LINAK TECHLINE provides electric linear actuator solutions designed for heavy-duty industrial applications. From industrial automation equipment to agricultural and construction machinery, our wide range of motion-control solutions offer reliable and precise movement for any imaginable type of application.

**Designed to meet your needs and provide:**

- Durability in extreme environments
- High speed
- High push/pull force ratings
- Long lifetime
- No maintenance
- Easy control
- Easy integration into existing automation control systems

**Stationary applications**

Linear actuators accommodate various adjustment functions in a wide number of stationary applications, easily and economically. LINAK actuator solutions can improve many facets of your equipment, providing measurable benefits to your customers such as ergonomic lifting, safe, cost-effective automation and ventilation – just to name a few.

Our comprehensive product program can be tailored to match your specifications. We believe motion-control solutions should adapt the workplace to the workers, rather than asking workers to adjust to the workplace.

**Mobile applications**

Linear actuators from LINAK are used in a wide range of different mobile applications to control movement, even in extreme conditions. Since 1980, TECHLINE actuators have been used in heavy agricultural and construction machinery.

Our actuators benefit both on and off-highway mobile applications with improved ergonomic comfort, advanced precision motor and positioning control and an energy-efficient alternative to hydraulic and pneumatic systems.

Whether you need an actuator solution to perform reliably in rough and rugged conditions typical of mobile applications, or smooth and controlled automation associated with stationary applications, we have a TECHLINE solution for you. Choose from a wide range of solutions, from basic actuators to advanced actuators with built-in IC™ automation technology.

For an expert motion control consultation, visit us online at linak-us.com/contact/ or call 502–253–5595 with your specifications.
TECHLINE® – electric linear actuators vs. hydraulic & pneumatic

Today’s electric actuators provide a better alternative to yesterday’s motion-control solutions in many applications. Customers demand safe, reliable and cost-effective operation, without the headaches of oil leaks, costly maintenance, spares, and loss of productivity associated with downtime.

Lower component cost
With fewer components required to design a system, you can reduce your component costs - it’s possible to replace an entire fluid system with one electric actuator.

Easier installation
There are no hoses, clamps or pumps to install and test. Reduce labor costs, save time, and get your equipment assembled faster.

Design flexibility
LINAK offers optional built-in positioning feedback, synchronous parallel operation and high positional control. This allows you to design innovative and flexible solutions for your customers.

Easy control and integration
The controls can easily connect to the existing power supply or control systems, offering a simple plug and play solution.

Safety
LINAK electric actuators work on low voltage DC, provide high self-locking ability and optional manual operation, creating a safer work environment for the operator.

Environmentally friendly
A wired solution is not only more energy efficient but also eliminates the risk of hazardous oil leaks, providing a greener alternative.

No maintenance required
Because there is no oil pump, filters or valves to worry about, an electric linear system requires no maintenance, reducing total cost of ownership and improving ROI on your capital investment.

And much more...

Pneumatic system: VS. Hydraulic system: VS. Electric system:
Cost-effective performance

When we claim that we can make your application more cost-effective, we base it on our ability to help you ensure less downtime, less time spent on maintenance, easier and faster set-up, more intelligent control and more accuracy in your application. All in all this can ensure a more cost-effective use of your application.

Ready for the future

To be ready for the future can mean different things. In our terminology it means being able to ensure that your application has the most up-to-date and intelligent features for performing at its best in regards to control, accuracy and speed.

Competitive edge

Cost-effective performance and innovative technology is exactly what you need in your application to make sure that you always keep your competitive edge and your ability to survive as a company in a highly competitive world.

Do you want cost-effective performance, innovative technology and a competitive edge? Go for LINAK actuators with integrated controller, and Move for the Future.
IC - Integrated Controller

IC is the range of integrated control options for TECHLINE® actuators that present you with almost unlimited possibilities for superior control and monitoring, to enhance the value and performance of your application.

