

FOCUS ON

MOBILE
AGRICULTURE

LINAK designs products that
improve productivity

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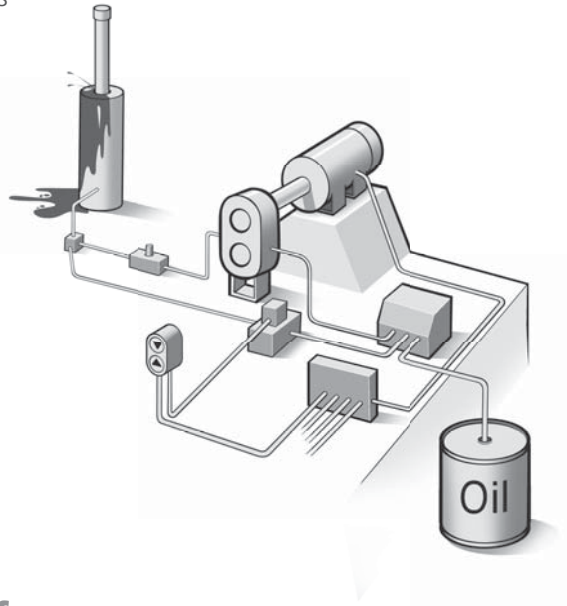
GO ELECTRIC AND SPOT THE DIFFERENCE

Electric actuators and electronic control are increasingly found in many everyday applications and equipment including agricultural machinery, compared to running traditional hydraulic lines and hoses with several weak spots, electric actuators are simple and economical to install using electric cables another great benefit is that environmental considerations such as hydraulic oil leaks contaminating the environment do not occur with electric actuators.

When lifts up to 10,000 N are needed the electric actuator carries out the same job as the hydraulic system while providing significant benefits such as lower costs, easier to install, less weak points and advantages when it comes to integration with control systems. When you go electric, the end-user will benefit from improved control over critical machine operations.

Understanding your needs!

For more than 25 years LINAK has been a supplier to designers and manufacturers of mobile agricultural equipment throughout the world. However we also know that to maintain our image we must continuously work to refine our products, improve our solutions and



Choose LINAK for...

A Knowledgeable Partnership

Multilevel cooperation with our customers is extremely important, for the benefit of both LINAK and the customer. Partnership is the driving force behind R&D, aftersales, logistics, manufacturing, and marketing.



better understand our customer's needs. We know that flexibility and reliability is the top priority.

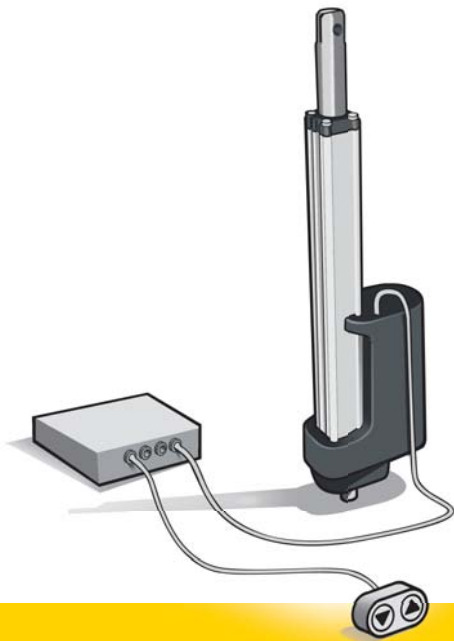
Manufacturers of agricultural equipment can gain significant improvements when using LINAK electric actuators.

Electrical actuators can eliminate pumps, valves, hoses etc.

However, another great benefit is that electrical actuators are flexible when it comes to interfacing with control systems to provide a wide range of new features and capabilities to the heavy-duty machinery.

For agricultural applications it is often critical that products work under extreme conditions. LINAK electric actuators are suitable for use in harsh conditions with dust, dirt and water. Even in these conditions electric actuators do not require regular maintenance. To develop a product that can handle tough conditions LINAK has extensive test facilities and rigid quality and design procedures. LINAK actuators undergo a 100% functional test before leaving the factory door.

To build comfort into your machinery, make sure your applications are LINAK powered



MOBILE AGRICULTURE APPLICATIONS

Spreaders:

Actuators are used to maximise the production on the fields. It is very important to fertilise the specified field in the right way and with the right amount.

Adjustment of the amount of fertilisers, salt, or sand.



Sprayers:

Actuators are used to control the angle and the height of the outlet nozzles. In windy situations, it is important to control direction to optimise the spreading. The height is adjusted according to the crop.



