Linear Motor Installation Instructions

A caution label has been placed across the device instructing you to read this document before proceeding with installation or operation of this equipment.

Since any machine can be installed or operated in such a manner that hazards can occur, compliance with this publication does not by itself ensure a safe installation. However, when a machine complying with this publication is properly selected with respect to the driven load and environment, and it is installed in accordance with the applicable provisions of national codes and sound local practices, the hazards to persons and property will be reduced.

Magnet Bar Handling and Installation

Warning — Use extreme caution! Magnet bars are powerful and can cause severe bodily injury, including dismemberment. Use extreme caution when installing iron core magnet bars into a system. Do not allow magnet bars to come within range of each other or other ferrous objects. Never disassemble a magnet bar—severe injury, including dismemberment, may result.

The following are instructions for proper handling and installation of the magnet bars:

- Unwrap the first magnet bar from its packaging and secure it to the system.
- Unwrap the second magnet bar from its packaging **in an area away from the first magnet bar**. Place the second magnet bar on the same plane (surface) as the first and carefully slide it into position near the first magnet bar. Secure it to the system. Repeat as necessary until all magnet bars are in place.

Grounding Connections

The following are proper grounding connections for ironless and iron core linear motors:

- Install a low resistance electrical connection from the forcer bracket to the linear motor carriage in accordance with EN60204. It is usually acceptable to use the mounting hardware to provide this electrical connection.
- Connect the linear motor carriage to Earth ground in accordance with EN60204.
- Connect the magnet bars to Earth ground through a ground wire, or electrically connect the magnet bars to a conductive plate and connect the plate to Earth ground, in accordance with EN60204. (Optional for iron core linear motors.)

Warning — Electrical hazard! If the coil in a linear motor becomes damaged, electrical hazard may result. Prevent damage to the coil, including but not limited to loose hardware and improper type and length of mounting hardware. Perform periodic inspections to ensure the coil has not been compromised. Keep the area clear of loose hardware. Only use the proper type and length of mounting hardware. Refer to product-specific information at http://www.parkermotion.com.

Warning — Hot surfaces! Do not touch the forcer after high duty operation. The unit may be too hot to handle which could result in burns or other personal injury.

Warning — Electrical shock! Do not perform maintenance or touch any internal components while the unit is energized. Shut off power to avoid potentially serious or fatal electrical shock.

Warning — High magnetic field! Unit may be hazardous to people with pace makers or any other magnetically-sensitive medical devices. The unit may have an effect on magnetically sensitive applications.

Warning — High-performance motion control equipment is capable of producing rapid movement and very high forces. Unexpected motion may occur especially during the development of controller programs. **Keep well clear of any machinery driven by motors.** Never touch any part of the equipment while it is in operation.

CAUTION! **This equipment contains hazardous voltage!** Electrical shock can cause injury that is serious or fatal. Unsafe installation or operation of this equipment can damage it or cause personal injury. The installation, setup, test, operation, and maintenance of this equipment should only be carried out by competent personnel who are thoroughly trained in electronic equipment, and familiar with NEMA publication MG-2 (*Safety Standard and Guide for Selection, Installation, and Use of Electric Motors and Generators*), the National Electric Code, and local codes and practices.

CAUTION! **It is your responsibility** as installer to ensure you identify the safety standards relevant to the end-use product and comply with them. It is also your responsibility to adequately train all personnel in the proper installation and operation of this equipment, and to ensure they are aware of the potential electrical and mechanical hazards associated with motion control equipment. See all safety warnings below.

Warning — Linear motor products are used in complex motion control systems. You should test your motion system for safety under all potential conditions. Failure to do so can result in damage to equipment and/or serious injury to personnel.

Warning — The grounding system for this equipment is essential in preventing electrical shock. Follow all grounding instructions and adhere to the National Electrical Code and all applicable local codes. Ensure grounding is correct before applying power.

Warning — Do not disable or bypass safety features. They are designed to prevent personal injury and damage to equipment, and can only do so if they remain operative.

Warning — There is strong magnetic attraction between all components of a linear motor system. Keep all body parts, jewelry, and any metallic equipment and tools away from this equipment to avoid injury and damage. **Never dissemble a magnet bar**— severe injury, including dismemberment, may result.

Warning — Follow proper lifting, handling, and operating procedures to prevent muscle strain and repetitive motion injury.

Warning — Do not use this equipment in environments that contain flammable or combustible vapors or dust.

Since Parker Hannifin constantly strives to improve all of its products, we reserve the right to change these instructions at any time without notice.

In no event will the provider of the equipment be liable for any incidental, consequential, or special damages of any kind or nature whatsoever, including but not limited to lost profits arising from or in any way connected with the use of the equipment or these instructions.

Technical Assistance and Product-Specific Information	
http://www.parker-emd.com	Europe
http://www.parkermotion.com	North America and Asia