

INSTRUCTION MANUAL

for TRAMA

Herbicide Sprayer for undiluted ROUNDUP®

ATTENTION!

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

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



USER SAFETY RECOMMENDATIONS for TRAMA

- 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 turn the wheels for approx. 2 minutes.

SET-UP AND OPERATION OF THE APPLICATOR

**Plug the 2-core plug of the control box in the socket of your tractor.
Operate switch of the control box.**

The atomisers are powered by the tractor battery. The fluid metering is handled by a metering pump. 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 valve on top of the chemical tank. 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

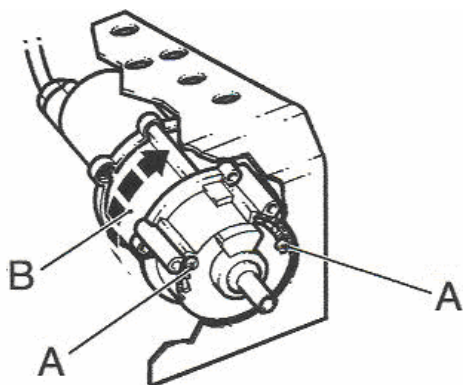
Before lifting the spray hood, be sure to close valve and switch off atomiser.

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.

TRAMA 2004

Assembly Instruction

- A. Set height of spray hoods
- B. Connect electrical plug into powerpack socket
- C. Adjust spray width of atomizers (see drawing)



