

MULAG

Innovative Technologies for Roadside Maintenance



Combination Mower

MKM 700

Unimog

In the context of the partnership model for equipment body manufacturers, MULAG was one of the first to be honoured by Daimler AG with the **highest partnership level Mercedes-Benz Unimog ExpertPartner**.

In this closer cooperation which is exemplary for the joint development of equipment, drive concepts and interfaces in the best quality, **MULAG has fulfilled the requirements to the highest level in the areas of quality, sales, service and technology**, which Mercedes-Benz Special Trucks sets for body manufacturers in the field of individual body solutions.



MULAG Combination Mower MKM 700

- High Working Speed
- Best possible use of Carrier Vehicle
- Easy One-Man-Operation

MKM 700 -Maximum performance with one-man operation

The combination of a front mounted mower and verge mower results in a compact mowing unit. The advantages of the FME-series are complemented by the performance of the verge mower. Consequently the amount of grass cut in one working cycle is doubled even with one-man-operation. Of course, both mowing units can be operated independently, too.

The CAN-Bus control system with electronically adjusted automatic touch control system on the verge mower as well as the m|tronic on the power arm-mower makes it easy to operate both systems at the same time. In this way the front mounted mower follows automatically every change of the terrain and the verge mower automatically avoids approaching obstacles.

Thanks to the integral lateral shift, the MKM 700 is able to go round obstacles like trees and traffic signs effectively. It is possible to operate both mowers ergonomically, easily and simply, thanks to the perfect interplay of the ingenious electronic control components - even in difficult terrain. No problem even with a mowing width of 2.4 m.

The versatile MULAG Working Attachment Concept

The large versatility of the MULAG-power arm along with our vast range of working attachments gives maximum utilisation throughout the year. Besides roadside maintenance attachments we also have a large equipment programme for specialised work like hedging and siding up or for embankment maintenance, for example.



The professional options of the MKM 700

Multifunction operating panel

Our multifunction operating panels can be used in different configurations - also most fastidious control problems can be mastered easily and ergonomically. The integrated diagnostic system helps with a quick error localisation and reduces downtimes. An colour display brings a better overview.



Combined operation of both power arms with one Joystick

Safety-Stop

All our working attachments can be stopped by means of a brake valve within 4 seconds. With attachments equipped with the **m|tronic**, the cutter shaft slows down automatically whenever it is raised off the ground. This means extra safety when using the mowing system.

From 2000 rpm
down to 0 rpm
within 4 seconds!

4 sec



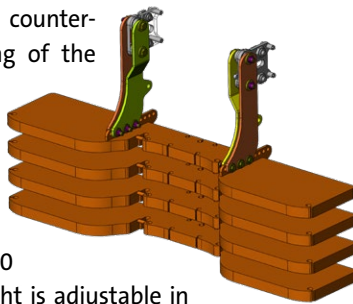
Solo operation of the verge mower

MULAG Counterweight

We propose a modular counterweight for the ballasting of the carrier vehicle.

The ballast weight can be built up variably from 350 kg to 1400 kg.

Attached to the CA4/D50 fittings, the ballast weight is adjustable in the longitudinal axis of the vehicle.



High-pressure blower for road cleaning as option



Trio-Mower

With the combination of the MKM 700 and the rear mounted mower MHU 800 you get an extremely efficient power unit. In two-man operation all the grass within a 3 metre range is cut completely in one working cycle.

With this concept you can get the most out of your Unimog: Considerably increased performance over the area to be cut and high economy, while reducing traffic obstruction as only one mowing pass is needed.