Choose between four IC variants:

**IC BASIC**
The plug and play option that comes pre-configured to meet your exact requirements.

**IC ADVANCED**
The customizable option with enhanced monitoring and read-out of actuator information.

**PARALLEL**
The smart and self-configurable option that allows for parallel drive of up to 8 actuators.

**BUS**
The BUS communication option for intelligent controls.

CAN bus, LIN bus, MOD bus

For more information on IC go to LINAK-US.COM/SEGMENTS/TECHLINE/TECH-AND-TRENDS/INTEGRATED-CONTROL
Actuators

LA37

Tough applications require equally tough actuator solutions. The LA37 is specifically developed for heavy-duty applications where there is a need for more lifting capacity and holding force. Ideal for solar and mobile "off-highway" equipment applications.

Features:
- Thrust: Max. 15,000 N (3,367 lbs)
- Speed: 3.5 mm/s (0.14 in/s)
- Stroke length: 100–600 mm (3.94–23.62 in)
- Duty Cycle: Up to 15%
- Voltage: 12 or 24 V DC
- End-stop: Built-in electrical endstop

Options:
- Trunnion mounting
- Hall effect sensor
- Endstop signals (not potential free)
- IC options: IC Basic, IC Advanced, LINbus, Modbus, Parallel and CAN bus SAE J1939

Scope of application:
- Agricultural applications
- Mobile "off-highway" applications
- Forestry and construction machines
- Hood lifting
- Solar tracking

Facts:
- Designed for outdoor use
- Heavy-duty aluminium housing
- Hand crank for manual operation
- Easy to use interface with integrated power electronics
- Hall sensors or potentiometer for relative or absolute feedback
- Salt spray and chemical tested
- High-pressure cleaner washable

Available with IC™

LA36

The LA36 actuator is a solid and powerful actuator designed to operate under extreme conditions. A very strong alternative to hydraulic solutions and ideal for mobile "off-highway" applications such as agricultural, construction, forestry and mining.

Features:
- Thrust: Max. 10,000 N (2,245 lbs)
- Speed: Up to 160 mm/s (6.30 in/s)
- Stroke length: 100–999 mm (3.94–39.33 in)
- Duty Cycle: Up to 20%
- Voltage: 12, 24 or 36 V DC
- End-stop: Slip clutch or built-in limit switches
- IP rating: IP 66 dynamic/IP 69 static

Options:
- Potentiometer
- Hall effect sensors
- Adjustable signal switches
- Integrated electronics
- IC options: IC Basic, IC Advanced, LINbus, Modbus, Parallel and CAN bus SAE J1939
- UL 1203 certification
- Class II, Division I, Group F & G
- IECEx/ATEX

Scope of application:
- Agricultural applications
- Mobile "off-highway" applications
- Floor sweeper and scrubber
- Industrial equipment
- Solar tracking
- Grain handling equipment

Facts:
- Designed for outdoor use
- Solid metal construction
- Hand crank for manual operation
- Suitable for very harsh conditions
- Salt spray and chemical tested
- High-pressure cleaner washable

Available with IC™
LA34
The LA34 actuator is an advanced actuator which can push up to 10,000 N. Its compact design, outstanding performance and range of safety options makes the LA34 actuator the ideal choice for a variety of industrial applications.

Features:
- Max. 10,000 N (2,245 lbs) in push and 6,000 N (1,347 lbs) in pull
- Up to 18 mm/s (.71 in/s)
- 100–400 mm (3.94–166.67 in)
- Up to 10%
- 12 or 24 V DC
- Built-in limit switches

Options:
- Potentiometer
- Reed switch
- IP66 housing
- Compact housing
- Safety nut

Scope of application:
- Factory automation
- Scissor lift
- Various indoor applications

Facts:
- Compact housing
- Outstanding performance
- Low noise level

LA35
The LA35 actuator is characterized by its robust design allowing the actuator to be used in harsh and extreme conditions. The LA35 is suitable for many light-duty applications requiring high dust or water ingress protection such as agriculture, forestry and construction machines.

