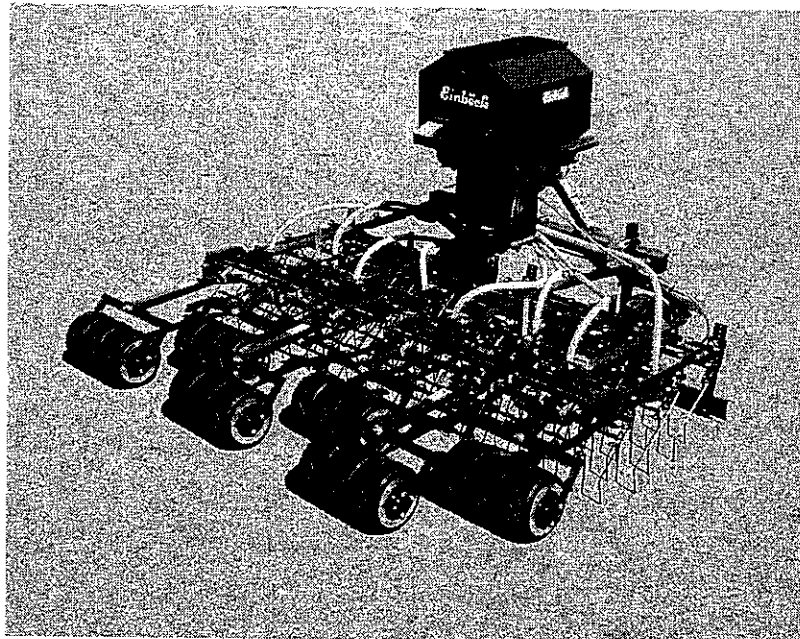


Operating Instructions And Spare Parts List

**Grassland Undersower Seeder
PNEUMATICSTAR 1.50 – 6.00**



Bitte Daten eintragen!

Einböck
BODENBEARBEITUNG

Landmaschinenbau Ges.m.b.H. & Co. KG
A-4751 Dorf an der Pram Austria
Telefon (0043) + 7764 / 64660

TYPE: P-STAR 600

FAB. NR.: 561110176 CE

Einböck
BODENBEARBEITUNG

EC - Conformity Declaration

Referring to the EG-regulations 89/392/EWG

Einböck
Zertifiziert nach EN ISO 9001

Einböck GmbH & CoKG
A-4751 Dorf an der Pram, Schatzdorf 7
Tel. ++43 (0) 77 64 764 68-0
Fax. ++43 (0) 77 64 764 68-85
Internet: <http://www.einboeck.at>

The producer, the company **Einböck GmbH & CoKG** ; Schatzdorf 7 ;
A-4751 Dorf an der Pram declares that the product

Grassland Undersower Seeder: PNEUMATICSTAR 1.50 – 6.00 m

Type / Fabrication Number (see at the Delivery declaration)

to which the conformity declaration refers, corresponds with the respective basic safety- and health regulations of the EC-instructions 89/392/EWG and the requirements of the other respective EC-regulations.

If so: Title / Number / status of issue of the other EC-instructions

For the skilful realisation of the mentioned safety- and health regulations mentioned in the EC-regulations the following norms and/or technical specifications have been applied:

EN 292-1 : 1991; EN 292-2 : 1991

if so: Title / Number / status of issue

Safety and technical requirements for soil treatment equipment ÖNORM L 5224

Dorf /Pram, 01.08.1999
Place, date



Signature

Einböck Leopold
Managing Director

We would like to congratulate you on the purchase you have made and would wish you a great deal of enjoyment and success, when working with this equipment.

Please make sure that you read all the information contained in these instructions before you operate the machine.

Guarantee

On receipt of the machine, please examine it immediately for any possible damage incurred during transportation. Delayed complaints for damage incurred during transportation will not be acknowledged.

Einböck grants a six month Company Guarantee, valid from the date of delivery (your invoice or delivery note serves as an insurance document).

This guarantee is valid in cases where the materials used, or constructions are defective. It does not apply to parts, which are damaged through normal or excessive wear-and-tear!

The guarantee is invalid:

- Whenever damages result from the use of excessive force
- Whenever the machine is known to have been incorrectly operated
- Whenever the stipulated KW/HP limit is exceeded
- Whenever the machine is altered, enlarged or equipped with other spare parts without the manufacturer's consent.

All information, pictures and technical data in this operating instruction comply with the latest state at the time of publication. Design changes are reserved at any time and without notice (publication).

Accident Prevention

The general accident prevention regulations are to be complied with (those regulations which are relevant to the country concerned).

When unhitching the equipment, make sure you secure it against unintentional toppling with the authorised unhitching supports. The machine is only allowed to be used by operators who are aware of the danger positions and are acquainted with the regulations for travelling on public thoroughfares.

Transporting on Public Road (The most important regulations)

The permitted axle load and the tractor's total weight must not be exceeded.

The attached equipment must be made identifiable with warning signs or red and white striped tape (according to the German, Austrian or relevant industrial norm).

Dangerous or other vehicle-endangering parts must be covered, as well as being made identifiable with warning signs or red and white striped tape (as above). Warning signs or tape should be attached a maximum of 150 cm above the carriageway when transporting.

Tractor lighting must not be impaired by the attached equipment; otherwise it must also be repeated on the attachment.

The attachment is not allowed to impair or diminish the tractor's steering capability!

Operating instructions for the **E i n b ö c k Grassland Seeder** **PNEUMATICSTAR 1.50-6.00**

- 1) Make sure you read all of the accompanying documents in the operating instructions. Especially the annex "For your safety"...
- 2) Hitching the Grassland seeder onto the tractor
- 3) Test turning of the pneumatic seed appliance
- 4) Work position and adjustment of the tine aggressiveness
- 5) Driving on the Roads
- 6) Servicing and Upkeep
- 7) Correct assembly of the grassland plates
- 8) Operating instruction of the pneumatic seed box

2. Hitching the machine onto the tractor:

The tyre pressure of the back wheel by tractor should be 0,8 bar, before you start to work.

Additional wheel load can be profitable under harder working conditions. See also the operating instructions of the tractor's manufacturer.

The tractor must be equipped at the front with sufficient ballast load, to grant the manoeuvrability and the brake horse power. A minimum of 20 % of the tractor's dead weight is required on the front axle.

The bottom linkages must be positioned on the left and right side at the same height.