Choose LINAK for...

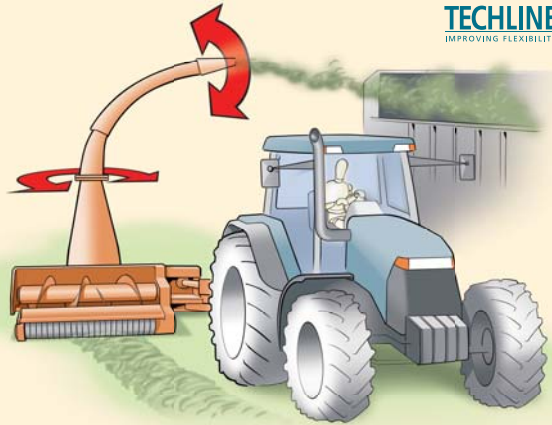
Knowledge

At LINAK we focus on our core competence – production of actuator systems. But we do more than this. We want to understand our customer's business by focusing on the individual customer's needs, market intelligence and application know-how.



Choppers:

On choppers actuators are used to control the outlet direction on harvesters and other cutters, e.g. forest machinery or grass choppers.



Balers:

On hay balers actuators are used to control the wrapping of the balers whether it is done by string or net. Actuators are used to control the position and/or the cut the strings/net.



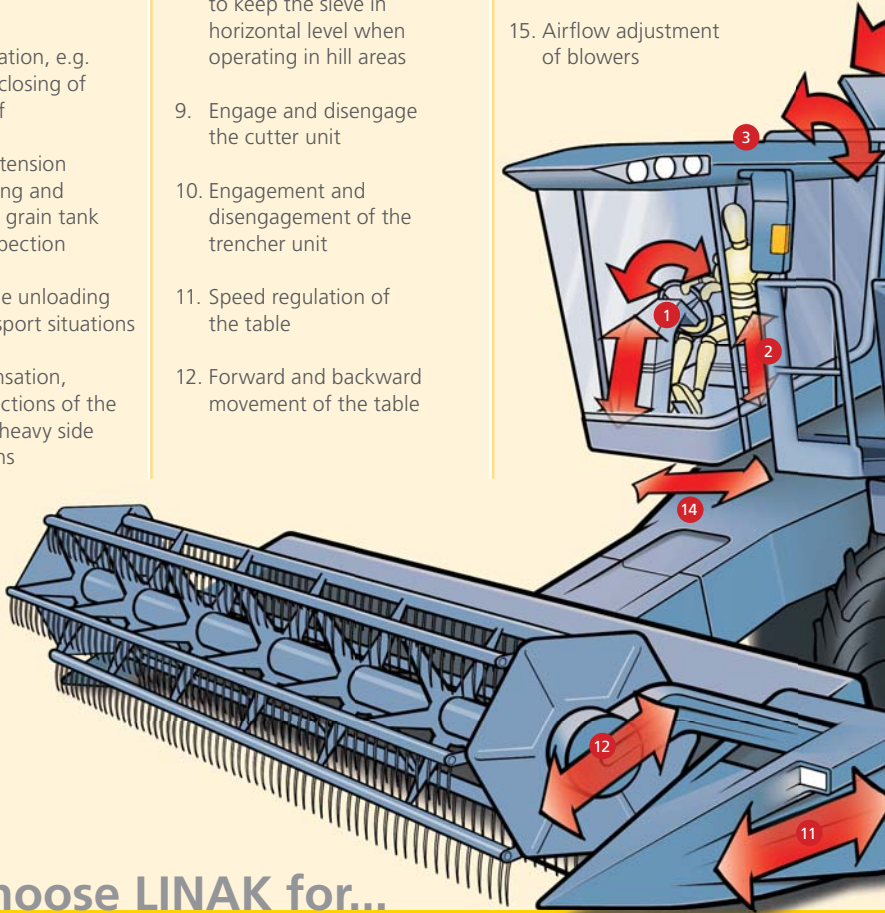
Seeding machines:

On planters, actuators are used for intelligent adjustment of the hatch opening. In combination with the control system, the actuator ensures that the amount of seed released, is the amount required.



