

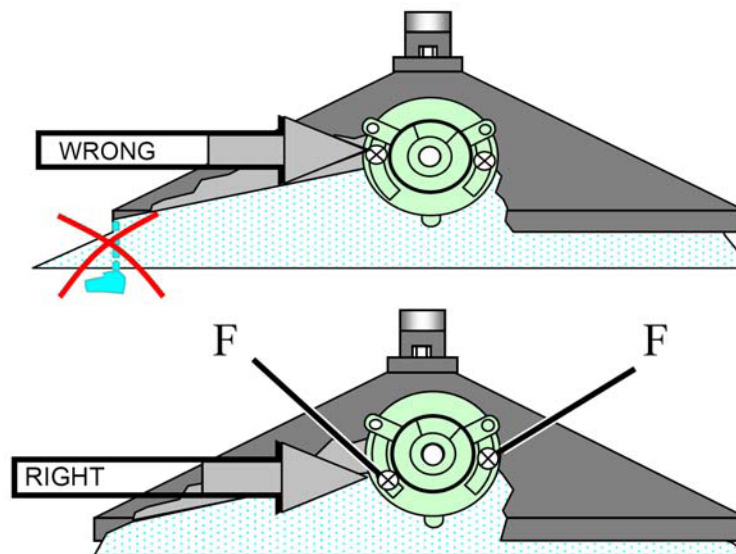
INSTRUCTION MANUAL

for MINI-MANTRA 06 **CE** and MINI-MANTRA PLUS 06 Herbicide Sprayer for undiluted ROUNDUP[®]

ATTENTION

The height of the spray hood above ground has an effect on the spray width of the atomiser.

It is essential to carry the spray hood as narrow above the weeds as possible.



F = Alteration of Atomiser spray width

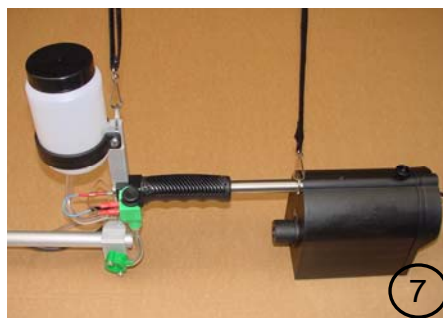
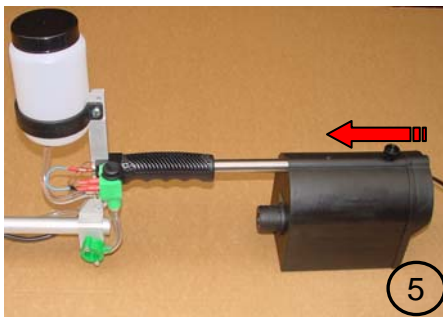
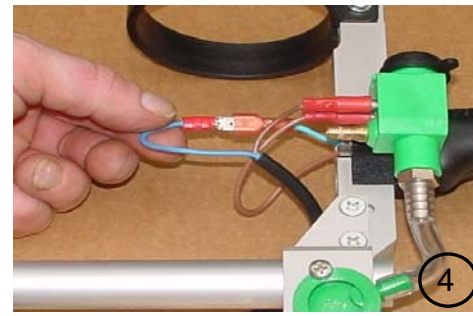
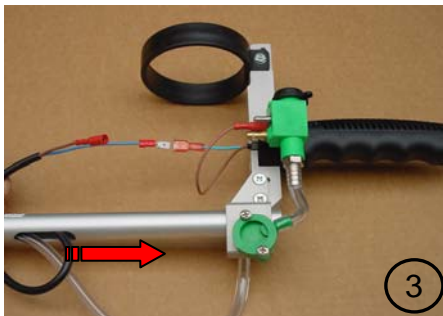
ATTENTION!

Parts of the ULV-Sprayers should be cleaned with a damp cloth only.

NEVER use a high-pressure water source.
Electric components could be destroyed.



**ASSEMBLING
ISTRUZIONI DI MONTAGGIO
ASSEMBLER
MONTAGE**



Tragegurt (30-0.111) als Zubehör, nicht im Preis enthalten.

