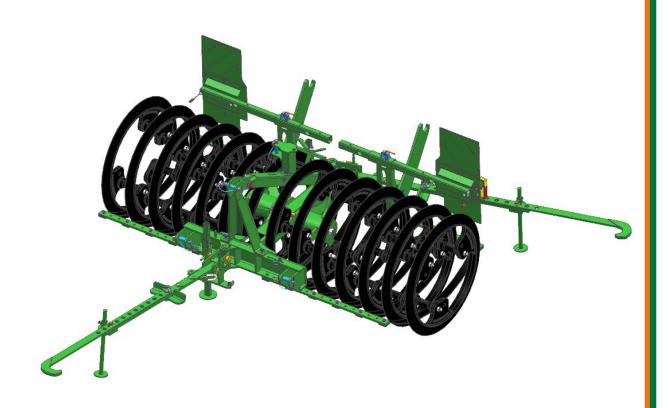
# **Operating Manual**

# **AMAZONE**

**Packer** 

# **C-Pack 900**



MG5088 BAG0137.2 04.21 Printed in Germany



Read and observe this operating manual before using the implement for the first time!

Keep it in a safe place for future use.

en





# Reading the instruction

manual and to adhere to it should not appear to be inconvenient and superfluous as it is not enough to hear from others and to realise that a machine is good, to buy it and to believe that now everything would work by itself. The person concerned would not only harm himself but also make the mistake of blaming the machine for the reason of a possible failure instead of himself. In order to ensure a good success one should go into the mind of a thing or make himself familiar with every part of the machine and to get acquainted with its handling. Only this way, you would be satisfied both with the machine as also with yourself. To achieve this is the purpose of this instruction manual.

Leipzig-Plagwitz 1872. Zug. Lark!



#### Identification data

Manufacturer: AMAZONEN-WERKE

H. DREYER SE & Co. KG

Implement ID No.

Type: C-Pack

Permissible system pressure in

bar:

Year of manufacture:

Factory:

Basic weight (kg):

Permissible total weight (kg):

Maximum load (kg):

#### Manufacturer's address

AMAZONEN-WERKE

H. DREYER SE & Co. KG

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E-mail: amazone@amazone.de

#### Spare part orders

Spare parts lists are freely accessible in the spare parts portal at www.amazone.de.

Please send orders to your AMAZONE dealer.

#### Formalities of the operating manual

Document number: MG5088
Compilation date: 04.21

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#### **Foreword**

#### Dear Customer,

You have chosen one of the quality products from the wide product range of AMAZONEN-WERKE, H. DREYER SE & Co. KG. We thank you for your confidence in our products.

On receiving the implement, check to see if it has been damaged during transport or if parts are missing. Using the delivery note, check that the implement has been delivered in full, including any special equipment ordered. Damage can only be rectified if problems are signalled immediately.

Before commissioning, read and understand this operating manual, and particularly the safety information. Only after careful reading will you be able to benefit from the full scope of your newly purchased implement.

Please ensure that all the implement operators have read this operating manual before the implement is commissioned.

Should you have any questions or problems, please consult this operating manual or contact your local service partner.

Regular maintenance and timely replacement of worn or damaged parts increases the lifespan of your implement.

#### **User evaluation**

#### Dear Reader.

We update our operating manuals regularly. Your suggestions for improvement help us to create ever more user-friendly manuals. Send us your suggestions by fax.

#### AMAZONEN-WERKE

H. DREYER SE & Co. KG

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# 1 User Information

The User Information section provides information on use of the operating manual.

# 1.1 Purpose of the document

This operating manual

- describes the operation and maintenance of the implement.
- provides important information on safe and efficient handling of the implement.
- is a component part of the implement and should always be kept with the implement or the towing vehicle.
- Keep it in a safe place for future use.

# 1.2 Locations in the operating manual

All the directions specified in the operating manual are always seen in the direction of travel.

# 1.3 Diagrams

#### Instructions and responses

Activities to be carried out by the user are given as numbered instructions. Always keep to the order of the instructions. The reaction to instructions is given by an arrow. Example:

- 1. Instruction 1
- → Implement response to instruction 1
- 2. Instruction 2

#### Lists

Lists without an essential order are shown as a list with bullets. Example:

- Point 1
- Point 2

#### Item numbers in diagrams

Numbers in round brackets refer to items in diagrams.

Example (6)  $\rightarrow$  Item 6



# 2 General Safety Instructions

This section contains important information on safe operation of the implement.

# 2.1 Obligations and liability

#### Comply with the instructions in the operating manual

Knowledge of the basic safety information and safety regulations is a basic requirement for safe handling and fault-free implement operation.

#### Obligations of the operator

The operator is obliged only to let those people work with/on the implement who

- are aware of the basic workplace safety information and accident prevention regulations.
- Have been introduced to working with/on the implement.
- have read and understood this operating manual.

The operator is obliged

- to keep all the warning symbols on the implement in a legible state.
- to replace damaged warning symbols.

#### Obligations of the user

Before starting work, anyone charged with working with/on the implement is obliged

- to comply with the basic workplace safety instructions and accident prevention regulations.
- To read and observe the section "General safety information" of this operating manual.
- To read the section "Warning symbols and other labels on the implement" (page 15) of this operating manual and to follow the safety instructions represented by the warning symbols when operating the implement.
- To get to know the implement.
- To read the sections of this operating manual, important for carrying out your work.

If the user discovers that a function is not working properly, then they must eliminate this fault immediately. If this is not the task of the user or if the user does not possess the appropriate technical knowledge, then they should report this fault to their superior (operator).



#### Risks in handling the implement

The implement has been constructed to the state-of-the art and the recognised rules of safety. However, operating the implement may cause risks and restrictions to

- the health and safety of the user or third parties,
- the implement,
- other property.

Only use the implement

- for the purpose for which it was intended.
- in a perfect state of repair.

Eliminate any faults immediately which could impair safety.

#### **Guarantee and liability**

Our "General conditions of sales and delivery" are always applicable. These shall be available to the operator, at the latest on conclusion of the contract. Guarantee and liability claims for damage to people or property will be excluded if they can be traced back to one or more of the following causes:

- Improper use of the implement.
- Improper installation, commissioning, operation and maintenance of the implement.
- Operation of the implement with defective safety equipment or improperly attached or non-functioning safety equipment.
- Non-compliance with the instructions in the operating manual regarding commissioning, operation and maintenance.
- Unauthorised design changes to the implement.
- Insufficient monitoring of implement parts which are subject to wear.
- Improperly executed repairs.
- Disasters through the impact of foreign bodies and Acts of God.