Available with IC™

Features:
- Designed for outdoor use
- Heavy-duty aluminium housing for harsh conditions
- Easy to use interface with integrated power electronics for direct connection to control system
- Hall sensors or potentiometer for relative or absolute feedback, regardless of the stroke length

Options:
- Hall effect sensor
- Potential free limit switches
- IP66 dynamic and IP69K static
- Safety nut in push
- IC options: IC and Modbus

Scope of application:
- Agricultural applications
- Mobile “off–highway” applications
- Floor sweeper and scrubber
- Industrial equipment
- Solar tracking
Actuators

LA31
The LA31 actuator is a very quiet and powerful actuator designed for a variety of applications. Due to its high capacity, design and protection class up to IPX6, the actuator is ideal for industrial applications. The various combinations of motor, spindle pitch, back fixture and piston rod eye make it a good candidate for a number of solutions.

Features:
- Thrust: Max. 6,000 N (1,347 lbs)
- Speed: Up to 26.6 mm/s (1.05 in/s)
- Stroke length: 50–600 mm (1.97–23.62 in)
- Duty cycle: Up to 10 %
- Voltage: 12 or 24 V DC
- End-stop: Built-in limit switches

Options:
- Analog or digital feedback
- IP X6 housing
- Signal switches
- Safety nut in push

Scope of application:
- Agricultural applications
- Marine applications
- Mobile “off-highway” applications
- Floor sweeper and scrubber
- Industrial equipment
- Solar tracking

Facts:
- Compact housing
- Outstanding performance
- Low noise level

LA33
The actuator LA33 is a true mid-size actuator that combines compact design and high power in one solution, fit for use in the most extreme environments. A thorough and demanding testing program forms the basis for the maintenance-free and long lasting performance of this solid and high-quality actuator.

Features:
- Thrust: Max. 5,000 N (1,124 lbs)
- Speed: Up to 30 mm/s (1.18 in/s)
- Stroke length: 100–600 mm (3.93–23.62 in)
- Duty cycle: 20 %
- Voltage: 12 or 24 V DC
- End-stop: Built-in limit switches
- IP rating: IP66 dynamic and IP69K static

Options:
- Hall effect sensor
- Endstop signals
- Possible IC options for LA33: IC Basic, IC Advanced, Proportional control, LINbus and CAN bus SAE J1939

Scope of application:
- Agricultural applications
- Construction machines
- Grain – and bulk handling
- Industrial automation
- Marine
- Mobile “off-highway” applications
- Outdoor power equipment
- Ventilation and farming solutions

Facts:
- Heavy-duty aluminium housing for harsh conditions
- Solid metal construction
- Hand crank for manual operation
- Salt spray and chemical tested
- High-pressure cleaner proof
- Designed for outdoor use
LA30
The LA30 actuator is a powerful actuator small enough to fit into most applications. The actuator can be supplied with options such as built-in potentiometer for servo operation, an extra powerful motor for increased speed and strength and motor housing for outdoor applications.

Features:
- Thrust: Max. 6,000 N (1,347 lbs)
- Speed: Up to 65 mm/s (2.56 in/s)
- Stroke length: 50–500 mm (1.97–19.69 in)
- Duty cycle: Up to 20%
- Voltage: 12, 24 or 36 V DC
- End-stop: Built-in limit/signal switches or external current cut off

Options:
- Extra powerful motor
- Potentiometer
- Reed switch
- IP66 housing
- Ball screw spindle
- Safety nut

Scope of application:
- Agricultural applications
- Lawn and garden equipment
- Floor sweepers
- Various industrial applications

Facts:
- Solid metal construction
- Compact and powerful
- Suitable for harsh conditions
- Stainless steel piston rod
- Self-locking ability

LA28
The LA28 actuator is a very quiet and powerful actuator used in agricultural machinery and other outdoor power equipment. The actuator can be supplied with a standard motor or extra powerful, fast motor.