Hitch the machine onto the three-point linkage of the tractor.

Hook in the top link, so that it can fall away from the tractor during operation. Mind also the yellow sticker on the machine. (Mind the instructions of the manufacturer of the tractor.)

Adjust the side-wing so, that the machine can swing freely on the field and that it can be fixed in the transport position.

3. Test turning of the pneumatic seed appliance (only for Pneumaticstar 6.00)

Connect the plug, making sure that all connections are completely clean.

Fill the cylinder with oil (It is full when the load has been taken off the safety chains.)

Before you fold the machine you must bring the tines to a certain angle. So you do not damage tines when folding (see the supplement of "Table for tine position by the folding adjustment").

Unhook the safety chain and hook in on the other end of chain.

Make sure that nobody is standing within the danger area and unfold the equipment.

The machine must be lifted up from the ground by the folding to the transport position. Don't forget to hook on safety chains.

Drain the hydraulic hose using the floating position, only then disconnect the plug.

4. Work position and adjustment of tine aggressiveness:

The machine should be attached on the tractor in a horizontal position; the machine shouldn't be suspended on one side.

Mind the yellow sticker on the machine for the right adjustment. Mind that the fork suspension of the section should press on the field more at the rear than on the front.

The first and the last tine-row should enter the soil at the same level (working depth).

The tine aggressiveness is controlled with an adjustment lever per section. Depending on the soil conditions, the tine can be changed through section and frame.

If the pressure of the re-consolidation rolls is too low (only possible with the Pneumaticstar 6.00 m) you can change the pressure carefully directed through filling of the rolls (cinders, sand or gravel, NO water) **Attention:** per roll unit = roll + gear and frame of the roll **maximum weight 26 kg**

To do this you need to take away the black protecting cap, which is positioned at the side of the rolls.

In order to distribute the mole-hills and the manure much better, we offer grassland sheets in series. You can mount additional front-levelling plates, if the desired effect fails to appear. (Extra charge for optional equipment).

5. Driving on the Roads:

Before you fold the machine to the transport position you must bring the tines to a plain level. Otherwise the seed box of the 6.00 m machine can be damaged. Respectively the tines of the 12.00 m machine can be damaged by hail.

Make sure the safety chains are hooked on.

Check also if any safety tension pins have been lost whilst working on the fields.

Refer to the Highway Code (Road Traffic Act) whenever transporting on public thoroughfares.

Only drain the hydraulic hose via the floating position of the controls of the tractor when you have returned to the yard.

For the transport on the road we recommend to fold up the re-consolidation rolls in the back because of the centre of gravity

for 2 m machine = 2 pieces

for 3 m machine = 3 pieces

for 6 m machine = 6 pieces

Attention with the 6 m machine: Fold up the re-consolidation rolls of the outer sections **before** and the rolls of the middle sections **after** you fold the machine to the transport position. When folding to the working position you act in reverse order.

Please note, that the transport width is more than 3.00 m after folding of the re-consolidation rolls because of the sloping-position of the side sections.

6. Servicing and Upkeep

When you lift up the machine from the ground the two side-wings of the frame should look downwards a little bit. Is this not the case, or the side-wings look too much downwards, and then you must tighten the backstop screw on the joint.

Please mind the following instructions, if you want to keep the machine in a good condition after a long working time:

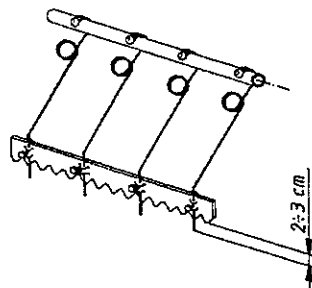
- In the annex “For your safety” you will find some general safety rules for servicing.
- Parts and accessories are conceived especially for the machine.
- We point out especially, that original parts and accessories which are not delivered by us are also not inspected and released by us.
- The mounting and the use of such parts can possibly change and impair the constructional quality of your machine negative. The manufacturer does not undertake liability for damages which are caused for the use of not original parts.
- Independent changes and the use of components and attachment parts on the machine exclude the liability of the manufacturer.
- Tighten all bolt connections after a maximum of 3 working hours, and once again after approx. 20 working hours. Check regularly afterwards. (Loose bolts can cause a great deal of consequential damage which is not covered by the guarantee).
- Regularly grease the greasing points on all joints (Recommended: every 10 operational hours, with all-purpose grease)
- Also grease the linkage slots on equipment with quick – release coupling.
- After the first 10 working hours and then after all 50 working hours you should test for leaks in the hydraulic-aggregate and the pipes and tighten all screws.
- Before every operation you should check the hydraulic-pipes of wear.
- Attention! Fluid which flows out under high-pressure can cause hurts. Contact a doctor immediately!
- After cleaning grease all lubrication points and distribute the lubricant consistently good in the bearing (for example a short test run).
- Don’t use a high-pressure cleaner for cleaning of gearing- or hydraulic-parts.
- Varnish-damages can be caused by cleaning with high-pressure.
- After the season protect the machine with non-polluting prophylactic from rust.
- Park the machine where you can keep from influence of the weather.
- Only park hydraulic and also mechanic machines in folding position.
- Unhitch the machine so that the tines are free of any pressure.
- Check the tyre pressure (Tyres 16x 6.50 ca. 2 bar, 18 x 8.50 ca. 2,5 bar)

7. Correct assembly of the grassland plates:

The 1, 5 m section is designed to carry 3 grassland plates, for a 2, 0 m section you need 4 grassland plates.

Attach as shown in the sketch below.

Bolt alternately onto the 2nd and 4th tine row of the weeder (this can also be done in other variations).



9. Operating instruction for the pneumatic seed appliance:

- 1) Basic setting of the seeding-shaft (dosing-roller)
- 2) Changing of the dosing-roller
- 3) Test-turning
- 4) Operating at the field
- 5) Emptying of the box
- 6) Service and Upkeep
- 7) Hectare counter (Extra charge)
- 8) Additional parts (Extra charge)
- 9) Analysis of defects

You must to lay the delivered cable with the fuse box, which is intended for the tractor-side, according to your introduction. (look at the enclosed installation plan) You must to use in any case the delivered cable-set, because most of the tractors have a too low cross-section to grant 13 ampere per pneumatic-motor.

A. Basic setting of the seeding-shaft (dosing-roller)

Before filling in the seeds, you have to check if there is the correct dosing-roller in the appliance and that the stripper above the dosing-roller is in the right distance.