# 2.2 Representation of safety symbols

Safety instructions are indicated by the triangular safety symbol and the highlighted signal word. The signal word (danger, warning, caution) describes the severity of the risk, and carries the following meaning:



#### **DANGER**

identifies a direct threat at high risk which can result in death or most serious bodily harm (loss of limbs or long-term harm), should it not be prevented.

If the instructions are not followed, then this will result in immediate death or serious physical injury.



#### **WARNING**

Indicates a medium risk, which could result in death or (serious) physical injury if not avoided.

If the instructions are not followed, then this may result in death or serious physical injury.



#### **CAUTION**

Indicates a low risk which could cause minor or medium level physical injury or damage to property if not avoided.



#### **IMPORTANT**

Indicates an obligation to special behaviour or an activity required for proper implement handling.

Non-compliance with these instructions can cause faults on the implement or disturbance to the environment.



#### NOTE

Indicates handling tips and particularly useful information.

These instructions will help you to use all the functions of your implement in the best way possible.



# 2.3 Organisational measures

The operator must provide the necessary personal protective equipment as per the information provided by the manufacturer of the crop protection agent to be used, such as:

- Protective goggles,
- Safety shoes,
- Protective overall,
- Skin protection agents etc.



The operation manual

- Must always be kept at the place at which the implement is operated.
- Must always be easily accessible for the user and maintenance personnel.

Check all the available safety equipment regularly.

# 2.4 Safety and protection equipment

Before starting up the implement each time, all the safety and protection equipment must be properly attached and fully functional. Check all safety and protection equipment regularly.

#### Faulty safety equipment

Faulty or disassembled safety and protection equipment can lead to dangerous situations.

# 2.5 Informal safety measures

As well as all the safety information in this operating manual, comply with the general, national regulations pertaining to accident prevention and environmental protection.

When driving on public roads and routes you should comply with the statutory road traffic regulations.



# 2.6 User training

Only trained and instructed persons should be allowed to work with/on the implement. The responsibilities of the operating and maintenance personnel must be clearly defined.

People being trained may only work with/on the implement under the supervision of an experienced person.

Person	Person specially trained for the activity 1)	Trained person	Persons with specialist training (specialist workshop) 3)
Loading/Transport	Х	Х	Х
Start-up		Х	
Set-up, tool installation		-	Х
Operation		Х	
Maintenance		-	X
Troubleshooting and fault elimina- tion	Х		Х
Disposal	Х		

Legend:

X..permitted

--..not permitted

- A person who can assume a specific task and who can carry out this task for an appropriately qualified company.
- Instructed persons are those who have been instructed in their assigned tasks and in the possible risks in the case of improper behaviour, have been trained if necessary, and have been informed about the necessary protective equipment and measures.
- People with specialist technical training shall be considered as a specialist. Due to their specialist training and their knowledge of the appropriate regulations, they can evaluate the work with which they have been charged and detect possible dangers.

  Comment:

A qualification equivalent to specialist training can be obtained from several years' experience in the relevant field.



If maintenance and repair work on the implement is additionally marked "Workshop work", only a specialist workshop may carry out such work. The personnel of a specialist workshop shall possess the appropriate knowledge and suitable aids (tools, lifting and support equipment) for carrying out the maintenance and repair work on the implement in a way which is both appropriate and safe.



# 2.7 Safety measures in normal operation

Only operate the implement if all the safety and protection equipment is fully functional.

Check the implement at least once a day for visible damage and check the function of the safety and protection equipment.

# 2.8 Danger from residual energy

Note that there may be residual mechanical, hydraulic, pneumatic and electrical/electronic energy on the implement.

Use appropriate measures to inform the operating personnel. You can find detailed information in the relevant sections of this operating manual.

# 2.9 Maintenance and repair work, fault elimination

Carry out prescribed setting, maintenance and inspection work in good time.

Secure all media such as compressed air and the hydraulic system against unintentional start-up.

Carefully fix and secure larger assemblies to lifting gear when carrying out replacement work.

Check loosened threaded connections for tightness. When the maintenance work is completed, check the functioning of the safety devices.

#### 2.10 Design changes

You may make no changes, expansions or modifications to the implement without the authorisation of AMAZONEN-WERKE. This also applies when welding support parts.

Any expansion or modification work shall require the written approval of AMAZONEN-WERKE. Only use modification and accessory parts approved by AMAZONEN-WERKE so that the type approval, for example, remains valid in accordance with national and international regulations.

Vehicles with an official type approval or with equipment connected to a vehicle with a valid type approval or approval for road transport according to the German road traffic regulations must be in the state specified by the approval.



#### **WARNING**

Risk of crushing, cutting, being trapped or drawn in, or impact through the failure of support parts.

It is strictly forbidden to

- drill holes in the frame or on the running gear.
- increase the size of existing holes on the frame or the running gear.
- weld support parts.



#### 2.10.1 Spare and wear parts and aids

Immediately replace any implement parts which are not in a perfect state.

Only use genuine AMAZONE spare and wear parts, or those approved by AMAZONEN-WERKE, so that the operating permit remains valid according to the national and international regulations. The use of spare and wear parts from third parties does not guarantee that they have been constructed such that they meet the requirements placed on them.

AMAZONEN-WERKE shall accept no liability for damage caused by the use of non-approved spare and wear parts or aids.

# 2.11 Cleaning and disposal

Handle and dispose of any materials used carefully, in particular

- when carrying out work on lubrication systems and equipment and
- when cleaning using solvents.

#### 2.12 User workstation

The implement may be operated by only one person sitting in the driver's seat of the tractor.



# 2.13 Warning symbols and other signs on the implement



Always keep all the warning pictograms of the implement clean and in a legible state. Replace illegible warning pictograms. You can obtain the warning pictograms from your dealer using the order number (e.g. MD 075).

#### Warning symbols - structure

Warning pictograms indicate danger areas on the implement and warn of residual dangers. Permanent or unexpected dangers exist in these areas.

A warning symbol consists of two fields:



#### Field 1

is a symbol describing the danger, surrounded by triangular safety symbol.

#### Field 2

is a symbol showing how to avoid the danger.

#### Warning symbols - explanation

The column **Order number and explanation** provides an explanation of the neighbouring warning symbol. The description of the warning symbols is always the same and specifies, in the following order:

1. A description of the danger.

For example: risk of cutting

2. The consequence of non-compliance with the risk avoidance instructions.

For example: causes serious injuries to fingers or hands.

3. Risk avoidance instructions.

For example: only touch implement parts when they have come to a complete standstill.

