

# OPERATING INSTRUCTIONS

## BEMA 1000, 1000K 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.



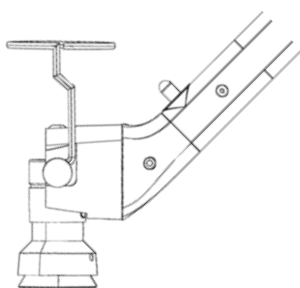
**Usage:** Position the atomiser directly above the ground – If the atomiser is held too high, the danger of spray driftage exists.

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

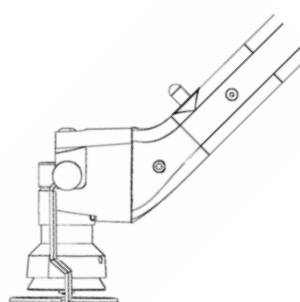
**Storage:** Store the unit at an angle of between ca. 45° (= work position) and 0° (= horizontal) to the floor (see picture).

**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.com](http://www.mantis-ulv.com) Email: [mantis@mantis-ulv.com](mailto:mantis@mantis-ulv.com)

# BEMA 1000, 1000K 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.

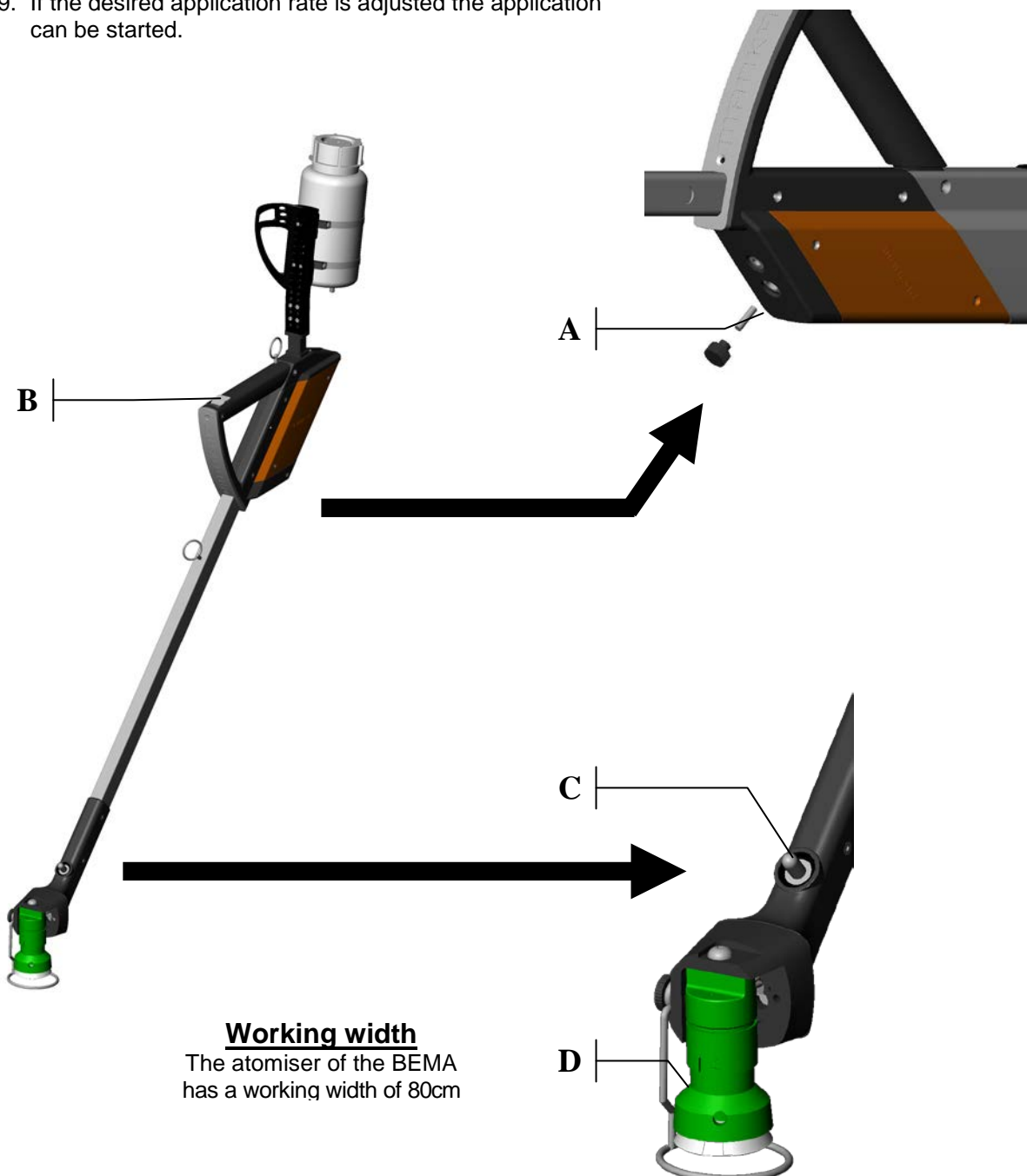
**Attention!** Before lifting or tilting the atomiser, it is essential that the stop valve is closed and the atomiser motor is switched off.

