



HIGH EFFICIENCY
SUPERIOR PERFORMANCE
IN A SINGLE PRODUCT

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The integrated combination of electric motor and inverter ensures reliability, energy savings, and ease of installation, in addition to all the functional characteristics of an equivalent panel-mounted inverter.

Compared to an electric motor paired with a traditional inverter, the DRIVEMOT allows for up to 30% energy savings since each of its components has been specifically designed for the integrated application.

The characteristics of the motor are pre-installed in the inverter logic to optimize its operation, increase efficiency, and reduce energy consumption, also ensuring a constant torque equal to the motor's nominal value and extremely low speed fluctuations throughout the speed range from 10 to 100 Hz.

The absence of external wiring between the motor and electronic control reduces the emission of conducted and radiated electromagnetic disturbances.

The electric motor is protected by the inverter from overloads and overheating.



bermar.it



### **KEY FEATURES**

CONTROL METHOD: VOLTAGE / FREQUENCY VECTOR CONTROL SENSORLESS

STANDARD FREQUENCY RANGE: 10-100HZ

INTEGRATED PID CONTROL EMC FILTER\*\*

INTEGRATED KEYPAD FOR PARAMETER READING AND SETTING

ANALOGIC CONTROL: -10V-+10V / 4-20MA, 0-10V

COMMUNICATION PROTOCOLS:
MODBUS / RTU
PROFINET\*\* - ETHERCAT\*\*
ETHERNETIP\*\* - MODBUS / RTU\*\*
PROFIBUS-DP\*\* - CANOPEN\*\*

**CE MARK FOR EUROPE** 

\*\*OPTIONAL FEATURES





### **ADVANTAGES**



COMPACT DESIGN, WITH OPTIMIZATION OF SPACE IN THE ELECTRICAL PANEL.

SIMPLICITY IN CONNECTIONS, INSTALLATION, AND USAGE.

DRIVEMOT IS AVAILABLE WITH EMC FILTER FOR DISTURBANCE SUPPRESSION.

HIGH STARTING TORQUE AT LOW SPEED.

EXCELLENT SPEED MAINTENANCE CONSISTENCY THANKS TO THE PRE-PROGRAMMED SLIP SYSTEM.

SUPPRESSION OF RESONANCE FREQUENCIES.

EASY START-UP DUE TO FACTORY PRE-SETTING BEFORE SHIPPING.

IGBT TECHNOLOGY UP TO 15KHZ WITH AUTOMATIC VARIATION FOR POWER MODULE WHICH ENSURES OPTIMAL PERFORMANCE AND LOW MAGNETIC MOTOR NOISE LEVEL.

#### **CE COMPLIANCE**

The DRIVEMOT product complies with EU regulations for low-voltage electrical machinery and related harmonized technical safety standards

### **APPLICATION FIELDS**



VENTILATION



PERISTALTIC PUMPS AND ELECTRIC PUMPS



INDUSTRIAL COMPRESSORS



MIXERS AND AGITATORS



CONVEYORS AND MATERIAL HANDLING



INDUSTRIAL AUTOMATION



# STANDARD & AC/DC SELF BRAKING MOTORS (GF SERIES)

#### **ASYNCHRONOUS MOTOR**

- 2-4-6 poles
- IE1/IE2/IE3 + PTO
- B3/B5/B14 mounting configuration
- 0.12 15 kW power supply

#### **INVERTER**

- Inverter BRC10, 50/60Hz, single/three-phase 230V
- Inverter BRC10, 50/60Hz, three-phase 400V
- Inverter S100 IP20, 50/60Hz, single/three-phase 230V
- Inverter S100 IP20, 50/60Hz, three-phase 400V
- Inverter S100 IP66, 50/60 Hz, single/three-phase 230V
- Inverter \$100 IP66, 50/60 Hz, three-phase 400V

#### **DRIVEMOT**



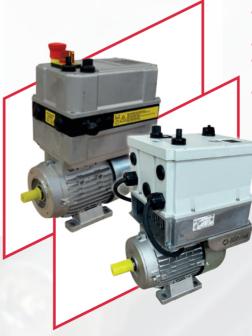
# STANDARD & AC/DC SELF BRAKING MOTORS (GPF SERIES)