# THE SAME AMAZEME

#### Order No. and explanation

# MD 078

# Risk of crushing of fingers/hand by accessible, moving parts of the implement!

This hazard can cause extremely serious injuries resulting in the loss of limbs.

Never reach into the danger area when the tractor engine is running with the PTO shaft or hydraulic/electrical system connected.

Warning symbols

#### MD 095

Read and follow the operating manual and safety information before starting up the implement!



#### MD 097

# Risk of crushing and contusions between the rear of the tractor and the implement when coupling and uncoupling the implement!

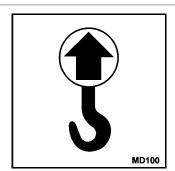
These dangers can cause extremely serious and potentially fatal injuries.

- It is forbidden to actuate the three-point hydraulic system of the tractor as long as persons are standing between the rear of the tractor and the implement.
- Actuate the operator controls for the tractor's three-point hydraulic system:
  - Only from the intended workstation alongside the tractor.
  - Only when you are outside the danger area between the tractor and the implement.



#### **MD 100**

This symbol indicates attachment points for lifting gear for loading the implement.





#### **MD 102**

Dangerous situations for the operator due to unintentional starting / rolling of the implement during all work on the implement, e.g. installation, adjustment, troubleshooting, cleaning or maintenance.

The potential dangers can inflict severe and potentially fatal injuries on all parts of the body.

- Secure the tractor and the implement against unintentional start-up and rolling before any intervention in the implement.
- Depending on the type of intervention, read and understand the information in the relevant sections of this operating manual.



#### **MD 114**

This symbol indicates a lubrication point





# 2.14 Potential risks from not observing the safety instructions

Non-compliance with the safety information

- can pose both a danger to people and also to the environment and implement.
- can lead to the loss of all warranty claims.

In particular, non-compliance with the safety information could pose the following risks:

- Danger to people through non-secured working areas.
- Failure of important implement functions.
- Failure of prescribed methods of maintenance and repair.
- Danger to people through mechanical and chemical influences.
- Risk to the environment through leakage of hydraulic fluid.

# 2.15 Safety-conscious working

In addition to the safety information in this operating manual, compliance with the generally applicable national workplace safety and accident prevention regulations is mandatory.

Comply with the accident prevention instructions on the warning pictograms.

When driving on public roads and routes, comply with the appropriate statutory road traffic regulations.



#### 2.16 Safety information for users



#### **WARNING**

Before starting up the implement and the tractor, always check their traffic and operational safety.

#### 2.16.1 General safety and accident prevention information

- Beside these instructions, comply with the generally applicable national safety and accident prevention regulations.
- The warning symbols and other labels attached to the implement provide important information on safe implement operation.
   Compliance with this information is in the interests of your safety.
- Before moving off and starting up the implement, check the immediate area of the implement (children). Ensure that you can see clearly.
- It is forbidden to ride on the implement or use it as a means of transport!
- Drive in such a way that you always have full control over the tractor with the attached implement.

In so doing, take your personal abilities into account, as well as the road, traffic, visibility and weather conditions, the driving characteristics of the tractor and the connected or coupled implement.

#### Coupling and uncoupling the implement

- You may only couple and transport the implement on a tractor that fulfils the power requirements.
- When connecting implements to the tractor's three-point hydraulic system, the attachment categories of the tractor and the implement must always be the same!
- When coupling implements to the front or the rear of the tractor, the following may not be exceeded:
  - The approved total tractor weight
  - o The approved tractor axle loads
  - The approved load capacities of the tractor tyres
- Secure the tractor and the implement against unintentional movement before coupling or uncoupling the implement.
- It is forbidden for people to stand between the implement to be coupled and the tractor while the tractor is moving towards the implement!

Any helpers may only act as guides standing next to the vehicles, and may only move between the vehicles when both are at a standstill.

 Secure the operating lever of the tractor hydraulic system so that unintentional raising or lowering is impossible, before connecting the implement to or disconnecting the implement from the tractor's three-point hydraulic system.



- When coupling and uncoupling implements, move the support equipment (if available) to the appropriate position (stability).
- When actuating the support equipment, there is a danger of injury from contusion and cutting points!
- Be particularly careful when coupling the implement to the tractor or uncoupling it from the tractor! There are contusion and cutting points in the area of the coupling point between the tractor and the implement.
- It is forbidden for people to stand between the tractor and the implement when actuating the three-point hydraulic system.
- Connect the implement to the prescribed equipment in accordance with the specifications.
- The release ropes for quick action couplings must hang loosely and may not release themselves when lowered.
- Also ensure that uncoupled implements are stable!

#### Use of the implement

- Before starting work, ensure that you understand all the equipment and actuation elements of the implement and their function.
   There is no time for this when the implement is already in operation
- Do not wear loose-fitting clothing. Loose clothing increases the risk of being caught by the drive shaft.
- Only start-up the implement, when all the safety equipment has been attached and is in the safety position.
- Comply with the maximum load of the connected implement and the approved axle and support loads of the tractor. If necessary, drive only with a partially filled tank.
- It is forbidden to stand in the working area of the implement.
- It is forbidden to stand in the turning and swivel range of the implement.
- There are crushing and cutting points at externally-actuated (e.g. hydraulic) implement points.
- Only actuate externally-actuated implement parts when you are sure that no-one is standing within the prescribed safety distance
- Secure the tractor against unintentional start-up and rolling, before you leave the tractor.

#### For this:

- Lower the implement onto the ground
- apply the parking brake
- Switch off the tractor engine
- o Remove the ignition key



#### Implement transportation

- When using public roads, national road traffic regulations must be observed.
- Before moving off, check:
  - o The correct connection of the supply lines
  - o The lighting system for damage, function and cleanliness
  - The brake and hydraulic system for visible damage
  - o That the parking brake is completely released
  - o The functioning of the brake system
- Ensure that the tractor has sufficient steering and braking power.
   Any implements and front/rear weights connected to the tractor influence the driving behaviour and the steering and braking power of the tractor.
- If necessary, use front weights.
   The front tractor axle must always be loaded with at least 20% of the empty tractor weight, in order to ensure sufficient steering power.
- Always fix the front or rear weights to the intended fixing points according to regulations.
- Comply with the maximum load of the connected implement and the approved axle and support loads of the tractor.
- The tractor must guarantee the prescribed brake delay for the loaded vehicle combination (tractor plus connected implement).
- Check the brake power before moving off.
- When turning corners with the implement connected, take the broad load and balance weight of the implement into account.
- Before moving off, ensure sufficient side locking of the tractor lower links, when the implement is attached to the three-point hydraulic system or lower links of the tractor.
- Before moving off, move all the swivel implement parts to the transport position.
- Before moving off, secure all the swivel implement parts in the transport position against risky position changes. Use the transport locks intended for this.
- Before moving off, lock the operating lever of the tractor's threepoint hydraulic system against the unintentional raising or lowering of the connected or hitched implement.
- Check that the transport equipment, e.g. lighting, warning equipment and protective equipment, is correctly mounted on the implement.
- Before transportation, carry out a visual check that the upper and lower link bolts are firmly fixed with the lynch pin against unintentional release.
- Adjust your driving speed to the prevailing conditions.
- Before driving downhill, switch to a low gear.
- Before moving off, always switch off the independent wheel braking (lock the pedals).



