



Wherever a  
linear motion  
is required,  
MecVel is in the  
front row

From the civil field  
to the defense one,  
there are many applications that  
MecVel is able to supply thanks  
to a constantly evolving range of  
products dedicated to linear automation





Since 1987, MecVel is in the linear automation field, developing and producing a constantly updated range of electric linear actuators and screw jacks.

These products transform the rotatory motion of a motor into a linear movement of pushing, pulling, lifting or positioning of loads even higher than 20 tons.

In addition, an important customization service provided by the company allows to configure each product in detail (for example in terms of force, speed, stroke length, power supply), in order to tailor it according to customer's technical specifications.

Moreover, the electric system in use has a lot of benefits, if compared to hydraulic and pneumatic systems, as the possibility to be suitable for many applications in different industrial fields, including civil and defense ones.

Kinds of handlings in these fields where the company is strongly involved are:

- Lifting systems for shelter
- Steering control systems
- Systems for mines detection
- Radar and satellite dishes orientation systems

A shelter is a communication and control station, a centre of operation or an area of first aid, used to storage materials or keep the staff in safety conditions in case of emergency.

Due to the important functions it has in critical situations, MecVel has developed an efficient and automate system for lifting the shelter from the ground, with four ALI7-PM linear actuators mounted in the four corners of the structure, equipped with an auto-levelling system in case of uneven surface, and controlled by an electronic system to ensure their synchronization.

MecVel system allows reaching a variable height, to facilitate the loading and the unloading of the shelter, but even to place the container (and any material/staff inside) at a "safety" level.

These products are designed to operate outdoor in hard climatic conditions, also thanks to a range of protective paintings dedicated to protect them from the corrosion of atmospheric agents.

The main technical features of this kind of linear actuators are:

- Maximum load (for electric linear actuator): 40.000 N (4.000 kg)
- Speed: 4,5 mm/s
- Power supply: AC motor with a resin coat to increase performance and resistance

Linear actuators can be mounted also on vehicles with two different functions: manage the steering, controlling the vehicle's direction, and in the defense field they can act on arms equipped with a radar system for mines detection.

These arms are mounted on the sides of vehicles, and linear actuators automate their opening when it is required to verify the ground condition where the vehicle must transit.

The most suitable products for these handlings are: AM line and ALI2 series.

AM is a hybrid between a linear actuator and a servo actuator, where excellent performance are provided in terms of efficiency and precision, also thanks to the possibility to match the latest generations of stepper, brushless and servo motors.

With a maximum load of 15.000 N (1.500 kg), AM5 is the most "powerful" of this line, and it is able to reach speeds of 170 mm/s.

ALI2 linear actuator is typically used for the automation of motorized robotic arms, and provides a force of 2.500 N (250 kg), with a maximum speed of 110 mm/s and a DC motor.

Finally, in both civil and defense fields, monitoring systems through radar and satellite dishes are in use.

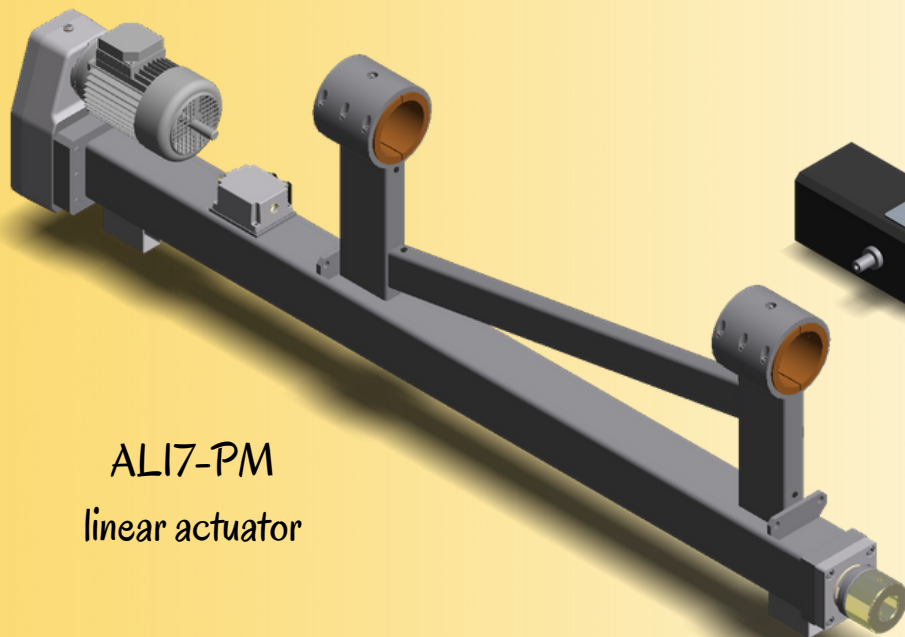
MecVel can manage their orientation, in order to optimize the coverage of the surrounding area.