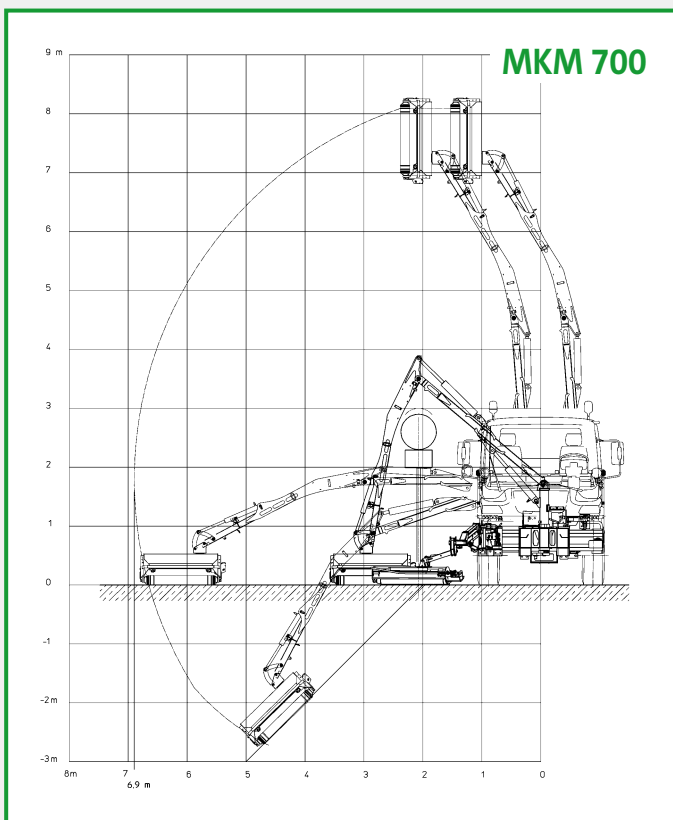


The safety area mown in one pass



The optimised boom geometry allows passing over high obstacles and offers more space to operate in difficult situations

Extended boom system provides more clearance



More reach due to overhead offset cylinder

Thanks to the overhead offset cylinder on the front arm, the optional extended boom system offers an optimised arm geometry with more free space to pass over obstacles.

As a result, standard mowing procedures must be interrupted more rarely, in order to manoeuvre the boom around the obstacle. A saving of time, which is economically evident.

At the same time the maximum possible reach of the arm is increased up to 6.9 m (and/or 7.4 m when the verge mower has been dismantled). It helps improving operation in ditches and on slopes.



The front boom in solo mode uses the increased reach optimally

Mowing combination with reflexion post mower

The adjustment of the reflexion post mower MLM 200 made it possible to complete all important works in the intensive green zone in two passages with the MKM 700: With the first passage the driver works on the road side range with the verge mower MRM 300 and the second cut with the front arm of the Mowing combination.

So far the working procedure with a combined mower. But before the operator can drive a second passage to carry out the third cut, **the verge mower which is no longer necessary can be mounted quickly and replaced with the reflexion post mower MLM 200.** Hereby during the second passage the driver can treat the safety-relevant close-up range around reflexion posts, signs and crash-barrier supports.

Thus no further mowing vehicle is necessary for the guidance installations and additional manual work is avoided as well. At the same time there are two crucial advantages: Increased security for the road users and service personnel, because on one hand there is no work outside the vehicle in the traffic necessary and on the other hand it is possible to work simultaneously on the protection device, which used to be neglected.



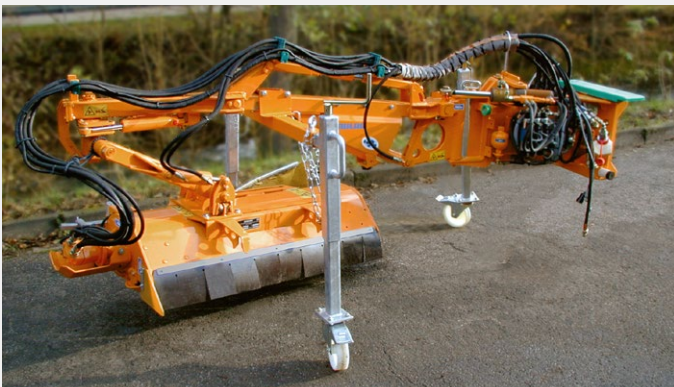
1st Passage with front arm and verge mower