Shoulder strap (30-0.111) - Accessory, not included in price.

Cinghia portante (30-0.111) - Accessorio non compreso nel prezzo dell'attrezzatura.

Les accessoires ne sont pas compris dans le prix. (30-0.111)

Schouderriem (30-0.111) - Accessoire niet bij prijs inbegrepen

USER SAFETY RECOMMENDATIONS

- Always observe the safety recommendations for user protection in the "directions for use" of the chemical and wear the recommended personal protective equipment.
- Do not eat, smoke or drink when working with pesticides.
- Dispose of excess pesticide mix and rinse in accordance with label instructions.
- Always keep pesticides and applicators out of the reach of children.
- After use, thoroughly clean the applicator.
Exchange the chemical in the tank for tap water and operate valve/switch for approx. 2 minutes.

SET-UP AND OPERATION OF THE APPLICATOR

BATTERY USE AND CARE

Use the charger in dry conditions only. Protect against moisture.

Always start the day with a fully charged battery.

Connect charger plug to powerpack socket correctly before connecting charger to 110 V (US) or 230 V (GB) outlet. The charging starts and indicator on charger will light. Battery is fully charged in 16 hours. When the battery is charged, the charger will switch to trickle charge automatically. After charging, remove charger plug from 110 V (US) or 230 V (GB) outlet, then remove plug from battery socket. Never disconnect by pulling on the wires. Store powerpack in fully charged condition. Failure to do so reduces the service life of the battery.

Recharge the battery immediately after use, at least as many hours as the sprayer has been operated.

Off season storage: Charge continuously

Total spraying time of fully charged battery is approx. 16 hours.

The atomiser is powered by the rechargeable battery. The fluid metering is handled by a dosing valve. The droplets are formed by the centrifugal force of the atomiser and discharged downwards through an adjustable segment. Flow rate can be affected by temperature fluctuations, therefore the flow rate specified in the calibration table has to be checked and adjusted as required. Check the atomiser daily to be sure it is clean and operating smoothly. The spray hood should pass closely over the top of the area to be treated. During operation, some of the chemical will collect in the atomiser and will trickle out for approx. 30 sec. after closing the shut off valve/switch. Be sure to close valve about one minute before end of treatment and allow atomiser to continue running. Switch off the atomiser at the end of the treatment.

CAUTION

Before lifting the spray hood, be sure to close valve and switch off atomiser.

Set the Spray band of the atomiser by adjusting the spray limiters (see drawing). The spray band should be set so that the droplets are discharged across the entire compartment width. Fill tank and open the valve. Find a clean dry surface, preferably a concrete base, or place a cardboard panel under the spray hood and check the coverage on the panel. Adjust as required and recheck. Be sure you understand all the functions of the applicator before starting treatment.

CALIBRATION

The flow rate can be altered by turning the flow adjustment knob -C-

Regular flow of the chemical can be seen in the flow control tube

Example for Flow Rate calculation using undiluted Roundup®

<u>Chemical rate</u>	<u>Swath width</u>	<u>walking speed</u>			
(litres/hectare) = 2	X (cm) = 30	X (meters/minute) = 67	:	1.000	= 4,02 ml/min
(oz/acre) = 28	X (inches) = 11,8	X (ft/minute) = 214	:	520.000	= 0,1363 oz/min

Required flow rate at a walking speed of 67 m/min = 4 km p. hour or 2,5 MPH

MINI-MANTRA

MINI-MANTRA PLUS

per hectare	per acre (US)	Required flow rate	Initial knob setting	per hectare	per acre (US)	Required flow rate	Initial knob setting
2 Litre	28 oz	4,0 ml/min	see next page	2 Litre	28 oz	6,7 ml/min	see next page
3 Litre	41 oz	6,0 ml/min		3 Litre	41 oz	10,0 ml/min	

Flow rate has to be checked before start of application

ADJUSTING FLOW:

- Fill bottle with chemical (do not use water as it may not have the same viscosity as the chemical being used)
- Place sprayer as illustrated -I-
- Disconnect plug from power pack -A-
- Remove hose from flow control -D-
- Set control knob -C- to suggested position
- Use 100 ml graduated cylinder with 1ml increments to collect flow
- Depress activation switch on handle -B- for 1 minute
- Note amount of fluid collected in graduated cylinder. If the amount collected differs significantly from the required ml/minute flow as calculated above, empty the cylinder into the chemical bottle, adjust the flow control knob and re-check flow starting from step -D- above.

