

OPERATING INSTRUCTIONS

BEMA 500K, 500, 1000 hand-held units

Important:

Before application, carefully read the usage instructions for the unit and the chemicals!
Observe safety instructions!
For questions regarding the chemicals, consult the manufacturer!
Application is to be performed only by a competent user.

Remarks about usage of the unit:

Settings: Use the release agent for testing the spray action and calibration of the flow rate.



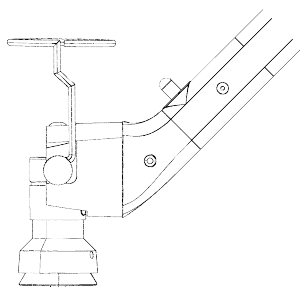
Usage: Position the atomiser directly above the ground –
If the atomiser is held too high, the danger of spray driftage exists.

Cleaning: Do not clean the unit with a high-pressure spray or an intense water jet spray.

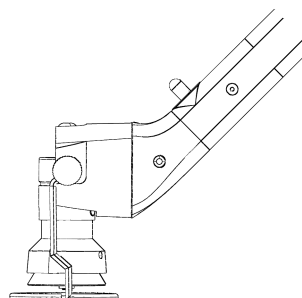
Storage: Store the unit at an angle of between ca. 45° (= work position) and 0° (= horizontal) to the floor (see picture).

Keep the applicator and pesticides out of the reach of children.

Work position



Storage: correct



Noise emission from the unit equates to less than 70 dB(A).

Manufacturer:

Mantis ULV-Sprühgeräte GmbH

Germany 21502 Geesthacht, Vierlander Str. 11 a

Telephone +49(0)4152-8459-0, FAX +49(0)4152-8459-11

Web: www.mantis-ulv.eu Email: mantis@mantis-ulv.eu

BEMA 500K, 500, 1000 hand-held units

**Before application, carefully read the usage instructions for the applicator and chemical.
Observe safety instructions.
For questions regarding chemical, consult the manufacturer!
Observe the requirements and regional regulations for the use of chemicals.**

Application is to be performed only by a competent user.

Noise emission from the unit equates to less than 70 dB (A).

Protective measures

Observe remarks in the usage instructions for the chemical regarding the safety of the user; wear recommended body protection. Wear protective gloves when filling the product.

Do not eat, smoke or drink while working with chemicals. Avoid chemical spillage without fail. After completion of the work, thoroughly clean hands and face.

Thoroughly clean and dry the unit immediately following its usage. Never use the mouth to blow out nozzles or other small parts!



Keep chemicals and applicators away from children.

Assembly and preparation for the first application

Assembly of this unit is described on page 3.

Before the first application of the unit, allow the battery to charge for at least 4 hours. First plug the applicator plug into the loading socket, then plug the charging device into the 230 V power outlet. After ca. 4 hours charging time, the battery has reached its full voltage capacity. When the charging process is complete, first unplug the charging device from the 230 V power outlet, then unplug the unit plug from the charger socket.

Applicator function: The rotating atomiser is driven by means of a rechargeable battery. Metering takes place by means of a metering valve. Droplets are formed by the centrifugal force of the rotating atomiser.

Checking applicator function: Chemicals can flow at differing rates, more quickly or slowly, due to temperature variations. For this reason, the flow rate depicted in the metering table must be checked and corrected as necessary. Always use the release agent for testing the spray process and for calibrating the flow rate. Check the rotating atomiser for cleanliness and free turning movement on a daily basis. Check the application volume from time to time.