#### PERMANENT MAGNET MOTOR

- 1500 rpm speed,
  0.4 3.3 kW power supply
- 3000 rpm speed,0.8 4 kW power supply
- Mounting configuration B3/B5/B14

#### **INVERTER**

- Inverter S100 IP20, 50/60Hz, three-phase 400V
- Inverter \$100 IP66, 50/60Hz, three-phase 400V



#### **DRIVEMOT**

GS SEDIES



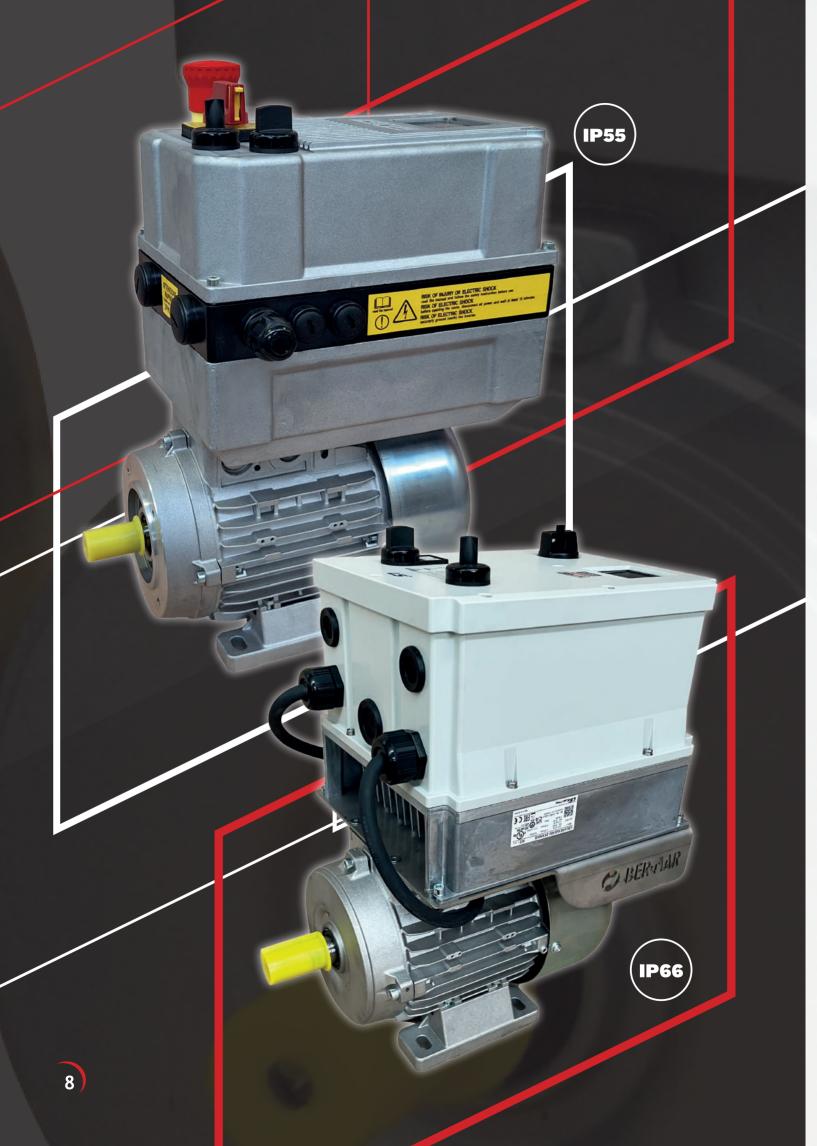
# STANDARD & AC/DC SELF BRAKING MOTORS

#### **ASYNCHRONOUS MOTOR**

- 2-4-6 poles
- IE1/IE2/IE3
- B3/B5/B14 mounting configuration
- 0.09 5.5 kW power supply

#### **INVERTER**

- BASIC model (no board control)
- 4-BUTTON KEYPAD model
- POTENTIOMETER & 2-BUTTON model
- DISPLAY BOARD model







The **G series** of Ber-Mar motoinverters excels in customization, adapting to the specific application required.

