BRAKE MOTORS

Power outputs	0,18 - 75kW
Voltages	Up to 690V
Frames	71 - 280
Efficiency classes	IE2 - IE3, where applicable
Sectors	Marine / Rail / Industrial / Steel Industry
Most common applications	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):

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

BF MOTOR SERIES

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

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

Arrangment for vibration detector
Encoder
Tachometer

Painting and solutions for extreme environment

Special painting colour (std RAL5010)
Special painting process for agressive 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