



# Operating instructions

Furrow press

## VarioPack

- EN -



Safety is our prime concern

Item no. 175\_1182

EN-5/11.2020

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## Dear Customer!

Thank you for the trust you have placed in us by purchasing this machine.

The machine can only be used to its full advantage when operated and used properly.

When the machine was delivered, you will already have been instructed in operation, adjustment and maintenance by your dealer. However, this brief instruction is not a substitute for thorough study of the operating instructions.

Therefore, carefully read the operating instructions before using the machine for the first time. Please also observe the safety information in the operating instructions.

Please note that any modifications not expressly mentioned or permitted in these operating instructions may only be carried out with the written consent of the manufacturer.

## Ordering spare parts

When ordering spare parts, state the type designation and serial number of the machine. This information can be found on the type plate.

Enter this data in the fields below to ensure it is always to hand.

Type designation:
Serial no.:

Please remember to only use genuine LEMKEN spare parts. Reproduction parts have a negative influence on the function of the machine, have a shorter service life and increase maintenance costs in practically all cases.

Please understand that LEMKEN does not assume any warranty for the functional disadvantages and damages caused by the use of reproduction parts!

## INTENDED USE



- Before commissioning, please familiarise yourself with your LEMKEN machine and its operation. These operating instructions and the safety information will help you with this!
- The LEMKEN VarioPack is built only for standard use for agricultural work (intended use). Any other form of deployment is regarded to be not in conformance with the designated purpose!
- Intended use also includes adherence to the manufacturer's specified operating, maintenance and repair conditions!
- The LEMKEN VarioPack may only be used, maintained and repaired by people who are familiar with it and who are aware of the hazards involved!
- The relevant accident prevention regulations as well as the other generally recognised safety-related, occupational health and road traffic regulations must be observed at all times!

## CONTENTS

INTENDED USE.....	2
CONTENTS.....	3
1 SAFETY AND ACCIDENT PREVENTION REGULATIONS.....	5
2 WARNING STICKERS .....	8
2.1 General information.....	8
2.2 Meaning of the warning stickers .....	8
3 HOOK LINKAGE .....	9
3.1 Catch arm length .....	9
3.2 Catch hook height .....	9
3.3 Transport position of the catch arms .....	9
3.4 Distance of the furrow press to the plough.....	10
4 DRAWBAR FOR SEMI-MOUNTED CONVENTIONAL PLOUGHS .....	10
5 VARIOPACK WITH TRACTION DEVICE FOR SEMI-MOUNTED CONVENTIONAL PLOUGHS.....	11
6 HEADSTOCK .....	12
7 CLEANING TAPES .....	12
8 SUPPORT FOR SINGLE-ROW FURROW PRESSES .....	12
9 TRAILED MACHINES .....	13
9.1 General information.....	13
9.2 Pivot linkage with arm, tension lever and tension spring.....	13
9.2.1 Switching from working to transport position.....	13
9.2.2 Switching from transport to working position.....	14
9.3 Pivot linkage with arm, stop lever and traction rope.....	15
9.3.1 Switching from working to transport position.....	15
9.3.2 Switching from transport to working position.....	15
10 ATTACHING AND DETACHING PACKER RINGS .....	16
11 FRONT MOUNTING HEADSTOCK .....	17
11.1 General information.....	17
11.2 Working with front mounting headstock.....	17

<b>12</b>	<b>MOUNTING INSTRUCTIONS FOR VARIOPACK.....</b>	<b>18</b>
12.1	<i>Mounting the hook linkage.....</i>	18
12.2	<i>Mounting the headstock.....</i>	18
<b>13</b>	<b>MAINTENANCE.....</b>	<b>18</b>
13.1	<i>Lubrication schedule.....</i>	19
13.2	<i>Checking the fluid grease of the bearings.....</i>	19
<b>14</b>	<b>INFORMATION FOR DRIVING ON PUBLIC ROADS.....</b>	<b>21</b>
14.1	<i>In the dark or in bad weather .....</i>	21
14.2	<i>In daylight.....</i>	21
14.3	<i>Field of view when used in front mounting .....</i>	21
14.4	<i>Transport width.....</i>	21
<b>15</b>	<b>WEIGHTS.....</b>	<b>22</b>
<b>16</b>	<b>NOISE, AIRBORNE SOUND .....</b>	<b>22</b>
<b>17</b>	<b>NOTES .....</b>	<b>22</b>
	<b>EC DECLARATION OF CONFORMITY .....</b>	<b>23</b>

## 1 SAFETY AND ACCIDENT PREVENTION REGULATIONS



### General safety information

- Before each commissioning, check the machine and the tractor for roadworthiness and operational safety!
- In addition to the information in these operating instructions, observe the generally applicable safety and accident prevention regulations!
- The machine may be used, maintained and repaired only by people who are familiar with it and are aware of the hazards involved!
- When driving on roads with the machine lifted, the operating lever must be locked against lowering!
- The attached warning stickers and information signs provide important information for safe operation; observance of the information helps to ensure your safety!
- When driving on public roads, always observe the respective regulations!
- Before starting work, familiarise yourself with all the equipment and operating elements and their functions. It is too late to do so when working in the field!
- The user's clothing should be tight fitted. Do not wear loose clothing!
- To avoid a fire hazard, keep the machine clean!
- Before commissioning and driving off, inspect the immediate vicinity around the machine! (Children!) Ensure adequate visibility!
- Riding along on the machine when working in the field and when driving on roads is strictly prohibited!
- Couple the machines in accordance with the regulations and only attach them to the prescribed equipment!
- Special care must be taken when coupling and uncoupling machines to and from the tractor!
- When attaching and detaching the machine, move the supports to the respective position! (Stability!)
- Always attach weights to the intended fixing points according to the regulations!
- Observe the permitted axle loads, gross weights and transport dimensions!
- Check and fit transport equipment - e.g. lighting equipment, warning devices and possible protecting devices!
- Release ropes for quick-release couplings must hang loosely and must not be released automatically in the low position!
- Never leave the driver's cab while driving!
- Driving behaviour, steering and braking ability are influenced by mounted or trailed machines and ballast weights. Therefore, ensure sufficient steering and braking ability!
- When cornering, take into account the wide overhang and/or the flywheel mass of the machine!
- Only put machines into operation when all safety guards are in place and in the protective position!
- Standing in the working area is strictly prohibited!

