

MULAG

Innovative Technologies for Roadside Maintenance



Tunnel Washer

MFK 500-T

Unimog



A new and improved level of international co-operation between MULAG and the Daimler AG has begun with the development of the Unimog U300-U500 and the U20:

Developing the equipment system partnership, which stands for joint development of high quality, perfectly co-ordinated drive concepts and interfaces, plus continuous evolution of the systems, **an international strategic co-operation is born between MULAG and Daimler AG.** It benefits from MULAG's international set up with strong distributors and therefore worldwide availability of high-quality attachments to be fitted onto UNIMOG for municipal use all over the year - **in renowned MULAG quality.**

MULAG Tunnel Washer MFK 500-T

- Large range
- Rapid working speed
- High cleaning performance
- Innovative features

Easy and flexible tunnel cleaning

The newly designed tunnel washer MFK 500-T excels with innovative options such as a convenient detergent dosing system and very efficient high pressure cleaning equipment.

Based on the successful MFK 500 front arm series the tunnel washer was adapted in order to meet the special requirements of professional tunnel maintenance: a standard telescopic arm enables important cleaning heights and the lateral shift makes it easier to adapt the equipment to the conditions in the tunnel. The transport position of the arm in front of the vehicle offers an easy park-out and park-in function even in narrow tunnel cross sections. Through the hydraulic swivelling device of the brush, the tunnel washer is ready for operation swiftly.

Therefore the MFK 500-T is suited for cleaning tunnel walls, noise protecting walls and hall walls. The water supply of the tunnel washer is provided by the water tank on the platform of the Unimog, whose volume capacity can be adapted to the additional loading possibilities of the Unimog and if necessary can be easily refilled by using hydrants available in the tunnel.



The MFK 500-T enables intensive cleaning of both tunnel walls and road.

TWB 2100 – high performance in all operational situations

The efficiency of the tunnel washer is dependent on the brush used. The TWB 2100 is convincing with its 2.1 m working width and the hydraulic drive integrated in the drive shaft: Apart from the excellent cleaning performance the reduction of the lateral overhang enables trouble-free operation even in difficult spots. The compact splash guard of the washing brush can be adjusted.

A low pressure spraying device is mounted at the front of the washing brush and dampens the tunnel wall. While operating an automatic detector with ultrasound sensors ensures that the brush adjusts automatically to the surface. The sensor signals are evaluated by the CAN Bus computer and the boom system is optimally adapted to the surface to be cleaned.



Multifunctional operating panel with indication of the dosing system (opt.)

For difficult places

The high-pressure hand lance

From time to time even the best tunnel washing concept must capitulate when confronted with angled corners, niches or extremely strong contamination: Here the high pressure hand lance can be used for manual intensive cleaning. Rolled out from a hose drum mounted at the rear of the vehicle it can eliminate the last dirt remainders if required. It ensures meticulous cleaning and functionality of protection devices in tunnels.



TWB 2100 – ideal implement for cleaning ceiling lights

Systematic professional tunnel cleaning



Low-pressure spraying device with detergent dosing system

Detergent dosing system

Depending on the kind and condition of the surface to be cleaned it may be necessary to use a detergent to improve the washing effect. In order to supply this detergent to the clear water, the tunnel washer can be equipped with a detergent dosing system. This makes it possible for the operator to supply the required quantity of detergent to the clear water from the driver's cab via the operating panel. The mixing ratio can be adjusted continuously and at

any time during operation to be able to react to different degrees of contamination. Furthermore the system indicates the water and detergent consumption in realtime - a big advantage in the daily working operation. The detergent is filled in an auxiliary tank placed on the side of the clear water tank or at the rear of the vehicle.

High-pressure cleaning system

The optional high pressure cleaning system can be used in conjunction with the tunnel washing brush or alone with a washing bar. A high-pressure water pump with a flow rate of up to 120 l/min. at a maximum pressure of 160 bars ensures meticulous cleaning of difficult spots. The system is mounted on the frame of the water tank.



Tunnel Washer MFK 500-T

Technical Data

Reach	horizontal 6.5 m from centre of vehicle (vertical 7.4 m from ground surface)
Application	Right- and left-hand use possible
Lateral shift	1800 mm, hydraulically
Swivelling range	240°
Telescopic arm	hydraulically adjustable, with 1000 mm reach
Type of fitting	- Front mounting plate size 3/5 - Unimog U400-U500, SBU (starting from U1600)
Drive	- power hydraulics of the vehicle - Front PTO-shaft
Safety-Stop	Electrical on/off of working attachments within 4 sec.
Control	- CAN-Bus tech./Prop. control with power arm relief control type AER and autom. sensor - One-hand control/multifunction joystick
Working attachments	Through quick-change device for attachments multi-purpose use with washing equipments, flail mowing heads, free zone cutters etc

Tunnel Washing Brush TWB 2100

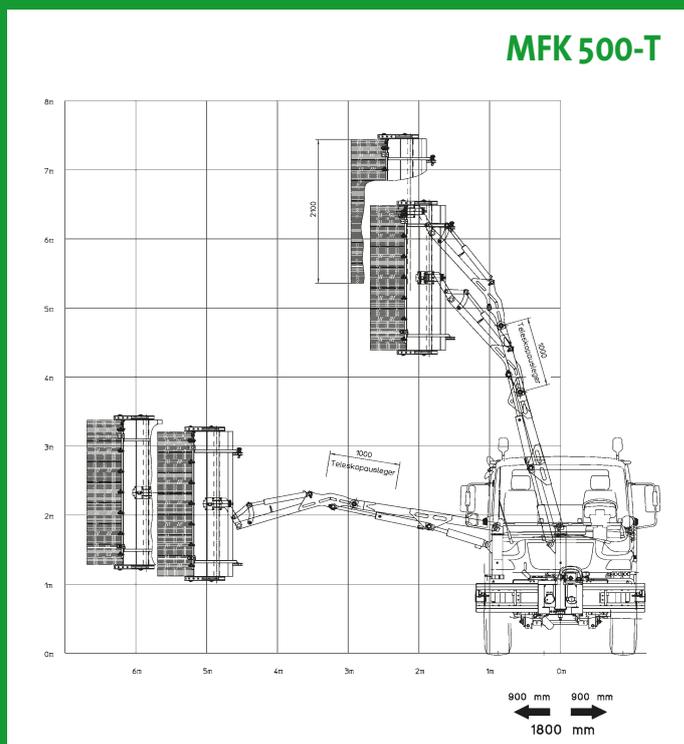
Working width	2100 mm (for tunnel radius > 4600 mm)
Diameter of Brush	1000 mm
Swivelling range	hydraulically swivelling tool carrier (260°)
Control	Washing Brush with automatic adaption to the tunnel wall via ultrasound sensors



MFK 500-T in transport position



Automatic adaption of the washing brush to the wall



Reach diagram MFK 500-T

Distributor

Manufacturer

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