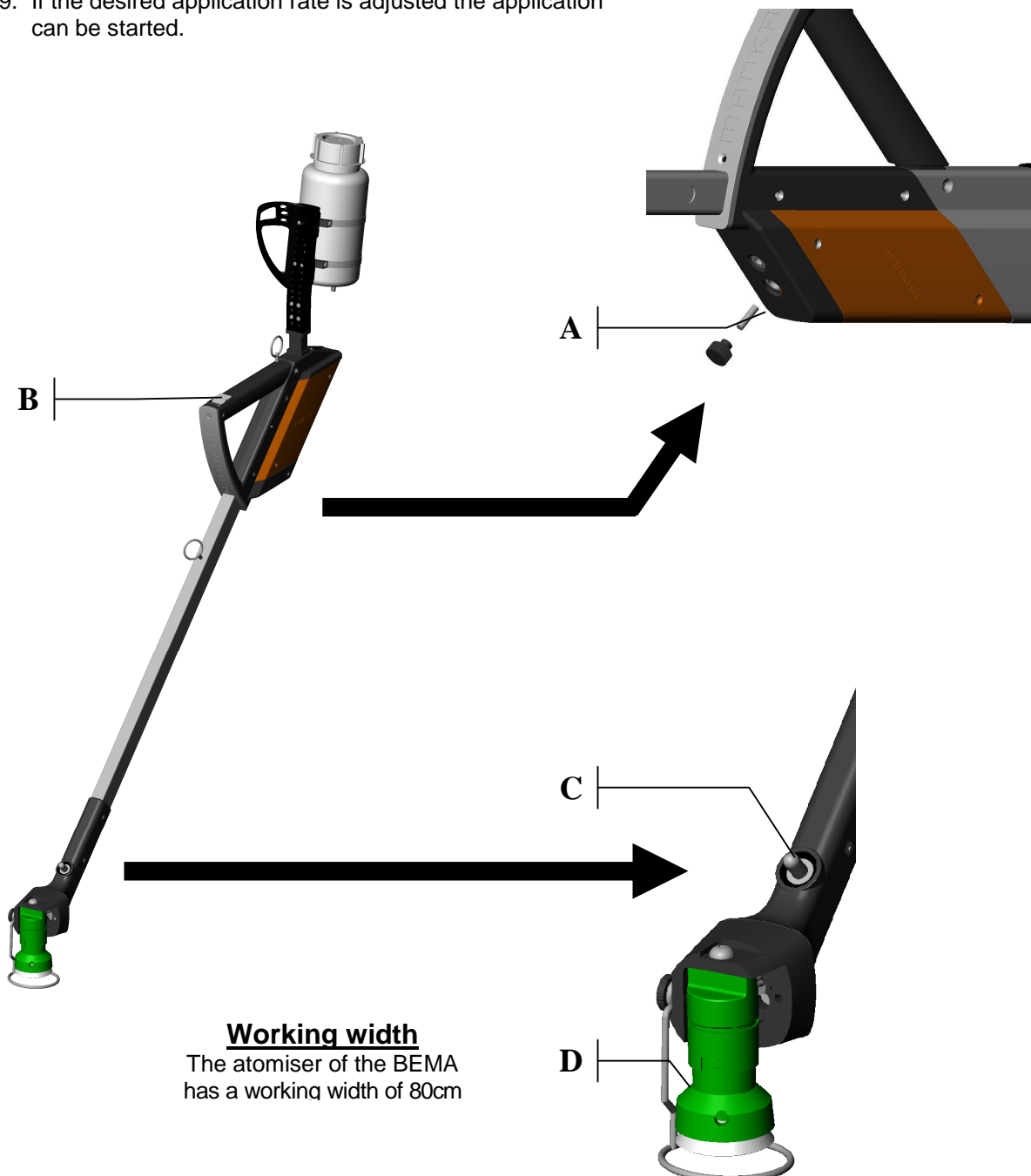
Attention! Before lifting or tilting the atomiser, it is essential that the stop valve is closed and the atomiser motor is switched off.

BEMA 500K, 500, 1000 hand-held units

Setting and verification

The required application rate depends on the desired amount per m² and the operating speed. The application rate can be adjusted with the dosing valve.

1. Remove the fuse from the unit. -A-
2. Fill the container with release agent.
3. Position the unit as shown below.
4. Open the valve by pressing and sliding the switch -B-.
5. Select the required quantity at the dosing valve. -C-
6. Remove hose at the nozzle. -D-
7. Collect the release agent for one minute in a measuring cup.
8. In case of deviations from the desired quantity the output has to be readjusted with the at the dosing valve.
9. If the desired application rate is adjusted the application can be started.



BEMA 500K, 500, 1000 hand-held units

Cleaning

Do not clean the applicator with a high-pressure spray or with an intense water jet spray.

Cleaning: During short breaks in the work day (a few hours), the chemical can remain in the system as long as the metering valve is closed. After completion of work task: return the chemical into its original container.



Charging the applicator and care of the accumulator


The applicator is fitted with an automatic charging device. Trickle charging is possible.

In order to charge a completely empty battery back up to full capacity, ca. 4 hours charging time is required. When a battery is empty, it should be immediately recharged. Never leave a battery discharged for long periods.