- Do not remain in the rotating and swivel area of the machine!
- Hydraulic devices (such as folding frames) may only be operated when there are no persons in the swivel area!
- There are crushing and shearing points at externally powered parts (e.g. hydraulic parts)!
- Before leaving the tractor, place the machine on the ground, turn off the engine and remove the ignition key!
- Never stand between the tractor and the machine without the vehicle being secured against rolling away by the parking brake and/or by the wheel chocks!

### **Mounted machines**

- Before attaching and detaching machines to and from the three-point connection, move the operating device to the position that prevents unintentional lifting or lowering!
- When a three-point connection is used, it is essential that the attachment categories of the tractor and the machine correspond or are coordinated!
- At the three-point linkage, there is a risk of injury at crushing and shearing points!
- Never walk between the tractor and the machine when actuating the external operation for the three-point connection!
- In the machine transport position, always ensure sufficient lateral locking of the tractor's three-point linkage!
- When driving on roads with the machine lifted, the operating lever must be locked against lowering!

### **Maintenance**

- Before carrying out any repair, maintenance and cleaning work or before rectifying any malfunctions, ensure that the drive has been switched off and the motor is at a standstill! - Remove ignition key!
- Regularly check whether nuts and screws are fitted correctly and re-tighten them, if necessary!
- When carrying out maintenance work on the lifted machine, always secure it with suitable support elements!
- Use suitable tools and gloves when changing working tools with cutting edges!
- Dispose of oil, grease and filters properly.
- Always disconnect the power supply before working on electrical components!
- When carrying out electrical welding work on the tractor and mounted machines, always disconnect cables at the generator and the battery!
- Spare parts must at least comply with the technical adjustments specified by the machine manufacturer! This is guaranteed, e.g., when using genuine spare parts!



### **Special safety information**

- Never park the furrow press on an inclined surface or on slopes!
- Secure the furrow press to prevent it from rolling away!
- Do not work with the furrow press on extreme slopes, as it may roll away!

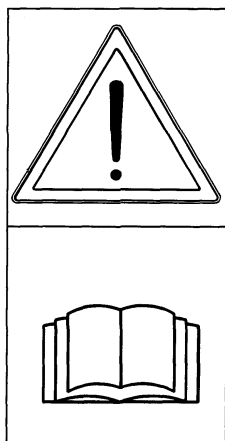
## 2 WARNING STICKERS

### 2.1 General information

The LEMKEN VarioPack features all the equipment that is necessary to ensure safe operation. If hazardous areas could not be completely secured with respect to operational safety of the machine, warning stickers are affixed which indicate these residual risks. Damaged, lost or illegible warning stickers must be replaced immediately. The numbers indicated serve as order numbers.

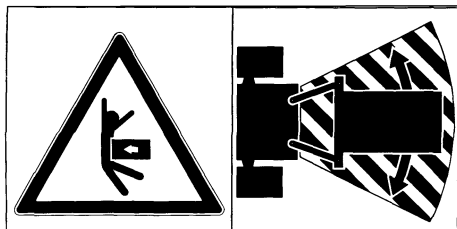
### 2.2 Meaning of the warning stickers

Please familiarise yourself with the meaning of the warning stickers. The following explanations provide detailed information.



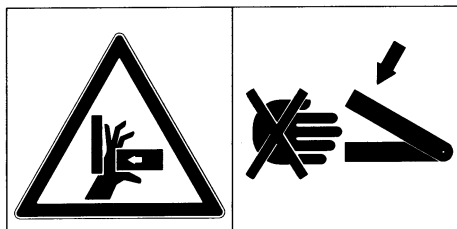
390 0555

**NOTICE:** Please read and observe the operating instructions and safety information before commissioning the machine!



390 0510

**NOTICE:** Do not remain in the working and swivel area of the machine!

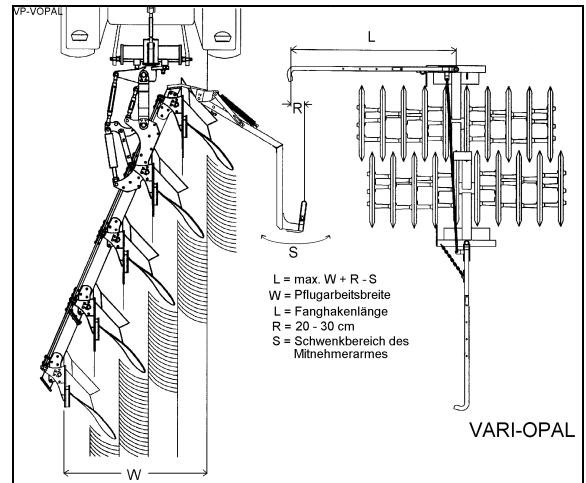
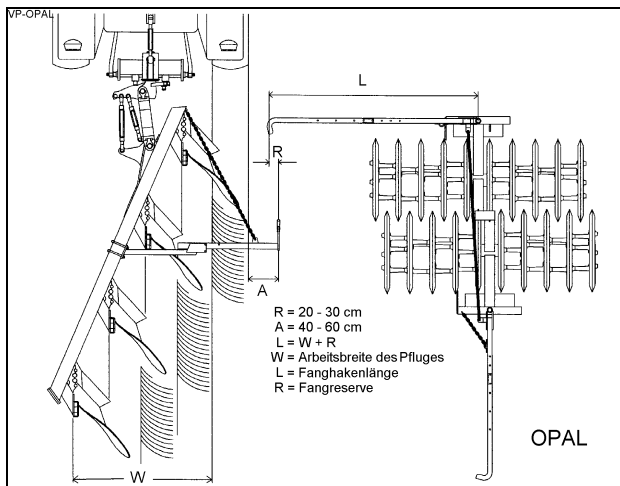


