



YELLOW LINE

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

From the civil field to the
defence one, MecVel can
supply several applications,
thanks to a range of products
dedicated to automation



Since 1987, MecVel is in the linear automation field, developing and manufacturing 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 and in general positioning of loads even of 200 kN (20 tons), while an important customization service provided by the company allows to configure each product (in terms of load capacity, travel speed, stroke length, kind of motor), to tailor it according to the technical specifications of the application to which it is intended and customer requests. The electric system used has several benefits, if compared to hydraulic and pneumatic ones, and it is suitable for different industrial fields, civil and defence included. Linear motions that can be supplied by the company are:

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

LIFTING SYSTEMS FOR SHELTER

A shelter is a communication and control station, an operation centre or an area of first aid, used to storage materials or to keep the staff in safety conditions in case of emergency. Due to the important functions it can have in critical situations, MecVel has developed an efficient and automate system to lift the shelter from the ground, with four ALI7-PM electric linear actuators mounted in the four corners of the structure, equipped with an auto-leveling system in case of uneven surface, and controlled by an electronic system to ensure their synchronization. These devices can handle intermediate positions along the stroke, allowing to reach a variable height, to make easier the shelter loading/unloading, but also to place the container (and eventually the material/staff inside) at a safety level. These products are developed to work outdoor, in harsh climatic conditions, also thanks to protective paintings used to preserve them from the corrosion of atmospheric/external agents. Main technical features of these electric linear actuators are:

- Max. load capacity (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 its resistance)

SYSTEMS FOR STEERING CONTROL AND MINES DETECTION

Electric linear actuators can be installed on vehicles with two different functions: handle the steering, controlling the vehicle's direction, and place the mechanical arms equipped with radar systems for mines detection. These mechanical arms, in particular, are mounted on the sides of vehicles, and electric 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 and ALI2 series. AM is a hybrid between an electric linear actuator and a servo actuator, providing excellent performances in terms of efficiency and motion accuracy, thanks to the possibility to match the latest generations of stepper, brushless and servo motors. With a max. load capacity of 15.000 N (1.500 kg), AM5 is the most powerful of AM series, with speed up to 150 mm/s, while ALI2 DC is used for the automation of mechanical arms, due to its max. load capacity of 2.500 N (250 kg) and speed up to 110 mm/s.

RADAR AND SATELLITE DISHES ORIENTATION SYSTEMS

Both in civil and defence fields, monitoring systems through the orientation of radar and satellite dishes are available. The product MecVel has developed to be mounted on the radar structure is the ALI4 DC electric linear actuator, with forces up to 10.000 N (1.000 kg) and speed up to 100 mm/s, equipped with limit switches and encoder to maximize the stroke control, while the hand wheel allows the operator to handle it manually.

That's how experience and technical know-how lead the company to have an innovative, performing and flexible range at the service of its customers, able to be tailored according to any application need.