Battery charging	Minimum charging time	Time interval
Fully discharged	4 hrs.	immediately
Short-term usage	2 hrs.	immediately
Storage without usage	(2 hrs. 1 x per month)	or permanent charge

The applicator can be used for ca. 16 hours with a fully charged battery.

Fault remedy

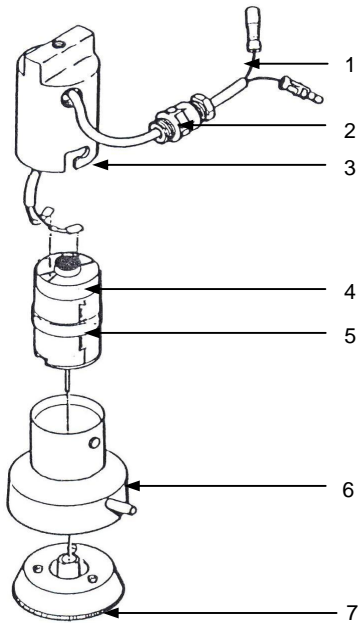
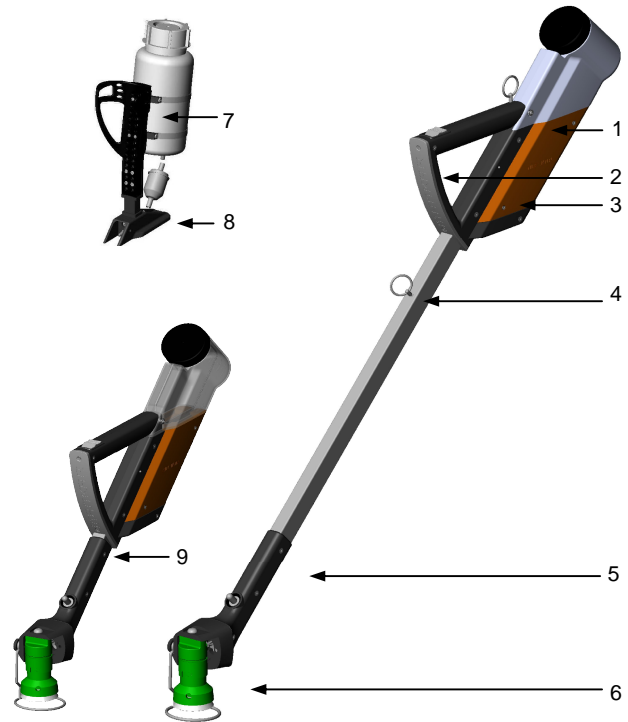
Fault	Cause	Remedy
Atomiser disc not turning	Atomiser contaminated Battery empty Fuse blown No electrical contact Battery defective Atomiser motor defective	Thoroughly clean atomiser, remove plant parts if needed Charge battery Replace fuse on powerpack (Replacement fuses are located in the powerpack housing) Check cable or connector contact Install new battery Install new motor Connect the brown cable to Plus (+).
Atomiser drips	Metering valve incorrectly set Atomiser disc defective / contaminated	Check setting Replace / clean disc
Chemical not flowing evenly	Metering valve clogged	Set scale to maximum  . Take off hose of upper side of metering valve and blow through with compressed air or use cleaning syringe (accessory art.-no. 100348).
Air in hose line	Hose connections	Check all hose connections for leaks .

Components and spare parts for BEMA

Pos.	Part No.	Description
1	102905	Cover for frame, left, HQ
	102906	Cover for frame, right, HQ
2	102908	Grip front plate, MANKAR HQ
3	103341	Grip-frame, left, MANKAR HQ
	103342	Grip-frame, right, MANKAR HQ
4	103343	Spray hood beam with electronics, socket and fuse holder complete BEMA 500 and BEMA 1000
5	102901	Shaft-spray hood adjustment, left, HQ
	102902	Shaft-spray hood adjustment, right, HQ
6	103774	Adapter for atomiser BEMA 2014
7	103779	Container, with hose connector for forearm support
8	103481	Forearm support for BEMA with 1L bottle compl.
9	103937	Spray hood beam with electronics, socket and fuse holder complete BEMA 500K