A = Spray width variation

B = Direction of rotation

TRAMA Calibration Instruction

Roundup - undiluted -

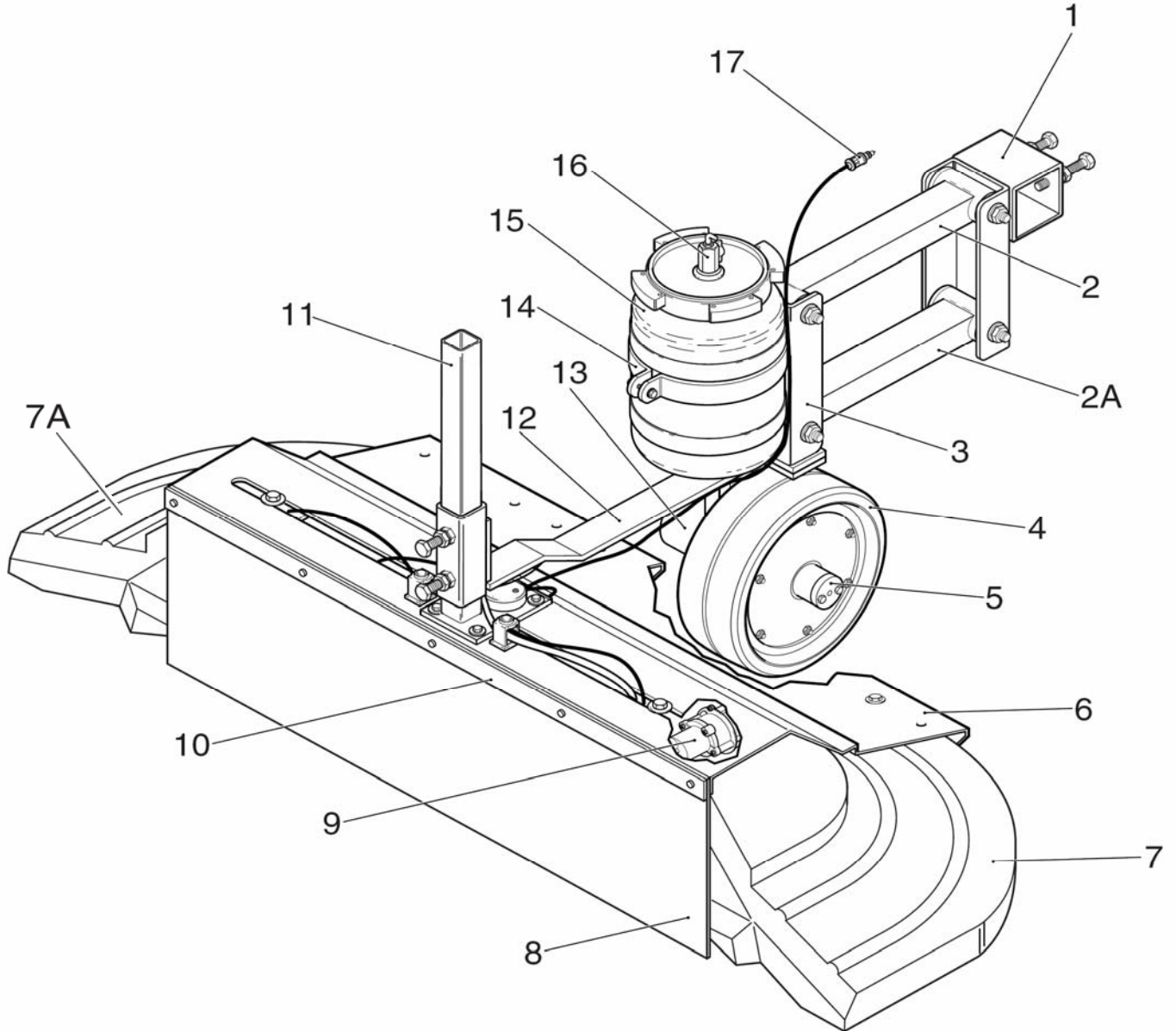
Checking the flow rate

The pump Type MANKAR-95 pumps the liquid into the spray hood with 2 atomizers.

Application Rate of undiluted setting ROUNDUP PER HECTAR treated area	Width of spray hood	Required yield for 50 wheel-rotations per atomizer	Metering knob setting approx.	Width of Spray hood	Required yield for 50 wheel-rotations per atomizer	Metering knob approx.
2,0 l	75 cm	3,5 ml	E	100 cm	4,7 ml	G
2,5 l	75 cm	4,4 ml	F	100 cm	5,9 ml	H

Checking the Flow Rate

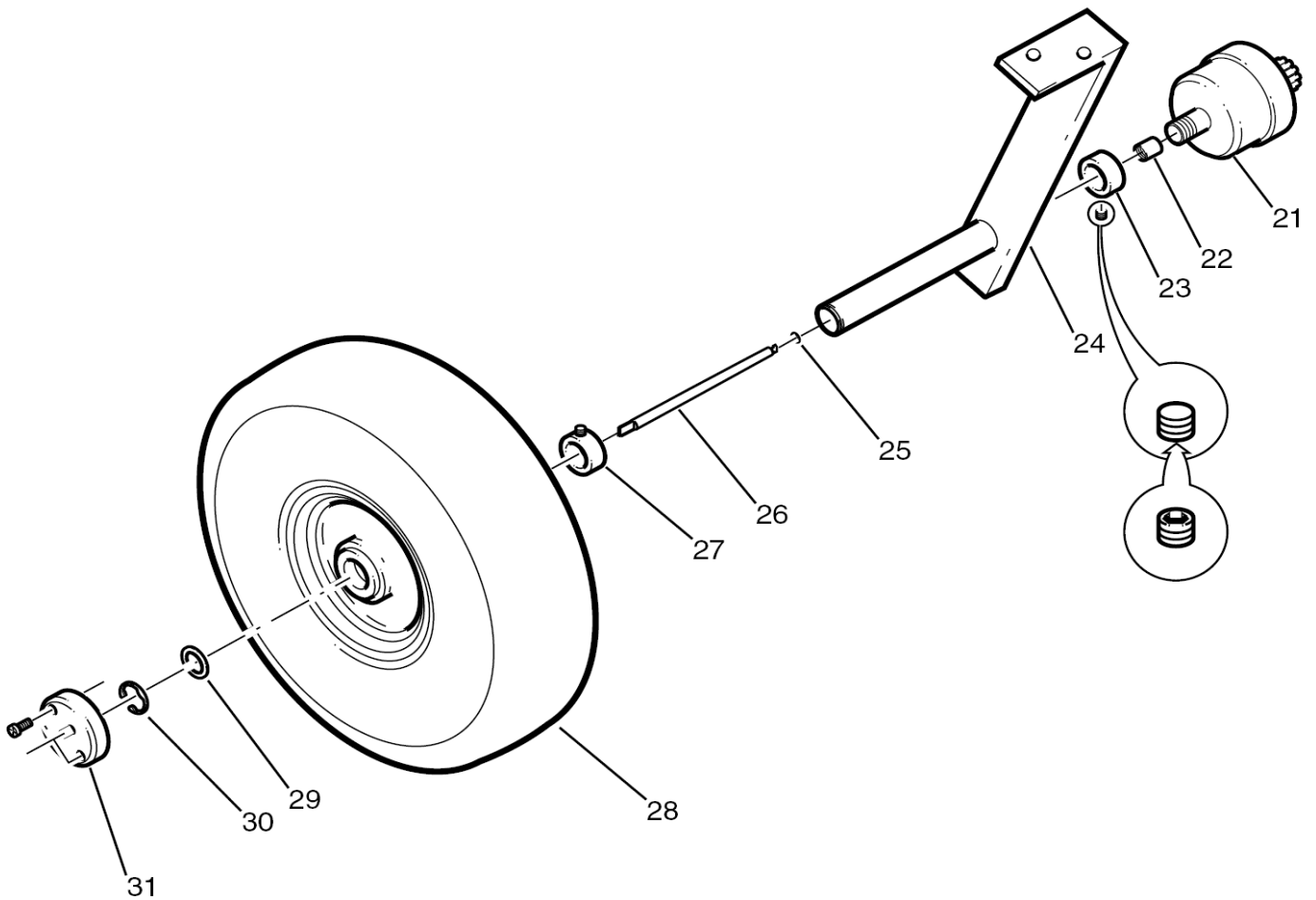
1. Fill tank with chemical solution
2. Fit screw cap with cock and filter
3. Open shut-off valve
4. Set metering knob to suggested letter
Refer to table
5. Disconnect hose coupling
6. Collect fluid in the metric measuring cup for 50 wheel rotations.
7. Check table and (if required) adjust metering knob to obtain desired flow rate.
8. Repeat steps 5 & 6 (if necessary)



