



ELION



ELECTRIC. STRONG.



www.elion.net



ELION UNICIPAL - THE ELECTRIC EQUIPMENT CARRIER

The ELION M-series from the manufacturer MUP technologies GmbH (first and only OEM for the manufacture of electric commercial vehicles) from Austria, is a fully electric transporter in the vehicle class N1 up to 3.5 tons. MUP technologies is the specialist for electric utility vehicles & equipment carriers for municipal services & urban use.

MUP technologies' vehicles are perfectly suited to match modern and innovative municipalities that intend to work in an exemplary, emission-free and nearly noiseless manner in environmental zones. For this application, MUP technologies offers a complete digitalization of your vehicle, whether in combination with a fleet management or MUP technologies' own Databox. Document and optimize your daily operations with a mouse-click. You can also benefit from the modular vehicle concept of the M-series for maximum future security. Additional attachments and superstructures can also be easily and conveniently exchanged or retrofitted at a later date.

The designs of ELION vehicles are also characterized by low follow-up costs in maintenance and operation, by the use of high-quality assemblies and partly maintenance-free components such as engines. Benefit from the simple diagnostic options of the vehicles, or the low operating costs of around 1/5 of a conventional vehicle in the same vehicle class with an internal combustion engine.

SAVE TIME!
Improve the efficiency of your fleet with the the M-series equipment carrier and a design speed of 65 km/h. Shorten the travel time to your work sites, or use the option to drive on the city highway.



EMISSION, CONSUMPTION & EFFICIENCY

EMISSION-FREE PRODUCTION

As manufacturer, MUP technologies aims to keep the CO₂-emissions in Stallhofen/Austria as low as possible. The energy supply of the entire production site is completely ensured by renewable energies. In this way the vehicles already leave behind a very small ecological footprint during production.

MUP TECHNOLOGIES' VEHICLES ARE 100% ELECTRICALLY POWERED.

All ELION attachments and superstructures have been specially designed, developed and optimized for electrified operation.

Here is a comparison of hydraulically operated implements with electrically operated ones:

Mower hydraulic drive up to 16.3 kW max. and electric, consumption 9.6 kW max. with the same cutting width and the same stock of cuttings. This results in a better efficiency of around 55 % hydraulic to electric, and up to 25 % higher efficiency compared to PTO-driven implements.

COST COMPARISON ELION M50 TO COMBUSTION WITH DIESEL ENGINE:

The ELION M50 requires around 20,20 kWh per 100 km at an average speed of 35 km/h.

In comparison, a combustion engine of the same vehicle class and similar design powered by diesel requires around 112.7 kWh per 100km.

¹⁾ Data: Vehicle MUP technologies, 33 kW, all-wheel drive, approx. 202,0 Wh/km at 35 km/h (average), combustion engine 33 kW diesel, approx. 1,127 Wh/km, at 35 km/h (average). Thus cost (energy consumption) ELION M50 on 100 km (electricity cost average Eurostat 2019 = 0,2294 €/kWh) about 4,63 €/ 100 km.



From
1) 4,63€ /100km
0g HC-Emission
0g CO₂-Emission
CO₂ savings / year
43.560 kg

Calculation basis savings: 11l diesel/h - 6 h/day - 250 days/year

Sickle mower

COMPACT AND ERGONOMIC

The M-series vehicles are perfectly tailored for extensive use at building yards or municipal service providers. Due to the approval class N1 with a maximum permissible total weight of up to 3,5 t, the vehicles can be driven with a class B driver's licence. No truck driving licence is required for this work vehicle.

The ELION implement carriers combine the power and flexibility of an implement carrier with the high loading volume of a transporter. Furthermore, the M-series shines with the comfort and reliability of a utility vehicle. In a pure transport activity, with the M series, a payload of up to 1.4 tonnes can be used in its entirety.



The cabin offers best protection for driver and passenger and has been inspected and tested in all relevant crash tests for commercial vehicle class N1.

Optionally, the cabin can also be equipped with a fire extinguisher.

CABIN

The command center of the ELION is very comfortably furnished. Seats, instrumentation and displays are ergonomically arranged and designed for a long working day. In direction of travel, the driver's display provides an overview of all the data relevant for driving.

The cabin is designed for two people, with enough space for both driver and co-driver. For logistical services the co-driver seat can be omitted in order to retrofit a logistics interface.

The cabin features a large, tinted panoramic windshield with a good view of the traffic area.