SETTING THE SPRAY WIDTH:

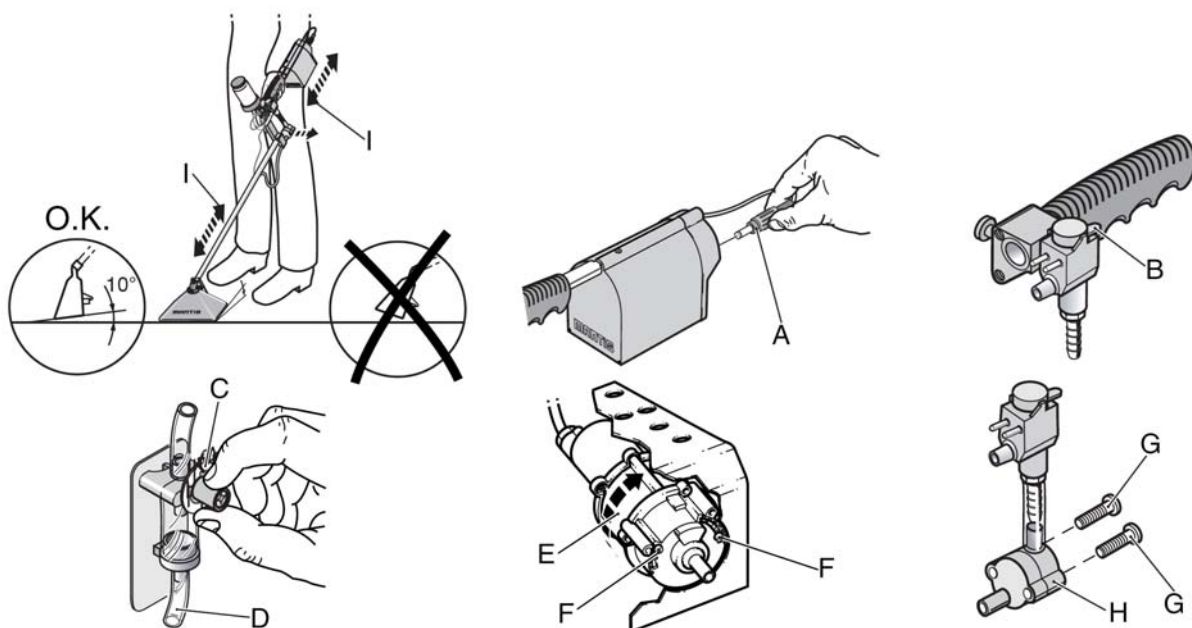
- Loosen the two screws marked „F“ as marked on the SPRAY HEAD diagram below
- The spray pattern may be adjusted by moving the white plastic pattern limiters in or out
- When setting the spray pattern for the maximum width, ensure that the spray does not hit the sides of the shroud. Sense of rotation -E-.