# 2.16.2 Cleaning, maintenance and repair

- Repair-, maintenance- and cleaning operations as well as the remedy of function faults should principally be conducted with
  - The drive is switched off
  - o The tractor engine is at a standstill
  - o the ignition key has been removed
  - o The implement plug has been disconnected from the onboard computer
- Regularly check the nuts and bolts for firm seating and retighten them as necessary.
- Secure the raised implement and/or raised implement parts against unintentional lowering before performing any cleaning, maintenance or repair work on the implement!
- When replacing work tools with blades, use suitable tools and gloves.
- Dispose of oils, greases and filters in the appropriate way.
- Disconnect the cable to the tractor generator and battery, before carrying out electrical welding work on the tractor and on attached implements.
- Spare parts must comply at least with the specified technical requirements of AMAZONEN-WERKE.
   This is ensured through the use of genuine AMAZONE spare parts.



# 3 Loading and unloading



#### **WARNING**

Risk of crushing due to accidental falling of a implement attached to a load carrier during loading and unloading!

- Use only slings (ropes, belts, chains, etc.) with a minimum tensile strength greater than the total weight of the implement (see Technical data).
- Only attach your lifting equipment to/at the designated points.
- Never remain in or enter the area below a raised, unsecured load.



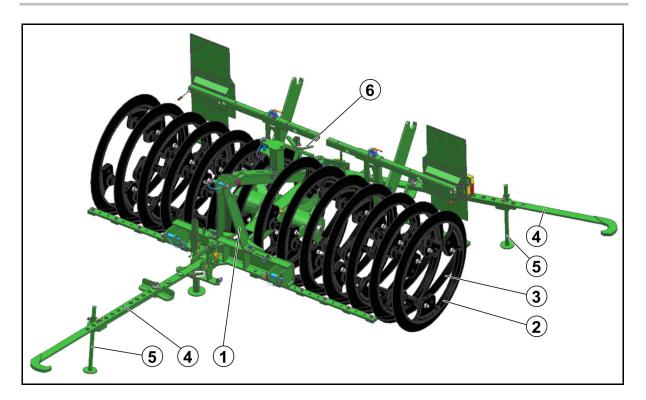
# 4 Product description

This section:

- provides a comprehensive overview of the implement structure.
- provides the names of the individual modules and controls.

If possible, read this section when actually at the implement. This helps you to understand the implement better.

# 4.1 Overview of the assemblies



- (1) Three-point hitch
- (2) Packer rings
- (3) Cleaning line

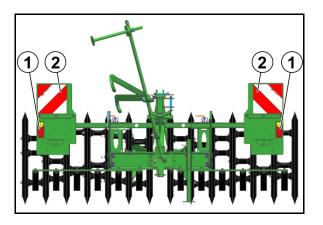
- (4) Hook linkage
- (5) Stands
- (6) Transport safeguard



# 4.2 Transportation equipment

- (1) Rear lights, brake lights and turn indicators, red rear reflectors
- (2) Warning signs
- One reflector on each side, on the left and right (not illustrated).
- For France: One additional warning sign on each side (not illustrated).

Connect the lighting system to the 7-pin tractor socket via the pin.





#### 4.3 Intended use

#### The **C-Pack** roller

- Is built for conventional use as a trailing packer roller for AMA-ZONE ploughs in agricultural operations.
- Is coupled to the tractor for transportation using the tractor top link and lower link and is operated by one person.
- Is not suitable for front mounting.

Sloping terrain can be traversed as follows:

Along the contours

Direction of travel to left 20 % Direction of travel to right 20 %

Along the gradient

Up the slope 20 % Down the slope 20 %

"Intended use" also covers:

- Compliance with all the instructions in this operating manual.
- Execution of inspection and maintenance work.
- Exclusive use of genuine AMAZONE spare parts.

Other uses to those specified above are forbidden and shall be considered as improper.

For any damage resulting from improper use

- the operator bears the sole responsibility,
- AMAZONEN-WERKE accepts no liability.



# 4.4 Danger areas and danger points

The danger area is the area around the implement in which people can be caught:

- work movements made by the implement and its tools
- materials or foreign bodies thrown out of the implement
- by unintentional rolling of the tractor and the implement

Within the implement danger area, there are danger points with permanent or unexpected risks. Warning pictograms indicate these danger points and warn against residual dangers, which cannot be eliminated for construction reasons. Here, the special safety regulations of the appropriate section shall be valid.

No-one may stand in the implement danger area:

• as long as the tractor and implement are not protected against unintentional start-up and running.

The operating person may only move the implement or switch or drive the tools from the transport position to the working position or viceversa when there is no-one in the implement danger area.

The following danger areas exist:

- Between the tractor and the implement, particularly during coupling and uncoupling procedures.
- Where there are moving components.
- When the implement is in motion.
- Underneath raised, unsecured implements or parts of implements

## 4.5 Rating plate and CE mark

#### Machine rating plate

The following information is specified on the rating plate and the CE mark:

- (1) Implement number
- (2) Vehicle identification number
- (3) Product
- (4) Permissible technical implement weight
- (5) Model year
- (6) Year of manufacture





# 4.6 Technical Data

	C-Pack	2400- 900	2600- 900	2800- 900	3000- 900
Working width	[mm]	2400	2600	2800	3000
Transport width	[mm]	2270	2470	2670	2870
Spacing of the rings	[mm]	200	200	200	200
Ring diameter	[mm]	900	900	900	900
Number of rings		12	13	14	15
Ring profile		36°	36°	36°	36°
Attachment category	Category II				
Centre of gravity distance (d)	[mm]	655 With cam ring roller 1010			

# Basic weight (empty weight)

	C-Pack	2400- 900	2600- 900	2800- 900	3000-
Basic implement C-Pack 900S	[kg]	375	375	375	375
Packer ring set	[kg]	964	990	1130	1200
Cleaning line set	[kg]	16	18	20	22
Cam ring roller	[kg]	690	690	706	706
Lighting	[kg]	25	25	25	25



The basic weight (net weight) is the total weight of the basic implement and the respective implement attachments.



