

# PNEUMATIC SEEDERS

-

DS 200

DS 500

Return the warranty certificate within 15 days together with a copy of the invoice (*without these documents the warranty procedure cannot be implemented*).



Original Manual



# FOREWORD

This manual is provided with your machine to enable you to make optimum use of your equipment, in particular under safe working conditions.

**All owners** are reminded that the manual is **an essential accessory** which must remain with the machine at all times, and that in the event of resale, article 1615 of the Civil Code requires that as such it **must be handed over** to the new owner.

You are also reminded that as the manual is essential to the machine, all owners must undertake to **leave it physically** available with the machine for all users to consult.

Original Manual: [http://bit.ly/manuels\\_agrisem](http://bit.ly/manuels_agrisem)





***To be returned on reception of the machine***

Dealer
Name
Address
Tel
Code Nb

Owner
Nom
Address
Tel

Type of machine	
Working width	
Serial number of the machine	
Delivery date to the user's place (join a copie of invoice and dealer's delivery note)	
Tractor description and horse power	
Type of soil, clay %	
Surface area of farm	

Date : ..... / ..... / .....

Customer's signature and client's stamp

Dealer's signature and dealer's stamp

We are fully aware of, and accept, the contents of the instruction manual and we hereby adhere to the clauses of the guarantee.

AGRISEM INTERNATIONAL - 535 Rue Pierre Levasseur CS 60263 – 44158 ANCENIS CEDEX  
Tél : 02 51 14 14 40 – Fax : 02 40 96 32 36



# DECLARATION OF COMPLIANCE WITH THE "MACHINERY" DIRECTIVE



The manufacturer referred to above certifies that the new equipment described below:

## PNEUMATIC SEEDERS

Complies with the provisions of the amended "Machinery" directive (Directive 2006/42/CE) and with the applicable national legislation.

Ligné,

21 May 2013

Michal Guzowski  
Chief Executive Officer

## **Identification of the machine**

On receipt of the machine, please enter the corresponding information below:

Type of machine: .....

Serial number: .....

Year of manufacture: .....

Date of first use: .....

Accessories: .....

.....

.....

Name of the Dealer: .....

Address:.....

.....

.....

Telephone number: .....

**AGRISEM INTERNATIONAL - 535 Rue Pierre Levasseur  
CS 60263 – 44158 ANCENIS CEDEX  
Tél : 02 51 14 14 40 – Fax : 02 40 96 32 36  
E-mail: [agrisem@agrisem.com](mailto:agrisem@agrisem.com)**

This document should be kept inside this user manual.

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# 1. INTRODUCTION

**The warranty certificate MUST be returned within 15 days of delivery of the machine to the final user.**

You have just acquired your AGRISEM machine. It has been designed to give complete satisfaction.

The equipment has been carefully designed using the latest technological solutions to reduce usage costs.

However, for the best and most profitable use of your AGRISEM machine, please read this manual carefully before starting it up and strictly follow the instructions. In particular, follow the instructions for adjusting and servicing the machine, as well as the safety precautions, very carefully.

Please contact our distributor for any information or advice.

The instructions in this user manual must be read and applied by any persons who will be carrying out work on or with the machine, in particular:

- Use of the machine (including preparation, repairs required during work and maintenance).
- Maintenance (servicing and inspection).
- Transport.

AGRISEM INTERNATIONAL cannot be held liable for personal injury or damage to equipment and malfunctions resulting from failure to comply with the instructions given by the manufacturer in this manual.

This user manual is an integral part of the machine and must always be kept with the machine, especially in the event of resale.

AGRISEM INTERNATIONAL is constantly seeking to improve its products and reserves the right to modify or improve its products with no obligation to apply these modifications or improvements to products already on the market.

The instructions in this manual are not exhaustive and cannot cover all eventualities. The user must comply with the applicable legislation, in particular with regard to safety, ensure that the rules of safety and caution dictated by the situation are applied, use common sense and adapt the use of the machine to the circumstances.

It is the Purchaser's responsibility to check that the AGRISEM machine complies with the legislation and regulations applicable to its final destination.

## 2. WARRANTY CONDITIONS

The warranty conditions applicable to machines fitted exclusively with genuine spare parts from AGRISEM INTERNATIONAL - 535 Rue Pierre Levasseur CS 60263 – 44158 ANCENIS CEDEX, France, are as follows:

### ➤ DURATION

- If a defect is observed on a structural part within a period of **12 months** as from the date of delivery of the machine, and if this defect is due to faulty raw materials, or its manufacture at the factory. The parts alleged to be faulty must be returned to the Company's address for an expert inspection.

The following shall be considered to constitute proof of the date of delivery of the equipment:

- The date of the delivery slip and the purchaser's invoice.
- The return of the warranty certificate within 15 days (with the dealer's and purchaser's stamp and signature) following delivery of the equipment.

### ➤ MACHINES AND PARTS CONCERNED

- For the purposes of this warranty, the term "Machine" is exclusively used to designate machines and parts manufactured by AGRISEM INTERNATIONAL. (It does not include external components, in particular tyres, hydraulic hoses, etc. even though these parts are also supplied by the Company)

- **The warranty is void if any modifications have been made to the machine without the formal agreement of AGRISEM INTERNATIONAL or if parts other than those manufactured by the Company have been fitted (e.g. counterfeit wear parts).**

### ➤ EXTENT OF THE WARRANTY

- The warranty is limited to the reimbursement or repair of parts recognised as faulty with regard to their raw materials or machining, in our factories by our Technical Departments.
- Any costs linked to the dismantling and replacement of the faulty part are not covered by the warranty. The cost of transporting machines or machine parts to the place of repair and their return to their owner is not covered either.
- Wear parts are not covered by the warranty.

### ➤ PRECONDITIONS

The machine must be maintained and used in accordance with the instructions in this User Manual.

All of the safety measures described in the User Manual and in the manuals of any additional equipment must be complied with.

All of the protection and safety devices and hazardous parts (e.g. shock absorbers) must be regularly inspected and replaced if necessary.

The warranty is only valid if the customer has met the contract's general obligations, in particular the payment conditions.

## ➤ **WARRANTY EXCLUSIONS**

The warranty does not of course apply to:

- Faults due to normal wear, incorrect use, lack of maintenance, inadequate monitoring or negligence.
- If the machine is damaged by an accident or develops a fault due to being used for purposes other than those specified by AGRISEM.
- In the event of non-compliant use of the machine. Please consult chapter 3 with regard to this point: Compliant use of the machine.
- If the manufacturer's instructions and requirements given in this manual are not complied with, particularly those regarding safety, assembly, use, operation and servicing.
- In the event of improper handling on the part of the user.
- Causes due to the presence of foreign bodies.
- In the event of damage due to the machine being combined with other machines or instruments without the prior written agreement of AGRISEM, and/or without complying with the instructions given by the manufacturers of the tractor and other instruments or machines.
- If the machine is used with protection and safety devices that are incorrectly fitted or not working.
- If the machine has been modified without prior written permission from AGRISEM, or if spare parts, accessories or equipment have been fitted to the machine which were not recommended by AGRISEM.
- In the event of non-compliant repair.
- If faults are due to the machine being immobilised.
- In the event of damage during transport or handling by a carrier. It is the recipient's responsibility to lodge the necessary complaints with the carrier.
- The adverse consequences of the machine being immobilised due to a fault or incident on the machine are not covered by the warranty.
- Personal injury to the owner or a third party and the indirect consequences resulting from this are not covered by the warranty.

Moreover, AGRISEM INTERNATIONAL shall not be liable for the payment of compensation for any reason whatsoever in the event of the loss of crops or any damage whatsoever due to a fault, hidden defect or machine breakdown.

The purchaser is always responsible for the choice of product and the suitability of the machine for the result that he hopes to obtain. He is responsible for its correct use in line with professional practice and the regulations.

Under no circumstances will AGRISEM INTERNATIONAL have any obligation with regard to the final result.

## ➤ **LIMITATIONS AND LIABILITY**

- The warranty cannot be assigned or transferred to any other person without the prior written permission of AGRISEM INTERNATIONAL.
- Under no circumstances do those selling our machines have the right or power to make any decision whatsoever, either express or tacit, in the Company's name.
- The technical assistance given by the Company or its representatives with the repairing or operation of equipment does not make it liable for any costs and in no way alters or leads to the waiving of the conditions of this warranty.

➤ **WARRANTY ENFORCEMENT PROCEDURE: TO BE STRICTLY ADHERED TO BY THE DISTRIBUTOR AND BY THE PURCHASER**

The warranty's enforcement is subject to strict compliance by the dealer and the user with the following requirements:

**A) RETURNING BY THE DEALER OF THE WARRANTY CERTIFICATE DULY COMPLETED AND SIGNED BY THE DEALER AND THE PURCHASER.**

**B)** Claims must be made without fail using an AGRISEM INTERNATIONAL "**WARRANTY CLAIM FORM**" (see appendix) and sent by registered letter with acknowledgement of receipt **by the dealer** to the company's technical department within 10 days of the incident. This form must be completed legibly by the dealer and must include the following information:

- Name and address of the dealer, code No.,
  - Name and address of the purchaser,
  - Type of machine,
  - Working width,
  - Machine serial number,
  - Date of delivery to the purchaser,
  - Date of breakdown,
  - **Precise references of the parts replaced, No. and date of invoice,**
  - **Make and model of the tractor used,**
  - Detailed description and alleged cause of the incident.
  - Surface worked with the Disc-O-Mulch,
  - Utilised agricultural land belonging to the farm,
  - Type of soil in terms of % clay,
  - Proof of wear part invoice
- Stones                     yes                     no
- Parts replaced             yes                     no (send the photocopy of the invoice)

**C) Allegedly faulty parts are to be returned by the dealer to the Company's address for an expert inspection,** together with the copy of the warranty claim form provided for this purpose. **The dealer must order the faulty part from the spare parts department.** Any transport costs incurred by the returning of said parts are payable by the sender.