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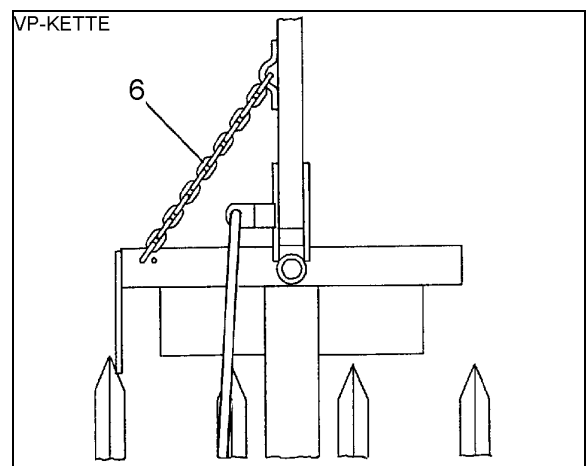
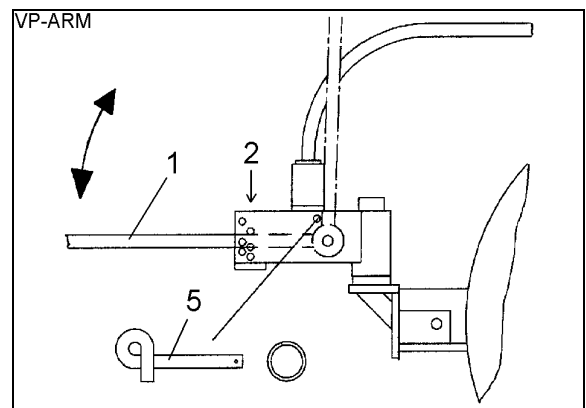
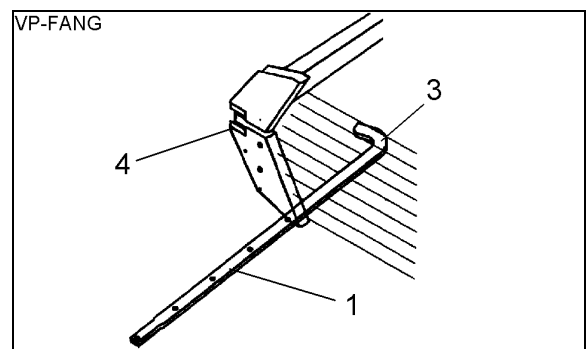
**NOTICE:** Crush risk!

### 3 HOOK LINKAGE

#### 3.1 Catch arm length



The length (L) of a catch arm (1) with a catch hook (3) can be altered by repositioning the catch hook (3). The catch arms should always be approx. 20 - 30 cm longer than the dimension of the plough working width (W). At ploughs with swivelling attachment arms, the length of the catch arm must be shortened by the dimension of the swivel area. When ploughing with a variable working width, the catch arm length must be carefully adjusted. If the working width of the plough is subsequently altered, the swivel area of the attachment arm adjusts automatically, meaning manual adjustment of the catch arm length is no longer necessary.



#### 3.2 Catch hook height

The height of the catch arms (1) is to be adjusted using the pin adjustment (2), ensuring that the catch hook (3) is approximately in the centre of the catch pocket (4) of the attachment arm.

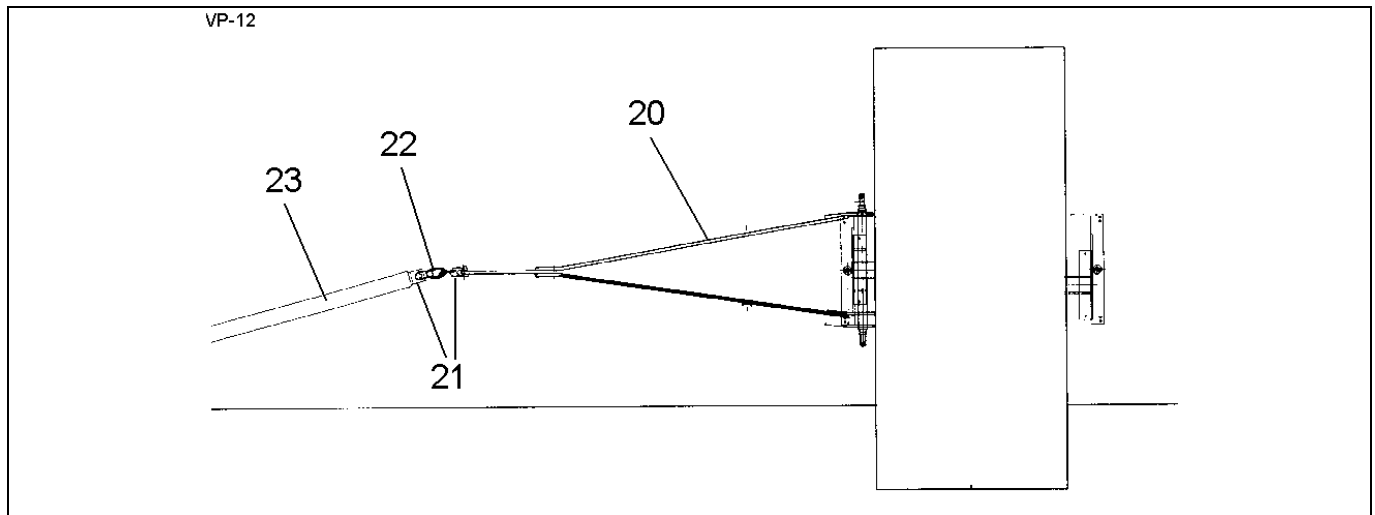
#### 3.3 Transport position of the catch arms

For transportation, the catch arms (1) must be folded up and secured using pins (5).

### **3.4 Distance of the furrow press to the plough**

The lateral guide chains (6) should always be slightly taut. By shortening the chains, sufficient distance between the furrow press and the plough can always be ensured on slopes, i.e. separately for right-turning and left-turning ploughing operations.

## **4 DRAWBAR FOR SEMI-MOUNTED CONVENTIONAL PLOUGHS**



The VarioPack can also be used in combination with semi-mounted conventional ploughs in conjunction with a drawbar (20).

The drawbar is connected to the attachment arm (23) using D-shackles (21) and a chain (22).