# 4.7 Necessary tractor equipment

For operation of the implement in compliance with the intended use, the tractor must fulfil the following requirements.

#### **Electrical system**

Battery voltage:

• 12 V (volts)

Lighting socket:

• 7-pin

#### Three-point hitch

- The lower links of the tractor must have lower link hooks.
- The upper links of the tractor must have upper link hooks.

# 4.8 Noise production data

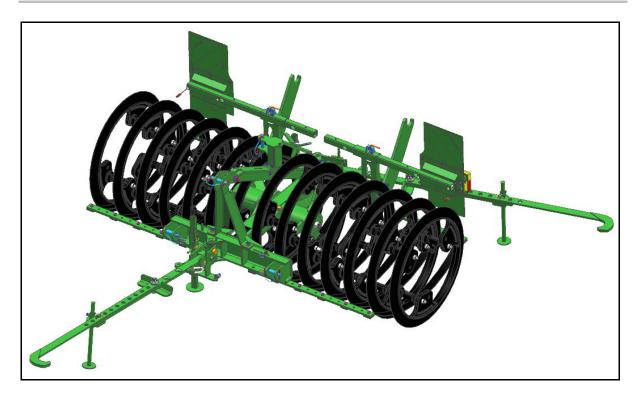
The workplace-related emission value (acoustic pressure level) is 74 dB(A), measured in operating condition at the ear of the tractor driver with the cabin closed.

Measuring unit: OPTAC SLM 5.

The noise level is primarily dependent on the vehicle used.



# 5 Layout and function



The C-Pack packer breaks the soil clods after ploughing and provides a level soil surface.

During operation, the packer is pulled on the hook linkage by the swivel arm of the plough, it is uncoupled at the headlands, and after the headlands it is coupled via the second hook linkage and is pulled behind the plough in the opposite direction.

The width of the packer should exceed the width of the plough by 10%.

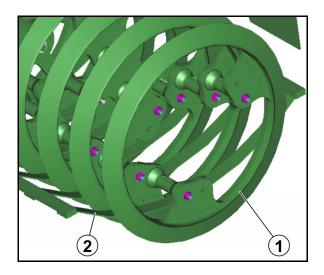
# 5.1 Packer rings and cleaning lines

The number of mounted packer rings determines the working width.

Additional packer rings can be mounted.

The cleaning lines prevent soil from clinging to the packer rings.

- (1) Packer ring
- (2) Cleaning line

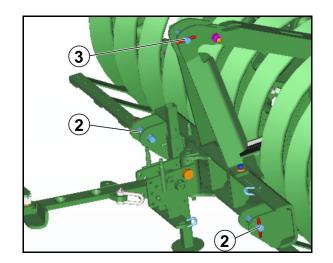




# 5.2 Three-point hitch frame

The frame is designed such that it meets the dimensions of a Category II three-point hitch.

- (1) Upper coupling point for Category II locking bolts
- (2) Lower coupling point for Category II locking bolts.
- Upper link pins and lower link pins with locking linch pins.

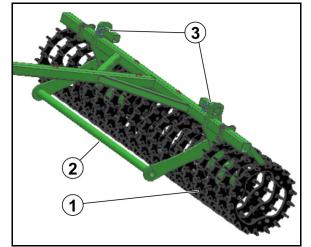


# 5.3 Cam ring roller

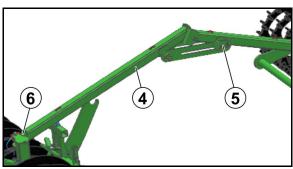
The cam ring roller is a trailing roller behind the C-Pack.

In transport position, it is transported with the C-Pack packer.

- (1) Cam rings
- (2) Hook tube for attachment in transport position
- (3) Support for the lighting



- (4) Folding linkage for coupling on the C-Pack
- (5) Swivelling hook for locking the folding linkage in operating position
- (6) Coupling point on the C-Pack





# 6 Start-up

This section contains information

- · on initial operation of your implement
- on checking how you may mount / tow the implement to your tractor.



- Before operating the implement for the first time the operator must have read and understood the operating manual.
- Follow the instructions given in the section "Safety instructions for the operator" from page 19 onwards when
  - o Coupling and uncoupling the implement
  - o Implement transportation
  - o Use of the implement
- Only couple and transport the implement to/with a tractor which is suitable for the task.
- Tractor and implement must satisfy the national road traffic regulations!
- Vehicle owner and vehicle operator are responsible for compliance with the statutory provisions of the national road traffic regulations!



# 6.1 Checking the suitability of the tractor



#### WARNING

Danger of breaking during operation, insufficient stability and insufficient tractor steering and braking power in the event of improper use of the tractor!

 Check the suitability of your tractor before you attach or hitch the implement to the tractor.

You may only connect the implement to tractors suitable for the purpose.

• Carry out a brake test to check whether the tractor achieves the required braking delay with the implement connected.

Requirements for the suitability of a tractor are, in particular:

- The approved total weight
- The approved axle loads
- The load capacity of the installed tyres
   You can find this data on the rating plate or in the vehicle documentation and in the tractor operating manual.

The front axle of the tractor must always be subjected to at least 20% of the empty weight of the tractor.

The tractor must achieve the brake delay specified by the tractor manufacturer, even with the implement connected.

# 6.1.1 Calculating the actual values for the total tractor weight, tractor axle loads and load capacities, as well as the minimum ballast



The approved total tractor weight, specified in the vehicle documentation, must be greater than the sum of the

- tractor empty weight
- ballast weight and
- total weight of the attached implement or drawbar load of the hitched implement.



## This notice applies only to Germany:

If, having tried all possible alternatives, it is not possible to comply with the axle loads and / or the approved total weight, then a survey by an officially-recognised motor traffic expert can, with the approval of the tractor manufacturer, be used as a basis for the responsible authority to issue an exceptional approval according to § 70 of the German Regulations Authorising the Use of Vehicles for Road Traffic and the required approval according to § 29, paragraph 3 of the German Road Traffic Regulations.



