

NEW  
2022



## PMG-I 1ph

### Permanent Magnet Generator + Single-phase AC Inverter + Actuator Kit

#### PMG-I

This **variable speed system** consists of a PMG (Permanent Magnet Generator) with PT100, a single-phase inverter (with **AC output** and EMC filter included) and a linear actuator to regulate the engine revolutions.

Adaptable to the engine models and interfacing with the control units by all the main brands, **PMG-I** represents a highly customizable solution for a compact and efficient AC generating set.

Plus the advantage of having **NSM** as your sole partner for a complete and fully integrated ready-to-use system.

The main objective of the **PMG-I** is to produce electrical energy with constant frequency and voltage, independently from the type of load ( $\cos\phi$ ) and the engine speed.

Possibility to adjust the revolutions by means of:

- our actuator (with mechanical adjustment)
- 0-5V / 0-10V analogue output for electronic governor
- RS485 (MODBUS) - RS232 (MODBUS) - CANBUS protocol (electronic governor)

Firmware and parameters can be updated via USB (or our programmer, in any case necessary to update parameters).

#### Technical characteristics

##### Standard voltage

50Hz: 100±240Vac\*

60Hz: 100±240Vac\*

\*set with programmer or USB

**rpm Range** (see data chart) every PMG is made to work within a single rpm range

##### Insulation class H

**Protection** IP 21 (PMG)

IP 1X (inverter 6kVA-10kVA)

**T.H.D.** < 2% (110-130Vac)

< 2% (220-240Vac)

**Voltage accuracy** ± 0,5%

**Frequency** ± 0,1Hz

**Communication ports** CANBUS / RS485 (MODBUS) / RS232 (MODBUS)

**Operating temperature** -10° C / +40° C

##### Safety features:

- Output short circuit protection
- Input and output overload protection
- Thermal protection\*\*
- Under and over-voltage input and output protection
- Automatic max output current derating in function of the temperature

\*\*either on PMG (PT100) and inverter

**Customizable I/O available**

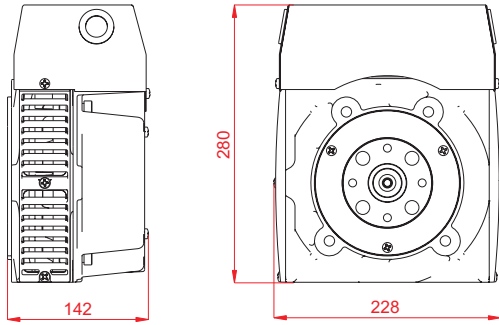
**Advanced diagnostic functions**

| Model           | Output Power<br>1 ph<br>[kVA] | Efficiency<br>(PMG + inverter)<br>η% | rpm Range<br>[rpm]         | Weight       |             |                  |                  |
|-----------------|-------------------------------|--------------------------------------|----------------------------|--------------|-------------|------------------|------------------|
|                 |                               |                                      |                            | cone<br>[kg] | SAE<br>[kg] | Inverter<br>[kg] | Actuator<br>[kg] |
| PMG-I 1ph 150SC | 6,0                           | 0,87                                 | 2000 ÷ 3000<br>2400 ÷ 3600 | 11,5         | ---         | 10,0             | 1,6              |
| PMG-I 1ph 185SC | 10,0                          | 0,87                                 | 2000 ÷ 3000<br>2400 ÷ 3600 | 16,5         | 15,5        | 10,0             | 1,6              |
| PMG-I 1ph 185SF | 10,0                          | 0,88                                 | 1700 ÷ 2400<br>1900 ÷ 2700 | 20,5         | 19,5        | 10,0             | 1,6              |