The dosing-roller with the **black** scoop parts on the whole length are suitable for: grass mixtures and in general for big volumes/quantities seeds.

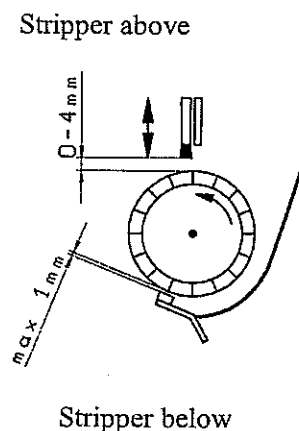
The dosing-roller with only one scoop part (for 3.00 m red, for 6.00 m black) per row is suitable in general for small volumes/quantities seeds. Beside these two serial dosing-rollers, we can offer you further rollers for other seed types or other rows.

The stripper above (**picture 8**) can be adjusted exactly by the notch lever (**picture 9**), which you find on the right side of the seed appliance (seen in the direction of motion).

The stripper distance is counted on the notch lever in front:

1. slot 0 mm
2. slot 1 mm
3. slot 2 mm
4. slot 3 mm
5. slot 4 mm

Back of machine



The basic rule: Distance between stripper and dosing-roller = $\frac{1}{2}$ of the grain size.

The stripper distance below should be 0,5 - 1 mm

B. Changing of the dosing-roller: (picture 7)

On the right side in the direction of motion you can remove the lock holder with the star screw.

Then remove the small protective covers (**picture 10**) (This part must be removed also for the test-turning) under the electric fan by pulling up pressure screws - The dosing-roller will be secured better. While pulling out the dosing-roller turn it a little bit to the left hand side. **ATTENTION:** Do not use force!

Before you put in another dosing-roller, please remove all seed rests in the appliance. The spring-loaded seal discs on the dosing-roller may not be fixed.

When mounting the dosing-roller, it must be possible to be pushed over the round shaft - you can oil the round shaft slightly.

C. Test-turning

For turning please remove again the little protective covers under the blowing engine by pulling up the spring-loaded pressure screw. (**picture 10**)

Then pull out the plate for the test turning with the 7 slots, which you find under the machine bracket, and pull it between the partition plates (**picture 11**).

Then you have to turn the driving wheel for a **working width of 6.00 m 13 times**, for a working width of 3.00 m 26 times, for a working width of 2.50 m 31 times for a working width of 5.00 m 16 times and for a working width of 2.00 m 38 times.

You have to multiply this amount in gramme with 100, and you receive the gramme per hectare. Then please divide this by 1000, and you receive kilo per hectare

You turn the driving wheel as fast as the wheel turns on the field. The bigger the seed corn the more slowly you should drive. Also the accuracy of the seeding depends on the speed. We suggest: about 6 - 8 km/h.

If there is overlap of about 10 cm while sowing, please do an additional turning of the wheel.

To change the seed amount, please move the notch lever (**picture 12**) in upwards on left hand side of the appliance (seed amount +) or downwards (Seed amount -). Attention the stated numerical value **does not stand for kg**.

While sowing the fan should always be switched on. 1 piece fan needs 13 ampere; therefore you should use the delivered cable-set with the big cross-section. The routing direction of the fan is on the right side, when you look into the paddle wheel (**picture 13**). **ATTENTION:** There is always a delay between the beginning of the turning of the actuation wheels and the falling down of the seeds.

On the enclosed adjustment scale you can insert your experiences.

D. Operating at the field :

First by operating start you must to switch on the fun by pressing of the switcher **picture 19**. (It is going on, when the little RED light shine next to the switcher.) If the machine is fitted with the mechanical fan (optional), it is no cable set attached.

The rotating direction of the E-fun motor is right, by look into the paddle wheel.

Picture 13

By machines with mechanical fans you can choose by yourself the rotational speed at the p.t.o. shaft according to requirements. By large quantity of seeds and by the speed more than 8km/h (=recommendation: no faster than 10km/h) can be operated also with 1000 turnings/min.

E. Emptying of the box:

By the emptying of the tank you must open the screw connection **picture 17** and deposit under a sack or box.

You can go ahead like by the test turning and emptying the seeds by the turning plate with the seeding wheel and the large adjustment of the knob.

By longer working breaks, the whole seeds should be deleted out the box. If you can empty the box completely, you must remove the seeding wheel.

F. Servicing and Upkeep: (Additional for the pneumatic-seed box)

From time to time it is necessary to blow out the dust with compressed air.

All 50 ha or 1 times per annum the chain of the left gearbox must be lubricated with oil and the chain stretcher must be adjusted. Therefore you must adjust the quantity lever above the raster plate **picture 15**, than the cover can be pivot (sway) downwards **picture 16**. Attention: Don't stretch the chain tightly too. Now you can mount the parts in reversely.

The proper adjustment gear unit (grey box near the tractor) does not need upkeep.

Don't use a high-pressure cleaner for cleaning of bearings and electrical fans.

G. Hectare counter (Extra charge)

Please mount the counter on the right hand side of the appliance on the three designated drill-holes. First please fill in the long shaft into the big drill-hole and then please push the throw-out lever on the shaft. Then you have to put the shaft in a designated drill-hole. Then please adjust the throw-out lever shaft, that a secured counting is guaranteed. It shouldn't stand too steep. (**picture 18 + 22**)

To calculate the floor-space you have to divide the number on the counter by the number which you turn the actuation wheel at the test turning. For example, on the counter you find the number 720 - Working width of the machine is 6 m you have to turn the actuation wheel for the test turning 13 = So you have to divide 720 by 13 = 55,4 are (= 0,55 hectare)

H. Optional equipment: (extra charge)

There is a retaining plate, which one is designed for heavy seed store and granulates. By the retaining plate you must trickle only such seeds or granulates to the dosing wheel, which can deliver outwards.

There are grass-seeds, with a very strong propensity of formation of bridges. The mechanical jogging unit can anticipate process, which one is screwed into the seed-tank.

For the mounting on the Einböck Tined weeder you can mount also filling steps, which one point at **picture 14**.

I. Analysis of defects:

No seeds coming out from the tubes!