2nd Passage with front boom and reflexion post mower

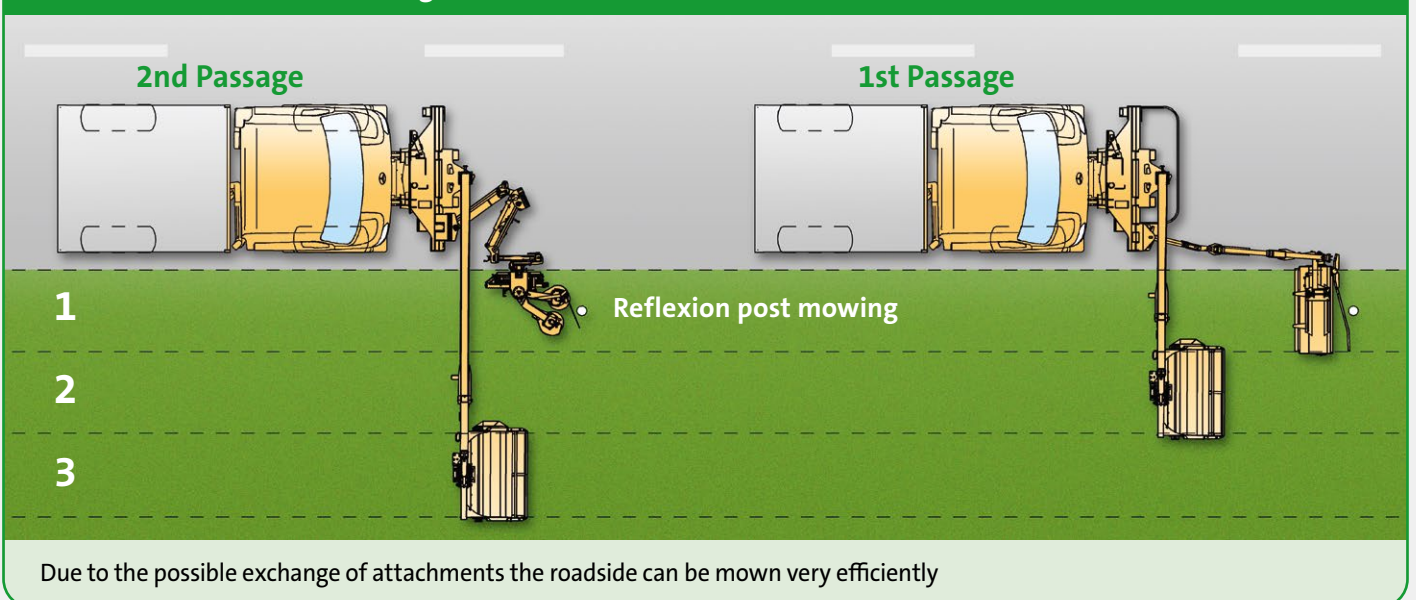
Get more out of your mowing system

Removing the verge mower allows the MKM 700 to achieve the maximum lateral shift and reach. In many situations, the extra reach gained in this way can be very important. At the same time it is possible to replace the verge mower with a reflexion post mower, as described above. The verge mower can be stored on three plug-in parking supports (option) with castor wheels. Then the mower is stored safely and conveniently- until the next application.



Verge mower on parking supports

MKM 700 attachment exchange



MULAG – the answer to all questions on roadside maintenance

The modular concept of MULAG power arms and its wide range of working attachments make their use economical and efficient: All tasks of road maintenance can be handled in a way that is both fast and flexible.

The combination of two approved basic devices provides a road maintenance system that is ideally suited for front-mounting on the Unimog and for one-man operation.