Features:
- Thrust: Max. 3,500 N (786 lbs)
- Speed: Up to 46 mm/s (1.81 in/s)
- Stroke length: 100–500 mm (3.94–19.69 in)
- Duty cycle: Up to 10%
- Voltage: 12 or 24 V DC
- End-stop: Current cut-off

Options:
- Extra powerful motor
- Reed switch
- IP66 housing
- Safety nut

Scope of application:
- Agricultural applications
- Lawn and garden equipment
- Floor sweepers
- Factory automation

Facts:
- Powerful and quiet operation
- Reinforced glass fiber
- Only for “push” applications
**Actuators**

**LA25**

With its robust design, high IP degree and aluminium housing, the actuator LA25 is ideal for harsh environments where operation under extreme conditions is required. Furthermore, the compact dimensions of the LA25 make it applicable for confined spaces.

Available with IC™

Features:
- Thrust: Max. 2,500 N (561 lbs)
- Speed: Max. 13 mm/s (.39 in/sec)
- Stroke length: 20–300 mm (.79–11.81 in)
- Duty Cycle: 20%
- Voltage: 12 or 24 V DC
- Endstop: Built-in endstop switches

Options:
- Hall sensor
- End Of Stroke (EOS)
- Safety nut in push or pull
- IC options: IC Basic, IC Advanced, Parallel and CAN bus SAE J1939

Scope of application:
- Agricultural applications
- Outdoor Power Equipment
- Pergola and louvre
- Marine
- Trucks
- Industrial automation
- Ventilation and farming solutions

Facts:
- Heavy duty aluminium housing for harsh conditions
- Compact design
- Small and strong

**LA23**

The LA23 actuator is a small and strong push or pull actuator. The small size of the LA23 is ideal for various applications that may be constrained to tight space.

Available with IC™

Features:
- Thrust: Max. 2,500 N (561 lbs)
- Speed: Up to 9.4 mm/s (.37 in/sec)
- Stroke length: 20–300 mm (.79–11.81 in)
- Duty cycle: Up to 10%
- Voltage: 12 or 24 V DC
- End-stop: Electrical and mechanical end-stop

Options:
- Exchangeable cable
- Safety nut
- Mechanical spline
- IPX6 and IP66 dynamic
- IC options: IC Basic

Scope of application:
- Agricultural applications
- Ventilation and farming solutions
- Industrial automation
- Wind turbines

Facts:
- Small and strong
- Compact design
- High lifting force
LA14
LA14 is a very tough and reliable actuator ideal for use in harsh and demanding environments. With its small size the LA14 is well-suited for applications that require short linear movements. The actuator is ideal for mobile “off–highway” equipment such as agricultural machinery, outdoor power equipment and factory automation.

Features:
- Thrust: Max. 750 N (168 lbs)
- Speed: Up to 40 mm/s (1.57 in/s)
- Stroke length: 20–130 mm (0.78–5.12 in)
- Duty cycle: Up to 20%
- Voltage: 12 or 24 V DC
- End–stop: Built–in limit switches

Options:
- Potentiometer
- Reed switch
- IP66 dynamic and IP69 static
- IC options: IC Basic, IC Advanced, Parallel and CAN bus SAE J1939

Facts:
- Designed for outdoor use
- Heavy-duty aluminium housing for harsh conditions
- Stainless steel inner tube and piston rod
- Compact

LA12
The LA12 is characterized by its robust design allowing the actuator to be used in harsh conditions. The actuator is ideal for mobile “off–highway” equipment such as agricultural machinery, outdoor power equipment and construction machinery.

Features:
- Thrust: Max. 750 N (168 lbs)
- Speed: Up to 40 mm/s (1.57 in/s)
- Stroke length: 40–130 mm (1.57–5.12 in)
- Duty cycle: Up to 20%
- Voltage: 12 or 24 V DC
- End–stop: Built–in limit switches

Options:
- Potentiometer
- Reed switch
- IP66 housing
- IC options: IC Basic

Facts:
- Designed for outdoor use
- Compact and lightweight
- Reinforced glass fiber piston rod
Lifting columns

**LC2**
The LC2 lifting column is well-suited for height adjustment of industrial work benches and other industrial applications. It can be operated with two, three or four columns in parallel.