- \$ No or too little electricity for the pneumatic-motor. (1 pneumatic motor need 13 ampere respectively check the fuse)
- \$ There is water in the tubes and the seeds are clogged in the tubes.
- \$ Also dampness can cause to stopping. Switch on the fan 5 minutes before you start to seed (for example: during the way to the field). This way the pipes can dry.
- \$ The driving wheel has no ground contact.
- \$ There is an alien element in the box (paper of the seed-bag).
- \$ Too high speed. Per minute is only a fixed amount of air available to bring out the seeds. Too high working speed can lead to stopping in the tubes. If you want to bring out more seeds you must to reduce the working speed.
- \$ Old seeds have germinated after a longer working break and therefore the sowing-wheel cannot turn.
- \$ Too heavy seeds for example: you can't bring out grain with a 3.00 m machine; it is only possible when using a second pneumatic fan (extra charge).
- \$ It isn't possible to bring out grain with a 6.00 m and 12.00 m machine. According to our experience it is possible to bring out grain at a very slow working speed and a low seed-amount.

Bad distribution of the seeds

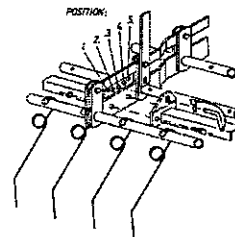
- \$ Too little electricity for the pneumatic fan(1 motor need 13 ampere)
- \$ Too much dust in the fan or when the guard (screen grid) is full of alien elements on the paddle wheel side.
- \$ The distribution plates are adjusted too steep or too flat. When you adjust the tine aggressiveness, you also have to adjust the distribution plates.
- \$ Too high working speed – per minute it is only available a certain air-amount to bring out the seeds. A high working speed can lead to a bad seed distribution. The more seeds you want to bring out, the slower the working speed should be.

There is a difference between the amount of the sowing seeds and the turning seeds

- \$ Higher working speed than turning speed
- \$ The box-cover has to be airproof – replace the cover sealing
- \$ Maybe you overlap too far?
- \$ Main-shaft (see **picture 12** in the spare part list) rev up in the dosing-roller. Check the driving pin in the shaft. Remedy – new main-shaft.

Table for tine positioning when folding

- v As the machine can not be folded into every tine position, you must move the tines into their respective positions (given underneath). This enables you to successfully fold together the machine, without damaging any of the tines.



Machine with tines	Tine position
Tined Weeder 6,00 m 7 – 8/490	1 - 2
Tined Weeder 12,00m shear-retractor 7 – 8/490	1 - 2