Technical Data MKM 700

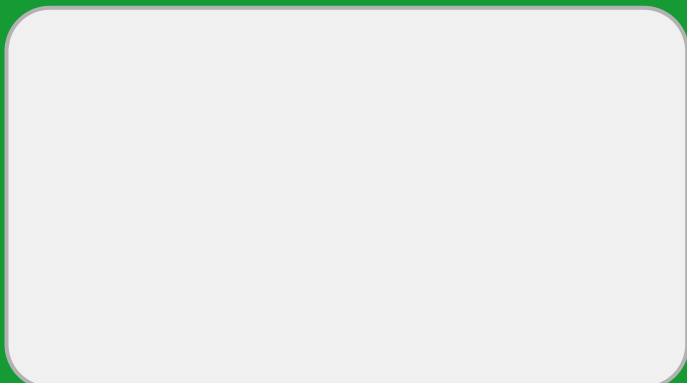
Mounting	U 400 - U 500 / U 423 - U 530
Type of fitting	Front mounting plate size 3 and 5
Reach	Front-mounted mower 6,7 m (7,2 m)* with overhead offset cylinder 6,9 m (7,4 m)*
Lateral shift	850 mm (hydraulic)
Drive	- Vehicle power hydraulic system - Front PTO shaft
Safety-Stop	Electrical operation of working attachment with safety stop within 4 sec
Front mower	CAN-Bus/ Proportional control and arm relief system m tronic
Verge mower	CAN-Bus with electronic automatic touch control
Reflexion post mower	- Electro-hydraulic control - Touch control system to adapt automatically to the contour of the terrain - Continuous distance control to the guard rail

* after removing the verge mower



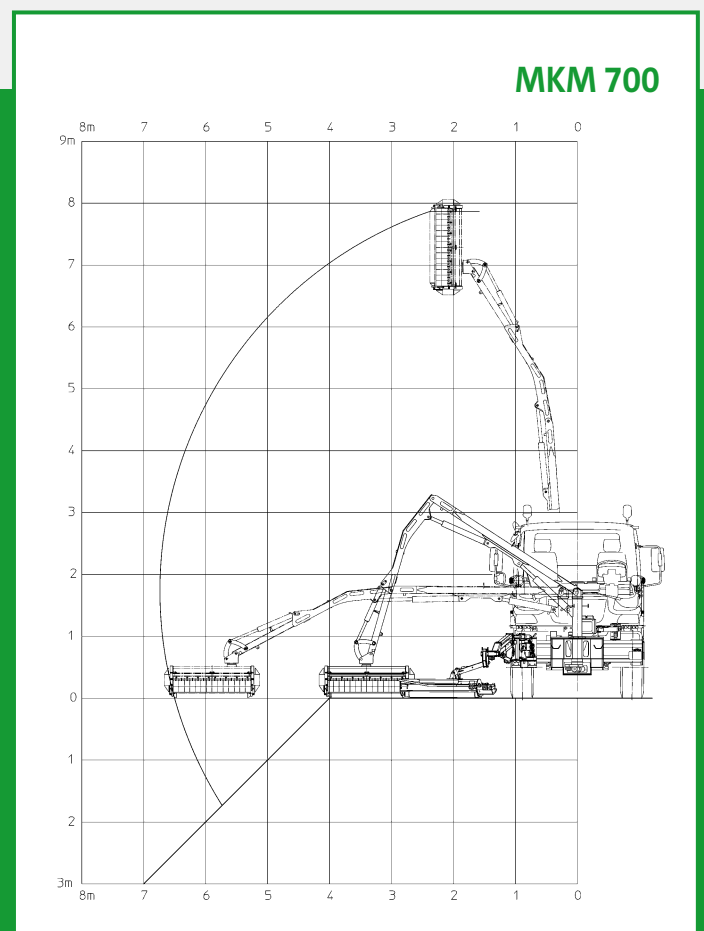
The mowing combination MKM 700 works efficiently and quickly

Distributor



A well balanced load** distribution during transport saves the carrier vehicle. The front axle load is considerably reduced by parking the power arm at the rear of the vehicle.

** varies depending on carrier vehicle and equipment



Reach diagram MKM 700

Manufacturer

MULAG

MULAG Fahrzeugwerk
Heinz Wössner GmbH u. Co. KG
Gewerbestr. 8
77728 Oppenau
Germany

Tel. +49 7804 913-0

Fax +49 7804 913-163

E-mail info@mulag.com

Web www.mulag.com