**D)** The final decision regarding payment under the terms of the warranty shall be made by **the company's technical or general management.** Whatever the reason for the warranty claim, this decision is final and irrevocable and the purchaser undertakes to accept this decision both with regard to the fault and the replacement of the part or parts.

Under no circumstances are the company's salesmen authorised to make such a decision, which would be void.

*NOTE: In the event of refusal, the part remains at the customer's disposal for eight days. After this time it will be scrapped with no appeal possible.*

Under no circumstances do those selling our machines have the right or power to make any decision whatsoever, either express or tacit, in the Company's name.

➤ **5-YEAR WARRANTY AGREEMENT**

If the customer subscribes to the 5-year warranty, please see this agreement for the terms and conditions of the warranty's enforcement.

## **2.1. EXCLUSIVE LIABILITY CLAUSE**

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AGRISEM INTERNATIONAL denies any liability for damage (and any indirect consequences linked to it) resulting from one or more of the following causes:

- Non-compliant use of the machine.
- Failure to follow the manufacturer's instructions or those given in this manual, particularly those regarding safety, assembly, start-up, use, operation and servicing.
- Unsuitable assembly, start-up, use and maintenance of the machine.
- Use of the machine with faulty protection and safety devices or safety and protection devices that are incorrectly installed or not working.
- Combining of the machine with other instruments or machines without the written agreement of AGRISEM and/or without complying with the instructions given by the manufacturers of the tractor and other instruments or machines.
- Modifications made to the machine without the written permission of AGRISEM.
- Fitting of spare parts, accessories or equipment on the machine which are not genuine or which have not been recommended by AGRISEM.
- Failure to monitor the wear parts on the machine.
- Use of the machine other than for the purposes specified by the manufacturer.
- Non-compliant repair and maintenance.
- Catastrophes resulting from the presence of foreign bodies, unforeseeable circumstances and cases of force majeure.

Moreover, AGRISEM INTERNATIONAL cannot be held liable for injury to the owner or a third party or for the indirect consequences of such an injury, whether or not it results from a fault. You are reminded that a safe distance of 50 metres must be maintained around the machine.

Any claim for compensation for damage that did not occur directly on the machine is excluded.

AGRISEM INTERNATIONAL cannot be held liable for damage caused by driving or use errors.

AGRISEM INTERNATIONAL cannot be held liable for compensation for the consequences of the instrument's immobilisation due to a fault or an incident on the machine.

## **2.2. COMPLIANT USE OF THE MACHINE**

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AGRISEM INTERNATIONAL products must only be used for the work for which they were designed:

### **Work on arable land under normal conditions**

In the event of damage linked to the use of the machine other than for the purposes specified by the manufacturer, the manufacturer shall be entirely released from liability.

Only use the machine in good technical condition, in accordance with the purpose for which it was designed and in full knowledge of the risks.

Compliant use of the machine also involves:

- Compliance with the instructions for use, servicing and maintenance issued by the manufacturer
- Compliance with all of the instructions in this manual, particularly including the safety instructions
- The exclusive use of genuine spare parts, accessories and equipment or those recommended by the manufacturer.

AGRISEM machines must not be combined with other machines or instruments without prior written permission from AGRISEM INTERNATIONAL.

For any combinations, the user must also comply with the instructions given by the tractor manufacturer.

AGRISEM machines must only be used, serviced and repaired by competent persons who are familiar with the machine's features and operating procedures. These persons must be informed of the dangers to which they may be exposed.

The user is required to strictly comply with the current legislation with regard to:

- Accident prevention
- Safety at work (labour code)
- Driving on the public highway (Highway code)

He is required to observe the warnings affixed to the machine. Any modifications made to the machine by the user or any other person without the prior written permission of the manufacturer releases the latter from any liability for the damage which may result.

Damage resulting from non-compliant use of the machine:

- Is entirely the user's responsibility,
- May under no circumstances be assumed by AGRISEM INTERNATIONAL

## 2.3. SAFETY INSTRUCTIONS

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### 2.3.1. Safety instructions

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#### 2.3.1.1. Introduction

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Most accidents which occur during work, maintenance or travel from one place to another are due to a failure to observe the most basic safety rules. It is therefore essential for anyone likely to be working with this machine to adhere to the basic rules listed below and to the safety instructions displayed on the stickers affixed to the machine.

This machine has been designed for a specific task. It must always be in good working order and must only be repaired using genuine AGRISEM INTERNATIONAL spare parts.

This machine must only be used, maintained and repaired by competent persons who are familiar with its features and its operating procedures and who are aware of the safety rules for accident prevention and the dangers to which they may be exposed.

This machine must only be used in accordance with its purpose and in a condition that does not present any safety risks. Any malfunctions likely to be detrimental to safety must be corrected immediately.

The user is required to strictly adhere to the safety instructions in this manual and the stickers affixed to the machine.

The user is also required to strictly comply with the current legislation with regard to accident prevention, safety at work (labour code), occupational medicine and highway legislation.

Before using the machine for the first time, read all of the safety instructions in this user manual carefully and familiarise yourself with the controls.

The machine must never be entrusted to a person who is not trained to use it.

#### **Liability and warranty:**

In addition to the other cases mentioned in this manual, the manufacturer denies any liability for any injury or damage to equipment resulting from one or more of the following causes:

- Failure to follow the manufacturer's instructions or those given in this manual, particularly those regarding safety, assembly, start-up, use, operation and servicing.
- Non-compliant use of the machine.
- Unsuitable assembly, start-up, use and maintenance of the machine.
- Use of the machine with faulty protection and safety devices or safety and protection devices that are incorrectly installed or not working.
- Combining of the machine with other instruments or machines without the written agreement of AGRISEM and/or without complying with the instructions given by the manufacturers of the tractor and other instruments or machines.
- Modifications made to the machine without the written permission of AGRISEM.
- Fitting of spare parts, accessories or equipment on the machine which are not genuine or which have not been recommended by AGRISEM.
- Failure to monitor the wear parts on the machine.
- Use of the machine other than for the purposes specified by the manufacturer.
- Non-compliant repair and maintenance.
- Catastrophes resulting from the presence of foreign bodies, unforeseeable circumstances and cases of force majeure.

Similarly, in addition to the other cases mentioned in this manual, any claim under the warranty linked to damage resulting from one or more of the above-mentioned causes is excluded.

### 2.3.1.2. *Instructions to be followed before using the machine*

**Wear close-fitting clothes. Loose clothing may become caught in moving parts.**

**Wear individual protective equipment corresponding to the work you are planning to do** (gloves, shoes, goggles, helmet, ear protection, etc.).

**Be aware that tillage equipment, even if not very wide, has very sharp parts (blades, shares, disks, etc.) which can cause serious injury in the event of an accident.**

**Whenever the machine is used, check the area around the machine beforehand (presence of children). Ensure you have sufficient visibility.**

Before any work, ensure that the tractor is sufficiently weighted at the front to avoid any risk of the front lifting. If not, add weights to the front of the tractor.

Check that screws, nuts and bolts are correctly tightened whenever you use the machine. Tighten if necessary. Also check the condition of the tools and their fastening elements in accordance with the instructions in this manual.

**No-one must be within 50 metres of the machine when it is being folded and unfolded.**

Check that the machine is correctly hitched.

Always install the pins and locking systems.

**Check that the machine meets personal safety requirements.**

Whenever you use the machine, check that the safety and protection devices are in place and working. Replace any worn or damaged protectors immediately.

**Move any people or animals likely to be in the area where the machine is being manoeuvred or used. A 50-metre safety zone must be kept clear around the machine.**

Go around the machine looking for any external damage and checking the condition of the protection devices.

Only persons authorised by the owner of the machine and who have been trained and instructed are allowed to work on and with this machine. The operator is responsible towards third parties when he is working on and with the machine.

The owner of the machine must:

- Provide the operator with the user manual.
- Ensure that the operator has read it and understands it.
- Ensure that the operator knows the basic instructions regarding safety at work and accident prevention.

### 2.3.1.3. *Instructions to be followed for hitching and unhitching*

Pay attention to the various possibilities permitted for the connecting of the tractor's coupling equipment to that of the machine.

Only combine equipment that is compatible (machine and tractor).

- **Check that the tractor has the characteristics necessary to hitch the machine.**

#### **WARNING:**

**Non-compliant implementation may result in a risk of the tractor breaking during operation, being insufficiently stable when loaded and having insufficient manoeuvrability and braking power.**

Check that the tractor meets the necessary requirements before installing or hitching the machine.

The machine must only be mounted on or hitched to a tractor if it meets the necessary requirements.

Perform a braking test to check that the tractor can provide the regulatory deceleration power even with the machine mounted or hitched.

The requirements relating to the tractor include:

- The total authorised weight
- The authorised axle loads
- The authorised vertical load on the tractor coupling point
- The permissible load capacities of the tyres mounted on the tractor
- Sufficient authorised load on the coupling point

You will find this information on the data plate or in the vehicle's registration papers and in the tractor user manual.

The front axle must support at least 20% of the tractor's empty weight at all times.

- Calculation of the real values of the total tractor weight, tractor axle load and the load capacity of the tyres, and of the minimum ballast required:

The total authorised weight of the tractor indicated in the vehicle's registration papers must be greater than the sum of:

- The tractor's empty weight,
- The ballast,
- The total weight of the mounted machine or the vertical load of the hitched machine.

#### ***This instruction only applies in Germany:***

*If the axle loads and/or the total authorised weight are not complied with after all the possibilities have been exhausted, the competent authority according to the law of the Land may issue a waiver based on the report of an approved expert in the field of motor vehicle circulation and with the agreement of the manufacturer, in accordance with article 70 of the German law governing the authorisation of vehicles to use the public highway, and the obligatory authorisation under the German highway code.*

Combining of machines: do not combine machines that are incompatible or are incompatible with the tractor when combined.

**AGRISEM denies any liability in the event of damage resulting from a combination of machines that has not received written authorisation from AGRISEM.**

**Accidents linked to the breaking of components during operation may result from unauthorised combinations of hitching equipment.**

**Hitching and ballasting are operations which involve a risk of injury.**

➤ **Before hitching or unhitching:**

- Place the machine on stable ground.
- Chock the machine and take all of the necessary measures to avoid the accidental movement of the tractor.