APPLICATIONS ON A COMBINE HARVESTER

1. Adjustment of the steering column for better operation and comfort
2. Adjustment of the drivers seat, improving working position
3. Natural ventilation, e.g. opening and closing of the cabin roof
4. Grain tank extension and /or opening and closing of the grain tank covers for inspection
5. Bending of the unloading auger in transport situations
6. Wind compensation, changing directions of the outlet e.g. In heavy side wind situations
7. Access ladder extension or retraction, or have an angle on the ladder for easy access
8. Grain sieve adjustment to keep the sieve in horizontal level when operating in hill areas
9. Engage and disengage the cutter unit
10. Engagement and disengagement of the trencher unit
11. Speed regulation of the table
12. Forward and backward movement of the table
13. Adjustment of the size of the sieve mesh depending on the crop
14. Concave adjustment depending on the crop
15. Airflow adjustment of blowers

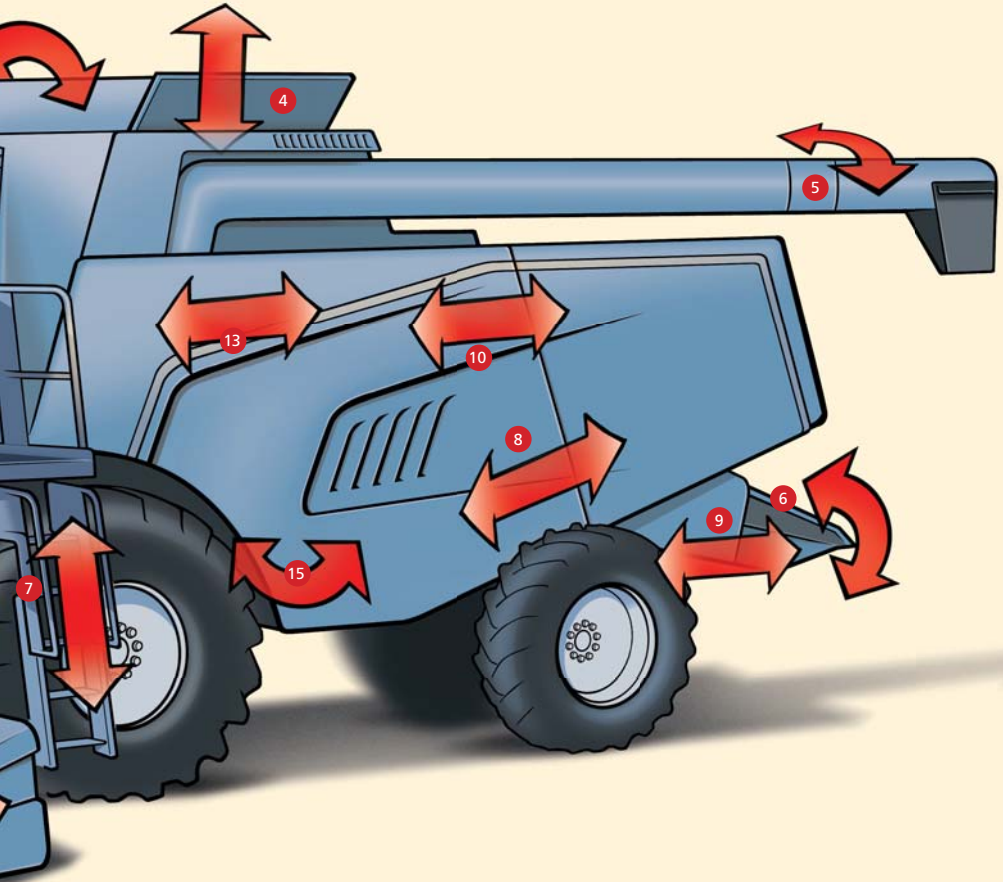


Choose LINAK for...

Robust and powerful

LINAK products are reliable products, made to last! High quality is the trademark of LINAK, and an element of the highest importance to us.





ACTUATORS FOR MOBILE AGRICULTURE

RELIABLE AND TOUGH

- Max thrust up to 10,000 N
- Max speed up to 160 mm/sec
- Standard stroke 100-999 mm
- Heavy-duty aluminum housing for harsh conditions
- Protection class IP 66 / IP 69K
- Integrated brake, high self-locking ability
- Voltage 12, 24 or 36 V DC
- Hall sensors or potentiometer for relative or absolute feedback
- End stops: slip clutch or built-in limit switches
- Solid metal construction
- Hand crank for manual operation
- Salt and chemical tested
- High pressure cleaning-resistant

The LA36 actuator is our most solid and powerful actuator designed to operate under extreme conditions. A very strong alternative to hydraulic solutions and ideal for agriculture applications.



