

Series 100 Motors & Generators

Educational Training Equipment for the 21st Century

Bulletin 252-108A

LIM-100

Linear Induction Motor

Description

The Hampden **Model LIM-100** Linear Induction Motor is essentially a squirrel-cage motor that has been split along the axis of its armature and unrolled into a flat plane. The result is a flat motor with either a single or double sided stator also called the primary. The armature or secondary requires some means of maintaining a minimal air gap, such as wheels, bearings, air cushion or magnetic repulsion.

AC power applied to the single sided stator (primary) of the linear motor induces a field in the flat armature (secondary) causing the primary and secondary to repel each other. The element that is free to move (primary) provides the linear motion. The secondary strip material provides a flux return path and is essential for good performance.

Linear motors are quick-responding and fast-moving. Acceleration is maximum at the start and reduces as speed increases. Acceleration time can be varied by selecting motors with more or less force in relation to application loads.

The Linear Induction Motor changes electrical energy into a constant-force, straight-line motion in either direction without the use of pulleys, gears, or mechanical linkages.

Specifications

Control Panel

Case:	14-gauge furniture stock steel finished in blue-grey enamel
Panel:	11-gauge furniture stock steel finished in white enamel
Nomenclature:	Black KEM silkscreen enamel
Feet:	Non-Mar, 4-required
Protection:	1-pole Electromagnetic circuit protector power switch
Pilot Light:	Omniglow
Control:	Pushbutton, 2-pole Switch, forward-reverse Capacitor Receptacle, multiconductor
Receptacles:	Hampden HR-1S color-coded socket, 15-required
Power Cord:	3/C, #14 6ft. long

Traverse Track

Steel:	Code gauge finished in black enamel
Feet:	Non-Mar, 8-required
Linear Motor:	Thrust - 15 lbs Duty cycle - 15 Maximum on Time - 2 minutes Ball bearing supported carriage Retractable 3/C #16 cable with plug
Shock Absorbers:	Non-hydraulic mini-shock, 2-required
Track:	Aluminum (secondary)

Accessory Package

- Spring scale with hook
- Weights, 4-required
- Weight Rod
- Stainless steel track insert (secondary)
- Clear plastic cover
- PP0.5 stacking cords, black, 9 required
- Manual, Bulletin 250-01-B-26



Hampden **MODEL LIM-100** shown with accessories.

All Hampden units are available for operation at any voltage or frequency

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