- Comfortable cabin with sliding side windows for driver and co-driver
- Very spacious and plenty of headroom, even for tall and stout people
- LED driving lights
- Heated windshield
- Electrically adjustable and heated side mirrors
- Seats with seat heating, adjustable backrest and longitudinal position and continuously height-adjustable armrest (optional)
- Storage spaces and compartments with nets (optional)
- Cup holder
- Heating register with 3-stage and adjustable air vents
- Radio with speakers in the roof liner

COMFORT ARMREST

High comfort of use due to the arrangement of the controls of the armrest, which is attached to the seat and continuously adjustable in height. It enables safe and fatigue-free operation of attachments and superstructures. All hydraulic and electric control functions can be operated with one hand via joystick and display.

Direct functions control pad:

- Change of travel direction
- Menu change on the display (between attachments and superstructures)
- Activation of automatic functions
- Raising and lowering of the body platform or flatbed
- Fading in and switching between cameras (if available)
- Activation of the attachment or superstructure device

Direct function display:

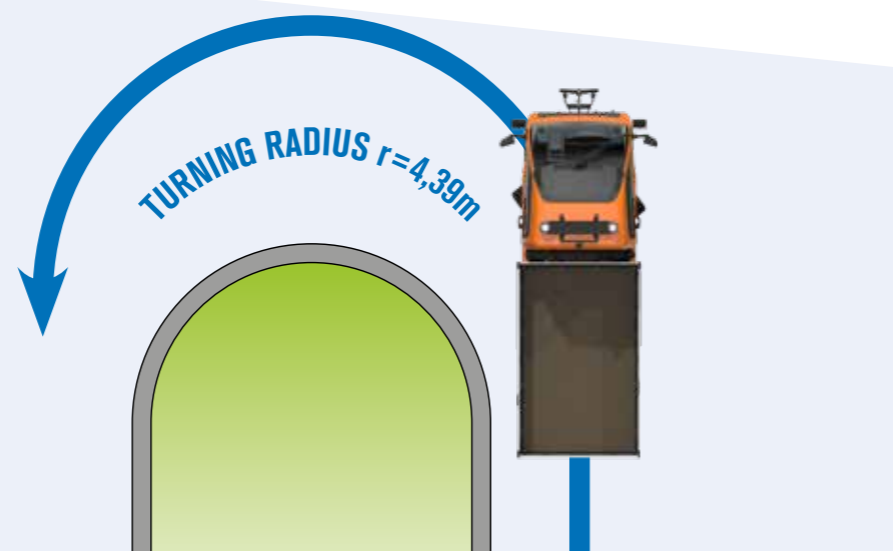
- Display of main parameters and settings for automatic functions of hydraulics and working electronics
- Display of operating functions and overview of equipment
- Display of cameras on the vehicle and/or on attachments and superstructures
- Graphic display of equipment-specific data via MLink

MLink Pro



COMPACT & MANEUVERABLE

The compact dimensions of the ELION are perfectly suited for working in urban environments. Drive on sidewalks or narrow alleys, due to the narrow track width and narrow clearance width of 1480 mm. You can also benefit from the maneuverability of the ELION vehicles due to the short wheelbase and the installation of the cabin above the front axle without protruding far.



VIELSEITIG & DURCHDACHT

VEHICLE FRAME

The vehicle frame is a robust steel profile frame partially welded and bolted. For the vehicle frame, the highest quality is used with exclusively S355 steel, as well as KTL and powder coating for the best possible corrosion protection. The vehicle frame has all the necessary mounting points for interchangeable bodies and/or loading areas.

INDEPENDENT SUSPENSION

The ELION has independent suspension on the front and rear axles. Due to the independent suspension, ELION has a suspension comfort almost like a passenger car. The independent suspension is ideal at higher speeds. It guarantees precise steering and high driving stability.



MECHANICAL DIFFERENTIAL LOCK

The mechanical differential lock provides 100 % locking action on the front and rear axles. This type of differential lock guarantees starting in any position even on loose ground, optimal traction and reduced risk of accidents. The differential locks can be activated in the cab via a pushbutton up to a maximum speed of 15.5 km/h.

STEPLESS ALL-WHEEL DRIVE

The continuously variable all-wheel drive ensures variable power distribution between the front and rear axles and optimum power adjustment depending on the ground conditions. This all-wheel drive also helps to protect the ground on soft surfaces. Furthermore, it guarantees maximum towing capacity of the work vehicle.