LA36

Choose LINAK for... Global Presence

LINAK has a well-developed sales and service organisation in Europe, America, Asia and Australia. Therefore, we can assist you and your customers locally, under the global sales concept idea: Be global, act local



FLEXIBLE AND POWERFUL

- Max thrust up to 6,000 N in push and up to 4,000 N in pull
- Heavy-duty aluminium housing for harsh conditions
- Protection class IP 66 dynamic, IP 69K static
- Stroke up to 600 mm
- Easy to use interface – with integrated power electronics for direct connection to control system
- Potential free limit switches as an option
- Hall sensors or potentiometer for relative or absolute feedback, regardless of the stroke length.
- Built-in limit switches and brake
- Voltage 12 or 24 V DC

The LA35 actuator is a new member of the TECHLINE™ family. It is characterised by its robust design allowing the actuators to be used in harsh and extreme conditions. The LA35 actuator is designed to meet the challenge, based on the philosophy that it must be able to operate on off-highway equipment such as agriculture, forestry and construction machines.



ACTUATORS FOR MOBILE AGRICULTURE

SMALL AND ROBUST

- Max thrust 750 N
- Max speed 50 mm/sec
- Standard stroke length 40-130 mm
- High quality reinforced plastic housing protects motor and gear
- Voltage 12 or 24 V DC
- Hall sensors or potentiometer for relative or absolute positioning.
- Protection class IP 51 or IP 66
- Built-in limit switches
- Option with integrated power electronics for direct connection to control systems

Thanks to its small size and outstanding performance, the LA12 actuator provides a practical and cost-effective alternative to traditional hydraulic systems. The LA12 actuator is ideal for industrial and agricultural machines, feeders, ventilation systems and many other applications requiring short linear movements.

After many years on the market, the LA12 actuator has shown that is a very reliable and robust actuator that can handle almost any situation and condition.



LA12

Choose LINAK for... Innovation

Innovation is the keyword to the success of LINAK. Today LINAK is the company within manufacturing of linear actuator systems to bring most new products to the market and to hold most technology-based patents. Therefore, we can always offer the newest technology, giving our customers a competitive edge.



LIGHT AND FLEXIBLE

- Max thrust up to 3,500 N
- Max speed 46 mm/sec
- Standard stroke length 100-600 mm
- High-strength plastic housing protects motor and gear
- Elegant and compact design, very easy to clean
- Voltage 12 or 24 V DC
- Protection class IP 51 or IP 66



The LA28 is primarily a system actuator that fits a broad selection of industrial applications. The actuator is noiseless and it has small built-in dimensions.

RUGGED AND COMPACT

- Max Thrust up to 6,000 N
- Max Speed up to 65 mm/sec
- Standard stroke 50-600 mm
- Stainless steel piston rod
- Protection class IP 66
- Potentiometer for positioning
- Elegant and compact construction with small installation dimensions
- Self-locking ability

The LA30 actuator has been in the industrial market for more than 20 years. It is a very reliable and versatile actuator for all kinds of industrial applications.



ACTUATORS FOR MOBILE AGRICULTURE

STRONG AND QUICK

- Max thrust up to 6,000 N
- Max speed up to 65 mm/sec
- Standard stroke length 100-600 mm
- Elegant and compact design, very easy to clean
- 12 or 24 V DC magnet motor
- Protection class IP 51 or IP 66



The LA32 is a powerful actuator, which is available with a ball screw to optimise the performance. Possibility of many special options. Small installation dimensions and easy to clean.

DOUBLE CONTROL



PARALLEL CONTROLLER

- 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
- (*)

World class operation

The LEAN philosophy permeates our entire production and way of thinking. For the customers it means that we deliver the right products, in the right quality, on time - at a competitive price.



ACCESSORIES

COMPLETE CONTROL



**MOTOR CONTROLLER
TR-EM-208**

- 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
 - Integrated brake
- (*)

PROTECTIVE

- Gives a better protection and therefore a higher lifetime of the actuator



BELLOW

EASY OPERATION



**ROCKER
SWITCH**

- For all actuators with limit switches
 - Easy operation of actuators without use of further electronics
 - IP 66 for outdoor use
 - Easy to install
 - Tested with an LA36 12 V DC for 50,000 operations
- (*)

- Protects the inner tube against dust and dirt
 - Can be used for the actuators: LA22, LA28, LA30, LA35
 - Does not change the IP rating
 - Available in black
- (*)

(*) "The specified product is a third party product that is produced by third party and distributed by LINAK as a supplement to LINAK's existing 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."

PRODUCT TESTING

Our products undergo thorough climatic, electrical and mechanical testing.