The G series motor inverters are designed by integrating an asynchronous motor, either standard or with brake, with a three-phase or single-phase inverter.

The power ranges from 0.12 to 15 kW, thanks to the availability of two inverter models, allowing you to choose the one that best suits the required application. They can be supplied with an aluminium casing with protection IP55 and with a plastic casing with protection IP66.

The **G series** motor inverters are provided with local controls and an integrated Modbus RTU communication protocol. The motor inverters integrated with the S100 Inverter can, upon request, be supplied with remote control operation and Wi-Fi option, and with communication protocols such as Ethernet, EtherCAT, Profinet, Profibus, and CanOpen.

The motors can be supplied in efficiency classes IE1/IE2/IE3, and all are manufactured according to International IEC standards.

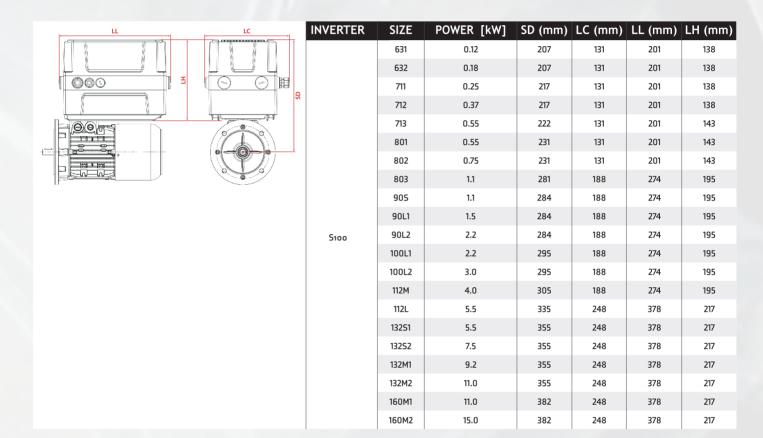
# MOTOINVERTER G SERIES

#### **TECHNICAL FEATURES**

SPECIFICATION	DATA								
SERIES	G - GF								
MOTOR		Asinchronous							
TYPE		Standard or AC/DC self-braking motors 30V, CC 24 V (brake controlled by the Inverter) Available with AC/DC brake with different voltage, if separately powered.							
POLES		2 - 4	<b>1</b> - 6						
INVERTER	BRO	i10	510	0					
POWER SUPPLY	0,12 - 4	,o kW	0,12 - 1	5 kW					
VOLTAGE	single/three-phase 230 V	three-phase 400 V	single/three-phase 230 V	three-phase 400 V					
FREQUENCY	50 ÷ 6	o Hz	50 ÷ 60 Hz						
EFFICIENCY	IE1 / IE:	2/IE3	IE1/IE2/IE3						
IP PROTECTION	IP <u>s</u>	5	IP <sub>5</sub>	-					
FILTER TYPE	C	3	C2/	C <sub>3</sub>					
COMMUNICATION PROTOCOLS	ModBu	s RTU	ModBu: Etherl Etherl Profil CanO Profil	NET CAT bus pen					

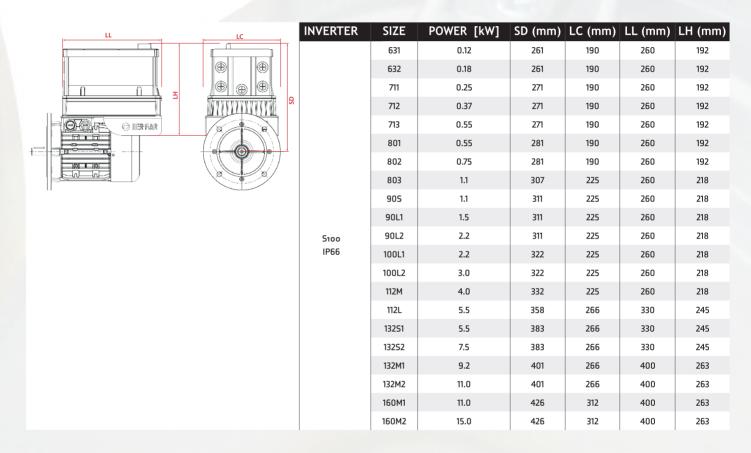
The technical specifications, performance, and dimensions of the motors are available in the general catalog "ELECTRIC MOTORS": three-phase (series S – SF -SFT) pag. 38 – 44.