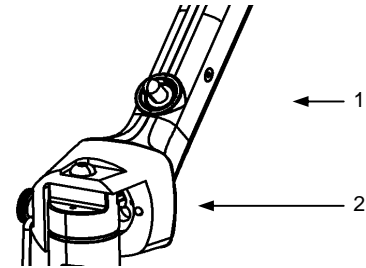
102965 Screw kit MANKAR HQ

103725 Charger 230, 12V DC / 1,0 A (NEW)
ohne Abbildung



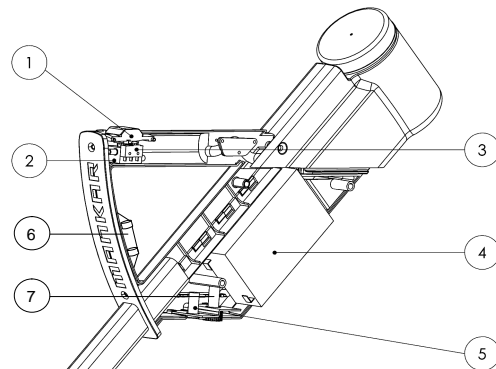
100130 Atomiser BEMA

1	100388	Atomiser cable
2	100121	Screwed cable gland PG 7, plastic
3	100123	Cover, upper part
4	101977	Motor for MAFEX / ROFA / BEMA atomiser
5	102305	O-Ring 30 x 2 mm
6	100126	Cover, lower part
7	100132	Atomiser disc for MAFEX / ROFA / BEMA



Pos. Part No. Description

1	102915	Dosing valve for MANKAR HQ
2	103774	Adapter for atomiser BEMA 2014



1	102946	Slideknop, MANKAR HQ
2	102914	Valve unit, MANKAR HQ
3	102890	Switch, MANKAR HQ
4	103924	Battery 6V-3,8Ah
5	100693	Socket, d=2,1 mm
6	103319	Flow rate controller, complete for Mankar HQ
7	100365	Fuse holder complete

GUARANTEE

- I. If the purchase is a commercial transaction for both sides, the Customer must examine the goods immediately on receipt, as far as this is possible during the regular course of business and if there is a defect, inform the Vendor immediately.
- II. If the Customer does not make a complaint, the goods are considered approved, unless there is a defect, which was not visible during the examination. Furthermore §§ 377 ff. HGB applies.
- III. The Vendor may choose to eliminate the defects or deliver an item free of defects, (rectification of defects). If the rectification of defects fails, the Customer has the right to choose to either demand a reduction in price or to withdraw from the contract.
- IV. Further claims from the Customer, in particular due to consequential damage caused by a defect are in principle disqualified. This does not apply in cases of intent, gross negligence or breaches of contract by the Vendor as well as in cases of injury to life, body or health. The right of the Customer to withdraw from the contract remains unaffected.
- V. Warranty claims lapse after 24 months, respectively after 12 months in case of commercial use of the goods. The limitation period begins at delivery. The guarantee expires, if the delivered goods change or are handled incorrectly.
- VI. The Vendor is not responsible for material defects on deliveries, which he sources from third parties and forwards unchanged to the Customer. Responsibility in the case of intent or negligence remains unaffected. The preceding regulations do not imply a change to the burden of proof to the disadvantage of the Customer.
- VII. Claims for defects do not only exist in cases of negligible deviations from the agreed properties and conditions or only in negligible impairment of usefulness.
- VIII. Necessary expenses for the purpose of the rectifying defects are to be paid by the Customer, if they increase due to delivery to a different place than the place of business of the Customer, unless the transport corresponds to its intended use.

EG-Declaration of conformity Council Directive 2006/42/EG

Mantis ULV-Sprühgeräte GmbH, Vierlander Straße 11 a, 21502 Geesthacht declares under our sole responsibility that the following products are in conformity with the provisions of the following Council Directive: 2006/42/EG

Typ	MANKAR-P, MANKAR-110-P, MANKAR-110-GP, MANKAR-L, MANKAR-110 SELECT EL
Typ	MANTRA, MINI-MANTRA / PLUS, MICRO-MANTRA, MICRO-VASO, BEMA
Typ	FLEXOMANT-1W, FLEXOMANT-2W, FLEXOMANT-3W, FLEXOMANT-4W, FLEXOMANT-PLUS, VARIMANT-1, VARIMANT-2, VARIMANT-4 PLUS, VARIMANT-WINNER-TOP, VARIMANT-WINNER-UNO
Typ	MAFEX
Typ	ROFA

André Verder
Managing Director

Geesthacht January 2012

(Place and date of signature)

(Name, title and signature)