- **Features:**
  - Thrust: Max. 5,000 N (1,122 lbs)
  - Speed: Up to 18 mm/s (.71 in/s)
  - Stroke length: 100–500 mm (3.94–19.67 in)
  - Duty cycle: Up to 10%
  - End stop: Built-in limit switches

- **Options:**
  - Digital feedback
  - 3 or 10 mm (.12 or .39 in) end plates

- **Scope of application:**
  - Height adjustment of industrial workstations
  - Work benches

- **Facts:**
  - Advanced design
  - High quality design
  - Ideal for operation with up to a max. of 4 units

**LP2**
Powerful and fast, the LP2 lifting column is the ideal choice for height adjustment of various industrial applications. It can be operated with two, three or four columns in parallel.

- **Features:**
  - Thrust: Max. 6,300 N (1,415 lbs)
  - Speed: Up to 21 mm/s (.83 in/s)
  - Stroke length: 100–400 mm (3.94–15.75 in)
  - Duty Cycle: Up to 10%
  - End stop: External current cut-off

- **Options:**
  - Reed switch
  - Safety nut
  - Mounting bracket
  - Gas spring for increased lifting capacity (only LP2-5)

- **Scope of application:**
  - Height adjustment of various industrial applications
  - Work benches

- **Facts:**
  - Advanced design
  - High quality design
  - Ideal for operation with up to a max. of 4 units
**DL2**
The DL2 lifting column is designed for industrial workstations and is the ideal choice for height adjustment on computer workstations, work benches or a wide selection of other duties.

**Features:**
- **Thrust:** Max. 2,500 N (561 lbs)
- **Speed:** Up to 43 mm/s (1.77 in/s)
- **Stroke length:** 300–500 mm (11.81–19.67 in)
- **Duty cycle:** Up to 5%
- **End stop:** Built-in limit switches

**Options:**
- Mounting bracket
- Hall sensors to ensure memory drive and parallel drive with CBD4/CBD5/CBD6
- CBD2 or CBD5 mounted in the DL2

**Scope of application:**
- Computer workstations
- Work benches
- Platforms

**Facts:**
- Low noise level
- Compact and mounting friendly design
- Single drive (CBD2 and CBD4)
- Parallel drive (only CBD4)

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**BL1**
The BL1 3-stage lifting column is specifically designed for applications where compact lifting is necessary in connection with a long stroke length. With its strong stability and aesthetic design, the BL1 is ideal for boat applications and recreational vehicles.

**Features:**
- **Thrust:** Max. 2,000 N (449 lbs)
- **Speed:** Up to 18 mm/s (.71 in/s)
- **Stroke length:** 200–300 mm (7.87–11.81 in)
- **Duty cycle:** Up to 10%
- **End stop:** External current cut off

**Options:**
- Dual Hall for positioning
- Safety nut

**Scope of application:**
- Recreational vehicles (RV)
- Boats
- Pet/Veterinary equipment

**Facts:**
- High degree of stability
- Aesthetic and compact design
- Synchronized movement of profiles in column
- Easy cleaning and low maintenance
- Low noise level, increased comfort
TECHLINE® system solutions improve functionality and add value to your application. Our systems offer:

- Simple Plug & Play functionality
- Easy integration into your application
- Time saving installation
- Significant minimization of installation failures
- Signal cable with open leads enables you to connect your own control along with an RF or Bluetooth solution. These can be run at the same time.

The cable(s) between the SMPS-T160 and the actuator(s) can be either 300mm or 1500mm

SMPS-T160

The SMPS-T160 is a powerful Switch Mode Power Supply typically used for outdoor applications within the TECHLINE® segments. SMPS-T160 is an eco-friendly solution due to a low standby power consumption compared to traditional transformer solutions. The universal input voltage makes the SMPS adaptable to the worldwide market irrespective of the input voltage.

Features:
- Nominal input voltage (mains voltage): 100VAC - 240VAC +10/-15%
- Nominal input frequency: 50 Hz/60 Hz
- Typical standby power consumption: Approx. 0.1 W
- Protection: IP66
- Compatibility: LA14 IC™, LA25 IC™

Scope of application:
- Pergola
- Farming solutions
- Food and beverage
- Valves
- Traffic management
- Energy solutions

Facts:
- Exchangeable mains and output cables
- Light weight and compact design
- Plug & Play solution

App compatible with iPhone 4s and up plus Android LINAK® Control
Bluetooth Receiver
The small and compact TECHLINE® Bluetooth receiver enables easy control of the actuator with an iPhone 4s and up or Android. Its small form factor makes this device easy to implement into your application.