CLIMATIC TESTING:

- Extreme temperatures
- Rapid temperature changes
- Salt spray
- Chemicals

ELECTRICAL TESTING:

- Power supply
- Power & signal cables
- Control signals
- Electrical immunity

MECHANICAL TESTING:

- Vibration
- Shock
- Bump



100% function test

The LINAK Group has extensive test facilities. All products go through a 100% function test before leaving the factory.

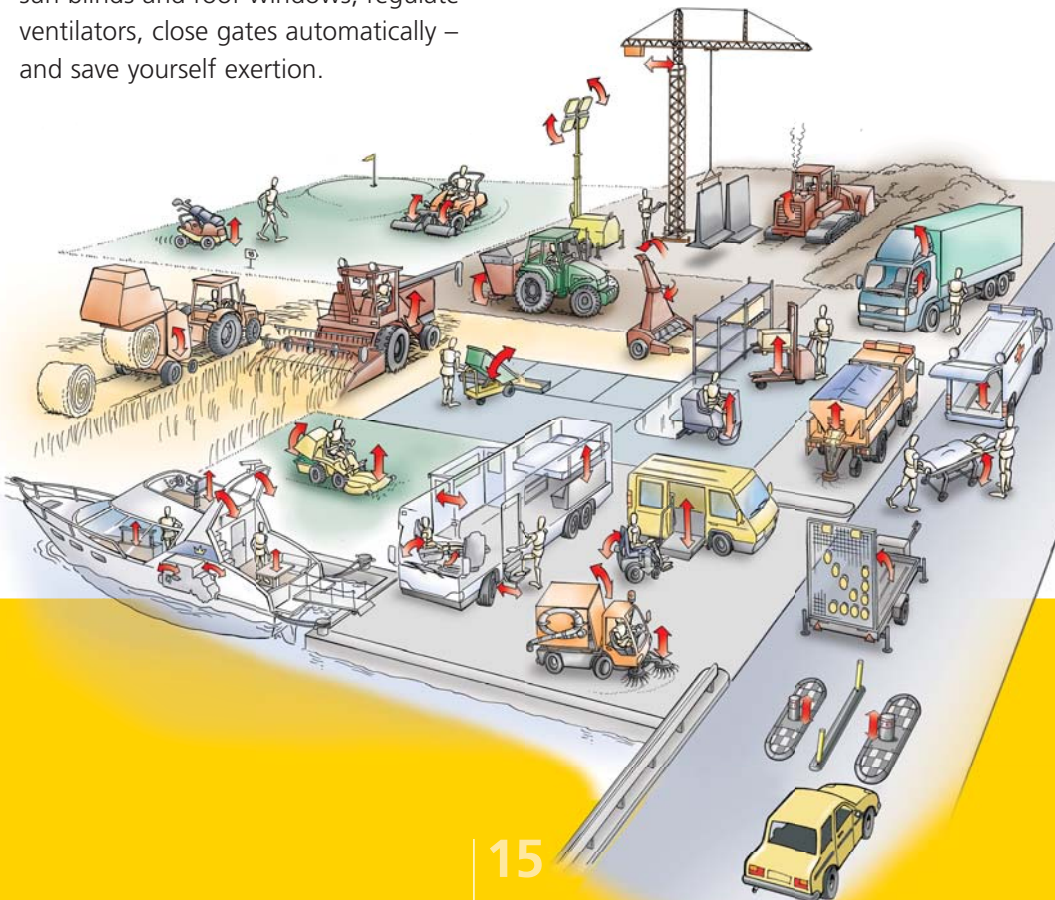
OTHER CAPABILITIES

TECHLINE™ - FOR HARSH CONDITIONS.

The TECHLINE™ systems ease the load and make work easier. The remarkably wide range of products offers something for any imaginable type of movement i.e. in industrial and agricultural machinery. With these actuators you can easily reach inaccessible places, open or close sun blinds and roof windows, regulate ventilators, close gates automatically – and save yourself exertion.

Mobile applications

Linear actuators from LINAK can be used for thousands of different applications. We offer big advantages compared to other linear movements in mobile equipment. Please contact your local LINAK office who has extensive experience in integrating our products into different applications.



LINEAR ACTUATOR TECHNOLOGY

LINAK - many years of experience from the industry

LINAK has over 25 years' experience as a supplier of linear movement for a broad selection of mobile and stationary applications in the industrial sector.

Application examples are automation of machine plants, adjustment of agricultural equipment, regulation of roof-lights, ventilation systems, combine harvesters, assembly lines, kettles, valves, and throttles. In brief, any purpose in the industry where a linear movement is required and where LINAK TECHLINE™ can be used to facilitate working operations and maintenance.

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 fulfil 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.

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