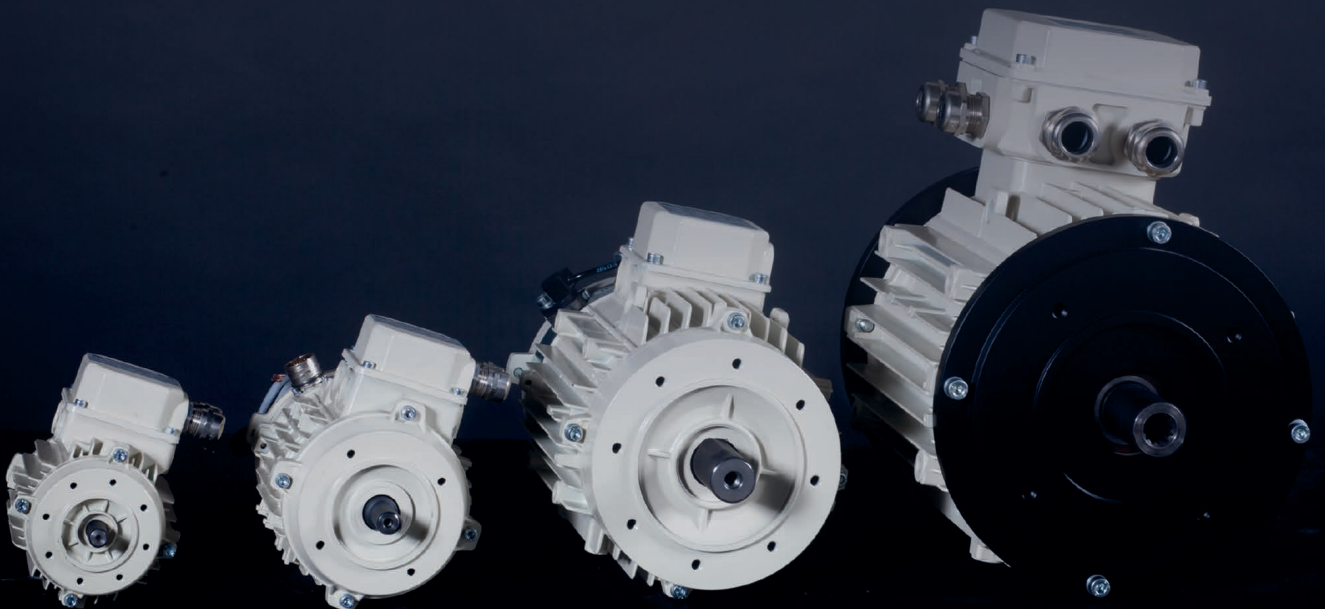




metalrota

PMS
BRUSHLESS

SYNCHRONOUS PMS MOTORS



INTRODUCTION

PMS is a synchronous electric motor with permanent magnets on the rotor, which generate high density magnetic fields.

This feature combined to the magnetic synchronism among rotor and stator permits to achieve high torques also when motor is running at very low speed. Through a position sensor the Controller supplies the correct current, just enough to achieve the required torque, reducing battery consumption.

Main advantages of this motor technology are:

- Higher Efficiency than other motor technologies as DC and AC (90-95%)
- High accuracy and control positioning on motor's rotation
- Compact dimensions achieved by the high power density
- Absence of friction components
- Low thermal heating and dissipation

Our motors are completely produced in **Modena, Italy**, in our plants and they are designed with these features:

VOLT: 24V -96V

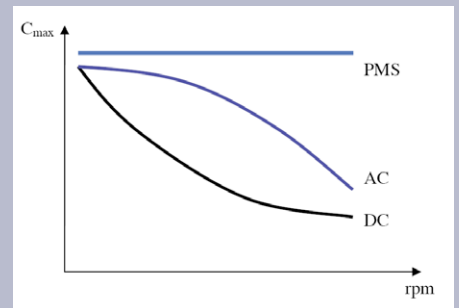
POWER: from 400W up to 50kW

FLANGE: B5, B14, Customized

PROTECTION: from IP20 up to IP65

The quality of components is of essence:

- Rotor with rare Earth magnets of 1.2 Tesla, with a thermal grade of 180°C
- Special laminations with 0.35mm thickness and
- Core Loss of 1,3W/kg
- Copper on stator winding is of class H superior with heating resistance up to 210°C



APPLICATIONS

DRIVE WHEELS:

We assemble PMS motors in our drive wheels in various application fields, mainly the ones that require high standards of precision, torque and speed, all this combined with a very low battery consumption. The application in which they are mostly used are AGVs, lift trucks and platforms.

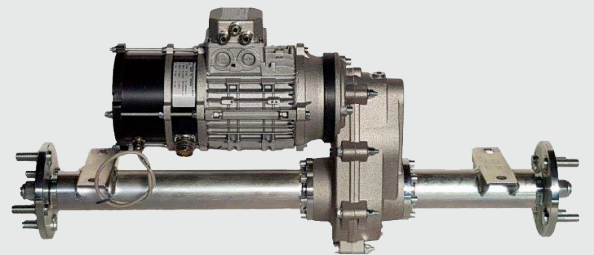


GEAR MOTORS:

PMS motors joined with reducers are able to provide a constant torque independently from rpm. They apply on industrial automations and agricultural machinery.

