

# ODP motors



	IE3 <b>C6C</b>
<b>Model IP 23</b>	LV <b>C3C - C4C</b>
	MV <b>C3CH - C4CH</b>
<b>Model IP 44</b>	LV <b>C3W - C4W</b>
	MV <b>C3WH - C4WH</b>
<b>Power</b>	Up to 10.000 kW
<b>Voltages</b>	Up to 15.000 V
<b>Frame</b>	315 ÷ 1000
<b>Pole</b>	4, 6, 8, 10 and 12
<b>Cooling</b>	IC 01 (IC 06 optional)
<b>Main application</b>	power, metals, pulp and paper cement, sugar mill, water pumping and treatments, manufacturing processes, mining, chemical.

## Power

	4 POLES	6 POLES	8 POLES	10 POLES
kW (50 Hz)	5500	6100	5500	4300
kW (60 Hz)	6200	7000	6300	5000

## Main components

<b>Housing</b>	<p>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.</p>
<b>Shield</b>	<p>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.</p>
<b>Shaft</b>	<p><b>General data</b>          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).</p> <p><b>Shaft design</b>          Cylindrical shaft with key.</p>
<b>Main terminal box</b>	<p>Mounted on top.          Made of cold-rolled formable steels EN 10025 – S235JR.</p>
<b>Internal fan</b>	<p>Made of aluminum alloy up to 400 frame.          Made of hot-rolled structural steel above (EN 10025 – S235 JR).</p>
<b>Construction</b>	
<b>Enclosure</b>	<p>ODP – Open Drip Proof Motors.</p>
<b>Cooling system</b>	<p>IC 01 as per IEC60034-6          Free circulation.          Internal air is flowing by a fan mounted on the shaft of the motor at the driven side.          The cooling air is taken on the ND-end, the air outlet is on the D-end.          On request for variable speed application an external ventilation unit can be supplied to get the IC 06 cooling type.</p>
<b>Degree of protection</b>	<p>IP 23 as per IEC60034-5.          The series can be supplied with air inlet filters to achieve the IP 44 rating. The motor series name will be C3W - C4W.</p>
<b>Mounting</b>	<p>IM B3, V1 and V10 as per IEC60034-7.</p>

## Technical data

### Stator/Rotor core

Laminated and enamel-insulated on both sides to minimise eddy-current losses. The stator winding is made of flat copper or round copper wire depending on the machine size. The completely wound stator pack with housing is thereby impregnated in an epoxy-resin VPI. The subsequent heat treatment hardens the resin.

### Rotor

Short circuit 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 motors, 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.

### Impregnation system

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

### Insulation system

Stator: F class insulated with a synthetic enamel.  
(H class insulation available on request)

### Protective treatments

Dedicated protective enamel is applied on the winding.

## Optional features

- 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.