The machine must only be coupled using the coupling points provided for this purpose and in accordance with the applicable rules.

When hitching, do not exceed:

- The tractor's total authorised weight
- The tractor's authorised axle loads
- The permissible load capacities of the tyres mounted on the tractor.



**No one must be standing between the tractor wheels and the tool when hitching or unhitching.**

*2.3.1.4. Instructions to be followed before using the machine*

**WARNING**

**A failure to take movement or operating safety measures may result in accidents involving crushing, cuts, entanglement, pinching or impacts.**

Before start-up, check that the machine and the tractor are able to move and operate in complete safety.

**Never climb onto the machine or stand on it when it is moving.**

Never work in reverse.

**Never allow children to climb on the tractor or the machine, or to play near the equipment, even if the machine is stopped.**

**When using or manoeuvring the machine ensure that no-one is within the manoeuvring or working area.**

**The elements of the machine that are controlled by an external force have crushing and shearing zones. Keep away from these hazardous areas.**

Be aware of hidden obstacles (stones, roots, pipes, cables, etc.) in the event of a collision with an obstacle.



**In such an event you must stop the drive, stop the tractor engine, remove the ignition key and wait for the machine to stop completely.**

Before starting work again, check the machine for any damage.  
If the obstacle is an electric cable or gas pipe, inform the appropriate authorities.

When using the machine, stones or other foreign bodies are likely to be thrown a considerable distance.

**Move any people or animals likely to be in the danger area around the machine.**

Do not stand in the machine's working area or in the area where the machine rotates and pivots.

Each time the machine is used, carry out a careful visual inspection of the machine to detect any external damage and ensure that the safety and protection devices are operating correctly. Also carry out regular inspections of the various adjustments.



**Do not approach the machine until all of the moving parts are completely immobile. Enforce a 50-metre safety area around the machine.**

➤ **With regard to driving:**

Adapt your driving to ensure that you are in control of the tractor with the machine mounted or hitched under all circumstances.

Take into account your personal faculties, the conditions of the land or road, the traffic, the visibility and the weather, the tractor's driving characteristics and the conditions of use when the machine is mounted or hitched.

**Ensure that the rules of safety and caution dictated by each situation are applied.**

The speed and driving style must always be appropriate to the land, roads and tracks.

Reduce your speed on uneven ground or tight corners.

On bends, take into account the overhang and the inertia of the mounted tool.

Avoid sudden changes of direction at all times.

Do not leave the driver's seat until the equipment has completely stopped, the engine is off and the parking brake is on.

**Do not transport any people or animals on the machine and the additional tools during work or transport.**

➤ **When driving on the public highway:**

**Comply with the highway code applicable in your country.**



**Before going out onto the public highway, check the width of the machine and unbolt or remove elements that exceed the regulatory width.**

Take into account the widths authorised for transport and the transported height depending on the hitched machine, in line with current legislation.

Before setting off on the road, ensure that the hitched machine is fitted with the lighting and signalling devices required by the highway code and any other devices required by the current regulations.

AGRISEM rear signalling lights and panels may be removed when working. Check that this signalling equipment has been correctly refitted.

Check that the equipment is clean and operating correctly. Replace all missing or damaged equipment.

Before travelling on the road, secure all of the machine's pivoting parts in their transport position to avoid dangerous changes of position. Also check that the screws, nuts and bolts are tightened and that all of the machine parts are correctly attached and cannot move or become detached.

If your machine is a folding machine, the locking system must be engaged.

Follow the instructions in this manual on how to prepare the machine for transport.

If necessary, also check:

- The connection of the supply pipes;
- The braking system and the hydraulic circuit.

If the equipment does not already have them, fit signalling devices: lighting board, reflectors, reflective plates or adhesive strips.

Ensure that the machine or additional equipment does not hide the tractor's lights.

Ensure that the tractor tyres are inflated to the correct pressure.

Ensure that the tractor and additional equipment is correctly balanced.

Install ballast at the front and back to ensure that the brakes and steering are effective.

The tractor's front axle must systematically support at least 20% of the tractor's empty weight to guarantee sufficient manoeuvrability.

**Never drive at more than 25km/hour when under load.**

Clean off any soil stuck to the machine before going out onto the road.

After using the public highway, ensure that the road is cleaned of any mud left by the tractor and tools.

**The driver/owner has sole responsibility when transporting the machine on the public highway.**

#### *2.3.1.5. Instructions to be followed before carrying out any operations on the machine*

In particular during cleaning, servicing and repairs.

**Comply with the instructions in this manual regarding the servicing of the machine.**

Before carrying out any operations on the machine:

- Ensure that the machine is on stable ground.
- **Stop the tractor engine, remove the ignition key, wait for all of the moving parts to stop and engage the hand brake.**
- Set the machine on the ground, depressurise the hydraulic circuit and allow the machine to cool down.
- Secure the machine or elements that are in a raised position to avoid any accidental lowering.
- Chock the machine.

If using a high-pressure washer or steam cleaner, it is essential to comply with the following points:

Do not clean the electrical and hydraulic components.  
Never direct the high-pressure washer or steam cleaner nozzle directly at the lubrication points or bearings.  
Systematically keep the nozzle a reasonable distance from the machine.  
Comply with the rules for using high-pressure washers.

**Wear appropriate personal protective equipment for the work to be performed. In particular, wear safety shoes and gloves to handle sharp parts.**

**Take all of the necessary precautions when fitting working parts that are both heavy and sharp.**

The machine must only be serviced and repaired by competent persons who are familiar with the machine's features and operating procedures.

**The machine must only be repaired with genuine AGRISEM International spare parts.**

For bare metal parts, use either an anti-rust product that leaves a greasy film or thick grease.

According to the type of machine: before carrying out any work on the electrical circuit or before any welding operations, disconnect the wiring harnesses coming from the tractor. Disconnect the battery and alternator cables.

**Do not weld or use blow torches near pressurised fluids or inflammable products.**

#### *2.3.1.6. Instructions regarding installation*

The machine may be fitted with electronic components and elements which may be affected by electromagnetic emissions from other devices. This type of interference may be a source of danger for people if the following safety instructions are not followed:

- If devices and/or electrical components are installed on the machine and connected to the on-board electrical circuit at a later date, the user must first check that installing these components will not interfere with the vehicle's electronics or other components.
- Ensure that electrical and electronic components subsequently installed comply with the current version of electromagnetic compatibility directive 2004/108/CEE and that they have a CE marking.

Before carrying out any operations on the electrical system, disconnect the battery's negative terminal.

Only use the recommended fuses. Using fuses which have too high an amperage may damage the electrical system and create a risk of fire.

Ensure that the battery terminals are correctly connected, starting with the positive terminal and then the negative terminal. When disconnecting the terminals, start with the negative terminal and then disconnect the positive terminal.

Systematically fit the cover provided for this purpose on the battery's positive terminal. Be aware of the risk of explosion when earthing.

**Risk of explosion: avoid sparks and naked flames near the battery.**

*2.3.1.7. Instructions regarding the hydraulic system*

If your machine is fitted with a hydraulic circuit, you must comply with the following instructions:

**Warning! The hydraulic circuit is pressurised.**

When mounting cylinders and hydraulic devices, take particular care to ensure that the circuits are correctly connected, in accordance with the manufacturer's instructions.

Mark the sockets and connectors of the hydraulic connections between the tractor and the machine to avoid handling errors.

Before connecting a hose to the tractor's hydraulic circuit, ensure that the circuits on both the tractor side and the machine side are perfectly clean and not under pressure.

Before connecting, check that the hydraulic quick connectors on the machine and the tractor are free from impurities.

Before performing any operations on the hydraulic circuit, lower the machine, depressurise the circuit, switch off the tractor engine, engage the parking brake and remove the ignition key.

Before carrying out any operations, allow the machine to cool down and discharge the hydraulic circuits' accumulators.

Check the hydraulic hoses regularly. Damaged or worn hoses must be replaced immediately. Check the appearance of the hydraulic hoses to detect any signs of tears or abnormal wear.

When replacing hydraulic hoses, ensure that you only use hoses of the characteristics and quality recommended by the machine's manufacturer.

Each time the machine is used, the hydraulic quick connectors' end fittings must be cleaned and the protective caps must be fitted afterwards. Replace connectors which do not lock correctly or which leak.

Hydraulic hoses must never trail on the ground.

If you find a leak, take all of the necessary precautions to avoid accidents. Never try to plug the leak with your hand or fingers.

**Any pressurised liquid, in particular oil in the hydraulic circuit, can penetrate the skin and cause serious injury and infections.  
In the event of injury, consult a doctor immediately.**

To avoid accidents caused by unexpected hydraulic movements or by third parties, the distributors on the tractor must be locked or immobilised when they are not being used or in their transport position.

*2.3.1.8. Instructions relating to the braking system*

**The braking system must be checked and serviced regularly.** Servicing and repair work and adjustments must only be carried out by brake system specialists.

Stop the tractor immediately in the event of a brake system malfunction and have it repaired.

Before performing any operations on the braking system, place the machine on stable ground and chock it.

After any adjustment or repair work on the braking system, perform a braking test.

### *2.3.1.9. Instructions specific to AGRISEM seeders*

In addition to the instructions applicable to all of machines, AGRISEM seeder users must comply with the following instructions:

**Never climb onto the machine elsewhere than on the AGRISEM walkway provided for this purpose.  
Only climb onto the machine when it is stopped.**

When operations are performed on the AGRISEM seeder or during flow tests, the seeder must be stationary and a 50-metre safety area must be enforced around it. The hydraulic system must be depressurised (e.g. turbine stopped) and the rear window of the tractor must be shut, the tractor switched off and the ignition keys removed.

Ensure that no one is on or near the seeder when the grain is being loaded. The AGRISEM walkway must only be used when the seeder is stationary.

Always ensure that the entire area within the seeder's dimensions is completely clear.

Never stand under the sun wheel when it is in its transport position.