DIFFERENTIALS:

Various size of motors are used in utility vehicles sectors, 3 and 4 wheelers, because they are also run as generators and can strengthen high powers with limited stator diameters. Applications: electric quadricycle, agricultural machinery, AGVs, floor cleaning equipment.

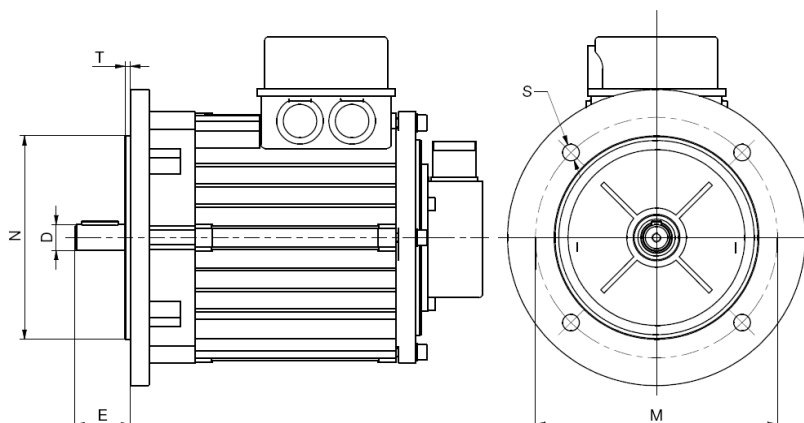


MOTORPUMPS:

In the motor pump field this product is used because it has the ability to provide high power and torque for long time without problems of thermal overheating. Application: lifting system, servo drives.

FLANGE PMS BL

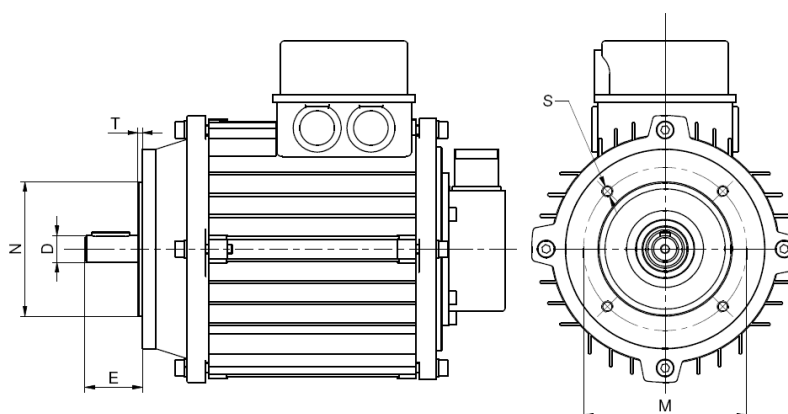
B5



MOTORE / MOTOR	FLANGIA / FLANGE	ALBERO / SHAFT
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TIPO FLANGIA TYPE FLANGE	POTENZA POWER	Ø STATORE Ø STATOR	N	M	T	S	D	E
BN 63	0.5-1 kW	90	95	115	3	9	11	23
BN 71	1.2-1.5 kW	106.5	110	130	3.5	9	14	30
BN 80	2 kW	125	130	165	3.5	11	19	40
BN 90	3 kW	135	130	165	3.5	11	24	50
BN 100	5-8 kW	152	180	215	4	14	28	60
BN 132	10-20 kW	200	230	265	4	14	38	80

B14



MOTORE / MOTOR	FLANGIA / FLANGE	ALBERO / SHAFT
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TIPO FLANGIA TYPE FLANGE	POTENZA POWER	Ø STATORE Ø STATOR	N	M	T	S	D	E
BN 63	0.5-1 kW	90	60	75	2.5	M5	11	23
BN 71	1.2-1.5 kW	106.5	70	85	2.5	M6	14	30
BN 80	2 kW	125	80	100	3	M6	19	40
BN 90	3 kW	135	95	115	3	M8	24	50
BN 100	5-8 kW	152	110	130	3.5	M8	28	60
BN 132	10-20 kW	200	130	165	4.0	M10	38	80

SENSORS:

The function of sensor is to provide the correct angular position of the rotor. Electronic controller (Servo-Drive) manage this information maintaining the synchronism between rotor and stator on torque's variations.

The configurations available are:

ANALOGUE SINUSOIDAL SIN/COS

RESOLVER

(a) Sine

(b) Cosine

HALL SENSOR + INCREMENTAL ENCODER



OPTIONAL:

- **Electromagnetic brake:** from 5 Nm up to 100Nm, from IP20 up to IP65
- **Encoders:** incremental encoder and absolute encoder with various types of resolution and protection from atmospheric agents.





PMS SYNCHRONOUS
BRUSHLESS **PMS MOTORS**



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