

# BRAKE MOTORS



<b>Power outputs</b>	0,18 - 75kW
<b>Voltages</b>	Up to 690V
<b>Frames</b>	71 - 280
<b>Efficiency classes</b>	IE2 - IE3, where applicable
<b>Sectors</b>	Marine / Rail / Industrial / Steel Industry
<b>Most common applications</b>	Handling and Lifting Systems

These motor series are specifically designed for heavy-duty applications where maximum reliability is required. They are asynchronous three-phase self-braking motors with a DC disk brake that can be supplied by a rectifier supplied with the motor.

The series name identifies the combination of materials of the main mechanical components of the engine (case and endshields):

<b>Series name</b>	1BF	2BF	3BF	4BF	5BF
<b>D-End Endshield</b>	Aluminum	Cast-Iron	Aluminum	Cast-Iron	
<b>Case</b>	Aluminum			Cast-Iron	
<b>N-End Endshield</b>	Aluminum		Cast-Iron		



## BF MOTOR SERIES

	<b>Standard configuration</b>	<b>Special configuration</b>
<b>Standards</b>	Applicable IEC EN 60034	Specification on request
<b>Polarity / Speed</b>	Single	Double / Triple
<b>Cooling method</b>	IC 411	IC 410 / IC 416 / IC 418
<b>IP Index of Protection</b>	IP55	IP56 / IP65 / IP66
<b>Insulation Class</b>	F	H
<b>Temperature rise Class</b>	B	F / H
<b>Altitude</b>	<1000m a.s.l.	up to 4000m a.s.l.
<b>Power supply</b>	Main	Frequency converter
<b>Rotor</b>	Squirrel cage	-
<b>Material of the rotor windings</b>	Aluminum	-
<b>Duty</b>	S1	S2 ... S9
<b>Ambient temperature</b>	-20°C / +40°C	On request
<b>Shaft extension</b>	D-End	D-End + N-End
<b>Shape of the shaft extension</b>	Cylindric, with key	Conical / special
<b>Material of the shaft</b>	Steel C40	39NiCrMo3 / Stainless steel
<b>Bearings</b>	Ball	Roller / Angular
<b>Seal ring</b>	MIM	Labyrinth / Viton / Silicon

	Standard configuration	Special configuration
<b>Material of the screws</b>	Galvanised	Stainless steel
<b>Vibration grade</b>	A	B
<b>Material of the fan</b>	Polyamide	Aluminum
<b>Material of the fan cover</b>	Steel	Cast-iron
<b>Lifting eyebolt</b>	From 100 frame and above	On request
<b>Feet</b>	Fixed (Cast-iron) / Removable (Aluminum)	-
<b>Terminal box - position</b>	On the right side, when seen from D-End On top ( Aluminum)	On top(§) / On the left(§) / Flying leads
<b>Terminal box - material</b>	Aluminum (cast-iron for 200 and 225)	-
<b>Cable entry</b>	On the right side	Rotatable in step of 90°
<b>Q.ty of terminals (single polarity)</b>	6	-
<b>Q.ty of terminals (double polarity)</b>	6	12
<b>Q.ty of terminals (triple polarity)</b>	12	-
<b>Supply to the brake</b>	DC	AC
<b>Feeding values to the brake</b>	230V - 50Hz/60Hz	On request

(§): Available only on 5B Motor series

## SPECIAL SOLUTIONS

### Windings

Insulation class H  
Tropicalisation  
Stator windings with enhanced insulation system for inverter

### Brake

Manual release lever  
Sealed braking unit  
Axial brake release  
Microswitch

Special voltage and/or frequency

Double impregnation

Encapsulation of the windings

### **Protections**

Bi-metal protection

PTC Thermistors

KTY Thermo-resistances

PT100 Thermo-resistances

PT1000 Thermo-resistances

Anticondensation heaters

### **Transducers**

Arrangement for vibration detector

Encoder

Tachometer

### **Painting and solutions for extreme environment**

Special painting colour (std RAL5010)

Special painting process for aggressive environment

Solutions for high temperatures

Anti-rain canopie

Anti-sun canopie

IP56 protection degrees

### **Bearings**

Sealed bearings

Roller bearings

Insulated bearings

Hybrid bearings

Bearings for high temperatures

Angular bearings

Re-greasing systems

D-End fixed bearing (only with Cast-iron endshield)

Rotating labyrinth

Silicon ring

Viton ring

### **Shaft and Fan**

Special shaft extension and/or special flange

Second shaft extension

Non-ventilated motor (IC410)

Forced ventilation (IC416)

Non-ventilated motor, externally cooled (IC418)

Metallic fan

Vibration grade B (with half or full key)

### **Terminal box**

12 terminals

Special cableglands

Position of terminal box

Direction of cable entry

Material of the terminal box

Flying leads

Auxiliary terminal box

Special cable entry



## CERTIFICATIONS

These motors are also available in marine configuration, with special painting and metal cable glands.  
These motors are according to the rules of the following certification bodies:

RINA (Certification No. ELE309516CS001)

Other certification bodies available on request