#### **G SERIES - INVERTER S100 - IP55**



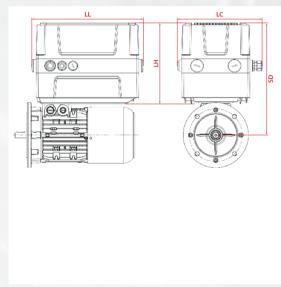
<sup>\*</sup> The dimensions refer to the standard version, without accessories and without filter

**G SERIES - INVERTER S100 - IP66** 



<sup>\*</sup> The dimensions refer to the standard version, without accessories and without filter (Standard equipped with reversing switch)

#### **G SERIES - INVERTER BRC10 - IP55**



INVERTER	SIZE	POWER [kW]	SD (mm)	LC (mm)	LL (mm)	LH (mm)
	631	0.12	266	188	274	195
	632	0.18	266	188	274	195
	711	0.25	276	188	274	195
	712	0.37	276	188	274	195
	713	0.55	276	188	274	195
	801	0.55	281	188	274	195
BRC10	802	0.75	281	188	274	195
Bitelo	803	1.1	281	188	274	195
	905	1.1	284	188	274	195
	90L1	1.5	284	188	274	195
	90L2	2.2	284	188	274	195
	100L1	2.2	295	188	274	195
	100L2	3.0	295	188	274	195
	112M	4.0	305	188	274	195

st The dimensions refer to the standard version, without accessories and without filter



The **GP series** motor inverters are distinguished by the presence of a permanent magnet motor, either standard or self-braking, with a three-phase inverter with power ratings ranging from 0.4 to 6.6 kW.

Unlike the G series, the GP series includes only one type of inverter integrated with the motor (S100 inverter).

They can be supplied with an aluminium casing with protection IP55 and with a plastic casing with protection IP66.

The **GP series** motor inverters are provided with local controls and an integrated Modbus RTU communication protocol. Upon request, they can be supplied with remote control operation and Wi-Fi option, and with communication protocols such as Ethernet, EtherCAT, Profinet, Profibus, and CanOpen.

All motors have an efficiency class of IE4 and are manufactured according to International IEC standards.

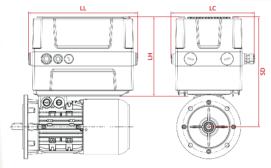
# MOTOINVERTER GP SERIES

#### **TECHNICAL FEATURES**

SPECIFICATION	DA	TA						
SERIES	GP - GPF							
MOTOR	Permaner	nt magnet						
ТҮРЕ		V, CC 24 V (brake controlled by the Inverter) erent voltage, if separately powered.						
SPEED	1500 rpm	3000 rpm						
INVERTER	S <sub>1</sub>	00						
POWER SUPPLY	o,4 - 3,3 kW	o,8 - 6,6 kW						
VOLTAGE	three-phase 400 V	three-phase 400 V						
FREQUENCY	50 ÷ 60 Hz	50 ÷ 60 Hz						
EFFICIENCY	IE							
IP PROTECTION		55 66						
FILTER TYPE	C2	/ C <sub>3</sub>						
COMMUNICATION PROTOCOLS	Ethe Ethe Prof Can(	us RTU rNET rCAT Gibus Open Ginet						

The technical specifications, performance, and dimensions of the motors are available in the general catalog "PERMANENT MAGNET MOTORS"