Item Part No. Description

100765 TRAMA, without 3-point-hitch

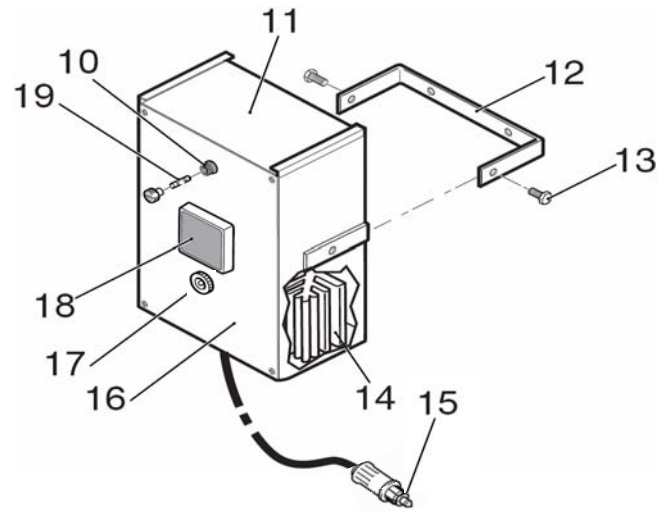
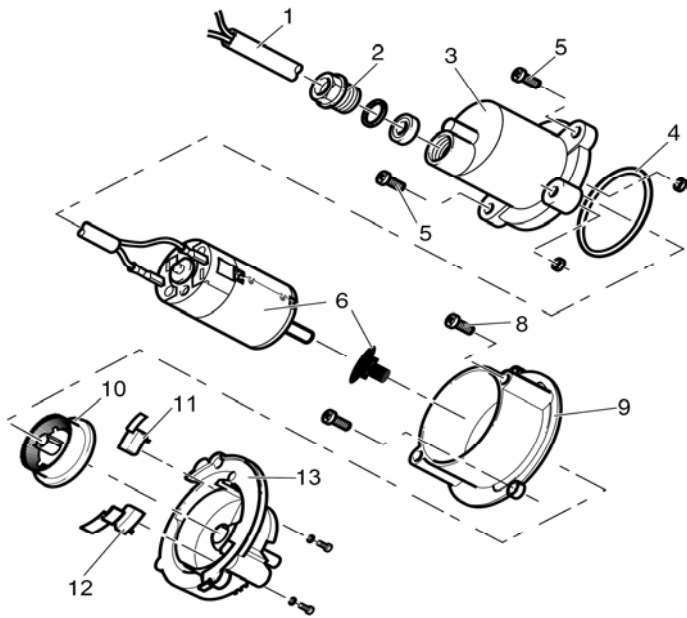
1	100612	Suspension
2	100617	Parallelogram
2A	100641	Parallelogram with cable protection
3	100647	Seat for parallelogram, TRAMA
4	100598	Farmflex wheel 300 x 100 mm
5	100600	Cardan shaft driver
6	100363	Metal hood, 600 mm width
7	100426	Spray hood, splitted 25 cm, right
7A	100400	Spray hood, splitted 25 cm, left
8	100380	Rubber curtain for MANKAR-110 P + GP
9	100320	SEGMENTAL-ATOMISER 2006 for MANKAR
10	100381	Fastener for rubber curtain
11	100626	Sprayhood adjustment, Flexomant
12	100766	Mounting bar for sprayhood
13	100660	Pump protection
14	100623	Tank holder for 6 litre tank
15	100624	Tank, capacity 6 litre
16	100390	Ball valve
17	100386	Electric cable complete for MANTRA
no pic	100522	Metering pump MANKAR-95, 3 pistons
no pic	100543	Control box with 1 switch, with converter 12 to 6 Volt, for Flexomant, Trama, Tramus