# 6.1.1.1 Data required for the calculation

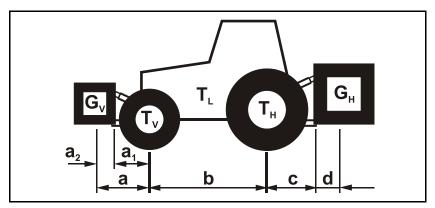


Fig. 1

$T_L$	[kg]	Tractor empty weight			
		, , ,	See tractor operating manual or vehicle		
T <sub>V</sub>	[kg]	Front axle load of the empty tractor	documentation		
T <sub>H</sub>	[kg]	Rear axle load of the empty tractor			
G <sub>H</sub>	[kg]	Total weight of rear-mounted implement or rear ballast	See technical data for the implement or rear ballast		
G <sub>V</sub>	[kg]	Total weight of front-mounted implement or front ballast	See technical data for front-mounted implement or front ballast		
а	[m]	Distance between the centre of gravity of the front implement mounting or the front weight and the centre of the front axle (total $a_1 + a_2$ )			
a <sub>1</sub>	[m]	Distance from the centre of the front axle to the centre of the lower link connection	See tractor operating manual or measurement		
a <sub>2</sub>	[m]	Distance between the centre of the lower link connection point and the centre of gravity of the front-mounted implement or front ballast (centre of gravity distance)	See technical data of front implement mounting or front weight or measurement		
b	[m]	Tractor wheel base	See tractor operating manual or vehicle documents or measurement		
С	[m]	Distance between the centre of the rear axle and the centre of the lower link connection	See tractor operating manual or vehicle documents or measurement		
d	[m]	Distance between the centre of the lower link connection point and the centre of gravity of the rear-mounted implement or rear ballast (centre of gravity distance)	See technical data for the implement		

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# 6.1.1.2 Calculation of the required minimum ballasting at the front $G_{V\,min}$ of the tractor to ensure steering capability

$$G_{V \text{ min}} = \frac{G_H \bullet (c+d) - T_V \bullet b + 0.2 \bullet T_L \bullet b}{a+b}$$

Enter the numeric value for the calculated minimum ballast  $G_{V min}$ , required on the front side of the tractor, in the table (section 6.1.1.7).

#### 6.1.1.3 Calculation of the actual front axle load of the tractor $T_{V tat}$

$$T_{V_{tat}} = \frac{G_{V} \bullet (a+b) + T_{V} \bullet b - G_{H} \bullet (c+d)}{b}$$

Enter the numeric value for the calculated actual front axle load and the approved tractor front axle load specified in the tractor operating manual in the table (section 6.1.1.7).

#### 6.1.1.4 Calculation of the actual total weight of the combined tractor and implement

$$G_{tat} = G_V + T_L + G_H$$

Enter the numeric value for the calculated actual total weight and the approved total tractor weight specified in the tractor operating manual in the table (section 6.1.1.7).

#### 6.1.1.5 Calculation of the actual rear axle load of the tractor T<sub>H tat</sub>

$$T_{H \ tat} = G_{tat} - T_{V \ tat}$$

Enter the numeric value for the calculated actual rear axle load and the approved tractor rear axle load specified in the tractor operating manual in the table (section 6.1.1.7).

#### 6.1.1.6 Tyre load capacity for the tractor tyres

Enter the double value (two tyres) of the approved load capacity (see, for example, tyre manufacturer's documentation) in the table (section 6.1.1.7).



#### 6.1.1.7 Table

	Actual value according to calculation		Approved value according to tractor instruction manual	Double approved load capacity (two tyres)	
Minimum ballast front / rear	1	kg			
Total weight		kg	≤ kg		
Front axle load		kg	≤ kg	≤ kg	
Rear axle load		kg	≤ kg	≤ kg	
You can find the approved values for the total tractor weight,					



- You can find the approved values for the total tractor weight, axle loads and load capacities in the tractor registration papers.
- The actual calculated values must be less than or equal to (≤) the permissible values!



#### **WARNING**

Risk of contusions, cutting, catching, drawing in and impact through insufficient stability and insufficient tractor steering and brake power.

It is forbidden to couple the implement to the tractor used as the basis for calculation, if

- One of the actual, calculated values is greater than the approved value
- There is no front weight (if required) attached to the tractor for the minimum front ballast  $(G_{V min})$ .



You must use a front weight, which is equal to at least the required minimum front ballast ( $G_{V\,min}$ ).



# 6.2 Securing the tractor / implement against unintentional start-up and rolling



#### **WARNING**

Risk of crushing, shearing, cutting, catching, drawing in and knocks during all work on the implement

- By driven work elements.
- By unintentional movement of work elements or unintentional actuation of hydraulic functions when the tractor engine is running.
- By unintentional starting and rolling of the tractor and mounted implement.
- Secure the tractor and the implement against unintentional starting and rolling before any intervention in the implement.
- It is forbidden to make any intervention in the implement, such as installation, adjustment, troubleshooting, cleaning, maintenance and repairs
  - o When the implement is being operated.
  - o As long as the tractor engine is running with a connected PTO shaft / hydraulic system.
  - o If the ignition key is inserted in the tractor and the tractor engine can be started unintentionally with the PTO shaft / hydraulic system connected
  - If moving parts are not blocked against unintentional movement
  - o If there are persons (children) on the tractor.

Particularly during these operations there are dangers due to unintentional contact with driven, unguarded work elements.

- 1. Switch off the tractor engine.
- 2. Remove the ignition key.
- 3. Apply the tractor parking brake.
- 4. Ensure that there are no persons (children) on the tractor.
- 5. If necessary, lock the tractor cab door.



# 7 Coupling and uncoupling the implement



When coupling and uncoupling implements, follow the instructions given in the section "Safety instructions for the operator" page 19.



#### **WARNING**

Risk of crushing, catching, drawing in and/or knocks due to unintentional starting and rolling of the tractor when coupling or uncoupling the PTO shaft and supply lines.

Secure the tractor and implement against unintentional starting and rolling before entering the danger area between the tractor and implement to couple or uncouple the the PTO shaft and supply lines. See page 37.



#### **WARNING**

Risk of crushing and contusions between the rear of the tractor and the implement when coupling and uncoupling the implement!

- It is forbidden to actuate the three-point hydraulic system of the tractor as long as persons are standing between the rear of the tractor and the implement.
- Actuate the operator controls for the tractor's three-point hydraulic system:
  - o Only from the intended workstation alongside the tractor.
  - o Only when you are outside the danger area between the tractor and the implement.



## 7.1 Coupling the implement



#### WARNING

Risk of crushing and contusions between the tractor and the implement when coupling the implement!

Instruct people to leave the danger area between the tractor and the implement before you approach the implement.

Any helpers may only act as guides standing next to the tractor and the implement, and may only move between the vehicles when both are at a standstill.