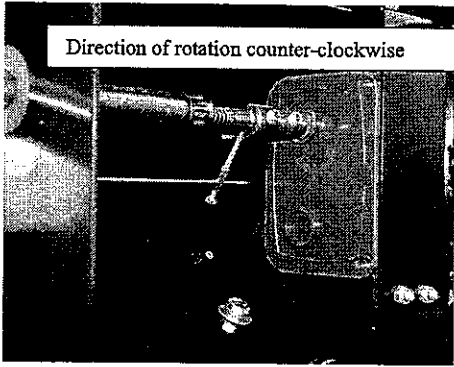


Bild 18

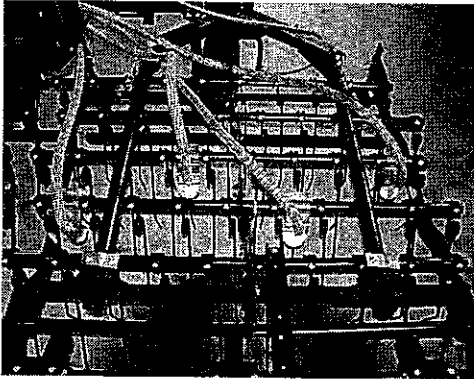


Bild 5

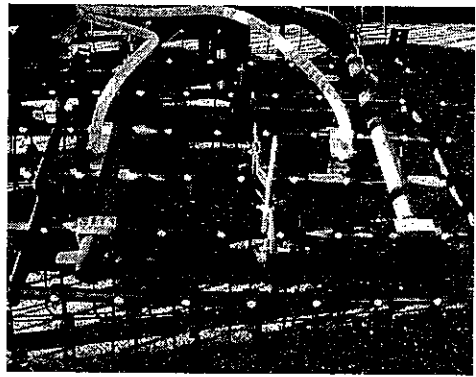


Bild 6

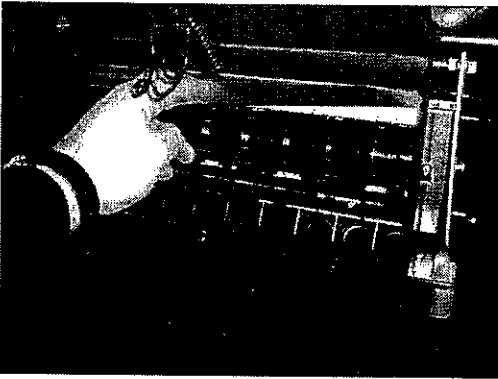


Bild 8

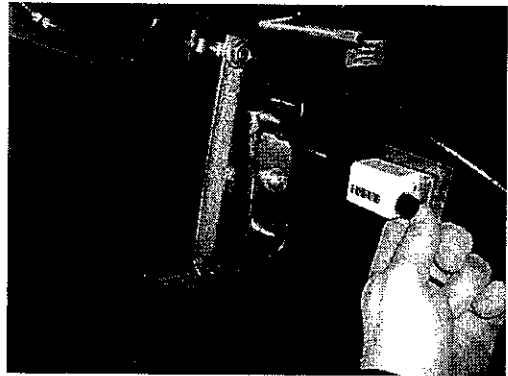


Bild 9

Bild 22

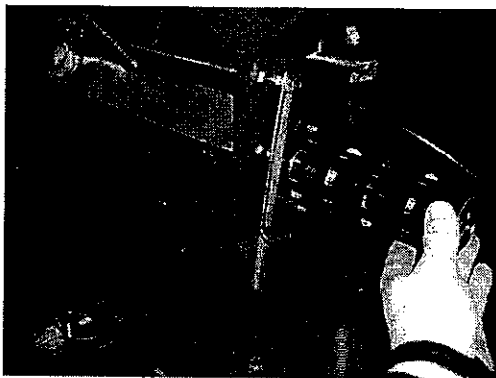


Bild 7

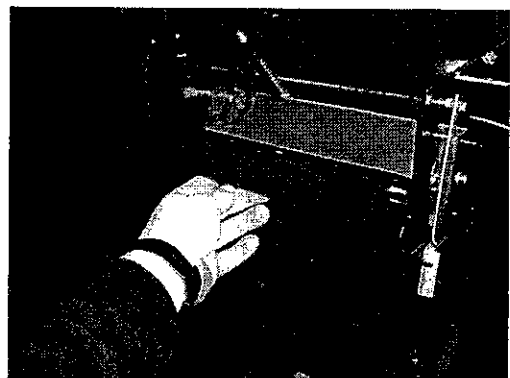


Bild 10

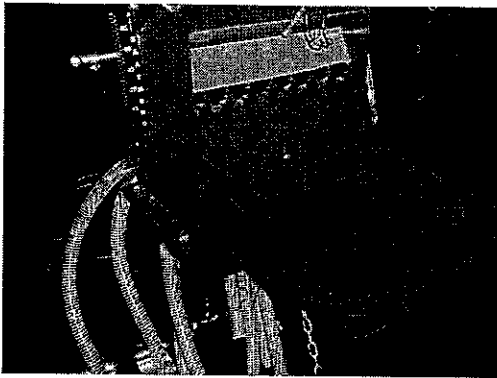


Bild 11

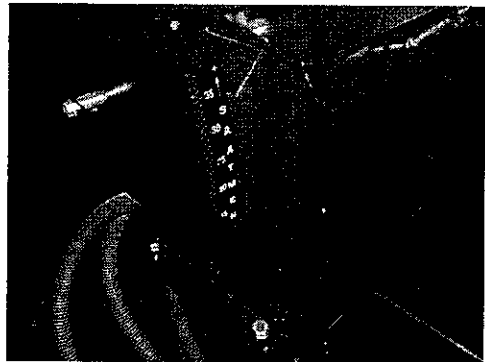


Bild 12

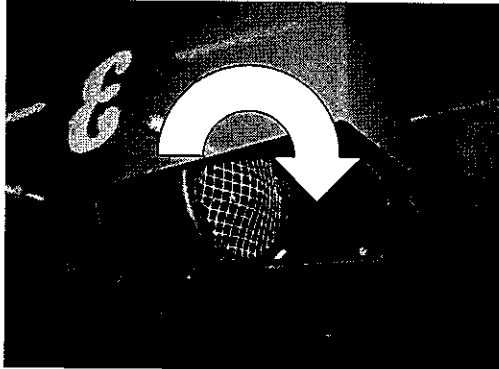


Bild 13

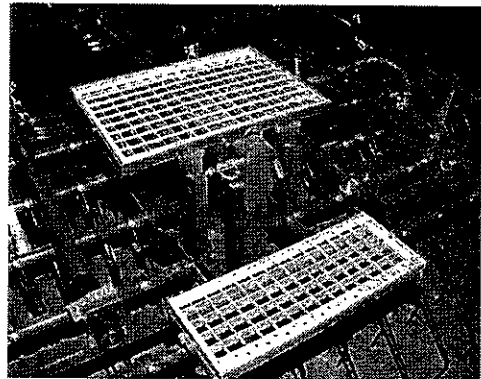


Bild 14

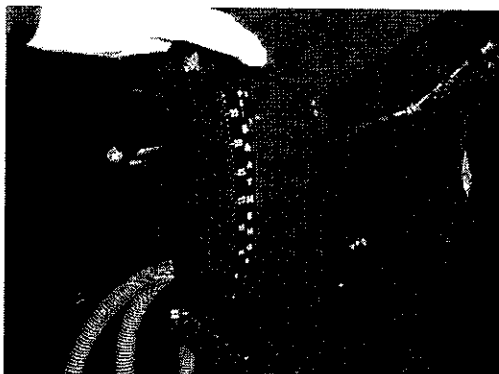


Bild 15

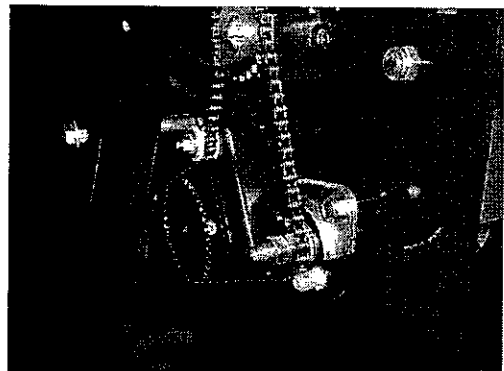


Bild 16

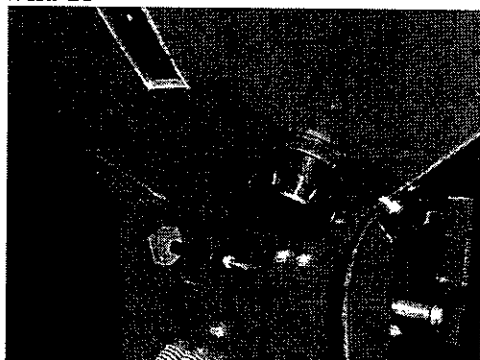


Bild 17

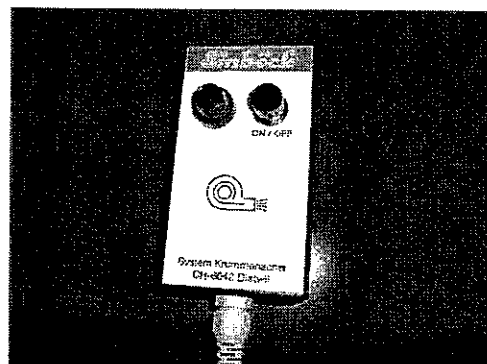


Bild 19

THE ABC OF GRASSLAND RENEWAL

A good stand grass in older pastures is in a delicate balance that is determined by soil, weather and farming methods.

An accumulation of mistakes in farming or a number of subsequent years of extreme weather conditions will disrupt this state of equilibrium and permanently throw the system off balance. Newly established pastures take years to develop their location-determined mixture of plants responsible for this sort of balance. Five to seven years after the initial sowing new pastures are in their most critical phase when certain plants are diminishing in number whilst other grasses and herbs typical for long-term grassland are spreading. That is the time when weeds take root easily and when herbs turn into weeds if the grassland management is not done properly. Sward-preserving grassland management lends itself to the purpose of improving pastures.