Item Part No. Description

100686 Pump drive subassembly FLEXOMANT

21	100522	Metering pump MANKAR-95, 3 pistons
22	100392	Screw socket
23	100389	Socket for pump
24	100645	Pump support complete
25	100141	O-ring 4,47 x 1,78 mm
26	100597	Cardan shaft-V
27	100377	Set collar 20 mm
28	100598	Farmflex wheel 300 x 100 mm
29	100457	Washer 28 x 1 mm
30	100394	Seeger circlip ring
31	100600	Cardan shaft driver



Item Part No. Description

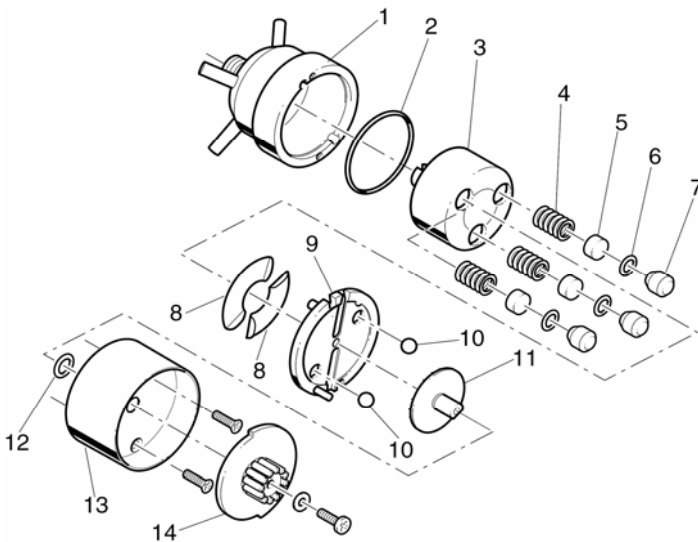
100320 SEGMENTAL-ATOMISER 2006 for MANKAR

1	100388	Cable	8	100003	Screw M 3 x 10
2	100121	Screw fitting PG 7	9	100487	Atomiser housing, front
3	100486	Motor housing	10	100478	Atomiser disc
4	100482	Para-Sealing	11	100479	Spray limiter, right
5	100996	Screw M 4 x 12	12	100481	Spray limiter, left
6	100345	Motor subassembly for atomiser since 1996	13	100490	Atomiser housing, rear

Item Part No. Description

100543 Control box with 1 switch, with converter 12 to 6 Volt for Flexomant, Trama, Tramus

10	100365	Fuse housing complete	16	100586	Front panel for control box
11	100578	Pump housing	17	100693	Socket, d=2,1 mm
12	100585	Handle for control box	18	100464	Switch with control light
13	100861	Star-shaped clamp screw	19	100730	Fuse T3.15 Amp
14	100667	Converter 12V to 6V			
15	100069	E-cable with 2-core plug			



Item Part No. Description

100522 Metering pump MANKAR-95, 3 pistons

1	100528	Pump housing, 2 pressure lines, for MANKAR-110P, -GP
2	100498	O-ring 41 x 1,78 mm
3	100138	Rotor, 3 cylinder
4	100529	Spring, bronze
5	100140	Piston
6	100141	O-ring 4,47 x 1,78 mm
7	100142	Distance piece
8	100530	Wobble plate, Mankar-95
9	100531	Pressure plate, Mankar-95
10	100532	Ball, 6 mm, stainless
11	100533	Selector, Mankar-95
12	100499	O-ring 7,65 x 1,78 mm
13	100534	Pump cover
14	100523	Metering adjustment knob, Mankar-95

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 24 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.