#### **WARNING**

Risk of crushing, drawing in, catching or contusions if the implement unexpectedly comes away from the tractor!

- Use the intended equipment to connect the tractor and the implement in the proper way.
- When coupling the implement to the tractor's three-point hydraulic system, ensure that the attachment categories of the tractor and the implement are the same.
- Only use the upper and lower link pins provided (original pins) for coupling the implement.
- Check the top and lower link pins for visible damage each time you couple the implement. Replace the top and lower link pins if there are clear signs of wear.
- Use locking pins to secure the upper and lower link pins against accidental loosening.
- Visually check that the upper and lower link hooks are correctly locked before you drive off.



## **WARNING**

Danger of breaking during operation, insufficient stability and insufficient tractor steering and braking power in the event of improper use of the tractor!

You may only connect the implement to tractors suitable for the purpose. See section "Checking tractor suitability", page 33.

- Always inspect the implement for visible signs of damage when coupling. Observe here the chapter "Obligations of the user", page 8.
- 2. Secure the ball sleeves over the upper and lower link pins in the pivot points of the three-point attachment frame.
- 3. Secure each of the upper and lower link pins with lynch pins to ensure that they do not accidentally come loose. See chapter "Three-point attachment frame", from page 32.
- 4. Direct people out of the danger area between the tractor and implement before you approach the implement with the tractor.
- 5. First connect the supply lines to the tractor before coupling the implement to the tractor as follows:
  - 5.1 Drive the tractor up to the implement in such a way that a



- gap (approx. 25 cm) remains between tractor and implement
- 5.2 Secure the tractor against unintentional starting and rolling away. To do so, see the Chapter "Securing the tractor against unintentional starting and rolling away" starting from page 37.
- 5.4 Connect the light system.
- 5.5 Position the lower link hooks so that they are aligned with the lower pivot points on the implement.
- 6. Now reverse the tractor further towards the implement so that the tractor's lower link hooks connect with the lower pivot points of the implement.
- 7. Raise the tractor's three-point hydraulic system until the lower link hooks connect with the ball bushings and automatically lock.
- Couple the upper links over the upper link hooks with the upper pivot point of the three-point attachment frame from the tractor seat.
- → The top link hook locks automatically.
- 9. Visually check that the upper and lower link hooks are correctly locked before you drive off.

# 7.2 Uncoupling the implement

- Always inspect the implement for obvious signs of damage during uncoupling. Observe here the chapter "Obligations of the user", page 8.
- 2. Uncouple the implement from the tractor as follows:
  - 2.1 Relieve the top links.
  - 2.2 Unlock and uncouple the upper link hooks from the tractor seat.
  - 2.3 Relieve the lower links.
  - 2.4 Unlock and uncouple the lower link hooks from the tractor seat.
  - 2.5 Drive the tractor approx. 25 cm forwards.
  - → This will allow more clearance between tractor and implement and give better access for uncoupling the supply lines.
  - 2.6 Secure the tractor against unintentional starting and rolling away, see chapter "Securing the tractor against unintentional starting and rolling away", from page 37.
  - 2.8 Disconnect the light system.



# 8 Use of the implement



#### **DANGER!**

- Observe the chapter "Safety instructions for the user", page 19, when using the implement.
- Observe the warning symbols on the implement. The warning symbols give you important information for safe operation of the implement. Compliance with this information is in the interests of your safety.

## 8.1 Transportation



#### **DANGER**

- During transportation, follow the instructions given in the section "Safety instructions for the operator", page 21.
- Both vehicle owner and operator are responsible for observing to the national road traffic regulations!
- Check the proper function of the light system!
- The tractor lights must not be hidden during transport of the attachment.
- The transport width of 3 m must not be exceeded!
- When driving on the road with the implement raised, the operating levers on the tractor must be locked to prevent unintentional lowering and folding out!



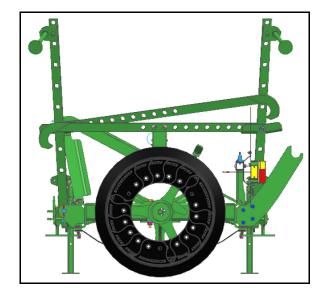
When the packer is equipped with more than 15 (19) rings, the transport width of 3 (3.5) m is exceeded.



## 8.2 Transport position / working position

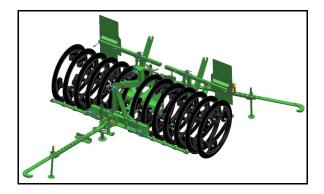
### Putting the C-Pack in transport position

- 1. Put the hook linkage in transport position.
- 2. Couple the implement to the 3-point hydraulic system.
- 3. Secure the packer rings against turning during transport.



#### Putting the C-Pack in working position

- 1. Lower the implement at the intended work starting point and uncouple from the 3-point hydraulic system.
- 2. Put the hook linkage into working position.
- 3. Release the turning safeguard of the packer rings.

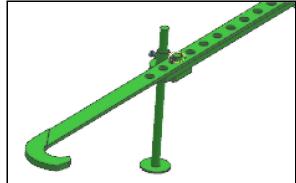


## Putting the hook linkage in transport position / working position

Put both hook linkages in transport position / working position in the same way.

#### Transport position:

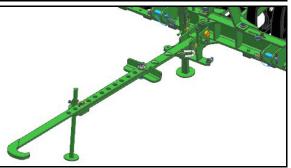
1. Loosen the bolted connections on the hook and keep in a suitable place.



- 2. Swivel the hook linkage to the side.
- 3. Swivel the hook linkage upwards.
- 4. Deposit the hook towards the middle of the implement.

### Working position:

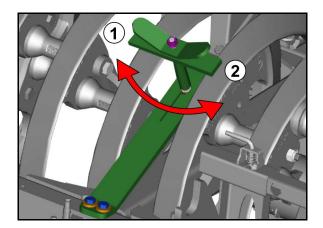
To put the hook linkage into working position, proceed in the opposite sequence.





# Putting the turning safeguard of the packer rings in transport position / working position

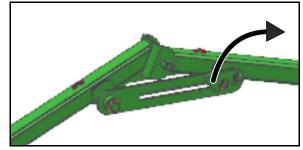
- (1) Tightening of the turning safeguard for transportation.
- (2) Releasing the turning safeguard before operation.