WORKING GEAR

The working gear operates between 0.6 and 15.5 km/h and allows to increase the tractive force of the vehicle. In combination with the speed memory, this function allows to keep very slow driving speeds constant. Furthermore, the driving speeds can be better dosed with the accelerator pedal.

CONSTANT SPEED AT THE TOUCH OF A BUTTON

In travel mode with the work cycle, the speed of the travel motors can be stored by means of a selection button. This serves as a cruise control function for working at a constant speed.

ELECTRONIC LOAD LIMIT CONTROL

The load limit control regulates the travel speed during operation as a function of the power absorbed by the attachment. This means that the vehicle always travels at the maximum possible working speed without the driver having to intervene. This prevents the attachment from stalling or stopping (e.g. mowing operation).

EQUIPMENT DETAILS



TRAILER COUPLING

The trailer coupling attached to the vehicle in ball head design in combination with the 13-pin plug is designed for trailers with a total weight of up to 1300 kg.



LUGGAGE NETS

Luggage nets in front of and behind the seats provide space for things needed in everyday work.



SWITCH STRIP

The switch strip integrated in the roof liner allows the most important functions, such as the rotating light or repeat lighting, to be operated quickly and conveniently.



LUGGAGE NETS

Luggage nets in front of and behind the seats provide space for things needed in everyday work.



ROTATING LIGHT BAR

The LED rotating light bar is easy to install and is characterized by its long service life with constant luminosity.



QUICK-CHANGE SYSTEM

The quick-change system enables safe and convenient changing of different superstructures in the shortest time possible.

UNIVERSAL - ONE VEHICLE - ALL POSIBILITIES

FUNCTIONAL WITHOUT LIMITS

The M-series vehicles are a „one for all“ solution for maximum multifunctionality. A very wide range of applications can be covered with one vehicle. Compared to other electric vehicles, the M-series also excels in winter service, as the battery pack is also designed for temperatures below 0 °C.



Link Pro

INTELLIGENT THROUGH MLINK

The M-series equipment carriers are networked with their attachments and have a CAN interface. The plug & play interfaces communicate with the control panels of the armrest and adapt the functions to the implements.

Furthermore, improper combinations or uses of implements, such as exceeding the maximum payload, can be prevented. The current fill level of the attachment, such as a spreader or water systems, can be displayed.

Networking between the implements and the carrier vehicle allows the work performed to be accurately logged and documented. Document how many grams of salt, brine or even water you have spread during your daily service. In winter service, document which driveways you have properly cleaned.

MLink works in combination with the vehicle's Databox, so you can map these values in real time in your fleet management system.

INTERFACES & MOUNTING SPACES

The M-series offers suitable interfaces and attachment compartments for quick and safe equipment changes.

The vehicles have three attachment compartments:

- Lifting unit with attachment triangle KAT.O Municipal
- Quick-change system on the vehicle frame
- Attachment compartment at the rear



On the front there is an e-high power plug for powering the electric attachments and communication between the vehicle and the attachment. Hydraulically the vehicle can be equipped with up to three double-acting hydraulic circuits at the front. The plug-in connection of the hydraulic line is made via leak-free, flat-sealing couplings. For the illumination of front attachments, a three-pin vehicle plug can be used to connect the the lighting system via a three-pin vehicle connector.

Behind the cab, there is a second e-high power plug for the supply and communication of electrical attachments and a 13-pin function socket.

Optionally, a 230Vac socket can be installed behind the cab to supply electrical hand tools with up to 3000W.

HYDRAULICS & IMPLEMENT SUPPLY

The M-series vehicles are equipped with a single circuit hydraulic system. This is used for lifting, lowering and swiveling of front attachments. The front hydraulic system also provides a float position and a contact pressure device. The lowering speed of the linkage is continuously adjustable from the cab. At the rear of the cab there is a hydraulic output for the lifting cylinder of the implement platform or for supplying a hook implement.

The M-series implements are mainly electrically powered to ensure maximum efficiency during operation.