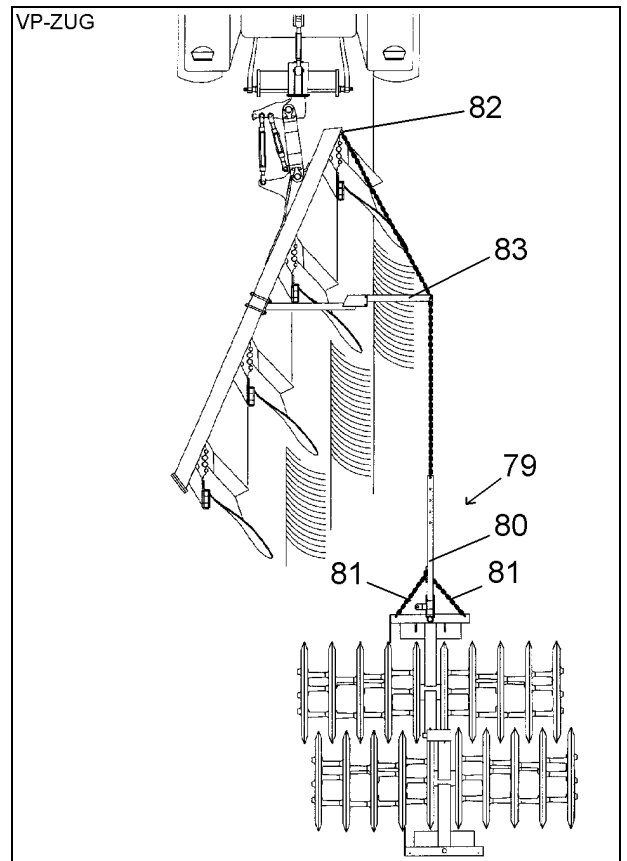
## 5 VARIOPACK WITH TRACTION DEVICE FOR SEMI-MOUNTED CONVENTIONAL PLOUGHS

The VarioPack is hitched to the plough using the traction device (79) as shown in the sketch.

The tie-rod (80) is to be locked in the traction position using the tension chains (81). The traction chain is connected at the front to the eyelet (82) on the plough frame and guided over the attachment arm (83). Secure the mounting pins carefully!

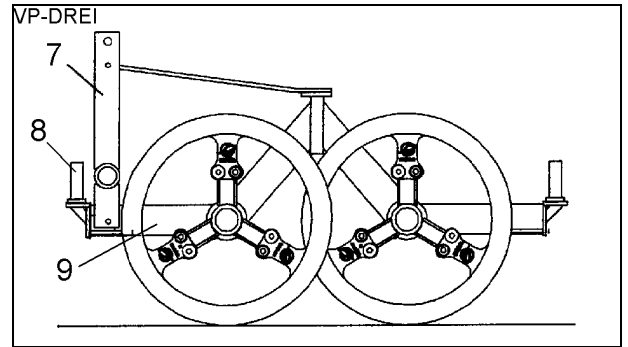


- After attaching (catching) the furrow press, the hook linkage swings around. Ensure that there is adequate safety clearance!
- Never use the furrow press (e.g. on extreme slopes) where it can roll away uncontrollably!



## 6 HEADSTOCK

In order to be able to transport the furrow press mounted to the tractor, the furrow press must be equipped with a headstock (7). The headstock is bolted to the side where the pivot (8) is arranged symmetrically to the frame tube (9). After attachment, tighten all the screws carefully.

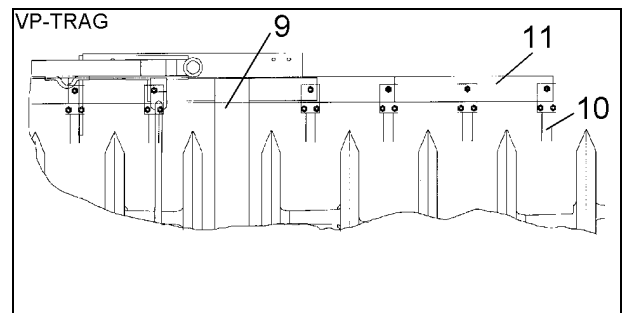


- Read and observe the general safety information and the safety information for 'Mounted machines'!

## 7 CLEANING TAPES

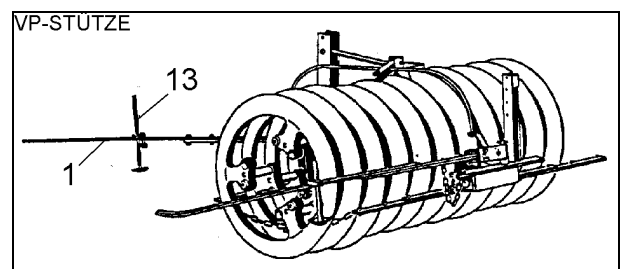
Rubber cleaning tapes (10) with fabric insert are available as accessories. They prevent clogging of the furrow press during operation.

They are bolted to the end of the frame tube (9) with their carriers (11).



## 8 SUPPORT FOR SINGLE-ROW FURROW PRESSES

At single-row furrow presses, the supports (13) attached to the catch arms (1) are adjusted to ensure the catch hooks are roughly 20 cm from the ground.