When testing the distribution flow, the user must turn the sun wheel with care to avoid any injury. When the wheel is rotating, no-one must be within 50 metres of the machine. This means that no-one must put their fingers into the distribution grooves unless the transmission system is completely stopped.

When changing the transmission gear ratios, ensure that the gearing and chain are handled with the greatest care to avoid any injury. No-one must be within 50 metres of the machine. Avoid putting yourself in danger when changing the gearing by avoiding climbing on the machine's beams or disks, as this could be dangerous.

Ensure that the sun wheel is protected during transport to avoid it hitting anything or injuring anyone.

Similarly, when the turbine is started up, a safety area must be enforced around the machine due to the risk of objects or liquids being ejected (e.g. soil, oil, stones, metal, etc.).

When travelling on the public highway, always be very careful and alert. As the rear visibility is reduced during transport, ensure that the way is clear before reversing the machine (50-metre safety area).

The user must comply with the highway regulations applicable in his country with regard to the front hopper.

If the tractor's signalling equipment is not sufficient (or not sufficiently visible) ensure that you fit your front hopper with lighting and signalling plates.



**When working, a 50-metre safety area must be enforced due to the risk of objects being ejected.**

#### 2.3.1.10. *Instructions relating to safety systems with spring assemblies*

---

Safety devices with pre-compressed spring assemblies are fitted on many AGRISEM tools. These can be very dangerous when performing technical operations on the machine if all of the necessary precautions are not taken.

**WARNING: Written authorisation must be obtained from AGRISEM International before carrying out any operations on the "Spring Assembly".**

#### 2.3.1.11. *Instructions relating to transmission shafts with universal joints*

---

Consult the tractor manufacturer's instructions when performing any operations on transmission shafts with universal joints.

#### 2.3.1.12. *Instructions relating to loading and transport*

---

Unless there is a specific transport agreement:

- For deliveries of less than three tonnes: the carrier is responsible for the loading, chocking, securing and unloading of the equipment from when he takes charge of it until its delivery.
- For deliveries of more than three tonnes: loading, chocking and securing on the one hand, and unloading on the other hand, are the responsibility of the contracting party or the recipient respectively. The responsibility for any equipment damage that occurs during these operations lies with the person carrying them out.

Unless there is a specific transport agreement, and for deliveries of more than 3 tonnes, the Purchaser will therefore unload the machine under his own responsibility.

Similarly, if the Purchaser sells the machine and has it delivered, as the sender, he will be responsible for the loading, chocking and securing of the equipment when it is sent.

<b>In case of doubt regarding the unloading or loading, chocking and securing of the machine, please contact AGRISEM International.</b>
---

#### 2.3.1.13. *The user's workstation*

---

The machine must be operated by one person only, from the tractor driver's seat.

#### 2.3.1.14. *Noise data*

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The sound pressure level is 70 dB(A), as measured at the level of the user's ear during operation with the cab closed.

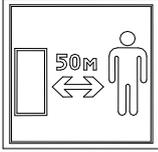
The sound pressure level mainly depends on the tractor used.

Measuring device: NICETY SL801A.

## 2.3.2. Safety symbols on the machine

---

**ETIQ-501**



Keep a safe distance from the machine during work. Risk of serious injury.  
Ensure that no-one is in the danger zone around the machine when the tractor engine is running.

**ETIQ-502**



Keep a safe distance from the machine when lowering it. Risk of serious injury.  
Ensure that no-one is under the machine when lowering it.

**ETIQ-503**

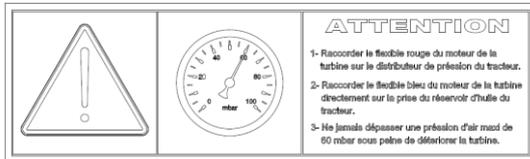


Beware of pinching. Risk of serious injury.  
Do not touch the hazardous areas under any circumstances while the tractor engine is running and the universal joint shaft, hydraulic circuit or electronic system is operating.

**ETIQ-504**



Keep a safe distance from the rear of the tractor during manoeuvres. Risk of serious injury.



Warning: never exceed a maximum air pressure of 60 mbar as this may damage the turbine.

**ETIQ-908**



Read the maintenance book and safety instructions before starting up the machine and abide by them during operation.

### 3. TECHNICAL INSTRUCTIONS

#### 3.4 PNEUMATIC SEEDER

##### 3.4.1 Technical characteristics of the DS 200



Hopper volume:	200 L
Distribution drive:	Electrical
Blower drive:	Electrical
Number of outlets	8
Unladen weight (variable depending on the equipment):	324 Kg

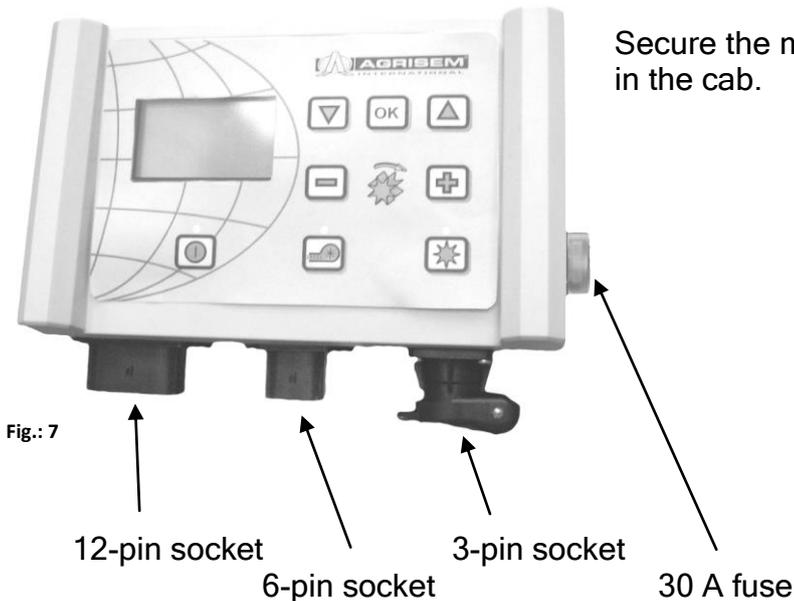
##### 3.4.2 Technical characteristics of the DS 500



Hopper volume:	500 L
Distribution drive:	Electrical
Blower drive:	Hydraulic
Number of outlets	8
Unladen weight (variable depending on the equipment):	462 Kg

### 3.4.3 Securing the control module

---



**WARNING:** If possible, do not wind the cable on a reel  
The lower part of the control module contains:  
=> A 3-pin socket (connection to the unit's power supply),  
=> A 6-pin socket (connecting of the seeder to the control module),  
=> A 12-pin socket for the sensors.  
A 30A fuse is located to the right of the control module.



**RECOMMENDATION:** Make sure that you observe the module from the right angle to benefit from optimum screen reading conditions. If necessary, slightly bend the mounting to correctly adjust the angle.

### 3.4.4 Electrical connections

---



You can directly connect the cable provided to the tractor's standard three-pin socket in the cab. Connect the other end to the control module.

The fuse (30A) is located to the right of the control module.



**WARNING:** The 12V power supply should NOT be connected to a cigarette lighter. Switch off the control module when the machine is no longer in use (for various safety reasons).



**WARNING:** Failure to follow these instructions may cause damage to the control module.



**WARNING:** Battery charging using a charger in "Start" operating mode may produce voltage peaks. These may damage the control module's electronics when the control module is connected during battery charging.

## 3.5 Turbine drive

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### 3.5.1 Connecting the hydraulic turbine

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The DS 500 has a hydraulic turbine that is directly driven by the tractor's hydraulic system.

Two hoses are provided for coupling to the tractor:

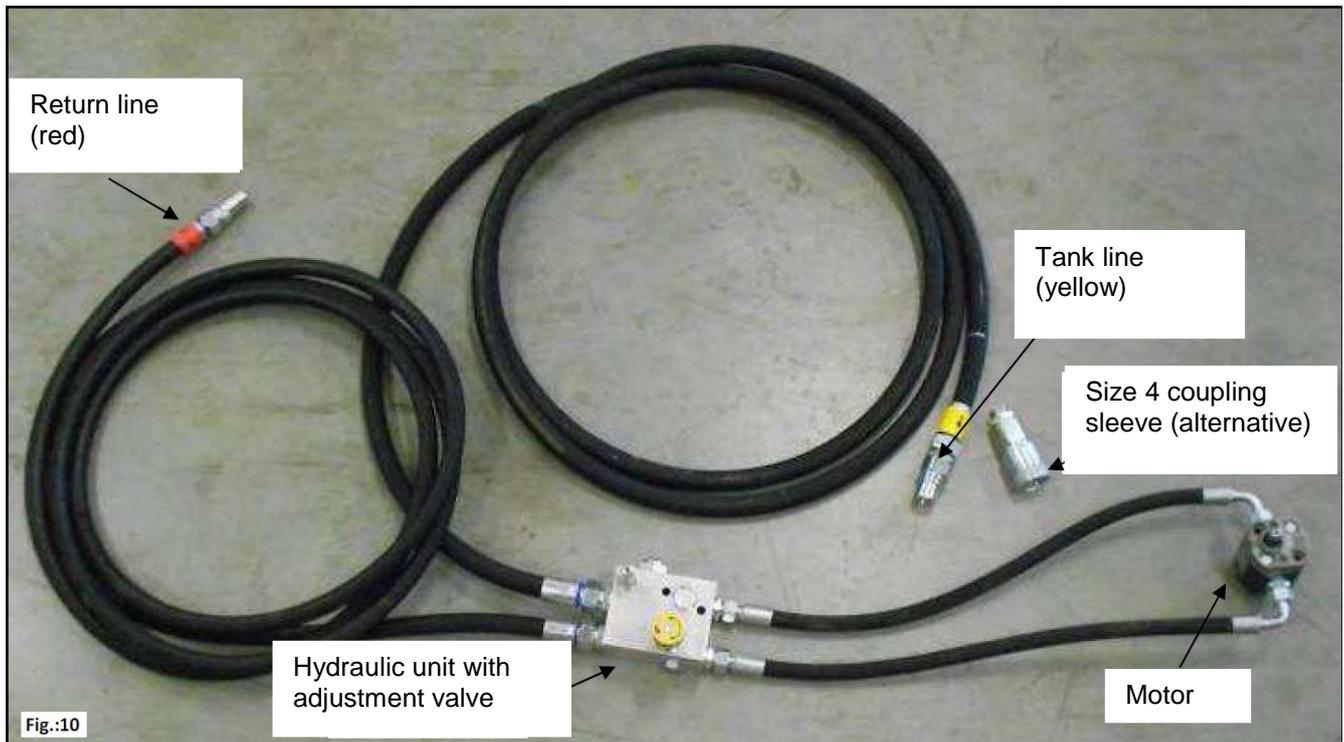
- The return line (yellow) should discharge without pressure into the tractor's oil tank.
- The pressure line (red, BG3) may simply be connected to the tractor's control system.
- When connecting the hydraulic hoses to the tractor's hydraulic system, make sure that you eliminate any pressure from the hydraulic system on the tractor and the machine side.