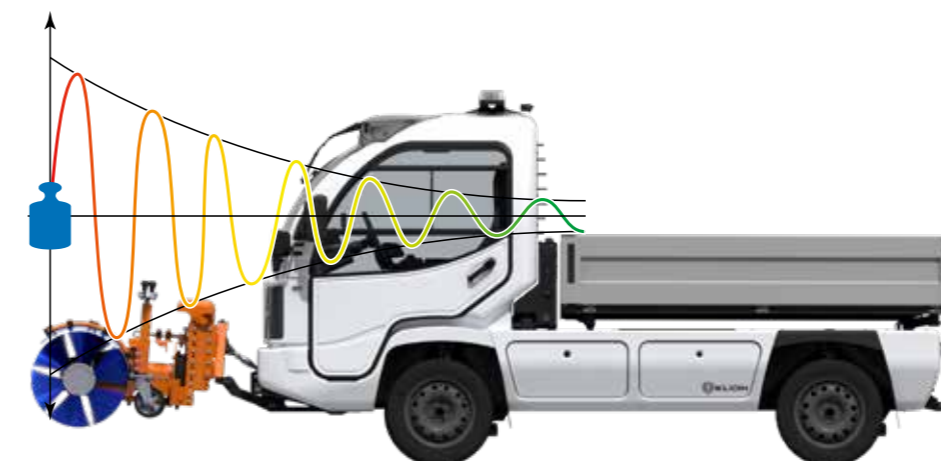
Central hydraulic box compactly integrated behind the cabin, with high power electrical components



230V / 3000W IP65 connection integrated in the central hydraulic box.

VIBRATION DAMPING VIA FRONT AXLE

When using front attachments, the front axle is used as a vibration absorber during transport due to the design of the chassis in connection with the independent suspension. This enables faster transport journeys, improves driving safety, increases driving comfort and protects the vehicle and attachment.



WARTUNG:

The M-series electric powered vehicles do not require maintenance.

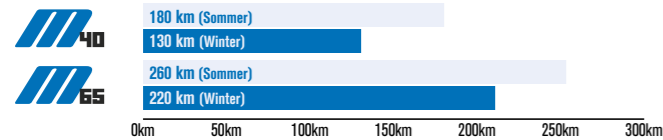
Locations that require frequent maintenance are easily accessible and panels can be easily removed when necessary.

Most maintenance points can be easily reached by folding up the superstructure platform.

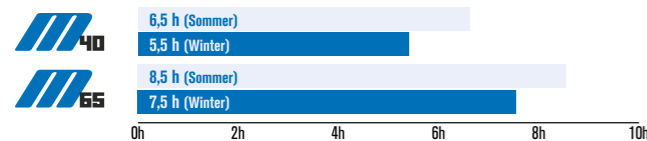


ELION has its charging infrastructure on board, so you can charge your vehicle with energy almost anywhere. You can choose between 230V, 400V or Typ2 charging interfaces, you only need the respective charging cables, which can be delivered with the vehicle.

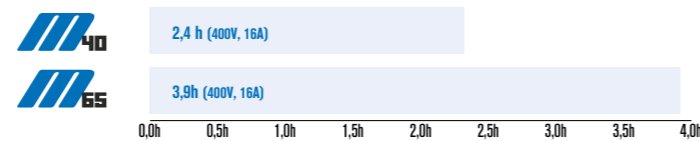
RANGE*



WORKING TIME***



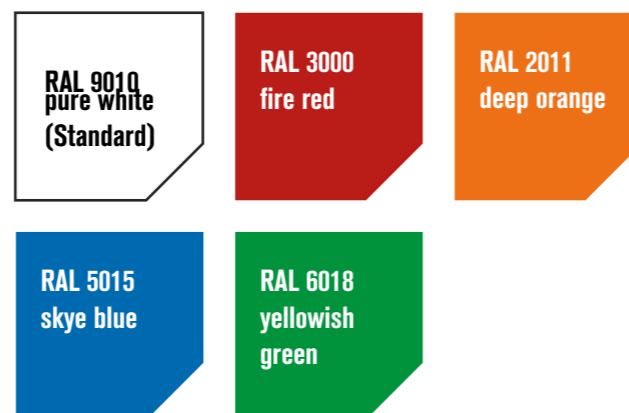
CHARGING TIME (SOC 0-100%)