## 9 TRAILED MACHINES

### 9.1 General information

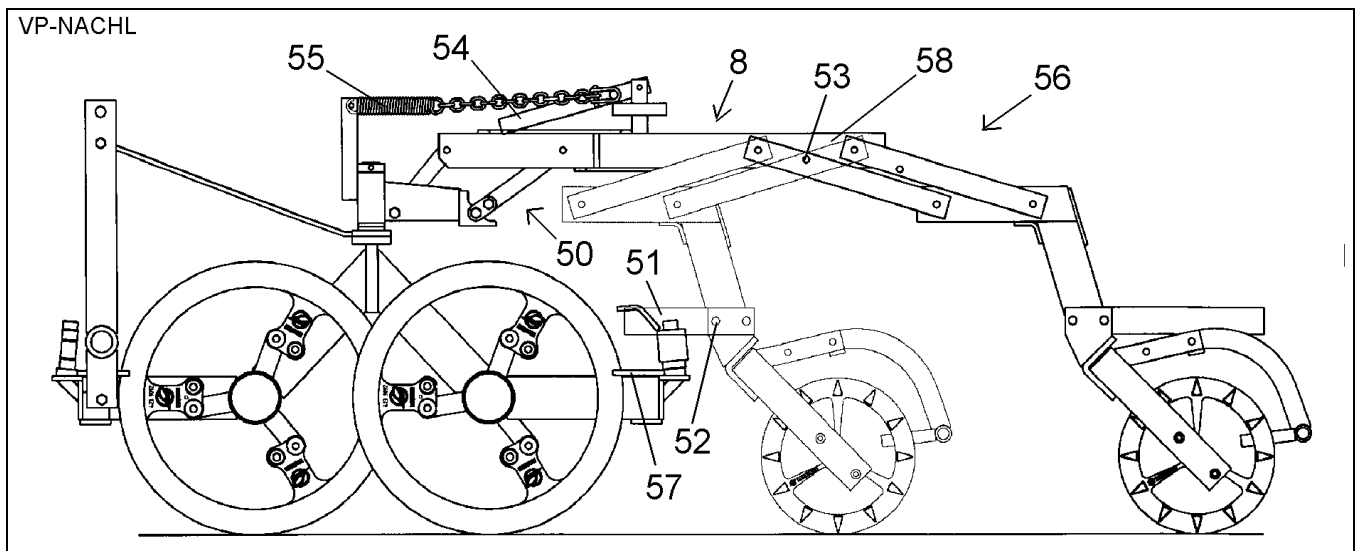
Crosskill rollers or Nockenring rollers are available as trailed machines for the VarioPack.

The pivot linkage with arm (8) of the trailed machines is equipped with a point of traction regulating pair of links (50) which regulate the crumbling and packing effect of the respective trailed machine and, for example, relieve the latter during the turning process, thus preventing the otherwise usual churning of the soil.

Until October 2000, the pivot linkage with arm (8) with a tension lever and spring were used. Since October 2000, the pivot linkage with arm with a stop lever and traction rope has been used.

### 9.2 Pivot linkage with arm, tension lever and tension spring

#### 9.2.1 Switching from working to transport position



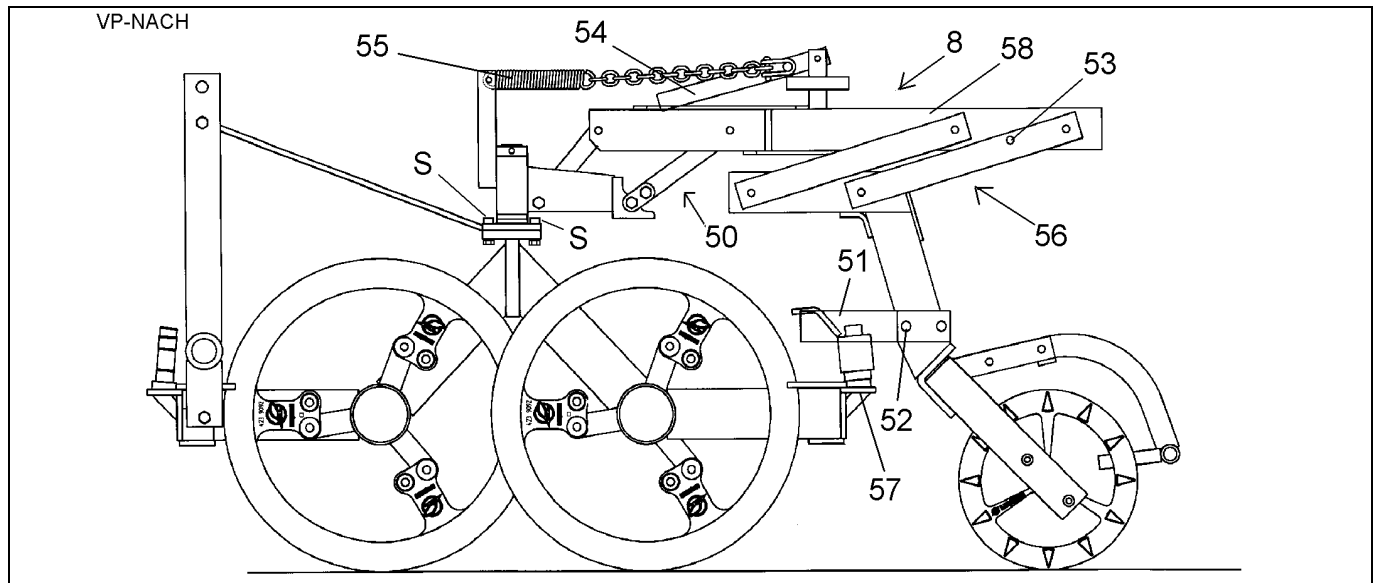
This is achieved with the furrow press mounted to the tractor as follows:

- Swivel the suspension clips (51) forwards and secure them with pins (52).
- Unlock and remove the pin (53).
- Swivel the tension lever (54) to the rear against the tension of the tension spring (55).
- Lift the furrow press slightly and move it back until the parallel linkage (56) is completely swivelled around and the suspension clips (51) are above the frame cross member (57).
- Secure the parallel linkage using the pin (53). The pin is inserted through the free holes of the parallel linkage (56) and the arm (58).
- Lift the furrow press with the trailed machine fully for transport.

### 9.2.2 Switching from transport to working position

This is achieved with the furrow press mounted to the tractor as follows:

- Lower the furrow press.
- Unlock and remove the pin (53).
- Unlock the suspension clips (51) and swivel them to the rear.
- Lift the furrow press slightly and drive forwards for a short distance before lowering the furrow press again.
- Lock the parallel linkage using the pin (53).
- Swivel the tension lever (54) forwards to release the tension spring (55).