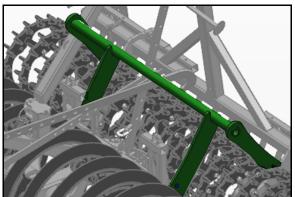


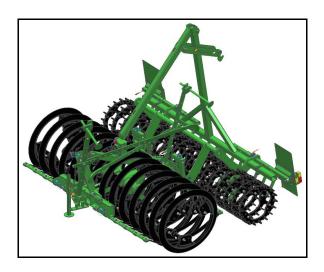
#### Putting the C-Pack with trailing element in transport position

- 1. Put the hook linkage in transport position.
- 2. Release the locking hook on the upper belt.
- 3. Secure the packer rings against turning during transport.



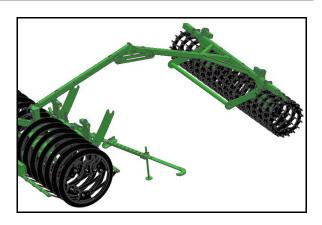
- 4. Couple the implement to the 3-point hydraulic system.
- 5. Slowly drive up to the trailing element with the lowered C-Pack roller until the cross tube on the trailing element is attached by the hooks on the C-Pack.





#### Putting the C-Pack with trailing element in working position

- 1. Lower the implement at the intended work starting point.
- 2. Slowly drive forwards, so that the attachments of the C-Pack roller release the trailing element.
- 3. Drive forward until the C-Pack and trailing element are separated by the greatest possible distance.
- 4. Lock the upper belt with the locking hooks.
- 5. Uncouple the implement from the 3-point hydraulic system.
- 6. Put the hook linkage in working position.
- 7. Release the turning safeguard of the packer rings.





#### 8.3 Use

Grab the packer slowly and carefully with the swivel arm of the plough on the hook linkage laid out at the side and pull along behind the plough while ploughing.

At the headland, uncouple the packer hydraulically using the plough.

After the headland, the packer is coupled using the second hook linkage and is pulled behind the plough in the opposite direction.

### Operation of the C-Pack with trailing element

During operation, the trailing element is pulled behind the packer using the linkage.



Be careful when attaching the packer after the headlands.

- The trailing element easily rolls backwards.
- The packer is pulled in the tractor track under the linkage of the trailing element.
- The trailing element turns around the packer in the opposite direction.



# 9 Cleaning, maintenance and repair



#### **WARNING**

Risk of crushing, shearing, cutting, being caught and/or drawn in, or impact through

- unintentional lowering of the implement raised using the tractor's 3-point hydraulic system.
- unintentional falling of raised, unsecured implement parts.
- Unintentional start-up and rolling of the tractor-implement combination.

Secure the tractor and implement against unintentional starting and unintentional rolling away before you perform any cleaning, servicing or maintenance work on the implement. See page 37.



#### **DANGER!**

- During cleaning, maintenance and repair work, observe chapter "Safety instructions for the user" from page Seite 22.
- Always use suitable supports when carrying out maintenance work on the raised implement.
- Check the proper function of the light system!



- After repair work involving repainting, the product logos and instruction signs must be replaced!
- Worn and damaged parts must be replaced. Use only OEM spare parts!
- All marked lubrication points must be lubrication according to the lubrication plan (page 48) and the sliding and pivot points greased accordingly!
- Clean the tools after work!



## 9.1 Cleaning



- After cleaning, grease the implement, in particular after cleaning with a high pressure cleaner/steam jet or liposoluble agents.
- Observe the statutory requirements for the handling and removal of cleaning agents.

#### Cleaning with a high-pressure cleaner / steam cleaner



- Always observe the following points when using a high pressure cleaner/steam jet for cleaning:
  - Do not clean any electrical components.
  - Never direct the cleaning jet from the nozzle of the high pressure cleaner/steam jet directly towards lubrication and bearing points.
  - Always maintain a minimum jet distance of 300 mm between the high pressure or steam jet cleaning nozzle and the implement.
  - o Comply with the safety regulations when working with high pressure cleaners.

## 9.2 Lubrication specifications

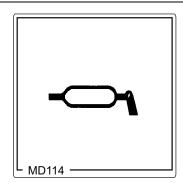


Grease all lubricating nipples (keep seals clean).

Lubricate / grease the implement at the specified intervals.

Lubrication points on the implement are indicated with a sticker.

Carefully clean the lubrication points and grease gun before lubrication so that no dirt is pressed into the bearings. Press the dirty grease out of the bearings completely and replace it with new grease.





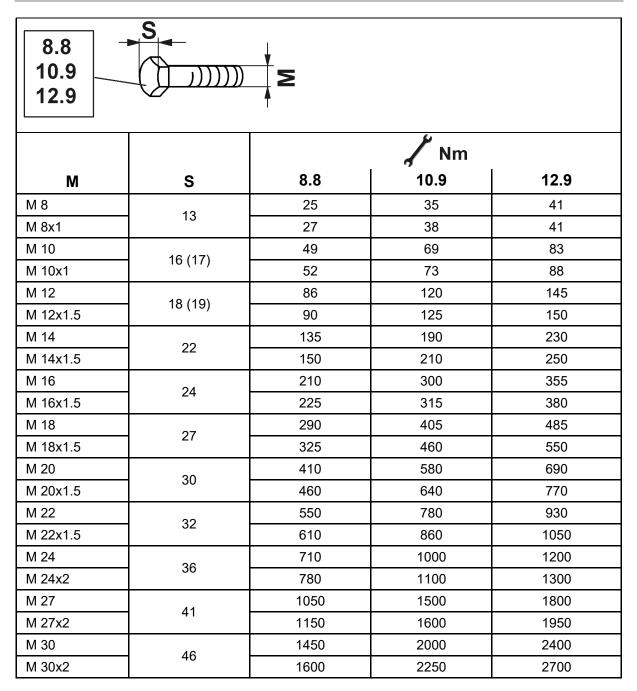
#### Lubricants

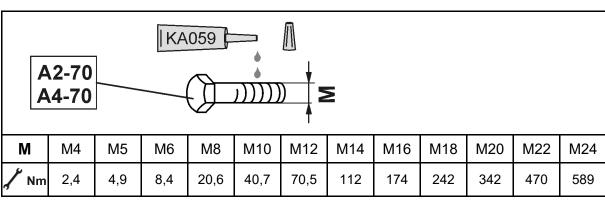
For lubrication work use a lithium saponified multipurpose grease with EP additives:

Company	Lubricant designation	
	Normal operating contions	ndi-Extreme operating con- ditions
ARAL	Aralub HL 2	Aralub HLP 2
FINA	Marson L2	Marson EPL-2
ESSO	Beacon 2	Beacon EP 2
SHELL	Retinax A	Tetinax AM



# 9.3 Screw tightening torques







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