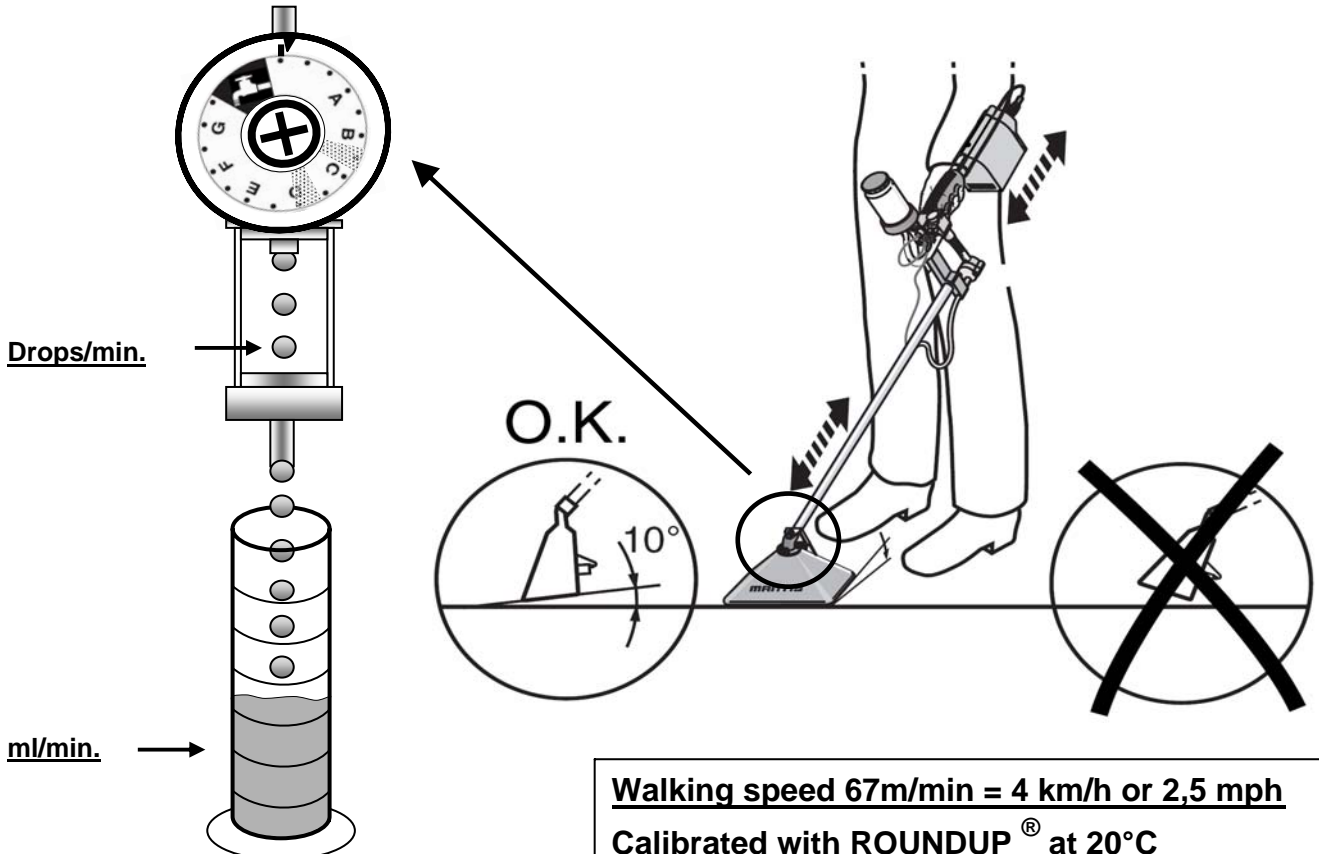
CLEANING THE COMPLETE SPRAYER:

- Empty unused chemical into the original container
- Pour ½ cup water into the bottle, operate switch/shut-off valve until only water is spraying through the atomizer.