Fig.: 9

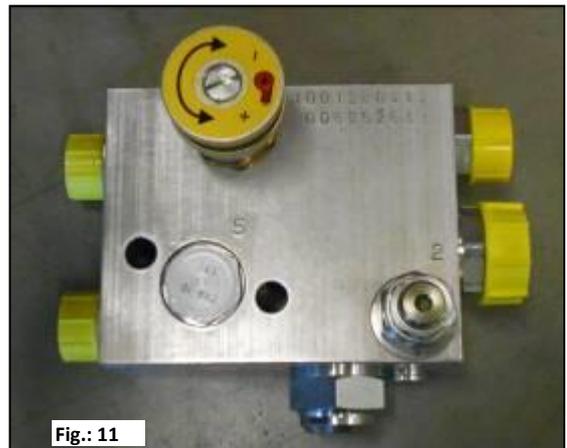


**WARNING:** Completely close the flow regulator before starting up the turbine. This will prevent the unintentional forcing of the turbine.



### 3.5.2 Setting values

The blower generates a stream of air that drives the seeds to the spreaders, through the pipes. The air pressure and quantity required depend greatly on the seeds involved (type and weight), the quantity, the working width and the speed. This makes it impossible to define a precise turbine setting, which must be determined through tests in the field.



**WARNING:** The setting must not be too low, however, as the seeds will otherwise remain in the pipes and block them. This creates a lot of work as the pipes must then be dismantled and emptied by hand. Furthermore, the seeds may be ground in the metering unit. The seeds may also be poorly distributed if the air flow is not strong enough. It is therefore recommended to always try to ensure a strong air flow.

The quantity of air is limited by the type of seeds used, as damage to these seeds must be avoided when they strike the spreaders.

The turbine's rotation speed increases in proportion to the oil flow.

### 3.5.3 Adjustment procedure

---

- Completely close the adjustment valve.
- Start up the turbine (same tractor engine rotation speed as in the field).
- Adjust the turbine rotation speed using the control unit's adjustment valve.
- The control unit protects the engine against over-speeding.



**RECOMMENDATION:** The tractor's hydraulic pump should deliver enough oil so that the turbine's rotation speed does not fall, even if the tractor engine's rotation speed falls or other hydraulic functions are used.



**RECOMMENDATION:** The control unit is designed for 80 L/min. If the tractor's pump produces a higher quantity of oil, the system may overheat, especially if the tractor does not have an oil cooling system.



**WARNING:** The setting is only valid for the tractor used. You must adjust the turbine again if you use another tractor.

The turbine setting must be correct so as to avoid sowing faults in the event of under-speeding and damage to the turbine in the event of over-speeding.



**RECOMMENDATION:** The hydraulic motor has a measuring strip. If the temperature rises into a certain range (71°C to 110°C) a black colouration appears.

It is prohibited to exceed 80°C.

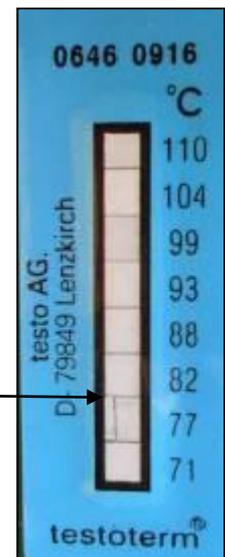
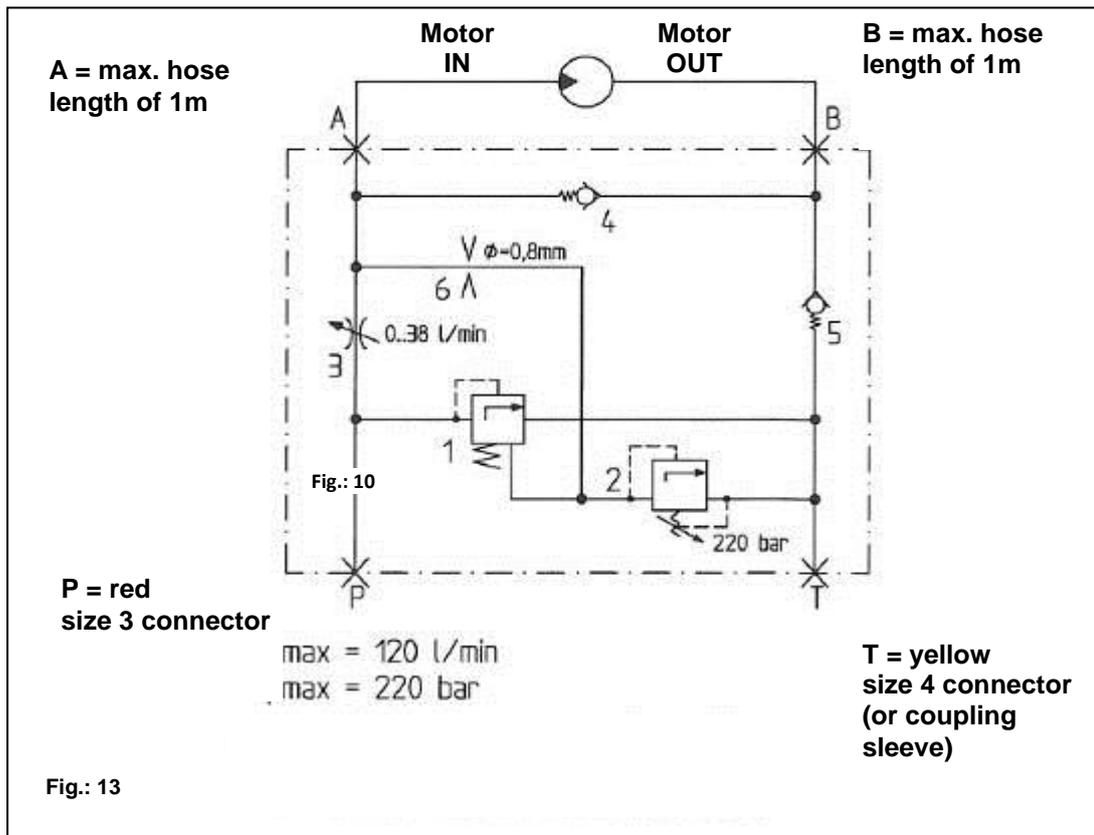


Fig.: 12

## Diagram



## Hydraulic system



**WARNING:** The hydraulic system is pressurised. Reversing the connections will reverse the direction of operation and/or result in the certain destruction of the hydraulic motor (e.g. raise/lower) creating the risk of an accident.

- When connecting the hydraulic motors you must therefore connect the hydraulic hoses as indicated.
- When connecting the hydraulic hoses to the tractor's hydraulic system, make sure that you eliminate any pressure from the hydraulic system on the tractor and the machine side.
- The hydraulic function connection sleeves and connectors between the tractor and the machine must be identified to prevent incorrect connecting.
- Check the hydraulic lines regularly and replace them if they are damaged. The lines replaced must meet the technical requirements of the machine's manufacturer.
- Use appropriate equipment when looking for leaks to avoid the risk of injury.
- Liquids (hydraulic oil) released at high pressure may penetrate the skin and cause serious injuries. In such a case, consult a doctor immediately (risk of infection).

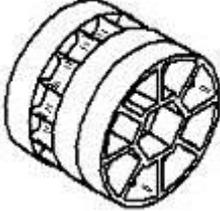
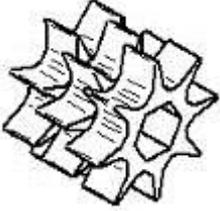


**RECOMMENDATION:** Make sure that you switch off the devices, eliminate any pressure from the system and switch it off.

## 3.6 Settings

### 3.6.1 Choosing the distribution shaft

You must select the right distribution shaft before filling the tank with seeds. The right choice is determined by the type of seed and the quantity to be spread (for the sowing of special seeds, contact AGRISEM International to obtain other types of flutings).

Distribution shaft types	
	
fb-f-fb-fb	GGG
Small flutings	Large flutings

Two fully assembled distribution shafts are delivered as standard with the machines

- 1 distribution shaft with coarse-toothed wheels (GGG)
- 1 distribution shaft with one fine-toothed wheel per outlet (fb-f-fb-fb)



#### Use of the coarse-toothed distribution shaft:

Usually for large quantities or large seeds, e.g. mixtures of grass seed, rye, barley, wheat, oats, mixtures with peas, etc.

#### Use of the fine-toothed distribution shaft:

Usually for small quantities or small seeds, such as rape, clover, phacelia, slug pellets, etc.



**RECOMMENDATION:** The quantity spread may be reduced much further by using dummy wheels or extra-fine wheels.



**WARNING:** Make sure that the combination of wheels selected results in a distribution shaft setting on the control module of, ideally, between 20% and 80%.

