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Linear Motors
During the last two decades, many linear motor variations have emerged on the market. Nevertheless, only a few were found to be practical, performed well and economically viable. ETEL has always remained dedicated to the flat, synchronous, 3-phase linear motors with permanent magnet excitation. This family of motors represents more than 90 percent of industrial applications worldwide.

They can be divided into two categories: ironcore and ironless motors. Based on these two technologies, ETEL developed product variants to reach optimal performance in a wide range of applications.

For more information, refer to our Linear Motors catalog and leaflet.

### IRONCORE MOTORS

- **LMA**
  - Highest continuous force
  - Optimized for high duty cycle applications
  - 600 VDC compliant

- **LMG**
  - Compact design
  - Economic
  - High peak force
  - 600 VDC compliant

- **LMS**
  - Compact design
  - Economic
  - High continuous force
  - 600 VDC compliant

### IRONLESS MOTORS

- **ILF+**
  - Medium force
  - Very low mass glider
  - 600 VDC compliant

- **ILM+**
  - High force
  - Low mass glider
  - 600 VDC compliant

### Highlights
- Speed up to 15 m/s
- Continuous force up to 956 N
- Peak force up to 3650 N
- Low force ripple
- All linear motor types work with the same MWD magnetic way

### Applications
- Wafer inspection systems
- Chip placement machines
- Flip-chip / die bonders
- Wire bonders
- PCB drilling
- PCB testing machines
- Flat panel display equipment
- Medical equipment
- General automation

### Highlights
- Continuous force up to 478 N
- Low glider masses down to 100 g
- Peak force up to 3200 N
- Option: forced air cooling
- No attraction force
- No force ripple

### Applications
- Wafer inspection systems
- Chip placement machines
- Flip-chip / die bonders
- Wire bonders
- Very high dynamic axes
- PCB testing machines
- Air bearing systems
- CMM measuring machines
- Optical equipment manufacturing
- Medical equipment