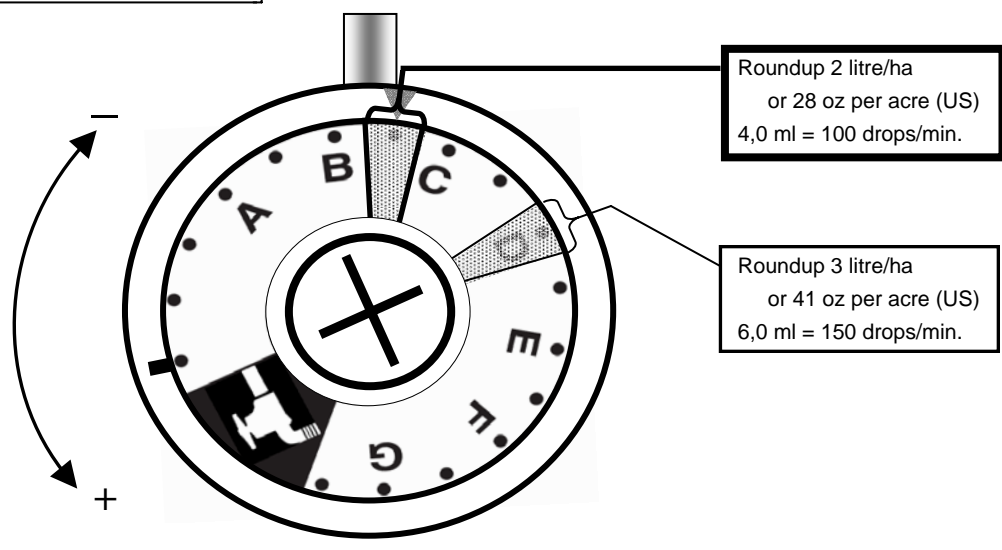
CLEANING THE FILTER:

- The filter should be inspected seasonally or if unit stops functioning
- Remove 2 screws -G- and clean filter inside -H-