**GP SERIES - INVERTER \$100 - IP55** 



#### 1500 rpm 50 Hz - STAR CONNECTION

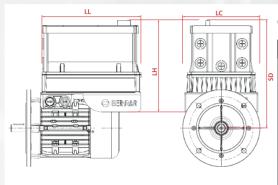
INVERTER	SIZE	POWER [kW]	SD (mm)	LC (mm)	LL (mm)	LH (mm)
	632	0.4	207	131	201	138
	633	0.55	212	131	201	143
S100	801	1.1	281	188	274	195
3100	802	1.5	281	188	274	195
	905	2.2	284	188	274	195
	90LP	2.75	284	188	274	195
	90L1	3.3	284	188	274	195

#### 3000 rpm 100 Hz - DELTA CONNECTION

INVERTER	SIZE	POWER [kW]	SD (mm)	LC (mm)	LL (mm)	LH (mm)
	632	0.8	212	131	201	143
S100	801	2.2	281	188	274	195
5100	802	3.0	281	188	274	195
	905	4.0	284	188	274	195

<sup>\*</sup> The dimensions refer to the standard version, without accessories and without filter

#### **GP SERIES - INVERTER \$100 - IP66**



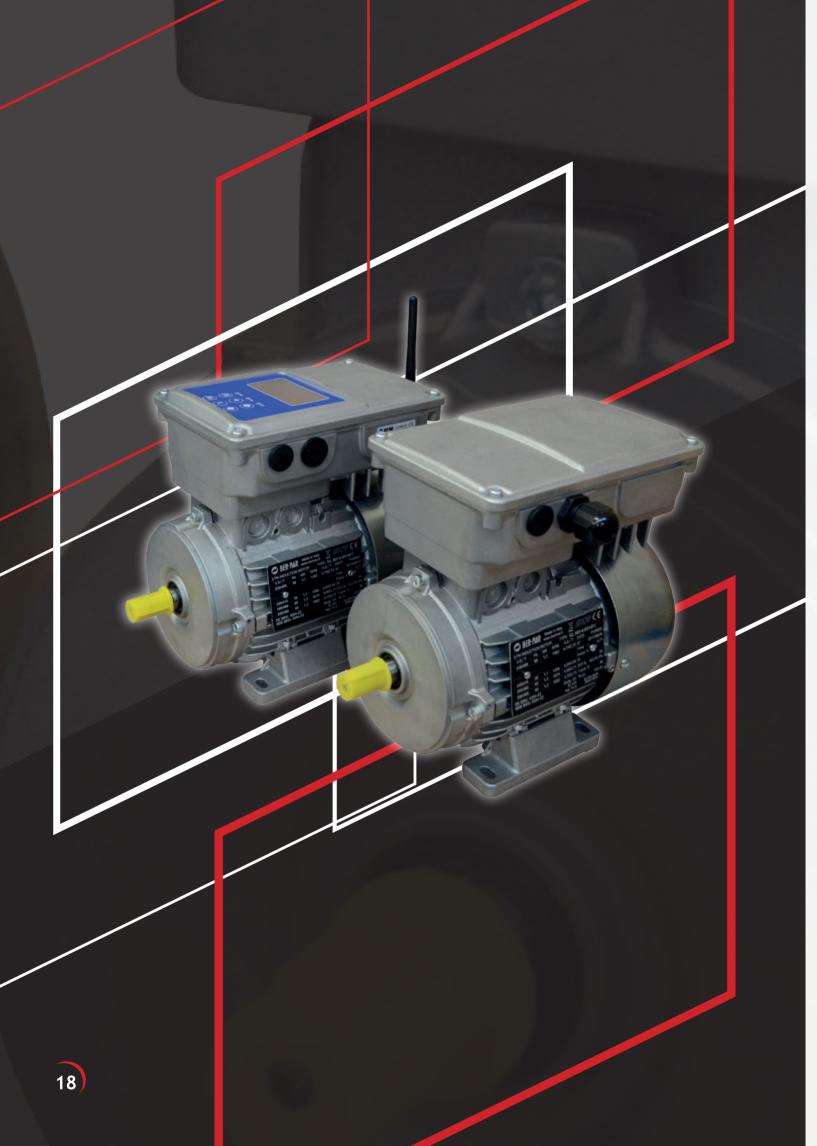
#### 1500 rpm 50 Hz - STAR CONNECTION

INVERTER	SIZE	POWER [kW]	SD (mm)	LC (mm)	LL (mm)	LH (mm)
	632	0.4	261	190	260	192
	633	0.55	261	190	260	192
S100	801	1.1	307	225	260	218
IP66	802	1.5	307	225	260	218
	905	2.2	311	225	260	218
90	90LP	2.75	311	225	260	218
	90L1	3.3	311	225	260	218