# BEMA 1000, 1000K hand-held units

## Setting and verification

The required application rate depends on the desired amount per m<sup>2</sup> 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 1000, 1000K 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)	<b>or permanent charge</b>

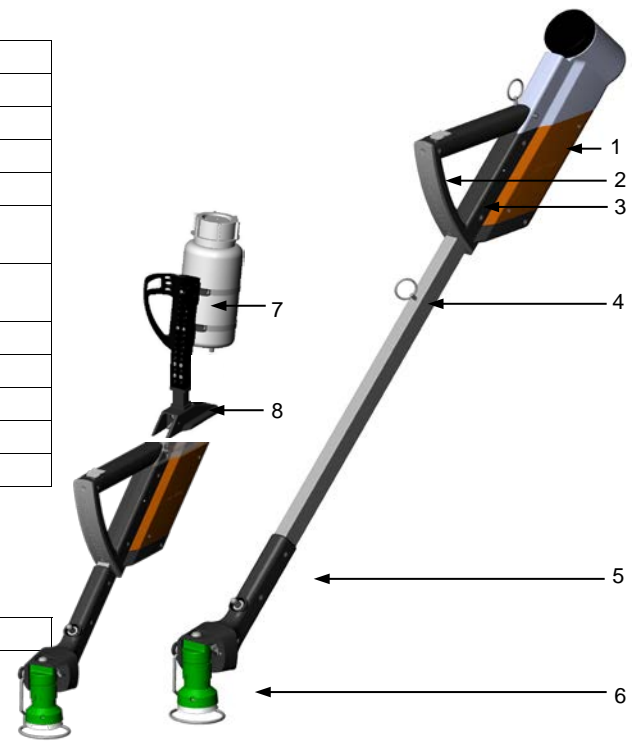
The applicator can be used for ca. 16 hours with a fully charged battery.

## Fault remedy

Fault	Cause	Remedy
<b>Atomiser disc not turning</b>	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 (+).
<b>Atomiser drips</b>	Metering valve incorrectly set Atomiser disc defective / contaminated	Check setting Replace / clean disc
<b>Chemical not flowing evenly</b>	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).
<b>Air in hose line</b>	Hose connections	Check all hose connections for leaks .

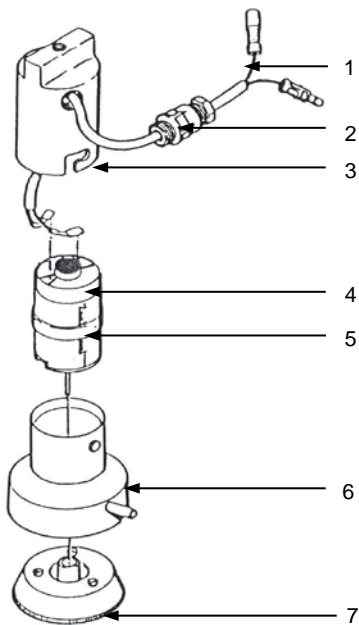
# Components and spare parts for BEMA

Item	Part No.	Description
1	102905	Cover (orange) for frame, left, MANKAR HQ
	102906	Cover (orange) for frame, right, MANKAR HQ
2	102908	Grip front plate, MANKAR HQ
3	104071	Grip-frame, left, MANKAR HQ 2017
	104072	Grip-frame, right, MANKAR HQ 2017
4	103343	Spray hood tube with electronics, socket and fuse holder complete, MANKAR-HQ
short	103937	Spray hood tube with cable, socket and fuse holder complete
5	103808	Shaft-spray hood adjustment, left, BEMA
	103807	Shaft-spray hood adjustment, right, BEMA
6	103774	Adapter for atomiser BEMA 2014
7	103779	Bottle 1 ltr. with hose connector HQ/BEMA
8	103726	Forearm support for MANKAR HQ with 1L bottle



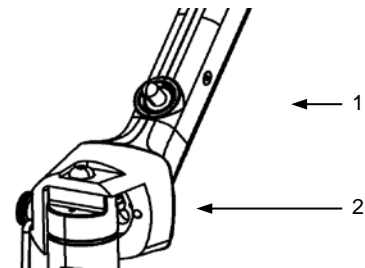
102965	Screw kit MANKAR HQ
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103926 Charger 100-240, 12V DC / 1.0A (NEW)  
without pic



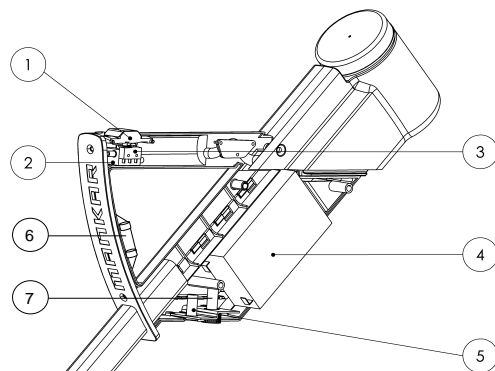
## 104966 Atomiser BEMA (HQ)

1	101097	Atomiser cable BEMA
2	100121	Screwed cable gland PG 7, plastic
3	100123	Cover, upper part for MAFEX atomiser
4	101977	Motor for MAFEX/ROFA atomiser
5	102305	O-ring 30 x 2 mm
6	100126	Cover, lower part
7	100132	Atomiser disc for MAFEX / ROFA



## Item Part No. Description

1	104994	Dosing valve BEMA, new
2	103774	Adapter for atomiser BEMA 2014



1	102946	Slide cap for MANKAR HQ
2	102914	Valve unit MANKAR HQ
3	102890	Micro switch for MANKAR HQ
4	103924	Storage battery 12 V - 2,5 Ah, BEMA
5	100693	Socket, d=2,1 mm
6	103800	Flow rate controller, complete for Mankar HQ, 35 mm for units since 08-2013
7	100365	Fuse holder complete MINI-MANTRA / MANKAR / FLEXOMANT / ...

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

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

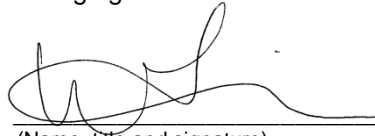
Typ BEMA

Hiske Weissmann  
Managing Director

Geesthacht January 2021

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(Place and date of signature)



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(Name, title and signature)