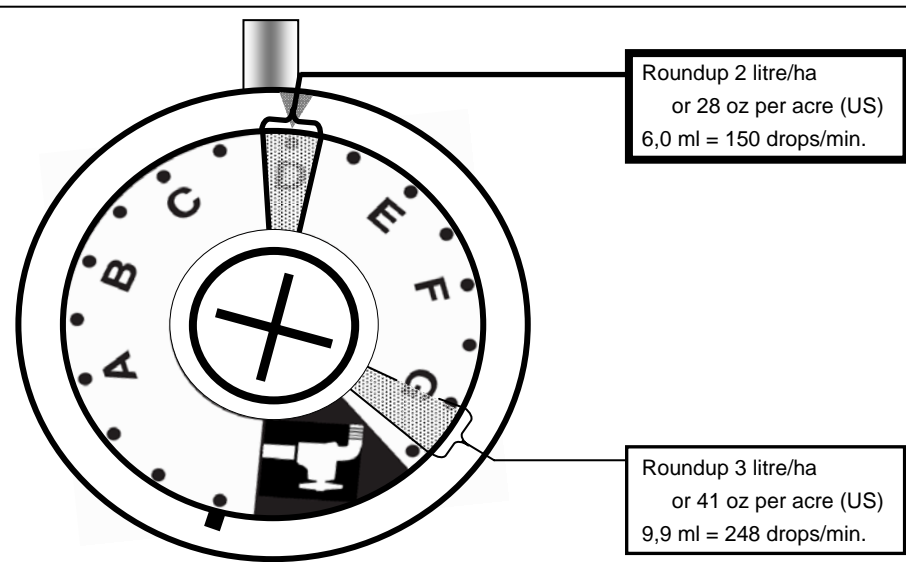




Mini-Mantra 2006

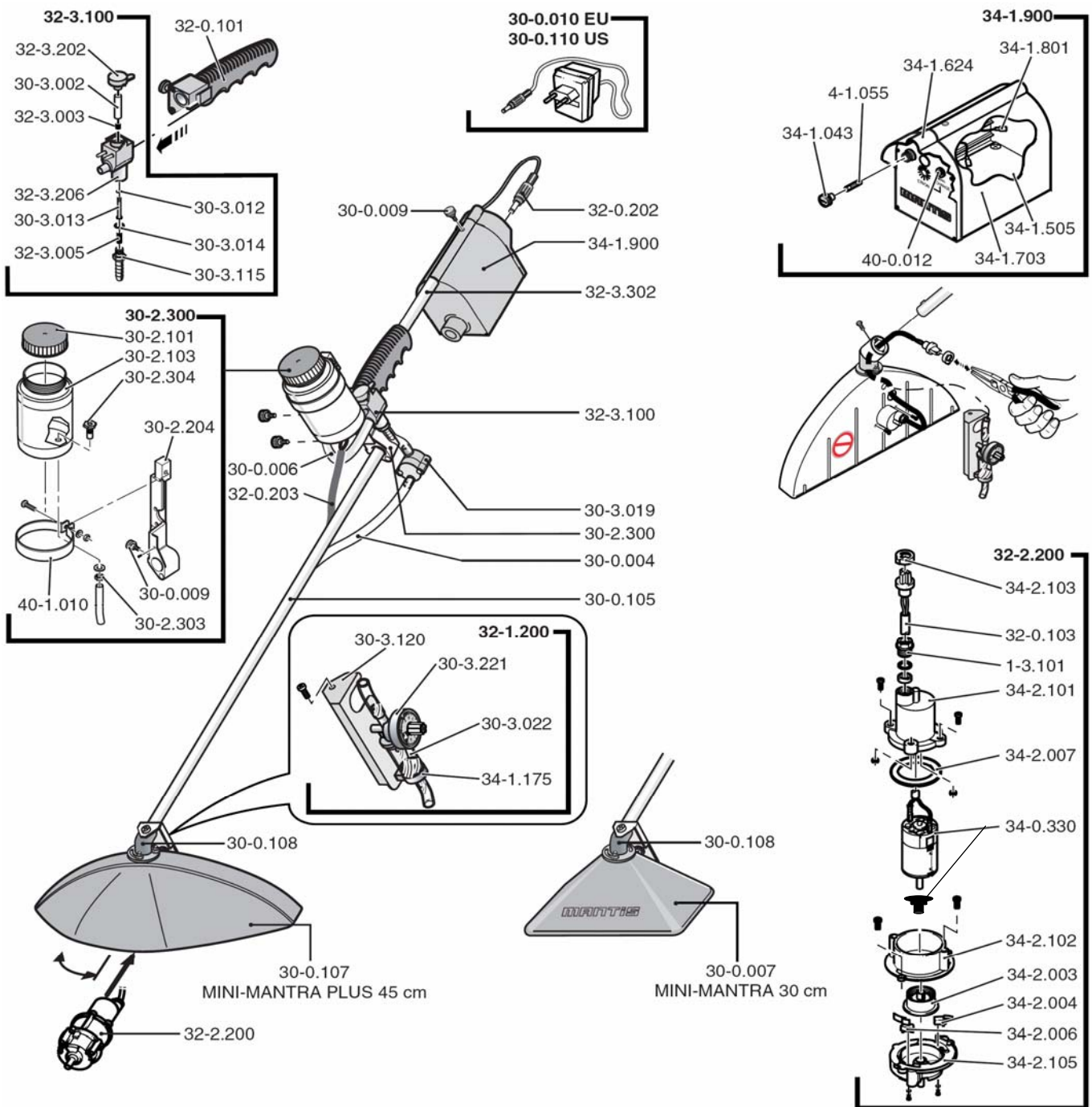


Mini-Mantra Plus 2006



INITIAL KNOB SETTING FOR CALIBRATION

MINI-MANTRA + MINI-MANTRA PLUS 06



Part No. Description

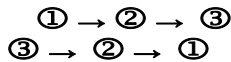
30-0.004	PVC-tube 4 x 2 mm
30-0.006	Tube connecting container with switch-/valve unit
30-0.007	Spray hood 30 cm width without atomiser
30-0.009	Knurled screw M 5 x 10 mm
30-0.105	Spray hood tube with cable and tubing
30-0.107	Sprayhood, green, 45 cm width without atomiser
30-0.108	Spray hood bracket 2004
30-2.300	Bottle holder kit MINI-MANTRA 2006, compl. with bottle, bottle holder ALU
30-3.019	Filter MINI-MANTRA
32-0.202	Cable with plug, Mini-Mantra / Plus
32-0.203	Connection-cable with socket for Mini-Mantra / Plus 2004
32-2.200	Segmental Atomiser, Mini Mantra 2004
32-3.100	Switch-/Valve unit 2004
32-3.302	Powerpack support 2006, stainless steel
34-1.900	Powerpack ABS