Features:
- Power supply: 24V DC
- Operation current: 20 mA
- Range in open space: up to 12 metres
- Protection class: IP66
- Housing: ABS
- Cables: integrated
- Cable length: 150 mm
- Compatible with SMPS-T160, LA36 IC™ and LA37 IC™

RF Receiver
The small and compact RF receiver enables easy control of the actuator with the two below remote controls. Its small form factor makes this device easy to implement into your application.

Features:
- Operating temperature: -20° C +45° C
- Working frequency: 868.3 Mhz
- Range in open space: up to 80 metres
- Protection Class: IP66
- Housing material: polycarbonate
- Cables: integrated
- Cable length: 1500mm
- Compatible with SMPS-T160, LA36 IC™ and LA37 IC™

Bluetooth Receiver

RF Receiver

Flange mounting bracket for valves

Accessories for wastewater treatment

Water valve control unit
WCU-Basic: Analog/Digital
WCU-BUS: Profibus

Features for WCU-Basic:
- Endstop signals
- Controlled with an analog 4-20 mA signal or digital on/off signal
- 4-20 mA feedback signal
- Can be remotely or manually controlled
- Ready signal for auto mode
- Signal for overcurrent and manual operation
- Display showing actual valve position (0-100%)

(*)

Features for WCU-BUS:
- Available with Profibus as a standard or as an add-on

Features for WCU-UPS:
- 24V DC power supply
- Automatic charge and control of battery level
- Fail safe positioning
- Output:
  - 5 A continuous
  - 12 A for 5 min.
  - 15 A for 10 sec.

(*) “The specified product is a third party product that is produced by third party and distributed by LINAK as a supplement to the existing LINAK product range. It is the responsibility of the product user to determine the suitability of the product for a specific application. LINAK will at point of delivery replace/repair defective products covered by the warranty if promptly returned to LINAK.”
Controls & Accessories

**TXP**

Facts:
- Dimensions: 60 x 30 x 10 mm
- Compatible with RF receiver (*)

**HB40**

Facts:
- Operation of up to four actuators
- Compatible with CB8, CB9, CB12, CB14 and CB18
- Ergonomic, compact design
- Robust plastic housing
- Protection class up to IP66

**DP**

Facts:
- Operation of the memory functions of the actuators
- Operation of up to three actuators/channels
- Compatible with all LINAK control boxes
- Mounting under table tops/industrial workstations
- Protection class IP30

**EVO**

Facts:
- Dimensions: 60 x 30 x 10 mm
- Compatible with RF receiver (*)

**CB8-A**

Facts:
- Compatible actuators: LA12, LA28 and LA30
- Up to 10% duty cycle
- 10 amp Max.
- 3 channels Max. battery operated

**CB8-T**

Facts:
- Compatible actuators: LA12, LA28 and LA30
- Up to 5% duty cycle
- 8 amp Max.
- 2 channels Max.
Controls & Accessories

Parallel controller

TR–EM–239

Facts:
- Synchronized parallel control for 2 actuators
- Operates with pulse feedback (Hall or Reed)
- Current and temperature limited
- Soft start/stop
- Adjustable drive speed
- Accurate repeatability
- Easy setting via serial interface

Motor controller

TR–EM–208

Facts:
- Variable power supply 12 - 36 V DC
- Overload protection - adjustable current limit 1-20 A
- Adjustable soft start and stop
- Several versions for different applications

Transformer solution


Facts:
- 150 VA
- Primary 230 V 50/60 Hz
- Secondary 24 V max 6.8 A
- Prepared for built-in motor controller or parallel controller
- IP66 housing for outdoor use
- XXX options 208, 239, 273