TYRE OPTIONS

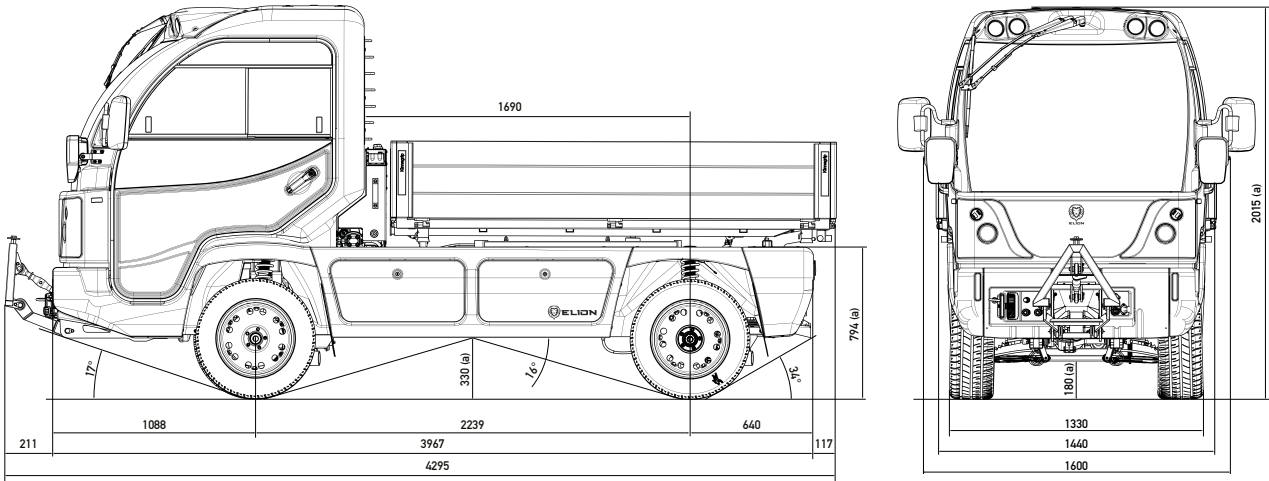


COLOR VARIATIONS (SPECIAL COLOR POSSIBLE)

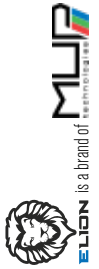


Type	40	65
Antrieb		
engine power [kW]	2x11	2x15
maximum system power [kW]	51	67
torque [Nm]	186	260
drive type	4WD	
transmission & driving stages	stepless, transmission with differential 2 driving stages (electrically simulated)	
pollutant emissions	none	
driving and working characteristics		
speed [km/h]	0-65	
crawling speed [km/h]	0,6-15,5	
front axle and rear axle	single-wheel suspension	
steering	electric servo assistance	
brake (Va // Ha)	internally ventilated disc brake // disc brake & load-dependent brake force regulator	
tyres (biggest)	195/70 R15	
Kabine	two-person comfort cabin	
charge values		
maximum total weight [kg]	3200	3500
permissible axle load (Va//Ha) [kg]	1500//1500	1750//1750
total pull weight [kg]	4300	4500
trailer load [kg]	1400	1700
payload [kg] (incl. battery package & driver, without construction)	1406	1640
dimensions (without superstructures)		
wheel base [mm]	2239	
total length [mm]	4295	
total height [mm]	2015 (at 195/70 R15)	
total outside width [mm]	1600 (without mirror) / 1780 (with mirror)	
turning radius [m]	4,39	
turning radius all wheel steering [m]	2,6	
ground clearance [mm]	330	
loading area three-way tipper [mm, L x H x W]	2300x400x1385	
energy storage		
battery chemistry	LiFePO4	
energy content [kWh]	44,0	66,0
range* [km]	180	260
charging time 400V; CEE- 16A [h] (also plug TYP2 possible)	2,4	3,9
working time*** [h]	6,5	8,5
hydraulics and equipment interfaces		
tipping hydraulics	max. 8 l/min; working pressure 110 bar	
working hydraulics	max. 8 l/min; working pressure 110bar - 180 bar	
hydraulic circuits	1-circuit	
equipment interface front [W, 12V // 96V]	960 // 16800	
rear equipment interface [W, 12V // 96V]	960 // 16800	
external supply rearw [W, 230V]	3000	
external supply rearw [W, 400V]	4500	

* According to the manufacturer under real conditions at 20 °C (summer), 0 °C (winter) outside temperature, all-wheel drive
 ** Tested under various climatic conditions, different load conditions, altered driving behavior and different driving modes.
 *** experience test according to manufacturer



(a) empty vehicle
representation in compressed state, with tyres 195/70 R15



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ADVICE, SALES AND SERVICE FROM YOUR SALES PARTNER



Sweeping brush



DIRECT WEB LINK



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