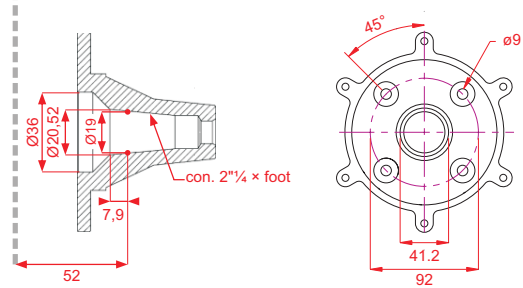
# Overall Dimensions

## CONE

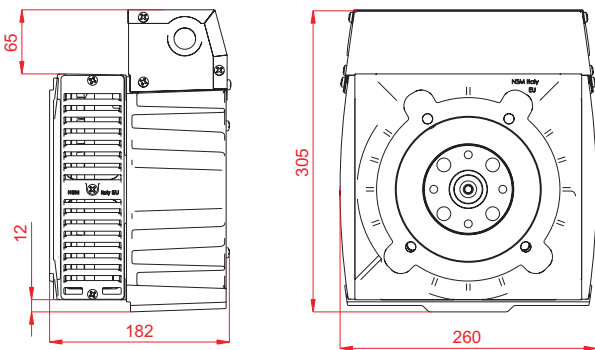
### PMG 150



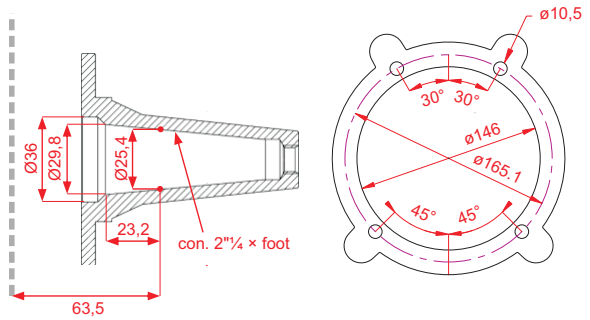
### J609a C 19



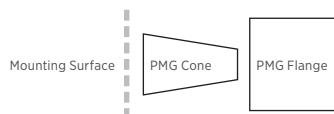
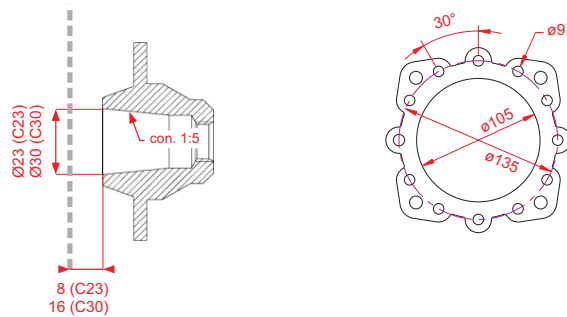
### PMG 185



### J609b C 25,4 C 35



### C 23 C 30

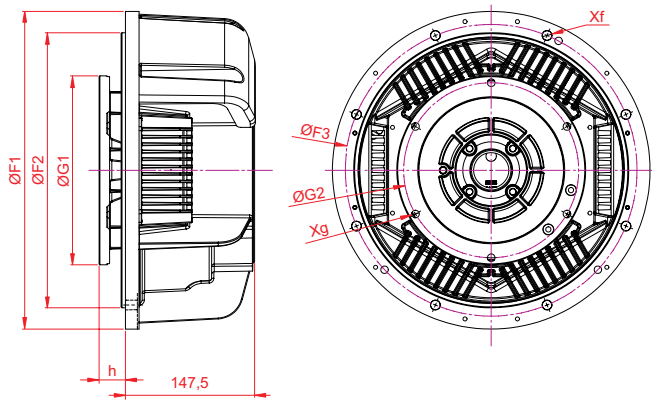


| Cone    | J609a | J609b | C 23 | C 30 |
|---------|-------|-------|------|------|
| PMG 150 | x     | x     | x    |      |
| PMG 185 |       | x     | x    | x    |