Subassembly

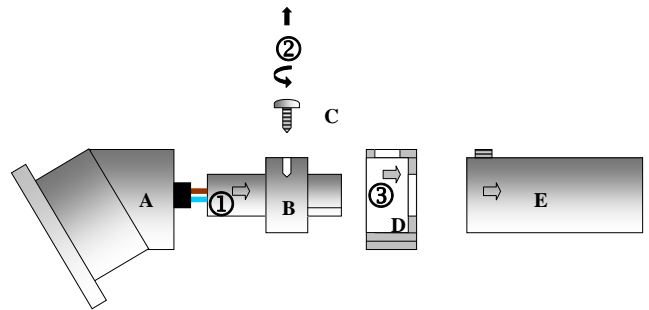
(see next page)

30-2.300	Bottle holder kit MINI-MANTRA 2006, compl. with bottle, bottle holder ALU
32-1.200	Flow control valve 2006, green, complete with flow control and bracket
32-2.200	Segmental Atomiser, Mini Mantra 2004
32-3.100	Switch-/Valve unit 2004
34-1.900	Powerpack ABS

Detach of atomizer
Assembling of atomizer

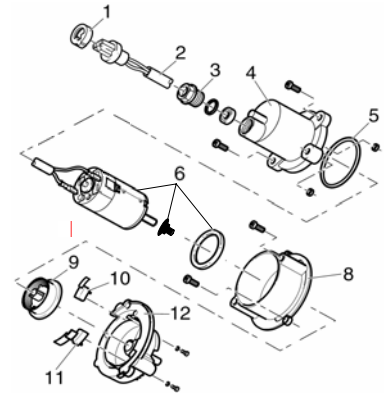


- A. Spray hood bracket
- B. Plug
- C. Screw
- D. Fixing device
- E. Spray hood tube



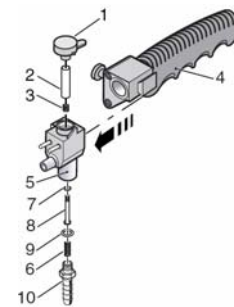
Segmental Atomizer, Mini Mantra 2004
Part No. 32-2.200

Item	Part No.	Description
1	34-2.103	Fixing device for plug
2	32-0.103	Cable Mini 2004 with plug
3	1-3.101	Screw Fitting PG 7
4	34-2.101	Motor housing
5	34-2.007	Para-Sealing
6	34-0.330	Motor subassembly for atomizer since 1996
8	34-2.102	Atomizer housing, front 2004
9	34-2.003	Atomizer disc
10	34-2.004	Spray limiter, right
11	34-2.006	Spray limiter, left
12	34-2.105	Atomizer housing, rear 2004



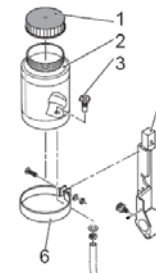
Switch-/Valve unit 2004
Part No. 32-3.100

Item	Part No.	Description
1	32-3.202	Knob for switch-/valve unit 2004
2	30-3.002	Silicone tube 3 x 1 mm
3	32-3.003	Spring
4	32-0.101	Handle 2006
5	32-3.206	Power unit housing 2004
6	32-3.005	Restoring spring
7	30-3.012	O-ring 3,68 x 1,78 mm
8	30-3.013	Pilot Pin
9	30-3.014	O-ring 9,25 x 1,78 mm
10	30-3.115	Hose stem



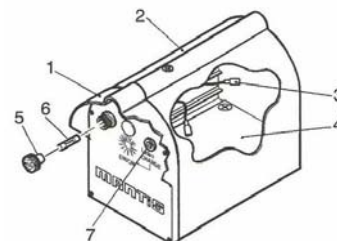
Bottle holder kit MINI-MANTRA 2006, compl. with bottle, bottle holder ALU
Part No. 30-2.300

Item	Part No.	Description
1	30-2.101	Bottle lid
2	30-2.103	Bottle 500 ml
3	30-2.304	Hose stem
5	30-2.204	Bottle holder, 2006 ALU
6	40-1.010	Tank seat