#### 3000 rpm 100 Hz - DELTA CONNECTION

INVERTER	SIZE	POWER [kW]	SD (mm)	LC (mm)	LL (mm)	LH (mm)
	632	0.8	261	190	260	192
S <sub>100</sub>	801	2.2	307	225	260	218
IP66	802	3.0	307	225	260	218
	905	4.0	311	225	260	218

<sup>\*</sup> The dimensions refer to the standard version, without accessories and without filter







The GS series motoinverters are distinguished by their compactness and market competitiveness.

They are provided with an aluminium casing with protection rated at IP55/IP66 and can be supplied in four different versions and control types:



#### BASE

The electric motor is controlled via the analogue and digital inputs of the inverter.



#### **4-BUTTON KEYPAD:**

the four-button control keypad allows for the management of start, stop, speed variation, and direction of rotation.



#### POTENTIOMETER:

the two-button control keypad allows for the management of start, stop, and direction of rotation, while the potentiometer on the back manages speed variation.



#### **DISPLAY:**

the inverter is equipped with a graphic display and a six-button keypad integrated into the cover. The display allows for intervention in the inverter's programming, in addition to providing the ability to view numerous parameters related to performance or any inverter errors.

All versions are available with an integrated Modbus RTU communication protocol.

The motors can be supplied in efficiency classes IE1/IE2/IE3, and all are built according to International IEC standards.

# MOTOINVERTER GS SERIES

#### **TECHNICAL FEATURES**

SPECIFICATION	DA	ATA					
SERIES	GS						
MOTOR	Asinch	ironous					
ТҮРЕ		V, CC 24 V (brake controlled by the Inverter) Ferent voltage, if separately powered.					
VOLTAGE	three-phase 400 V	single/three-phase 230 V					
POLES	2-4	4 - 6					
POWER SUPPLY	0,37 - 5,5 kW	o,og – 3 kW					
INVERTER	4-BUTTOI POTENTI	NSE N KEYPAD IOMETER PLAY					
FREQUENCY	50 ÷ (	6o Hz					
EFFICIENCY	IE1/IE	Ez/IE <sub>3</sub>					
IP PROTECTION		<sup>2</sup> 55 <sub>266</sub>					
FILTER TYPE	C <sub>3</sub> (50L0 VE	ERSIONE SN)					
COMMUNICATION PROTOCOLS	модви	US RTU					

