Insulation system

Low voltage

Stator: F class insulated with a synthetic enamel.

(H class insulation available on request)

Protective treatments

Marine dedicated protective enamel is applied on the winding.

Optional features

List

Dual/multiple winding configuration
flanged shaft or special shaft end on both sides
increase protection degree up to IP 56
encoder
vibration sensors
special frame design to suite the application
special bearings (sleeve or angular contact bearings)
reinforced winding for VFD operation
insulated bearings design for VFD application
shaft earth brush for VFD application
other options available on request.