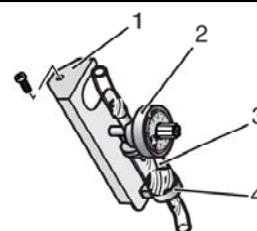
Powerpack ABS
Part No. 34-1.900

Item	Part No.	Description
1	34-1.624	Powerpack-cover, ABS
2	34-1.703	Powerpack case 2004
3	34-1.801	Battery connection cables MINI-MANTRA
4	34-1.505	Storage battery 6V - 7,2Ah
5	34-1.043	Fuse housing complete
6	4-1.055	Fuse T3.15 Amp
7	40-0.012	Socket, d=2,1 mm



Flow control valve 2006, green complete with flow control and bracket
Part No. 32-1.200

Item	Part No.	Description
1	30-3.120	Dosing valve bracket
2	30-3.221	Dosing valve 2006
3	30-3.022	Flow control hose
4	34-1.175	Flow control, lower part



SPECIFICATIONS: MINI-MANTRA and MINI-MANTRA PLUS

- Adjustable flow control from 2.5 ml/min to 15 ml/min
- Mean droplet diameter 120 microns
- Poly cone helps protect the spray pattern from the wind
- Adjustable wand length
- 6V rechargeable battery
- Battery lasts 16 hours on a charge
- 16-hour charge time, charger included

MINI-MANTRA

- 500 ML chemical bottle
- Spray width is adjustable from 10-30 cm (4"-12")
- Only 2,7 kg (5,8 lbs.)
- Shipping wt. 10 lbs.

MINI-MANTRA PLUS

- 500 ML chemical bottle
- Spray width is adjustable from 15-50 cm (6"-20")
- Only 2,7 kg (5,8 lbs.)
- Shipping wt. 10 lbs.

CLEANING & STORAGE

Empty any unused chemical into the original container.

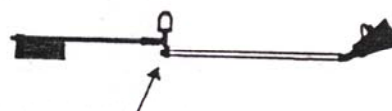
Fill the chemical bottle with clean water and operate the unit until water has completely flushed out the system.

Loosen knurled screw and turn spray hood 180 degrees so it faces up when the unit is laid down for storage as outlined in the diagram below.



WRONG

Herbicide can flow into the motor via motor shaft



RIGHT

Loosen knurled screw and turn spray hood 180°

GUARANTEE

The manufacturer guarantees that in accordance with the present state of technology the article of purchase is free from defects as regards raw materials and construction. Guarantee is valid for all machines and apparatus for twelve months. The period of guarantee begins from the date of purchase by the user.

The manufacturer will decide to repair or replace faulty parts or issue a credit note.

Parts damaged due to normal wear and tear will not be replaced under guarantee. Carriage costs are borne by the manufacturer for faulty goods.

Unresolved claims do not entitle purchaser to withhold payments or set them against non-approved claims. Parts not manufactured by manufacturer are guaranteed by the original manufacturer under their terms. Warranty claims must be submitted in writing within 4 weeks of the damage being seen.

Repairs will be carried out with original manufacturer spare parts by an approved dealer.

Acknowledgement of a claim by manufacturer is binding only when a written notice is issued. Unless the manufacturer cannot make a repair, there is no right to cancellation of orders or to mitigation. Compensation for direct or indirect damage will not be given.

Guarantee terminates if the article of purchase is altered by manipulation of third parties or by installing spare parts of extraneous origin and if the ascertained damage is directly caused thereby. Guarantee also terminates if orderer does not observe the operating instructions.

Guarantee does neither apply to natural wear, to damage caused during storage or by corrosion, nor to damage caused by negligent or improper handling. Guarantee does not apply to used machines or apparatus.

The operation instruction published by the manufacturer has been carefully prepared and is based on extensive tests. Since manufacturer has no influence on installation and handling of apparatus, the company will not assume any responsibility for lack of success or for damages caused by the apparatus itself or by its use.