### 3.6.2 Replacing the distribution shaft

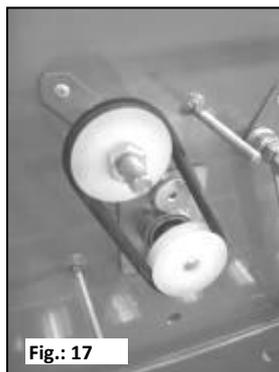
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The distribution shaft must be dismantled as follows:



**RECOMMENDATION:** Check that the hopper is completely empty before replacing the distribution shaft. Check that the machine operates correctly after the distribution shaft has been fitted.

- Consult the sowing table and select the distribution shaft required with the corresponding quantity spread.
- Completely empty the receptacle.
- Remove the side cover for the drive rollers (*see fig. 16*).
- Remove the drive roller belt (*see fig. 17*).
- Unscrew the fastening screws from the side panel for the distribution shaft.
- Now remove the whole of the distribution shaft together with the side panel (*see fig. 18*).
- The new distribution shaft can now be refitted inside the machine.
- Refit the parts in reverse order.



### 3.6.3 Floor hatch (brush adjustment)

---

A brush is fitted on the distribution shaft. This brush can be adjusted using a lever on the frame according to a scale from +4 to -5.

If the brush is no longer compressed by the lever on the distribution shaft (scale values -1 to -5), the quantity spread decreases slightly. If the brush is raised (scale value +1 to +4), you can distribute slightly more seeds.

The brush setting is 0. The distribution tests are carried out for the sowing tables using this setting.



The machine is set for the seeds distributed using the brush.

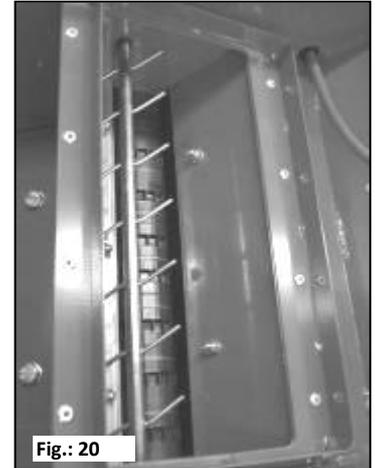
For fine seeds that flow easily, the brush should be retracted and therefore set to a minus value and for large seeds it should be extended and therefore set to a plus value on the scale.

### 3.6.4 Mixer

---

The mixer should be used for seed types with a low degree of flowability or seeds that are very light, such as forage grasses.

The mixer can be disconnected. Simply remove the belt that is on the drive wheels between the mixer and the shaft.

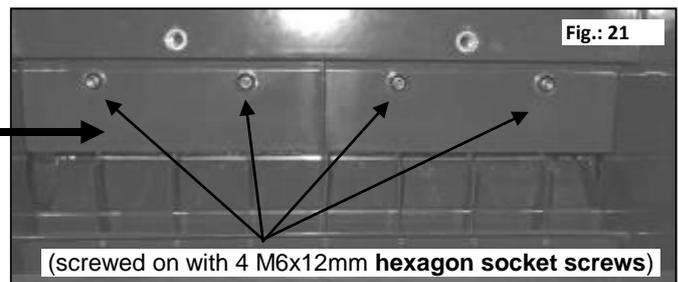


### 3.6.5 Shaft ventilation sheeting

---



**INSTRUCTION:** For large seeds such as vetch, peas or horsegram, the sheeting must be removed to avoid damaging the distribution wheels.



### 3.6.6 End-of-hopper sensor

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The end-of-hopper sensor is available only with the electronic unit with DPA.

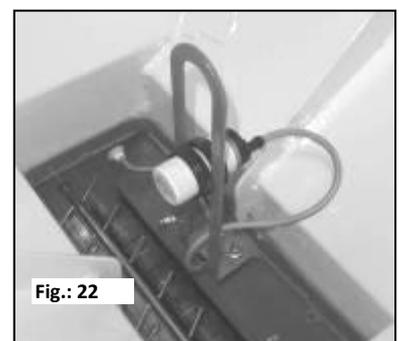
The end-of-hopper sensor reacts when it is no longer covered by seeds.

It can be adjusted height-wise and according to the quantity that you would like to still have in the hopper after the sensor has been tripped.

The sensor can also be adapted to the seed in terms of intensity. This is possible using the small slotted head screw located behind on the sensor.

When the sensor is activated, it starts to light up and the hopper is full.

You can try covering up the sensor at the front with your hand. It should start to flash. This is a way to easily check that the sensor is working and that the intensity is appropriate.



### 3.6.7 Working widths / sowing tables

The DS200 and DS500 machines can be used for a maximum working width of 6 metres.

The quantity distributed depends on the speed of the distribution shaft and the speed of travel. You must conduct a distribution test before starting work to define the required quantity spread.

The sowing tables show you the quantity spread for the different types of seeds in kilograms per minute (quantity spread during the distribution test).



**INSTRUCTION:** You can use these tables as setpoint values. They cannot be applied universally, however, as many factors are at play and large changes may occur (e.g. weight of a thousand seeds, seed humidity, change in fluidity, etc.).



#### Flow rate test procedure with the electronic unit without DPA

The distribution flow rate is independent of the tractor's forward speed. The equation below must therefore be used to calculate a value in Kg/min.

Refer to the corresponding metering table once the value in Kg/min has been determined (according to the type of fluting used and the type of seed. See page 38 to 42).

The quantity spread is determined according to the following equation:

$$\frac{\text{Required quantity spread [kg/ha]} \times \text{Speed of travel [km/h]} \times \text{Working width [m]}}{600} = \text{weight [kg/min]}$$

Example: Wheat seeds

$$\frac{5 \text{ [kg/ha]} \times 12 \text{ [km/h]} \times 12 \text{ [m]}}{600} = 1.2 \text{ [kg/min]}$$

<b>Weizen Wheat Blé</b>				
Triticum				
<b>Qté</b>	kg/min	kg/min	kg/min	kg/min
<b>Arbre de distribution</b>	ffff	GGG	fb-Flex20-fb	Flex40
2	0,13	0,52	0,344	0,480
<b>5</b>	0,16	<b>1,18</b>	0,584	1,030
10	0,20	2,30	0,985	1,945
15	0,24	3,41	1,386	2,681
20	0,28	4,52	1,787	3,776
25	0,32	5,64	2,188	4,692

⇒ Find the value closest to 1.2 Kg/min in the table in the column corresponding to the fluting chosen.

⇒ Enter the figure corresponding to the "distribution shaft" column in the electronic unit.

**Flow rate test with the electronic unit with DPA:**  
**See page 53**

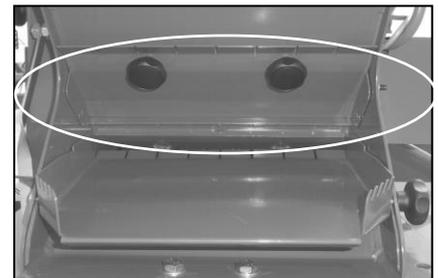


**3.6.8 Adjusting the seed quantity**

You must conduct a distribution test to define the required quantity spread.

Conduct the distribution test as follows:

1. Remove the distribution plate beneath the blower by the lower metal plates.



2. Place the distribution plate on the seeder and secure it to the frame with the star grip screws (see figure 24).

3. Use a bag or another receptacle to collect the seeds during the distribution tests.

4. Using the equation on the previous page, calculate the required quantity spread per minute.

5. The speed required to achieve the required quantity spread is shown in the corresponding sowing tables.

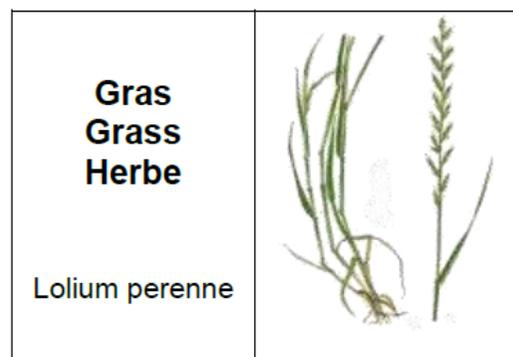
Fig.: 23



Fig.: 24

6. The calculated speed of the distribution shaft is set using the control module.
7. The distribution test will now be automatically performed (for one minute precisely) when the seeds flow with no seed loss through the distribution plate.
8. You must now weigh the quantity of seeds distributed and captured.
9. The precise adjustment value can be found by adjusting the distribution shaft speed and repeating the distribution process.
10. You can also slightly adapt the quantity spread using the floor hatch (brush adjustment, see "Floor hatch (brush adjustment)").
11. The following steps must be repeated until you achieve the required quantity spread.
12. We recommend checking the flow rate in the field once work has started. The speed of travel, quantity spread and the distribution of the deflectors should be checked in particular.

