

GEARMOTORS ASSEMBLY INSTRUCTIONS

In accordance with Annex VI of Directive 2006/42/CE (Machinery Directive)

These instructions describe the activities to carry out when installing the gearmotor units, of which they form an integral part, and as such must be kept in a safe place.

More detailed information on Maintenance, Use and Storage of the products is available in the online manuals at website www.motorpowerco.com. Please refer to these prior to carrying out any installation work.

All our products are manufactured and factory tested with precision and taking the utmost care to guarantee the performance and characteristics indicated on the rating plate and in our sales literature. Trouble-free operation, nevertheless, depends on the correct installation and use of the product.

Motor Power Company Srl will not be held responsible for any occurrences resulting from negligence or non-compliance with the standards and/or requirements reported in these instructions. Neither will the company be held responsible for damage or injury caused by improper use of the product itself.

Once purchased, make sure that the equipment supplied is complete in all its parts. Any complaints must be sent in writing not later than eight days following receipt of the motor.

The information contained in this document is subject to change and may be amended at any time without prior notification. Motor Power Company will not be held liable for damages deriving from incorrect use of the information contained in the document or from the use of non-updated versions.

WARNING:

The gearmotors have been designed and manufactured in compliance with “Machinery Directive” 2006/42/CE and subsequent modifications.

The gearmotors, therefore, are designed for installation in machines declared as conforming to the safety standards of the countries in which they are used (European countries: Directive 2006/42/CE - 2004/108/CE).

The units can only be operated if the national EMC requirements for the particular application have been complied with. It is the system/machine supplier’s responsibility to respect the limits set by the national standards.



Live electrical equipment; any operations must be carried out by qualified personnel only.

The gearmotors and the power supply equipment feeding them are industrial devices subject to high voltages. When in operation, these devices contain live electrical components and rotating parts and as such constitute a hazard. They can cause very serious damage and injury if the following instructions are not complied with, if the mechanical and electrical protections are removed and in the case of improper or misuse.

The information contained in this document must be made available to all personnel needing to carry out installation, maintenance and operation of the gearmotor. The appropriate information must therefore be included in the booklets appertaining to the machine on which the motor is used.

For reasons of clarity, the instructions contained in this document may not contain detailed information regarding all possible construction variants, nor can they cover each individual mounting, service or maintenance situation.

DEFINITION OF OPERATOR OR MAINTENANCE TECHNICIAN

The operator or maintenance technician is defined as the person technically qualified to work on the machine, possessing a perfect knowledge of the contents of this manual, sufficient know-how and training, with clearly defined responsibilities and actually employed by the company. MOTOR POWER COMPANY Srl will not be held responsible if the persons operating the company's equipment do not satisfy the above requirements.



MECHANICAL COUPLING

This is a very delicate operation and must be carried out by qualified personnel in order to ensure that the gearmotor functions correctly.

During this operation, the following measures must be adopted:

- use balanced drive systems with mechanical tolerances able to guarantee a perfect coupling.
- avoid hitting the shaft violently; during the installation comply with the maximum axial and/or radial torques specified.
- mount the body of the gearmotor securely using the front flange or foot, use all the fixing point provided with steel screws and a medium strength thread locking compound (Loctite 243 recommended).
- thoroughly clean the flange and/or foot mating surfaces, making sure that all traces of dirt, machining residues and paint are removed.

Except in the case of specials, gearmotors cannot be installed in the following environments:

- locations requiring the use of explosion-proof devices, undersea environments, mines, for the transport of personnel and any other environment not included in the commercial or light industry sectors.
- locations subjected to water or dust in quantities exceeding the protection grade reported on the rating plate.
- locations subjected to temperatures above or below the normal operating temperature range (0° ~ 40°C);
- locations subjected to environmental humidity percentages higher than the normal operating conditions (85% ~ 40°C);

The gearmotors can be mounted in any position taking into consideration the following:

- the rating plate should remain visible where possible.
- the surfaces of the gearmotor will heat up when in operation: provide the necessary guards to protect the operator against possible contact.
- hot air currents from other parts of the machine, or any hot parts of the machine itself, must not come into contact with the gearmotor .
- ventilated gearmotors must have their air-change grills unobstructed in order to allow correct ventilation.



ELECTRICAL CONNECTION

The electrical wiring of the gearmotors to the power supply system must be installed by qualified personnel only, paying particular attention to the following:

- make sure that the voltage and type of power supply required by the gearmotor corresponds to that provided.
- when connecting the gearmotor to the power supply, refer to the connection wiring diagrams supplied with the motor.
- regulate the nominal current of the power supply to the gearmotor in line with that reported on the rating plate.
- If the use of the gearmotor involves intermittent operation and/or current peaks, refer to the technical documentation of the product in order to accurately regulate these parameters. Note that the maximum specified current must not be exceeded during any of the operating phases.
- insulate or make any uninsulated parts of the electrical connection inaccessible (terminal board contacts, wire terminals, connectors, etc..).
- use power cables suitable for the type of application and nominal current of the motor specified on the rating plate.
- provide overload and short-circuit protection as these are not provided on the motor, except in the case of specials;
- protect the power supply unit against possible return voltages at the motor terminals should the motor itself stop by inertia.
- an efficient earthing system must be provided and connected to the earth terminals on the motor terminal board.

START-UP

The start-up of the gearmotor constitutes a very important phase in which to check its correct operation, and as such ensure its long life and reliability.

Once the gearmotor has been installed as described in the preceding paragraphs, it can be started up by switching on the power supply and proceeding as follows.

1. Run the gearmotor without any load and with a reduced supply current with respect to the nominal value in order to check the coupling and the operation of the system. Making sure that the rotation of the motor is stable and in the right direction.
2. Stop the gearmotor, disconnect the power supply and check that all the mountings and anchoring systems are secure and tight.
3. Run the gearmotor under normal operating conditions at the nominal load and current specific to the application.
4. After a certain period of operation (normally 1-2 hours) check that the heat dissipation is satisfactory by measuring the external temperature of the reduction gear. If the temperature is higher than 80° C, contact the Motor Power Company technical office.