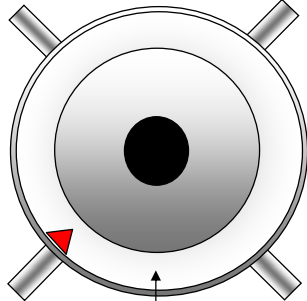
Since manufacturer have no influence on installation and handling of apparatus, the company will not assume any responsibility for lack of success or for damages caused by the apparatus itself or by its use.

Dosierpumpe MANKAR
Metering pump MANKAR
Pompe doseuse MANKAR

Dosierpumpe MAFEX 95 MS
Metering pump MAFEX 95 MS
Pompe doseuse MAFEX 95 MS

Druckseite
Pressure sleeve
Pression

Saugseite
Sucking sleeve
Aspiration

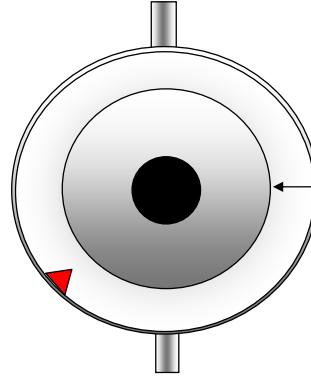


Saugseite
Sucking sleeve
Aspiration

DOSIERKNOPF
Metering adjustment knob
Réglage de débit

Druckseite
Pressure sleeve
Pression

Druckseite / Pressure sleeve / Pression

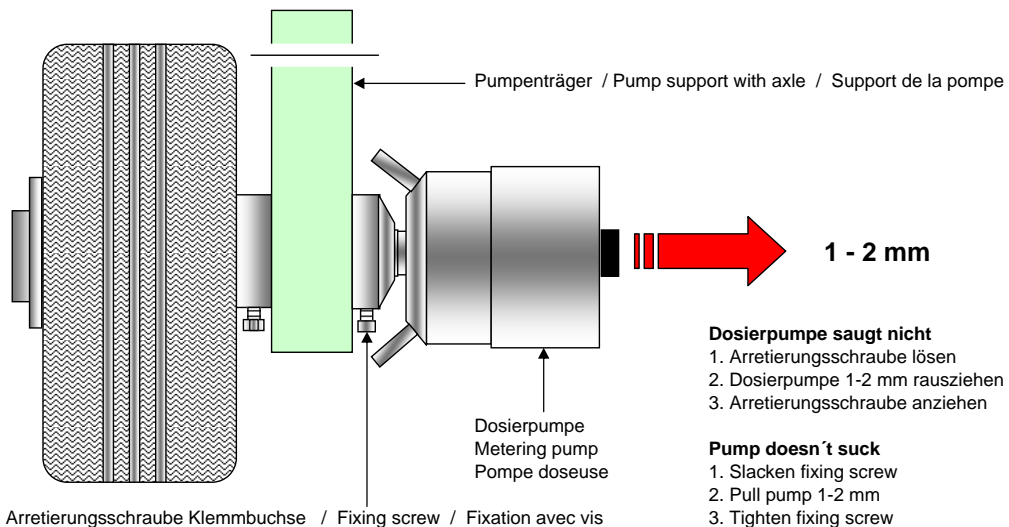


DOSIERKNOPF
METERING
ADJUSTMENT KNOB
RÉGLAGE DE DÉBIT

Saugseite
Sucking sleeve
Aspiration

Dosierpumpe saugt nicht
Metering pump doesn't suck
La pompe doseuse n'aspire pas

Pumpeneinheit Mankar/Flexomant
Pump subassembly Mankar/Flexomant
Pompe sur roue Mankar/Flexomant



- Dosierpumpe saugt nicht**
1. Arretierungsschraube lösen
 2. Dosierpumpe 1-2 mm rausziehen
 3. Arretierungsschraube anziehen

- Pump doesn't suck**
1. Slacken fixing screw
 2. Pull pump 1-2 mm
 3. Tighten fixing screw

- La pompe doseuse n'aspire pas**
1. desserrer la vis de fixation
 2. tirer la pompe 1 à 2 mm (libre jeu du cardan)
 3. serrer la vis de fixation