Parallel controller

TR–EM–273

Facts:
- Overload protection - adjustable current limit 1 - 20 A
- Soft start/stop
- Adjustable speed limit
- Small built-in dimensions
- Output signal if an error occurs
- Analog (absolute position) or pulse feedback from actuator
- Servo adjustment

Motor controller

TR–EM–288

Facts:
- Overload protection - adjustable current limit 1-20 A
- Soft start/stop
- Adjustable speed limit, fixed or variable
- Small built-in dimensions
- Output signal if an overcurrent occurs

Rocker switch

TR–EM–273

Facts:
- For all actuators with limit switches
- Easy operation of actuators without use of further electronics
- Easy to install
- Tested with an LA36 12 V DC for 50,000 operations.
- IP66 for outdoor use

(*) The specified product is produced by a third party and distributed by LINAK as a supplement to LINAK’s existing product range. It is the sole responsibility of the product user to determine the suitability of the product for a specific application. LINAK will at point of delivery replace/repair defective products covered by the warranty if promptly returned to LINAK.
100% function tests

In each application, the actuator is just one component of many, but at TECHLINE® we fully appreciate that it is of utmost importance to you and your customers. Not a single actuator leaves LINAK until it has undergone a 100% function test.

Depending on the actuator type, various tests have been carried through. Please consult your local LINAK office or take a look at the actuator data sheet in question to get a thorough test overview.

This is your guarantee that a solution based on LINAK TECHLINE electric actuator systems is a solution that will work reliably for years and years.

**Electrical tests:**

All electrical parts are tested i.e. power supply, power and signals cables, control signals etc. Electrical immunity is tested according to industrial standards i.e. for radio noise, electrical discharge and burst.*

(*) These tests do not apply to third party products!

**Climatic tests:**

In the climatic test the actuators are tested to operate in extreme temperatures as well as to endure rapid changes in temperature. In some tests, the actuator has to withstand going from a +100°C environment to -30°C repeatedly and still maintain full functionality.

**Mechanical tests:**

**Vibration:** The actuator must withstand continuous vibration in three directions.

**Shock:** The shock test puts the actuator through 3 shocks of up to 100 G in each of 6 directions.

**Bump:** The actuator receives bumps of up to 40 G in each of six directions several hundred times.
EN/IEC 61000-6-4 - Generic standard emission industry
EN/IEC 60204 - Electrical equipment of machinery
EN 50121-3-2 - Railway applications - Rolling stock apparatus
94/25/EC - Recreational crafts directive
EN/ISO 13766 - Earth moving machinery
EN/IEC 61000-6-2 - Generic standard immunity industry
2004/104/EC - Automotive Directive
EN/ISO 14982 - Agricultural and forestry machines
EN/ISO 13309 - Construction machinery

EN60068-2-1 (Ab) - Cold test
EN60068-2-2 (Bb) - Dry heat
EN60068-2-14 - Change of temperature
EN60068-2-30 - Damp heat
EN60068-2-52 - Salt spray
EN60529-IP66 - Degrees of protection
BS7691/96 hours - Chemicals

EN60068-2-36 (Fdb) - Vibration
EN60068-2-29 (Eb) - Bump
EN60068-2-27 (Ea) - Shock
LINAK has a well-developed sales and service organization in the Americas, Europe, Asia and Australia. Therefore, we can assist you and your customers locally, under the global sales concept idea: Be global, act local.

We add value to your products by offering innovative solutions, extensive knowledge, world-class production and global presence.

TERMS OF USE

The user is responsible for determining the suitability of LINAK products for a specific application. LINAK takes great care in providing accurate and up-to-date information on its products. However, due to continuous development in order to improve its products, LINAK products are subject to frequent modifications and changes without prior notice. Therefore, LINAK cannot guarantee the correct and actual status of said information on its products. While LINAK uses its best efforts to fulfill orders, LINAK cannot, for the same reasons as mentioned above, guarantee the availability of any particular product. Therefore, LINAK reserves the right to discontinue the sale of any product displayed on its website or listed in its catalogues or other written material drawn up by LINAK.

All sales are subject to the Standard Terms of Sale and Delivery for LINAK. For a copy hereof, please contact LINAK.