

## EMKA DEVELOPED LOCKING SYSTEM FOR MORELO MOBILE HOMES

With its newest premium model „EMPIRE LINER“, MORELO, a manufacturer of mobile homes, leaves nothing to be desired in terms of equipment, design, and comfort. For the storage flaps – which measure approx. two meters in length – of the up to eleven-meter-long luxury liner, the company is committed to EMKA closure and sealing technology. In order to do justice to the flush design of the „EMPIRE LINER“, the locking experts developed an „invisible“ locking system which on the outside, due to the electronic release system mounted on the inside in conjunction with gear hinges, does neither require a handle nor a recess for opening the storage flap on the outside.

### THE TASK

Based on the Mercedes Atego, in its largest version, the „EMPIRE LINER“ reaches a vehicle length of over eleven metres and is up to 3.80 m high. For the smooth exterior panel of the new model series, the designers conceived a locking mechanism in the area of the massive storage flaps which is invisible from the outside. A further requirement for the engineers at EMKA was to design an „invisible“ high-performance gear hinge which is adjustable and able to withstand strong forces. Furthermore, special gaskets had to ensure that the flap is absolutely leak-proof.

### THE WAY

In order to implement the individually elaborated solution, it was necessary for the EMKA developers to adapt the kinematics that were required by MORELO to a EMKA gear hinge. To accomplish this, a modification of the hinge was required that allowed an opening angle of at least 160 degrees. The connection and fastening technology in the interior of the storage flaps required the designers to consider two mounting points. Thus, the gear hinge is mounted to the upper side of the storage compartment and to the interior side of the flap. The gas damper that is attached to each hinge opens the flap as soon as it is unlocked electronically. The housing of the electronic locking system is attached to the lower edge of the storage



compartment, the associated catch made of stainless steel to the bottom of the flap.

### THE RESULT

The locking mechanism solution mounted on the inside does neither require a handle nor a recess on the outside of the doors. Thus, EMKA created an invisible locking solution, which provides a smooth surface on the outside panel of the storage flaps. EMKA also designed sealing profiles for the interior side of the flap as well as for the exterior area of the storage compartment. To meet the heavy load requirements of the massive flaps, the hinge was designed to withstand strong forces in order to ensure a durable efficient functioning. The combination of (1) electronic unlocking with (2) reinforced gear hinges with gas damper as well as (3) special seals make it very comfortable to open the flap by push of a button.



### Morelo

It all began in February 2010 with an ambitious project and great goals. Today, it has developed into an impressive success story. At the MORELO manufacturing facility in Schlüsselfeld, Germany, the company combines state-of-the-art production technology with traditional craftsmanship and applies this approach to vehicles that are absolutely top notch. So, the MORELO family grows a little bit bigger every year. A staff of 230 employees ensures that customer dreams come true. Day in. Day out. In just six years, the company has become one of the most successful European manufacturers of luxury travel vehicles. The family-type environment, individuality, determination of the individual employees, and many years of combined experience make the brand a strong seller.

A MORELO is something special – Made in Germany.

### EMKA

The EMKA GROUP is the world leader for locking systems, hinges and seals, which are used in cabinets and control cabinets for electronics and electrical engineering. In the areas air-conditioning technology and transport, EMKA is one of the leading manufacturers of locking technology. The product range comprises 15,000 articles that are developed, manufactured, processed and assembled at European production sites in Germany, France, England, Spain, Italy, Bosnia and Serbia. The company has 1,600 employees in more than 50 countries worldwide.

EMKA is an expert in the casting of stainless steel, spraying of zinc and high-performance plastics as well as in the extrusion of rubber and plastic profile. Punching, bending, turning, milling, surface coating or powder coating as well as the final assembly of the modular product program ensure a unique vertical integration. An experienced team of designers, developers and engineers is available at EMKA for the realisation of individual customer solutions. The company sets standards in quality, depth of production and delivery performance.

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