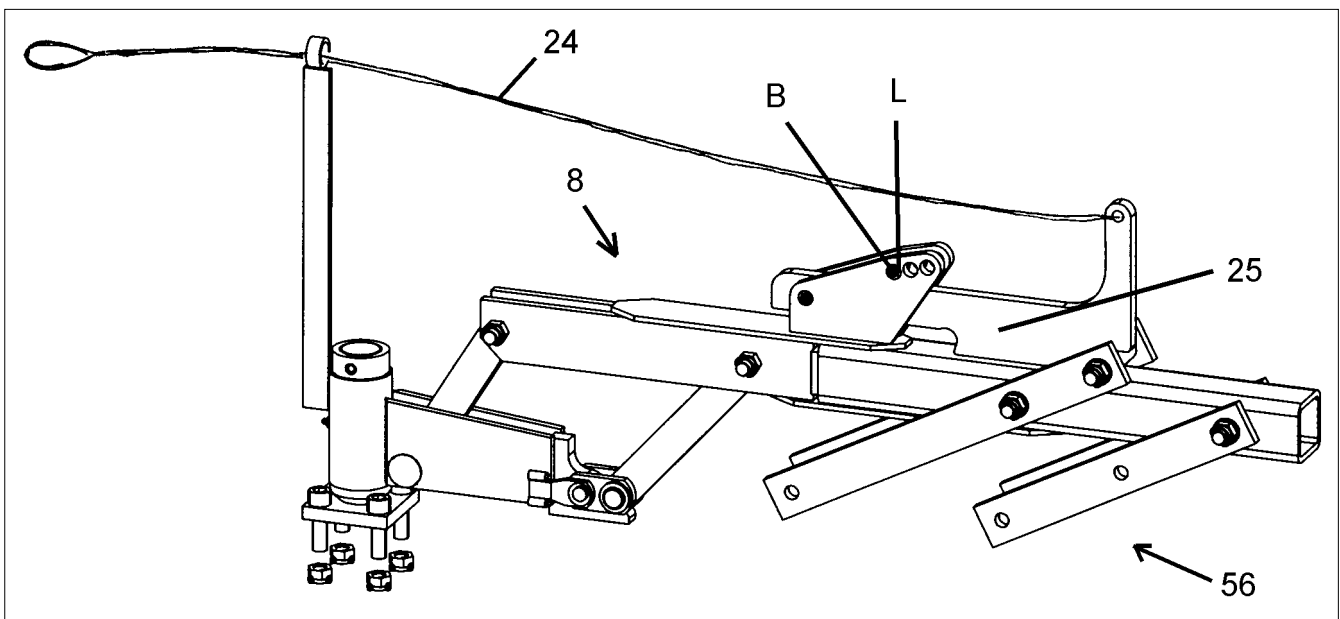


### 9.3 Pivot linkage with arm, stop lever and traction rope

#### 9.3.1 Switching from working to transport position

This is achieved with the furrow press mounted to the tractor and lowered as follows:

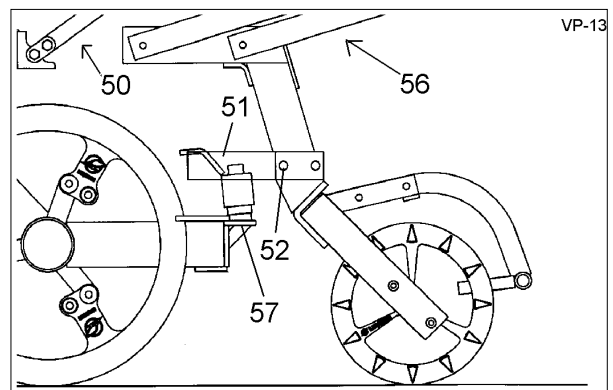
- Dismantle the pin (B).
- Pull the traction rope (24) to disengage the stop lever (25).
- Lift the furrow press slightly and move it back until the parallel linkage (56) is completely swivelled around and the stop lever (25) has engaged at the rear.
- Insert the pin (B) directly above the stop lever (25) into the hole (L) and secure it.
- Swivel the suspension clips (51) forwards and secure them with pins (52).
- Lift the furrow press with the trailed machine fully for transport.



#### 9.3.2 Switching from transport to working position

This is achieved with the furrow press mounted to the tractor and lowered as follows:

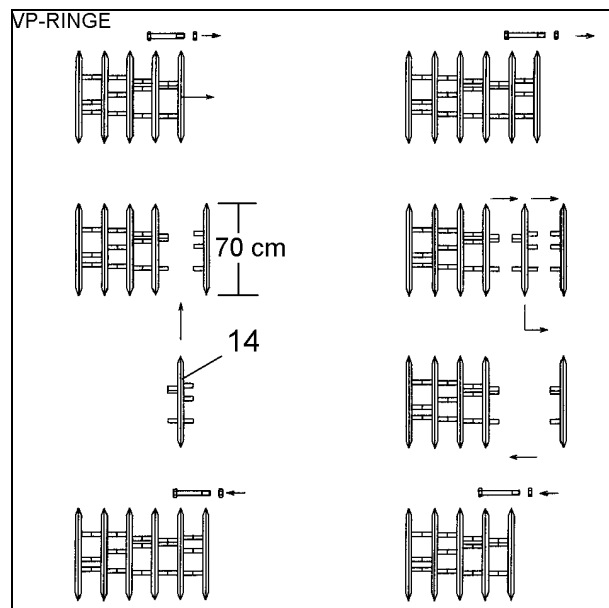
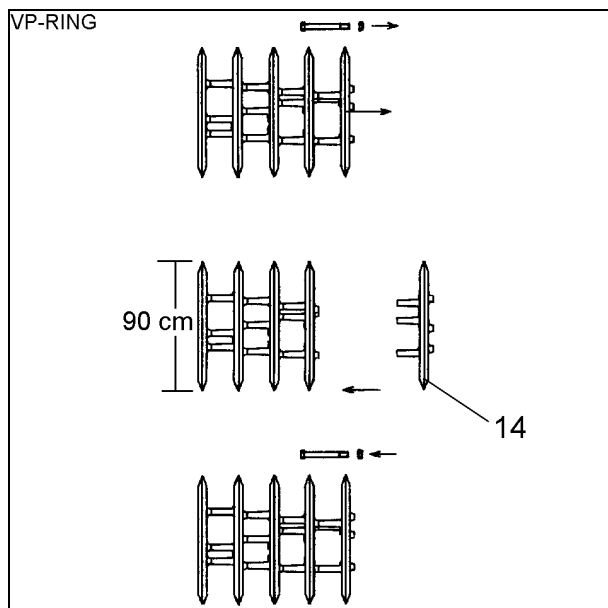
- Unlock the suspension clips (51) and swivel them to the rear.
- Dismantle the pin (B).
- Pull the traction rope (24) to disengage the stop lever (25).
- Unlock and remove the pin (53).
- Lift the furrow press slightly and move it forwards for a short distance until the stop lever (25) at the front engages.
- Insert the pin (B) into the hole (L) and secure it.