Quality Reserves in Basal Green Fodder

The increasing quality awareness in basal green fodder increasingly draws the attention to the plant mixture. Dense swards with a "good" mixture of high quality feed grass, legumes and herbs not only determine the yield but also the quality. This becomes evident in protein content, mineral substances, carotene and also the degree of contamination and the percentage of rotten plant elements. The latter can boost the degree of yeast and mould spores considerably in pastures rich in long-stemmed grasses and overdue for mowing.

A good grass stand means a well-balanced mixture of fodder grasses, clovers and herbs. A limited amount of weeds like *heracleum sphondylium* and *anthriscus silvestris* are considered part of our typical managed grassland.

A balanced grass stand may well contain weeds like *rumex acetosa*, *heracleum sphondylium*, *anthriscus silvestris*, *achillea millefolium* or *ranunculus acris*, i.e. meadow buttercup. They are tolerated as a standard feature of typical managed grassland in our region. The important thing is not to let them take over and thus become a problem for the hay composition, sward closure and fodder value. As a matter of fact it is hard to determine limits for the amount of weeds in green fodder since the type of soil, the amount of precipitation and the intensity of farming greatly influence the degree of a tolerable level of weeds.

Eliminating Causes for Deterioration

In the long run, grassland improvement will only be successful when farming mistakes are eliminated.

This means: The cutting height needs to be set at 5 cm, blades must be sharp, pickup attachments and swathers must not scrape the soil and the time (especially for the first) cut must be right. Of these factors the cutting height and the swather adjustment in particular form the basis for a long-lasting grassland improvement.

Choosing the Right Seed

Beware of cheap "Field, Forest and Grassland" seed mixtures that contain no or very few officially tested and approved species. The joy over savings turns into the opposite quite soon, often already in the year of sowing. Purchasing cooperatives are also under obligation to screen the quality of their seeds.

Only in rare cases are the missing species replaced by other valuable ones - mostly aggressive, low-quality plants like *poa pratensis*, *stellana media*, *veronica officinalis* (speedwell), *capsella bursa pastoris*. No improvement in the grass stand will take place. Only premium quality seeds will help to master the difficult initial phase (high competition). Only a

quality mixture tested by an independent authority for frost resistance, endurance, sward density and disease resistance will guarantee the desired results.

The premium oversowing mixtures with the ÖAG label can fulfil those requirements. We recommend asking for the mixture suitable for exposed areas.

Preparing the Sward

Grasses and clover that have been oversowed require plenty of air and light. They should preferably stand alone, which is usually made possible by patches in the old sward or by the pinpointed or selective elimination of weeds. Quite often massive damage by burrowing mice or field mice after long winters with a solid blanket of snow may make oversowing necessary in order to restore a closed sward. Pinpointing seems to be the preferable approach since it entails the least follow-up problems. Treating entire areas with selective herbicides may be considered when the labor intensity for pinpointing is unacceptable. The choice of herbicide will depend on the predominant weeds and the existing grass and clover sward. It will be necessary to observe the required waiting periods after the herbicide application.

The Upper Austrian Chamber of Agriculture has published a brochure containing tips on battling selected weeds in pastures.

The old sward must offer enough room for the oversowing mixture. Otherwise oversowing would not make sense.

The Right Time, The Proper Technology

Seedlings are very vulnerable and require proper soil moisture conditions during and after germination. On the other hand, the competitive pressure from the growing old sward should be minimal. A compromise needs to be found. Oversowing after the first cut usually warrants enough soil moisture. Particularly after an early silage cut rain can normally be expected. In areas with arid summers oversowing after the second growth is not advisable, the young plants cannot develop an adequate winter resistance any more.

At the same time the second growth is less dense and takes a while to re-start so that the germinating seeds have a longer period of "competition free" growth.

Grassland improvement immediately after the first cut has proved to be the most successful. The pastures are easier to drive on and the second growth is less dense and remains lower.

Success Factor "Post Sowing Management"

The great care in oversowing and the quality of the seeds will only bear fruit if the first growth of the young plants is used at a height of max. 20 cm. At this height there is considerably less green matter we recommend mixing it in with the fodder or preserving it in silage bales.

Most failures in oversowing seem to be traceable to faulty post sowing management in the first year. Instantly after germination an intense competitive battle between the seedlings and the established plants sets in in which the new plants are at an obvious disadvantage.

Only a cut in time will provide the young plants with adequate light and air. In addition, light will enhance the stocking of the grasses. The second cut after oversowing can be a normal aftermath. However, the proper cutting height will have to be observed.

A cutting height of appr. 5 cm will give the grass enough green stalk; it can assimilate immediately after the cut and form nutrients for the renewed growth. Besides the stocking process, essential for sward density, receives an additional boost.

Using Nitrogen Fertilizer Wisely

It is better to refrain from using nitrogen fertilizer when oversowing, i.e. immediately after the first cut. At that point it could only be processed by the existing grass stand. These plants however, should not be encouraged in resuming growth to give the seedlings as much time to establish themselves as possible. The young plants initially have enough nitrogen at their

disposal: Dung from the previous autumn and liquid manure spread prior to oversowing will guarantee an adequate supply.

After the aftermath adding about 40kg of nitrogen per hectare appears necessary because on the one hand it can be well absorbed by the new grass and on the other hand it enhances the stocking process.

In case the liquid cattle manure is watered down by at least 50% and an even spread (homogenisation and distribution) can be guaranteed, fertilizing the pasture with such a mixture is permissible.

Quelle: Landwirtschaftskammer f. O.Ö. 1997 – Dipl. Ing. Peter Frühwirth



For your safety.....

This supplement to the operating instructions contains general behaviour rules towards the agreed use of the equipment, as well as safety technical advice, which you really should take notice of in order to ensure your personal safety.

The list is very extensive. Some of the advice is not exclusive to the delivered equipment. The advice summary is often however, remembered by you, often without you realising it as you daily operate the machine and equipment. In addition you take notice of the remaining safety rules.

1. Agreed Use

- The equipment has been built for the exclusive purpose of carrying out agricultural tasks.
- Any use exceeding this, counts as not having been agreed upon, and the manufacturer is therefore not responsible for damage resulting from this. In this case the responsibility is borne solely by the user.
- Adherence to the working, servicing and maintenance requirements as laid down by the manufacturer is also a part of the agreed usage.
- The equipment may only be used, serviced and maintained by the people entrusted with this task and who have been informed of the dangers. Please also pass on all safety instructions to other users.