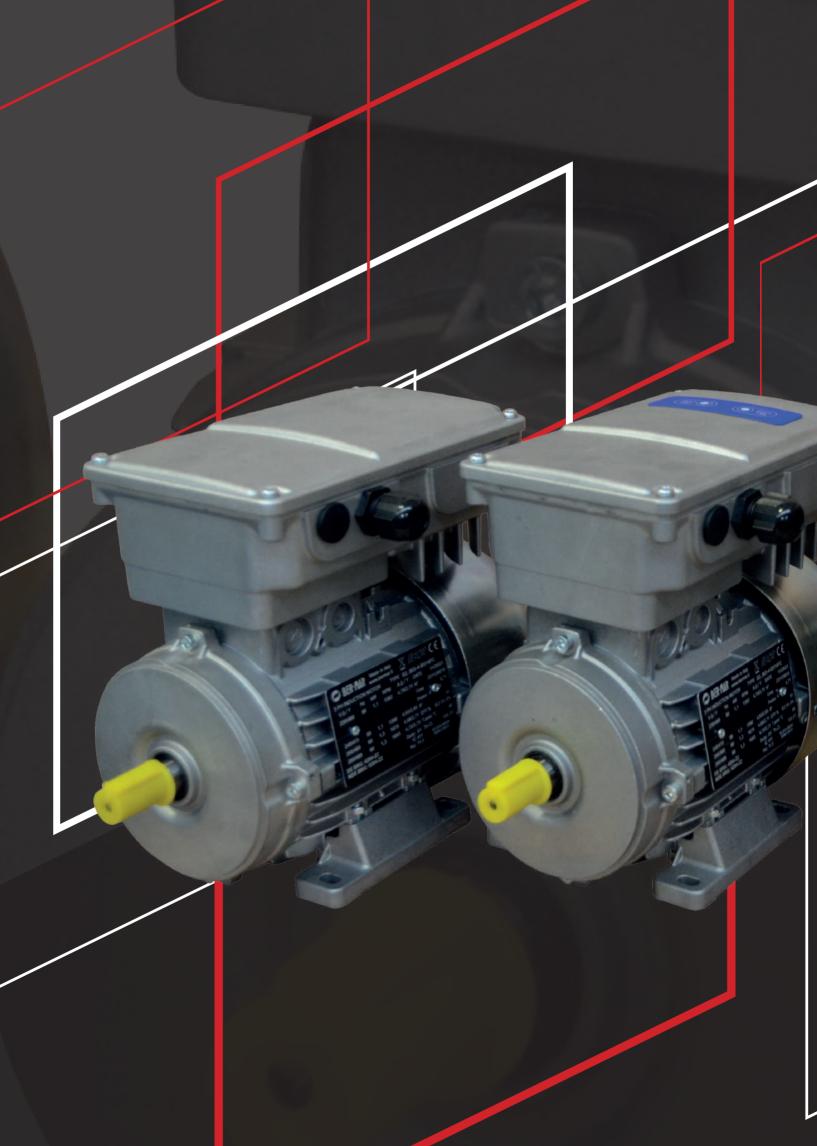
The technical specifications, performance, and dimensions of the motors are available in the general catalog "ELECTRIC MOTORS": three-phase (series S – SF -SFT) pag. 38 – 44.

THREE-PHASE (ST - E - B)	INVERTER	SIZE	POWER [kW]	SD (mm)	LC (mm)	LL (mm)	LT (mm)	LH (mm)
<u> </u>		631	0.12	159	150	206	229	102
		632	0.18	159	150	206	229	102
		711	0.25	169	150	206	229	102
		712	0.37	169	150	206	229	102
		713	0.55	169	150	206	229	102
A A		801	0.55	179	150	206	229	102
	BASE 2-BUTTON	802	0.75	179	150	206	229	102
	4-BUTTON	803	1.1	179	150	206	229	102
	DISPLAY	905	1.1	187	150	206	229	102
		90L1	1.5	187	150	206	229	102
		90L2	2.2	187	150	206	229	102
		100L1	2.2	198	150	206	229	102
		100L2	3.0	222	171	261	285	117
		112M	4.0	232	171	261	285	117
		112L	5.5	232	171	261	285	117

<sup>\*</sup> The dimensions refer to the standard version, without accessories

SINGLE/THREE-PHASE (J - SN - M - L)	INVERTER	SIZE	POWER [kW]	SD (mm)	LC (mm)	LL (mm)	LT (mm)	LH (mm)
ш		631	0.12	123	126	196	221	60
ROOM AB. F TAB		632	0.18	123	126	196	221	60
		711	0.25	152	126	196	221	80
		712	0.37	152	126	196	221	80
		713	0.55	152	126	196	221	80
		801	0.55	162	126	196	221	80
	BASE 2-BUTTON	802	0.75	162	126	196	221	80
	4-BUTTON	803	1.1	179	150	206	229	102
	DISPLAY	905	1.1	187	150	206	229	102
		90L1	1.5	187	150	206	229	102
		90L2	2.2	187	150	206	229	102
		100L1	2.2	198	150	206	229	102
		100L2	3.0	222	171	261	285	117