- The tension lever (54) is subjected to spring tension!
- There are crushing and shearing points in the area of the pivot linkage with arm and the parallel linkage. Ensure that there is adequate safety clearance!
- After attaching (catching) the furrow press, both the hook linkage and the trailed machine swing around. Ensure that there is adequate safety clearance!

## 10 ATTACHING AND DETACHING PACKER RINGS



If possible, the same number of packer rings should be bolted to the left and right of the frame.

If the front mounted VarioPack is used with a front mounting headstock, the same number of packer rings must be mounted to the left and right of the centre of the headstock to ensure optimum steerability of the 'front furrow press'.

The maximum permissible working width is:

VarioPack 80/70 1.8 m  
VarioPack 110/70 3.2 m  
VarioPack S 110 4.4 m

VarioPack 110 DP 90 4.0 m  
VarioPack 110 FEP 4.0 m  
VarioPack 110 EP 90 4.0 m

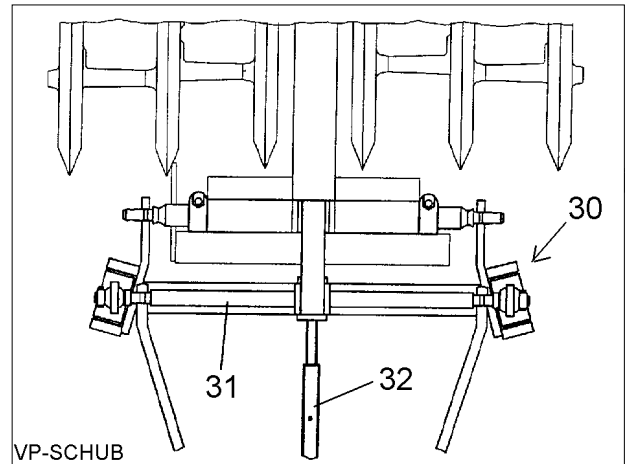


- Always tighten the screws and nuts of the packer rings (14) carefully!
- Ensure the screws are fitted correctly. If necessary, tighten the screws carefully!

## 11 FRONT MOUNTING HEADSTOCK

### 11.1 General information

Using the front mounting headstock (30), trailed furrow presses with a category II headstock can also be front mounted. The front mounting headstock is equipped as standard for tractor front headstocks with category II hook-type couplers. On request, the front mounting headstock can be supplied with a cross shaft (31) suitable for quick-release couplings with push-on balls. When working, the top link (32) and the lower link (33) should be as parallel as possible or the top link should slope slightly towards the tractor. After attachment, secure the top link and the lower link.



### 11.2 Working with front mounting headstock

The front mounting headstock automatically adjusts to the change in driving direction of the tractor. The tractor control unit for the front headstock must generally be switched to the float position. For turning on the headland, the front mounting headstock with mounted furrow press must be lifted fully. Turning on the headland should be done at moderate speed to avoid damage to the tractor and the machine.

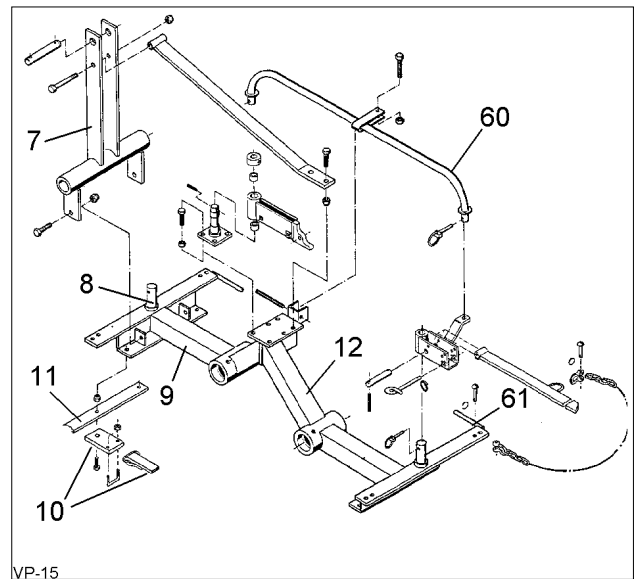
## 12 MOUNTING INSTRUCTIONS FOR VARIOPACK

### 12.1 Mounting the hook linkage

The hook linkage must be mounted on the frame (12) of the VarioPack furrow press in such a way that the connecting rod (60) is always on the same side of the furrow press as the dividers (61).

### 12.2 Mounting the headstock

The headstock (7) is bolted to the side of the furrow press where the pivot (8) is welded on symmetrically to the frame tube (9).



## 13 MAINTENANCE

The lubricating points of the front furrow press must be lubricated with an environmentally compatible grease according to the lubrication schedule. The top link pin (A1) and the lower link pins (A2) must be regularly adjusted slightly to prevent them from seizing up with rust.

If the front furrow press is not used for a longer period of time, grease the piston rods of the hydraulic rams (K1) with an acid-free grease.

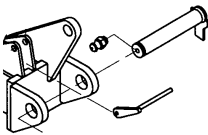
It is also advisable to park the front furrow press folded in, as the hydraulic rams (K1) are then fully retracted and thus well protected.

**Important:** Do not use a steam jet cleaner to clean the machine during the first 6 weeks; after this period, only steam clean it from a distance of 60 cm and at max. 100 bar and 50° C.



- Read and observe the general safety information and the safety information for 'Maintenance'!

### 13.1 Lubrication schedule

		Every 8 operating hours	Every 25 operating hours	Before and after a longer break
Folding frame 2x		X		X

### 13.2 Checking the fluid grease of the bearings



- Pay attention to cleanliness when changing the fluid grease.
- Properly dispose of drained fluid grease.
- Do not mix fluid grease with other oils, water or greases.