## Overall Dimensions

### SAE

#### PMG 185

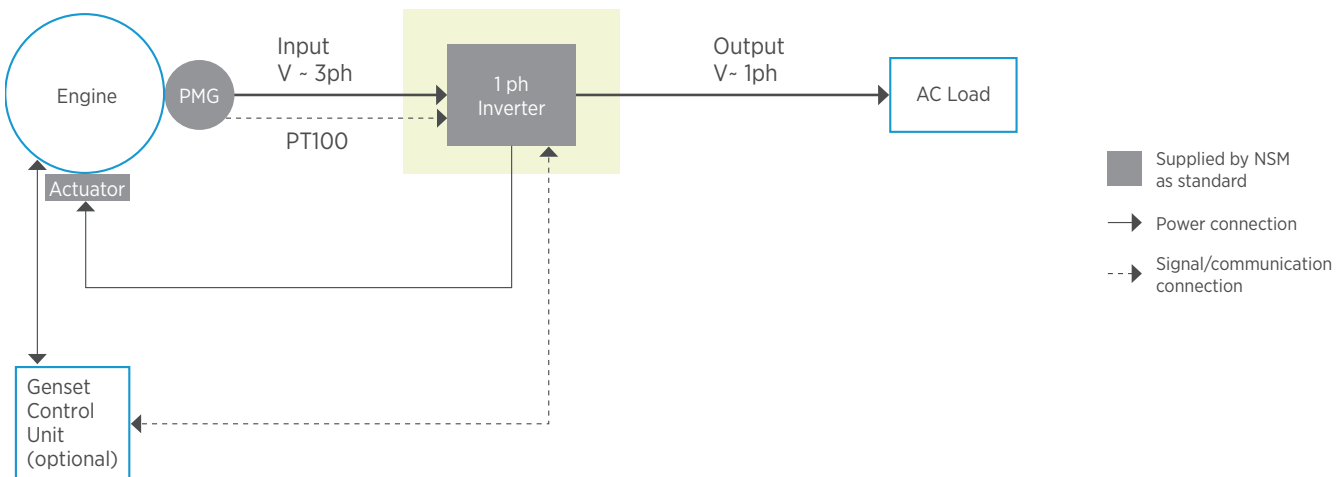


| SAE | Flange |        |       |          |
|-----|--------|--------|-------|----------|
|     | ØF1    | ØF2    | ØF3   | Xf       |
|     | [mm]   |        |       |          |
| 5   | 363    | 314,33 | 333,4 | Ø11 (8)  |
| 4   | 403    | 361,95 | 381,0 | Ø11 (12) |

| SAE | Joint |        |      |        |
|-----|-------|--------|------|--------|
|     | ØG1   | ØG2    | h    | Xg     |
|     | [mm]  |        |      |        |
| 6,5 | 215,9 | 200,02 | 30,2 | Ø9 (6) |
| 7,5 | 241,3 | 222,25 | 30,2 | Ø9 (8) |

## Block Diagram

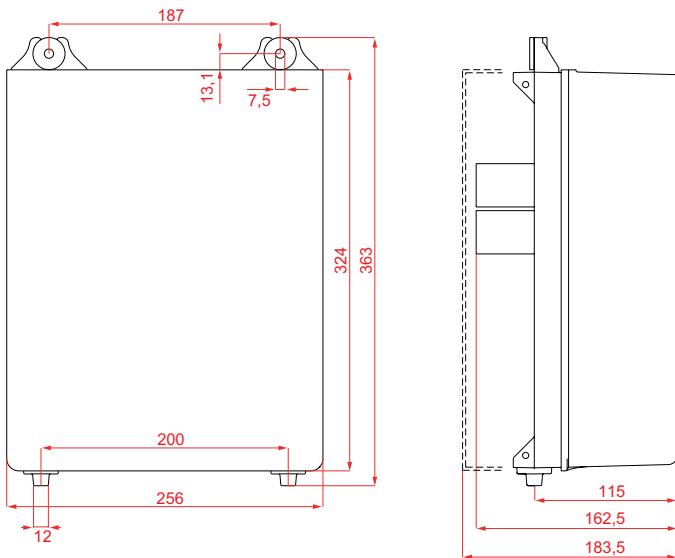
### PMG-I 1ph



## Overall Dimensions

### Inverter

6kVA - 10kVA



### Linear Actuator