<sup>\*</sup> The dimensions refer to the standard version, without accessories





# ACCESSORIES AND SPECIAL VERSIONS

SPECIAL MOTOR	G - GF SERIES		GP - GI	PF SERIES	GS SERIES		
EXECUTIONS	STANDARD	SELF-BRAKING	STANDARD	SELF-BRAKING	STANDARD	SELF-BRAKING	
IP 56/65 Protection	~		<b>✓</b>		<b>~</b>	~	
Tropical proof winding	<b>~</b>	~	<b>~</b>	~	<b>~</b>	~	
H class insulation	~	~	<b>~</b>	~	<b>~</b>	~	
1 x PTO thermal protection	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>	~	
1 x PTC thermal protection	~	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>	
24V brake		<b>~</b>		<b>~</b>		<b>~</b>	
Oversized brake		<b>~</b>		<b>~</b>		~	
IP55 brake protection		<b>~</b>		<b>~</b>		<b>~</b>	
DC brake fast rectifier		<b>~</b>		<b>~</b>		<b>✓</b>	
Stainless steel disk		<b>~</b>		<b>~</b>		<b>✓</b>	
1-phase forced ventilation 230 V/50 Hz	~	<b>~</b>	<b>✓</b>	<b>~</b>	<b>~</b>	<b>~</b>	
3-phase forced ventilation 230-400V/50 Hz	~	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>	~	
Forced ventilation 24V dc	~	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>	
Encoder** + forced ventilation	~	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>	~	
Incremental bidirectional encoder **	~	<b>~</b>	<b>✓</b>	<b>~</b>	~	<b>~</b>	
Absolute encoder**	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>	<b>✓</b>	
Rain/textile fancover	~	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>	

<sup>\*\*</sup> Encoder not controlled by inverter

SPECIAL INVERTER	G - GF SERIES		GP - GPF SERIES	GS SERIES
EXECUTIONS	BRC10	S100	S100	
Potentiometer (KIT)	<b>~</b>	<b>~</b>	<b>✓</b>	
Emergency button	<b>~</b>	<b>~</b>	<b>✓</b>	
Two-position selector	<b>~</b>	<b>~</b>	<b>✓</b>	
Panel disconnector	~	<b>~</b>	<b>✓</b>	
Three-position selector (spring return)	~	~	<b>~</b>	
Up/down device	<b>~</b>	~	<b>✓</b>	
Connectors	<b>~</b>	<b>~</b>	<b>~</b>	
Motor supply cable	<b>✓</b>	<b>~</b>	<b>✓</b>	<b>✓</b>
Remote LED keypad with cable	<b>~</b>	<b>~</b>	<b>✓</b>	
Extension I/O (digital/analogic)	<b>~</b>	<b>~</b>	<b>✓</b>	
Radio control setting	~	~	<b>✓</b>	
4-button radio control	<b>~</b>	<b>~</b>	<b>✓</b>	

#### **CONNECTORS**





#### **LED REMOTE CONTROL**



#### **SELECTORS**

#### **BUTTON/ REVERSING SWITCH**

**POTENTIOMETER** 















Since 1969, we have been operating in the market with standard and customized solutions, thanks to the production of synchronous and asynchronous electric motors, both standard and self-braking. Our range also includes inverters and control systems, available as stand-alone or integrated with the motor (motor inverter).

# **OUR STRENGTH**



PRE-SALES SUPPORT



CUSTOMIZED
SOLUTIONS UPON
REQUEST



INSTALLATION ASSISTANCE

### **OUR NUMBERS**



EMPLOYEES 35



ANNUAL TURNOVER > 11.000.000 €



DOMESTIC MARKET 85%



FACILITIES 5000 m2



ANNUAL PRODUCTION
> 30.000 Elettric Motors
> 20.000 Inverter



FOREIGN MARKET

15%

# **BER-MAR PRODUCTS**

### **INVERTER**











### **ELECTRIC MOTORS**



### ASINCHRONOUS MOTORS

Standard motors
Brake motors



### PERMANENT MAGNET SYNCHRONOUS MOTORS

Standard motors
Brake motors



### IMPORT MOTORS

Three-phase motors



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