### 3.6.9 Metering tables



Lolium perenne

Qté	kg/min	kg/min	kg/min
Arbre de distribution	ffff	BG-G-BG	GGG
2	0,06	0,26	0,27
5	0,22	0,45	0,61
10	0,49	0,76	1,17
15	0,76	1,07	1,73
20	1,03	1,39	2,30
25	1,30	1,70	2,86
30	1,38	1,98	3,42
35	1,47	2,26	3,98
40	1,55	2,54	4,55
45	1,64	2,83	5,11
50	1,72	3,11	5,67
55	1,82	3,30	6,23
60	1,93	3,50	6,79
65	2,03	3,69	7,36
70	2,13	3,89	7,92
75	2,23	4,08	8,48
80	2,34	4,28	9,05
85	2,44	4,47	9,61
90	2,54	4,67	10,17
95	2,67		10,73
100	2,81		11,30



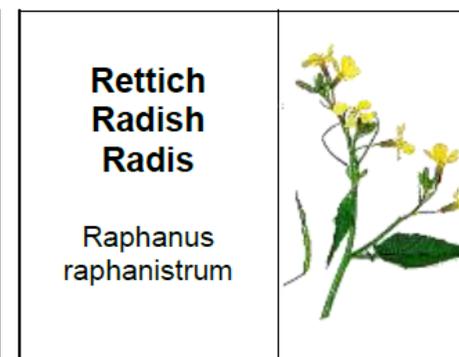
Triticum

Qté	kg/min	kg/min	kg/min	kg/min
Arbre de distribution	ffff	GGG	fb-Flex20-fb	Flex40
2	0,13	0,52	0,344	0,480
5	0,16	1,18	0,584	1,030
10	0,20	2,30	0,985	1,945
15	0,24	3,41	1,386	2,681
20	0,28	4,52	1,787	3,776
25	0,32	5,64	2,188	4,692
30	1,58	6,70	2,589	5,607
35	2,85	7,76	2,990	6,523
40	4,11	8,82	3,391	7,438
45	5,37	9,88	3,792	8,354
50	6,63	10,94	4,193	9,269
55	6,96	11,21	4,593	10,185
60	7,28	11,48	4,994	11,100
65	7,61	11,76	5,395	12,016
70	7,93	12,03	5,796	12,931
75	8,26	12,30	6,197	13,847
80	8,58	12,57	6,598	14,762
85	8,91	12,84	6,999	15,678
90	9,23	13,12	7,400	16,593
95	9,86	13,93	7,801	17,509
100	10,48	14,75	8,202	18,424



Hordeum

Qté	kg/min	kg/min
Arbre de distribution	ffff	GGG
2	0,18	0,54
5	0,48	0,87
10	0,97	1,41
15	1,47	1,96
20	1,96	2,51
25	2,45	3,06
30	2,95	3,61
35	3,44	4,16
40	3,94	4,71
45	4,43	5,26
50	4,93	5,81
55	5,02	6,70
60	5,12	7,59
65	5,22	8,48
70	5,32	9,38
75	5,41	10,27
80	5,51	11,16
85	5,61	12,05
90	5,71	12,95
95	5,80	13,84
100	5,90	14,73



Raphanus raphanistrum

Qté	kg/min	kg/min
Arbre de distribution	ffff	GGG
2	0,24	0,66
5	0,62	1,18
10	1,27	2,05
15	1,91	2,92
20	2,55	3,79
25	3,19	4,66
30	3,60	
35	4,29	
40	4,98	
45		
50		
55		
60		
65		
70		
75		
80		
85		
90		
95		
100		

**Wicke**  
**Vetch**  
**Vesce**



Vicia

<u>Qté</u>	kg/min	kg/min
<u>Arbre de distribution</u>	<u>fb-f-fb-fb</u>	<u>ffff</u>
2	0,76	3,37
5	1,42	3,89
10	2,51	4,75
15	3,61	5,61
20	4,71	6,48
25	5,81	7,34
30		8,00
35		
40		
45		
50		
55		
60		
65		
70		
75		
80		
85		
90		
95		
100		

**Buchweizen**  
**Buckwheat**  
**Blé Noir**



Fagopyrum

<u>Qté</u>	kg/min	kg/min	kg/min	kg/min
<u>Arbre de distribution</u>	<u>ffff</u>	<u>GGG</u>	<u>fb-Flex20-fb</u>	<u>Flex40</u>
2	0,09	0,54	0,33	0,27
5	0,39	0,99	0,50	0,70
10	0,90	1,74	0,78	1,40
15	1,41	2,49	1,07	2,11
20	1,92	3,24	1,35	2,82
25	2,43	3,99	1,64	3,53
30	2,86	4,68	1,92	4,23
35	3,30	5,38	2,21	4,94
40	3,74	6,07	2,49	5,65
45	4,18	6,76	2,78	6,36
50	4,62	7,45	3,07	7,07
55	4,84		3,35	7,77
60	5,06		3,64	8,48
65	5,28		3,92	9,19
70	5,50		4,21	9,90
75	5,72		4,49	10,60
80	5,94		4,78	11,31
85	6,16		5,06	12,02
90	6,38		5,35	12,73
95			5,63	13,44
100			5,92	14,14

**Blaue**  
**Lupine**  
**Blue Lupine**  
**Lupin Bleu**



Lupinus angustifolius

<u>Qté</u>	kg/min
<u>Arbre de distribution</u>	<u>GGG</u>
2	0,42
5	1,11
10	2,26
15	3,41
20	4,56
25	5,71
30	6,87
35	8,03
40	9,19
45	10,35
50	11,51
55	12,48
60	13,44
65	14,41
70	15,37
75	16,33
80	17,30
85	18,26
90	19,23
95	21,71
100	24,20

**Grünroggen**  
**Green Rye**  
**Seigle Vert**



Secale cereale

<u>Qté</u>	kg/min
<u>Arbre de distribution</u>	<u>GGG</u>
2	0,46
5	0,99
10	1,87
15	2,74
20	3,62
25	4,50
30	5,33
35	6,16
40	6,98
45	7,81
50	8,64
55	9,45
60	10,27
65	11,08
70	11,89
75	12,71
80	13,44
85	14,18
90	14,92
95	15,14
100	18,10

<b>Hafer Oat Avoine</b>		
	Avena	
<b>Qté</b>	kg/min	kg/min
<b>Arbre de distribution</b>	fb-f-fb-fb	GGG
2	0,01	0,15
5	0,02	0,46
10	0,04	0,98
15	0,06	1,50
20	0,07	2,02
25	0,09	2,54
30	0,12	3,03
35	0,14	3,52
40	0,17	4,01
45	0,19	4,50
50	0,22	4,99
55	0,23	5,42
60	0,24	5,85
65	0,25	6,29
70	0,26	6,72
75	0,27	7,15
80	0,27	7,58
85	0,27	8,02
90	0,27	8,45
95	0,28	8,73
100	0,31	10,23

<b>Senf Mustard Moutarde</b>		
	Sinapis Alba	
<b>Qté</b>	kg/min	kg/min
<b>Arbre de distribution</b>	fb-f-fb-fb	ffff
2	0,04	0,33
5	0,15	0,75
10	0,33	1,45
15	0,50	2,15
20	0,68	2,86
25	0,86	3,56
30	1,00	4,23
35	1,15	4,89
40	1,29	5,56
45	1,43	6,22
50	1,58	6,89
55	1,65	7,25
60	1,72	7,61
65	1,79	7,97
70	1,86	8,33
75	1,93	8,69
80	2,00	9,05
85	2,07	9,41
90	2,14	9,77
95	2,31	10,35
100	2,48	10,92

<b>Luzerne Alfalfa Luzerne</b>		
	Medicago Sativa	
<b>Qté</b>	kg/min	kg/min
<b>Arbre de distribution</b>	fb-f-fb-fb	ffff
2	0,10	0,30
5	0,21	0,70
10	0,40	1,38
15	0,60	2,05
20	0,79	2,73
25	0,98	3,40
30	1,15	4,05
35	1,32	4,71
40	1,49	5,36
45	1,65	6,01
50	1,82	6,67
55	1,86	7,03
60	1,90	7,40
65	1,93	7,77
70	1,97	8,14
75	2,01	8,50
80	2,04	8,87
85	2,08	9,24
90	2,12	9,61
95	2,24	10,33
100	2,36	11,06

<b>Rotklee Red Clover Trèfle Rouge</b>		
	Trifolium	
<b>Qté</b>	kg/min	kg/min
<b>Arbre de distribution</b>	fb-f-fb-fb	ffff
2	0,04	0,56
5	0,15	1,37
10	0,33	2,72
15	0,51	4,06
20	0,70	5,41
25	0,88	6,76
30	1,06	6,99
35	1,23	7,22
40	1,41	7,45
45	1,58	7,68
50	1,76	7,91
55	1,82	8,14
60	1,87	8,36
65	1,93	8,59
70	1,98	8,82
75	2,04	9,05
80	2,09	9,28
85	2,15	9,51
90	2,20	9,74
95	2,33	10,34
100	2,46	10,94

<b>Phacelia</b> <b>Phacelia</b> <b>Phacélie</b>  Phacelia tanacetifolia		
	<b>Qté</b>	kg/min
<b>Arbre de distribution</b>	fb-f-fb-fb	ffff
2	0,14	0,34
5	0,31	0,77
10	0,61	1,49
15	0,90	2,22
20	1,19	2,94
25	1,49	3,66
30	1,52	
35	1,56	
40	1,59	
45	1,63	
50	1,66	
55	1,75	
60	1,85	
65	1,94	
70	2,04	
75	2,13	
80	2,23	
85	2,32	
90	2,42	
95	2,52	
100	2,62	

<b>Raps</b> <b>Rape</b> <b>Colza</b>  Brassica Napus				
	<b>Qté</b>	kg/min	kg/min	kg/min
<b>Arbre de distribution</b>	fb-f-fb-fb	fb-fb-ef-eb-fb	fb-efv-efv-fb	
2	0,110	0,037	0,010	
5	0,211	0,060	0,019	
10	0,380	0,099	0,047	
15	0,548	0,138	0,075	
20	0,717	0,177	0,103	
25	0,885	0,216	0,131	
30	1,031	0,294	0,159	
35	1,178	0,371	0,187	
40	1,324	0,449	0,215	
45	1,470	0,526	0,243	
50	1,617	0,603	0,271	
55	1,685	0,636	0,299	
60	1,754	0,669	0,327	
65	1,823	0,701	0,355	
70	1,892	0,734	0,383	
75	1,960	0,766	0,411	
80	2,029	0,799	0,439	
85	2,098	0,831	0,467	
90	2,167	0,864	0,496	
95	2,303	0,908	0,524	
100	2,440	0,952	0,552	

<b>Mohn</b> <b>Poppy</b> <b>Pavot</b>  Papaver		
	<b>Qté</b>	kg/min
<b>Arbre de distribution</b>	fb-fb-ef-eb-fb	
2	0,029	
5	0,049	
10	0,083	
15	0,116	
20	0,150	
25	0,183	
30	0,260	
35	0,336	
40	0,412	
45	0,489	
50	0,565	
55	0,602	
60	0,638	
65	0,675	
70	0,711	
75	0,748	
80	0,784	
85	0,821	
90	0,857	
95	0,900	
100	0,942	