- The relevant accident protection regulations as well as the particular generally recognised safety technical, working medical and road traffic rules are to be adhered to.
- The manufacturer accepts no responsibility for damage resulting from unauthorised alterations to the equipment.

2. General Safety: Technical Advice and Accident Prevention Regulations

- Check over the machine and the tractor for traffic and operational safety before every inauguration
- Take heed of the general current safety and accident prevention regulation.
- Attaching warning and advice signs onto the equipment provides important information which ensures a danger-free operation.
- Pay attention to the relevant regulations when using public thoroughfares.
- Make sure you are familiar with all the setting up and operation basics as all their functions before you begin working; it is too late during use.
- The user should wear tight-fitting clothing – avoid wearing loose clothing.
- Keep the equipment clean to avoid the risk of fire.
- Check the surrounding area before driving off and before operating the machine (children). Ensure that you have sufficient all-round visibility.
- Nobody is permitted to ride on the machine whilst working, or whilst being transported.
- Couple on the machine according to the regulations and only fasten onto those linkage points stipulated by the manufacturer.
- Special attention is needed when hitching and unhitching from the tractor.
- Set up the supports in their respective positions whenever attaching or detaching equipment.
- Always attach loads according to regulations and always to the linkage points provided for that purpose.
- Comply with the permitted axle load, total weight and transporting measurements.
- Check over the transporting equipment e.g. lighting, warning equipment and possible guard fittings.
- Release ropes for the hydraulic coupling must hang loose. They should not be able to release themselves when working on a deep setting.
- Never leave the tractor seat whilst driving.

- Driving conditions, steering ability and braking ability are affected by attached or hitched on equipment and pallet weights.
- When turning, take into consideration the extended overhang and/or the swinging affect.
- Only operate the machine, when all safety guard devices are attached and in the guard position.
- Staying within the working area is forbidden.
- Do not stay within the turning and swing area of the machine.
- Hydraulically folding frames may only be operated when nobody is within the swing area.
- “Squash and cut spots” are to be found where different power parts are in operation (e.g. Hydraulic).
- Always make sure of a good stable standing position with machines with manual folding.
- There is a danger of a run-on swing effect after raising in machines driven at speed with ground driven tools. Only approach when the equipment is motionless.
- Before leaving the tractor seat – lower the machine onto the ground, switch off the engine and remove the ignition key.
- Nobody is permitted to remain in between the tractor and the machine without the vehicle being secured against further movement by the locking brake and/or wedges placed underneath.
- Secure folded frames and lifting equipment in the transport position.
- Swing in the “catching-arm” and look in place before travelling onto the carriage way.
- Bolt the track guide into the transport position.

2.1. Attached Equipment

- Position the setting-up equipment before hitching or unhitching machines onto and from the three linkage, to exclude unintentional raising or lowering of the machine.
- The attachment categories of the tractor and equipment must match or agree for the three-point linkage.
- “Squash and Cut” spots constitute a danger within the area of the three point linkage.
- Do not stand between the tractor and the machine when operating the external control
- Always make sure that the three-point linkage bars are fastened firmly on the side when the machine is in the transport position.

2.2. Trailer equipment

- Secure the machine after the parking with parking chocks!
- Mind the maximum permissible support load of the trailer coupling, swing-axle or hitch!
- Pay attention to enough mobility on the trailer point by the tractor hitch!

2.3. Hydraulic Fittings

- Hydraulic fittings are highly pressurised
- Pay attention to the stipulated connectors of the hydraulic hoses when connecting hydraulic cylinders and hydraulic motors.
- Make sure whenever connecting the hydraulic hose to the tractor's hydraulics that the hydraulics both on the tractor as well as on the equipment are depressurised.
- If connecting the hydraulic functions between the tractor and the equipment, coupling sleeves and plugs should be marked, so that mistakes cannot be made. Mixed up connectors will lead to reversed functions (e.g. raising/sinking) – Danger of accidents.
- Regularly check the hydraulic hose leads and replace if damaged or worn out. The replaced leads must satisfy the technical demand requirements at the equipment manufactures.
- When looking for leaks use a suitable agent because of danger of injury
- Escaping high-pressured liquids (hydraulic oil) can penetrate the skin and cause serious injury. Seek immediate medical assistance if there are injuries (danger of infection).
- Before beginning work on the hydraulic fittings, unhitch the machine depressurise the fittings and switch off the motor.
- Only unhook the safety chains after they have gone slack (the cylinder must be filled with oil).

2.4. Servicing

- Always only undertake maintenance, servicing and cleaning work once the drive has been turned off and the motor is motionless – remove the ignition key.
- Regularly check guards and bolts to make sure they are fitted tightly and if necessary, tighten them.
- Always ensure complete safety when carrying out maintenance work on the raised machine by using the proper supports.

- Use suitable tools and gloves when replacing working parts with cutting edges.
- Dispose of oil, grease and filters properly.
- Always be sure to disconnect the electricity supply before working on the electrical fittings.
- Always clamp the cable onto the generator and the battery before carrying out electrical welding work on the tractor and attached equipment.
- Spare parts must at the very least satisfy the technical requirements stipulated by the equipment manufacturer. These requirements are given from the original parts.

2.5. Pin shaft operation (only for pin shaft driven equipment)

- Only those joint shafts stipulated by the manufacturer may be used.
- Guard/bars and guard guides of the joint as well as pin shaft guards – on the equipment as well – must be attached and kept in a proper condition.
- Ensure the correct stipulated pipe covers of the joint shafts when in the transporting and working position.
- Only connect and disconnect the joint shaft when the pin shaft has been turned off and the ignition key removed.
- Always ensure correct assembly and securing of the joint valves
- Joint shaft protection by securing against further movement by hooking on chains.
- Make certain that the chosen Tractor's pin shaft revolutions per minute matches the permitted revolutions per minute of the equipment before turning on the pin shaft.
- Pay attention when using the pin shaft that the revolutions per minute is dependant on driving speed and the revolutions directions changes when driving backwards.
- Before switching on the pin shaft, make sure that nobody is within the equipment's danger area.
- Never turn on pin shaft when the motor is turned off.
- Nobody is allowed to be within the turning area of the pin or joint shaft when working with the pin shaft.
- Always turn off the pin shaft when big bends arise it is not needed any longer.
- Reward of danger after switching off the pin shaft due to the following-on swing load.