In this case the product fixed to the radar structure is an ALI4 linear actuator with DC motor, offering a maximum load of 10.000 N (1.000 kg) and a maximum speed of 100 mm/s.

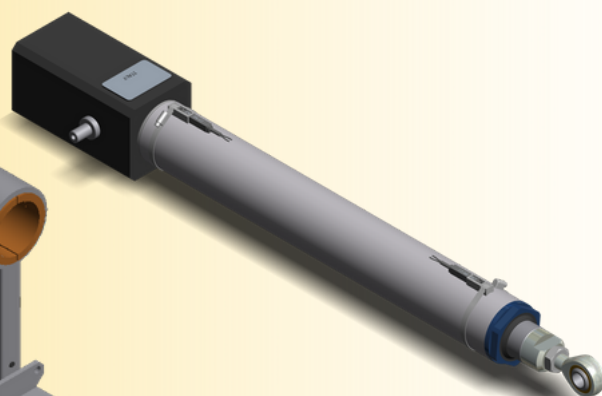
Usually it is equipped with limit switches and encoder to maximize the control of the stroke, and a hand wheel so that an operator can handle it even manually.

A particular attention to the protection of electrical connections and stainless steel elements allow using these products outdoor without being affected by environmental conditions in terms of performance.

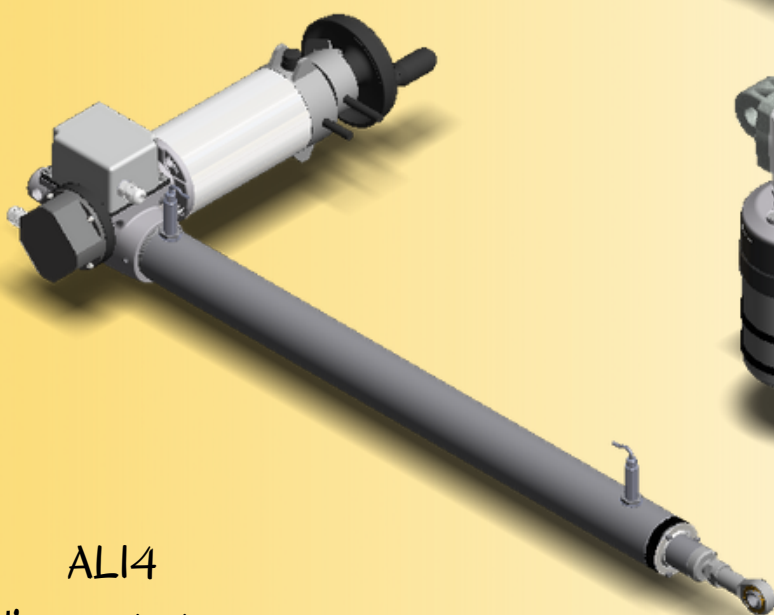
Experience and technical knowledge have led the company to tailor its products according to needs and characteristics of any application and industrial field, and have a highly innovative and performing range at the service of its customers.



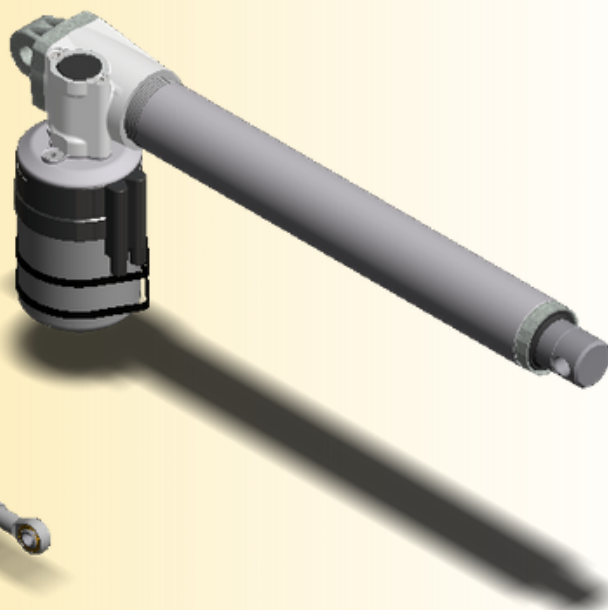
ALI7-PM  
linear actuator



AM series  
linear actuator



ALI4  
linear actuator



ALI2  
linear actuator

For more information or to set up your product contact us at:

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