**Note:** The fluid grease is a long-life grease.

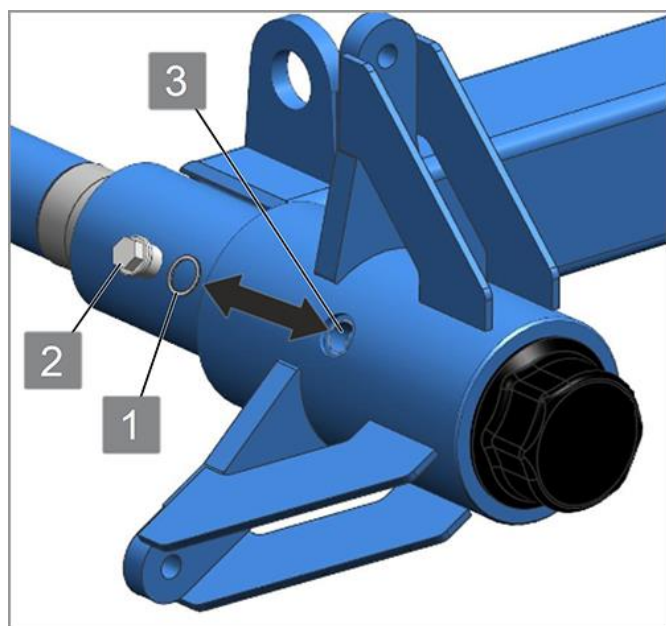
Check the level and condition of the fluid grease annually at each bearing:

- Lift the machine on the tractor.

#### CAUTION



- Switch off the tractor.
- Secure the tractor-machine combination to prevent it from rolling away.
- Remove ignition key.



- Remove the filler screw (2) and the sealing ring (1) from the filler opening (3).
- Carefully rotate the bearing until some fluid grease escapes.

If normal looking fluid grease escapes, it does not have to be changed:

- Insert the sealing ring (1) and tighten the filler screw (2) to 75 Nm.

If water or white fluid grease escapes:

- Drain the fluid grease completely through the filler opening (3) into a suitable collector (approx. 0.5 l).
- Fill 0.5 l of fluid grease (Olit 00 (Optimol)) into the filler opening (3).
- Insert the sealing ring (1) and tighten the filler screw (2) to a tightening torque of 75 Nm.

## **14 INFORMATION FOR DRIVING ON PUBLIC ROADS**

### ***14.1 In the dark or in bad weather***

This machine must be equipped with tail lights and reflectors at the rear end, as it protrudes more than 1 m beyond the tail lights of the tractor and partially covers the lighting equipment of the tractor. If the driving direction indicators and the registration plate of the tractor are covered by the machine, driving direction indicators and a registration plate must be attached to the machine. In addition, two front position lights must be attached if the machine protrudes more than 40 cm beyond the light emitting surfaces of the tractor's front position lights.

### ***14.2 In daylight***

In daylight, the machine must be marked with warning boards or warning marking adhesive tape. If the lighting equipment, the driving direction indicators and the registration plate of the tractor are covered by the machine, driving direction indicators and a registration plate must be attached to the machine. If the machine protrudes more than 40 cm laterally beyond the light emitting surfaces of the tractor's front position lights, the machine must also be marked at the front.

### ***14.3 Field of view when used in front mounting***

The distance between the centre of the tractor steering wheel and the front edge of the front furrow press trailed in the front attachment must not exceed 3.5 m! If this distance is greater, additional measures must be taken according to the German Road Traffic Licensing Regulations (StVZO) to ensure safe transport on public roads (e.g. an additional signaller).

### ***14.4 Transport width***

According to the German Road Traffic Licensing Regulations (StVZO), furrow presses wider than 3 m may not be driven on public roads when mounted on a tractor.

## 15 WEIGHTS

Model	Weights in kg	Working width in cm	Approx. weight per extension ring in kg
VarioPack 80 WDP 70	100	100 - 180	45
VarioPack 110 WDP 70	170	140 - 300	45
VarioPack S 110 WDP 70	192	250 - 440	45
VarioPack 110 WEP 70	85	100 - 320	45
VarioPack 110 WDP 90	285	162 - 400	90
VarioPack 110 WEP 90	147	100 - 400	90

## 16 NOISE, AIRBORNE SOUND

The noise level of the VarioPack furrow press does not exceed 70 dB (A) during operation.

## 17 NOTES

Since the scope of delivery depends on the actual order, the equipment supplied with your machine may differ in some descriptions and illustrations. To ensure our machines remain up-to-date with the latest technological developments, we reserve the right to modify their design, equipment and technology.



**EC Declaration of Conformity**

according to EC Directive 89/392/EEC

**Déclaration de conformité pour la CEE**

conforme à la directive de la CEE 89/392/CEE

**EG-Conformiteitsverklaring**

overeenkomstig de EG-richtlijn 89/392 EWG

We,  
Nous, Lemken GmbH & Co. KG  
Wij, Weseler Str. 5  
D-46519 Alpen,

declare under sole responsibility that the product  
déclarons sous notre seule responsabilité que le produit  
verklaren enig in verantwoording, dat het product

**LEMKEN VarioPack**


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(Model, type/Marque, modèle/Fabricant, type) (serial number/no.)

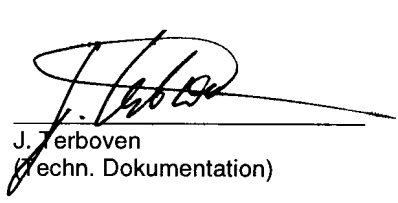
stipulated in this declaration is in conformity with the relevant basic health and safety requirements of EC Directive 89/392/EEC within the scope of the plant shipped equipment.

faisant l'objet de la déclaration est conforme aux prescriptions fondamentales en matière de sécurité et de santé stipulées dans la Directive de la CEE 89/392/CEE.

waarop deze verklaring betrekking heeft, met de desbetreffende grondlegende veiligheids- en gezondheidseisen van de EG-richtlijnen 89/392/EWG overeenkomt.

Alpen, on(Place and date of issue / Lieu  
et date/Plaats en datum van de verklaring)(Signature of authorised person/Nom de la personne  
autorisée/Nam van bevoegd persoon)

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G. Giesen  
(Entwicklung und Konstruktion)

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J. Terboven  
(Techn. Dokumentation)