- During this period, nobody is allowed to approach too close to the equipment. Only after it is standing completely motionless may work be carried out on it.
- Only clean, grease or adjust the pin shaft driven equipment or the joint shafts when the pin shaft is switched off, the motor is turned off and the ignition key removed.
- Remove coupled joint shafts using the stipulated mounting.
- After dismantling the joint shafts, cover the shaft stumps with protection covers.
- If anything is damaged, immediately remove before carrying out work on the equipment.

2.6. Tyres

- Take care that the machine is parked and secured during the work on the tyres (Parking chocks).
- The mounting of wheels and tyres require sufficient knowledge and prescribed mounting tools!
- Repair works on the tyres are allowed to be executed only by technical personnel and with suitable mounting tools!
- Check regularly the inflation pressure (air pressure)! Mind the prescribed inflation pressure

BESONDERS ZU BEACHTEN

1. Verwenden Sie nur Original-Ersatzteile.
2. Machen Sie genaue Angaben über Anschrift, Postamt und Zielbahnhof. Deutlich schreiben!
3. Type, Baujahr und Fabrikationsnummer der Maschine (am Typenschild eingepreßt) angeben. Den zu bestellenden Teil mit Artikel Nr., Benennung und Stückzahl lt. Ersatzteilliste anführen.
4. Für eventuelle Fehllieferungen, die aus unvollständigen Angaben resultieren, ist der Auftraggeber verantwortlich. Bereiten Sie daher besonders telefonische Bestellungen sorgfältig vor.
5. Lassen Sie allfällige Reparaturen an Ihrer Maschine möglichst in den Wintermonaten durchführen. Sie ersparen sich dadurch Kosten und sichern sich für die Ernte ein einsetzbares Gerät.

POINTS TO NOTE

1. Use only original spares.
2. Give exact details of address/nearest post office/railway station. Write legibly.
3. Quote machine type, year of manufacture and serial number (punched in data plate). Quote order code, description and quantity required for each item ordered.
4. The customer is responsible for any mistakes in filling orders that may result providing insufficient information. Particularly when ordering by phone, prepare data carefully beforehand.
5. If possible, have your machine repaired (should this be necessary) during the winter. This will save you money and ensure that your machine is fully operational for the harvesting season.

A REMARKER SPECIALEMENT

1. N'utiliser que des pièces originales.
2. Veuillez indiquer exactement votre adresse, le bureau postal et la gare destinatrice. Prière d'édire lisiblement.
3. Veuillez mentionner le type, l'année de construction et le numéro de fabrication de la machine (gravés sur la plaquette). Indiquez la pièce à commander par son numéro, sa désignation et le nombre désirée.
4. Le donneur d'ordre est responsable d'éventuelles fausses livraisons résultant d'indications incomplètes. Préparez donc soigneusement surtout les ordres téléphoniques.
5. Faites exécuter si possible en hiver les réparations éventuellement nécessaires. Vous épargnez ainsi des frais et votre machine sera prête au moment de la récolte.

FARE SPECIALE ATTENZIONE

1. Utilizzate esclusivamente pezzi ricambio originale.
2. Evidenziate esattamente il Vs. Indirizzo, l'ufficio postale e la stazione meta. Scrivete chiaramente!
3. Evidenziate il tipo, l'anno di costruzione nonché il no. di fabbricazione dell'attrezzo (evidenziato sull'etichetta). Evidenziate l'articolo desiderato col no. del pezzo la denominazione e la quan desiderata.
4. L'acquirente sarà responsabile di eventuali errori nel fornimento, qualora doveresso risultare da indicazioni non complete. Eperci'o consigliabile organizzare accuratamente ogni ordinazione, specialmente se fatta per telefono.
5. Possibilmente fate riparare il Vs. attrezzo durante i mesi invernali. In questo modo risparmierete delle spese Vi assicurerete un attrezzo pronto all'uso per il raccolto.

BELANGRIJKE PUNTEN

1. Gebruik alleen originele onderdelen.
2. Noteer de juiste gegevens als adres c.p. postbus, postcode en woonplaats. Duidelijk schrijven!
3. Type machine, bouwjaar en serienummer van de machine (in het machineplaatje geslagen) vermelden. Het te bestellen onderdeel met onderdeelnummer, omschrijving en het benodigde aantal doorgeven.
4. Voor eventuele foutieve leveringen, ontstaan door het niet juist opgeven van de delen, is de opdrachtgever verantwoordelijk. Geef daarom telefonisch orders goed en zorgvuldig door.
5. Indien mogelijk, reparaties aan uw machine in de wintermaanden uitvoeren, dit bespaart kosten en verzekert u een goed inzetbare machine tijdens het seizoen.

Sie erreichen uns in Österreich:

Our address in Austria:

Voici notre adresse en Autriche:

In Austria potete mettervi in contatto con noi:

U kunt ons bereiken:

E-Mail: leo@einboeck.at

Im Ausland berreut Sie Ihr Händler. (Importeur)

Abroad please contact your dealer. (Importeur)

A l'étranger nous vous prions de vous adress à votre vendeur.

All'estero potete mettervi in contatto con il vostro mercante.

Uw importeur voor Nederland.

Einböck GmbH & Co KG

MASCHINENBAU

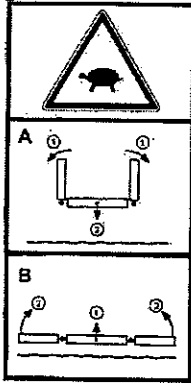
Schatzdorf 7

A-4751 Dorf an der Pram

Tel.: +43/07764/6466 Fax: /6466-85

Internett: <http://www.einboeck.at>

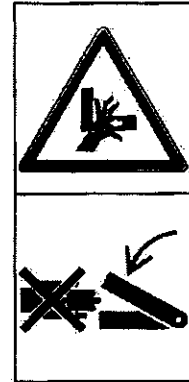
Please pay attention to these stickers on the machine -
They indicate particular dangers!



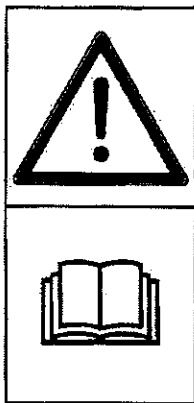
Lift the machine from ground and fold it carefully.



Do not stay in the danger zone! (Swivel area)



Attention! Danger of squashing.



Before handling the machines read and follow the operating instructions and safety warnings.

Sticker without graphic symbol

After short operating time tighten all nuts and bolts.