<b>Erbse</b> <b>Pea</b> <b>Pois</b>  Pisum sativum			
	<b>Qté</b>	kg/min	kg/min
<b>Arbre de distribution</b>	fb-Flex20-fb	Flex 40	
2	0,46	0,95	
5	0,67	1,45	
10	1,02	2,29	
15	1,37	3,12	
20	1,72	3,96	
25	2,07	4,80	
30	2,42	5,63	
35	2,77	6,47	
40	3,12	7,30	
45	3,48	8,14	
50	3,83	8,98	
55	4,18	9,81	
60	4,53	10,65	
65	4,88	11,49	
70	5,23	12,32	
75	5,58	13,16	
80	5,93	13,99	
85	6,28	14,83	
90	6,64	15,67	
95	6,99	16,50	
100	7,34	17,34	

<b>Pferde- Bohne</b> <b>Fieldbean</b> <b>Féveroles</b>  Macrotyloma uniflorum			
	<b>Qté</b>	kg/min	kg/min
<b>Arbre de distribution</b>	fb-Flex20-fb	Flex 40	
2	0,46	1,02	
5	0,66	1,57	
10	1,00	2,49	
15	1,34	3,40	
20	1,68	4,32	
25	2,02	5,23	
30	2,36	6,15	
35	2,70	7,06	
40	3,04	7,98	
45	3,38	8,89	
50	3,71	9,81	
55	4,05	10,72	
60	4,39	11,64	
65	4,73	12,55	
70	5,07	13,47	
75	5,41	14,38	
80	5,75	15,30	
85	6,09	16,21	
90	6,43	17,13	
95	6,77	18,05	
100	7,11	18,96	

<b>Chia WITHE</b>		
<b>Qté</b>	kg/min	kg/min
<b>Arbre de distribution</b>	fb-f-fb-fb	fb-fb-ef-eb-fb
2	0,050	0,029
5	0,119	0,049
10	0,235	0,082
15	0,351	0,115
20	0,467	0,149
25	0,614	0,182
30		0,249
35		0,316
40		0,383
45		0,450
50		0,517
55		0,550
60		0,583
65		0,615
70		0,648
75		0,681
80		0,713
85		0,746
90		0,779
95		0,790
100		0,797

<b>Florex</b>	
<b>Qté</b>	kg/min
<b>Arbre de distribution</b>	fb-f-fb-fb
2	0,00
5	0,08
10	0,21
15	0,33
20	0,46
25	0,59
30	0,72
35	0,85
40	0,98
45	1,10
50	1,23
55	1,36
60	1,49
65	1,62
70	1,75
75	1,88
80	2,00
85	2,13
90	2,26
95	2,39
100	2,52

<b>DC37-lose</b>	
<b>Qté</b>	kg/min
<b>Arbre de distribution</b>	GGG
2	0,60
5	1,64
10	3,05
15	4,54
20	6,25
25	7,72
30	9,16
35	10,60
40	12,02
45	13,15
50	14,67
55	15,69
60	16,99
65	18,65
70	19,68
75	20,81
80	21,73
85	22,36
90	22,84
95	23,26
100	23,51

<b>NACKAS-lose</b>	
<b>Qté</b>	kg/min
<b>Arbre de distribution</b>	GGG
2	1,27
5	2,25
10	3,67
15	5,38
20	6,73
25	7,94
30	9,54
35	10,66
40	11,95
45	13,52
50	14,80
55	16,11
60	17,46
65	18,79
70	19,78
75	20,38
80	20,99
85	21,69
90	21,90
95	22,31
100	22,72

<b>DC25-lose</b>	
<b>Qté</b>	kg/min
<b>Arbre de distribution</b>	GGG
2	0,90
5	1,81
10	3,82
15	5,18
20	6,90
25	8,56
30	10,08
35	11,56
40	13,11
45	14,64
50	16,15
55	17,63
60	18,85
65	20,99
70	22,08
75	23,16
80	23,91
85	24,66
90	25,41
95	26,15
100	26,90

### 3.6.10 Use in the field

---

The steps below must be followed when you begin sowing:

- Start up your tractor.
- Switch on the control module by pressing the "On/Off" key.
- Start up the blower by pressing the "Blower" key.
- To start the seed supply, press the "Distribution shaft" key to start up the gear motor.



**Instruction:** The next two steps can be ignored if you are working with a link arm sensor (7-pin socket, link arm sensor).

- When you turn at the end of the field, just press the "Distribution shaft" key until the green LED switches off.
- When you have finished working, first of all switch off the distribution shaft, followed by the blower and finally the whole of the control module by pressing the "On/Off" key.

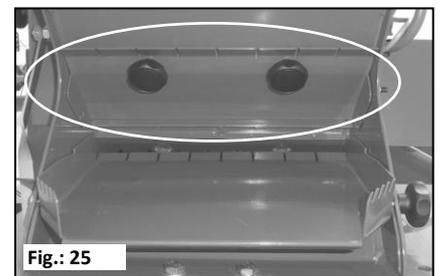
The following steps should be taken when the machine is used in the field:

- The blower should always be switched on when the machine is used in the field.
- Check the required quantity spread.
- Check that there is an equal distance between the spreaders.
- Check the height of the spreaders: distance from the ground of around 20 - 40cm.
- The distribution hoses should be slightly tilted downwards or placed horizontally on the working machine.
- The receptacle's cover should be hermetically sealed.

### 3.6.11 Emptying the hopper

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To guarantee complete emptying, you must also remove the distribution cover, which can be found beneath the blower, turn it and place it at the front on the lower metal plate so that it acts as a slide. Next select the "Empty" menu option on the control module. The distribution shaft will start to automatically turn. Now let the distribution shaft turn until the receptacle is completely empty and the distribution wheels no longer transport any seeds.



**RECOMMENDATION:** You can also use the distribution plate instead of the distribution cover. It offers the advantage of being bigger and easy to place underneath a bag or a receptacle.



**Warning:** No water should be allowed to enter the receptacle or the machine. Only compressed air should be blown through the inside of the machine.

- ✓ High pressure cleaning may damage the machine.
- ✓ In the winter, protect the machine with an environmentally-friendly anti-rust product.
- ✓ Shelter the machine from bad weather.
- ✓ Do not clean the machine with water. Cleaning with compressed air is recommended.

### **3.6.12 Technical characteristics**

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Recommended distribution width:	1 - 6m
Max. distribution width (electric blower):	1 - 6m
Max. distribution width (hydraulic blower):	up to 12m
Power supply:	12 V, 25A
Electricity consumed by the electric blower:	25 A on start-up

#### **Hydraulic supply**

Max. pressure:	130 bar
Max. quantity of oil:	32.5 L/min
Length of the hydraulic system's hose:	
5m tank line	
5m motor supply line	
0.5m pressure line	
0.5m return connection	

### 3.7 Control module without DPA (flow rate proportional to the forward speed)

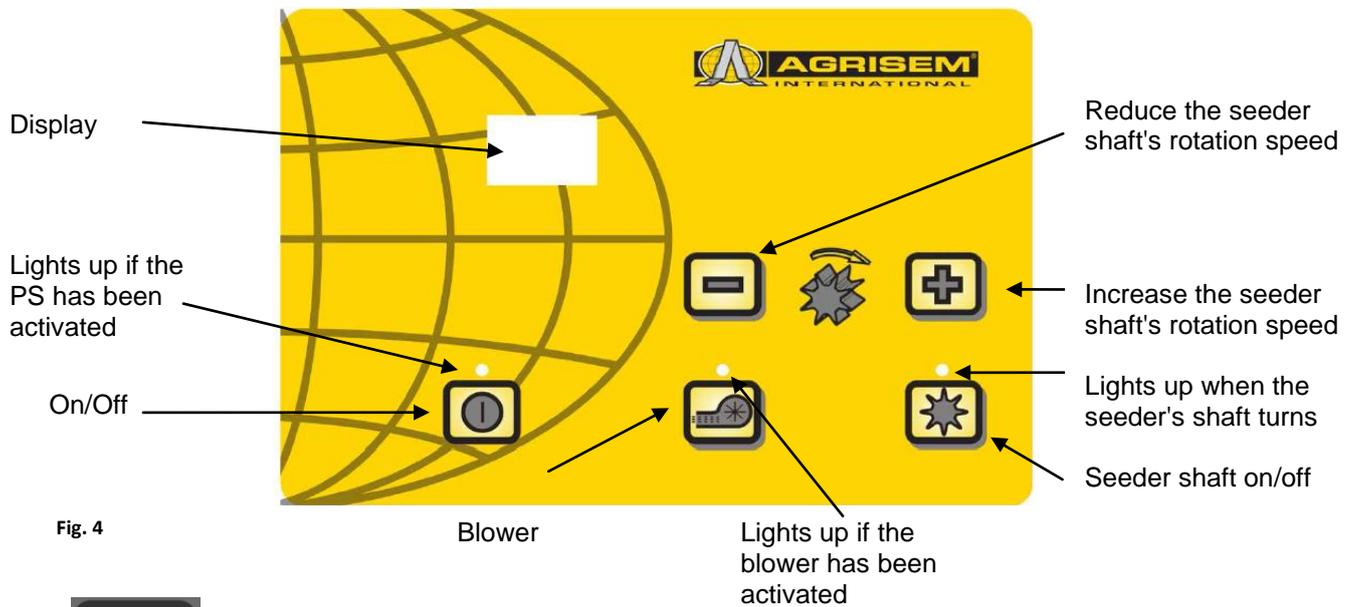


Fig. 4



## Starting up the device

The machine's version number will be displayed after activation with the  key.

The control lamp above the key will light up.

This indicates that a supply voltage is present.

The distribution shaft's rotation speed will be displayed (as a %) on the dual display.

You can then adjust the distribution shaft's rotation speed using the   keys.

The blower's motor is started up by pressing the  key.

When you press the  key the distribution shaft will start to turn and you will be able to start the distribution process.

## Use in the field

If you want to start distribution straight away, press the  key.

**1st stage:** the red control LED flashes on the  key (the blower motor starts up).

**2nd stage:** after a  few seconds, the red control LED lights up continuously on the  key (the blower motor is in operation).

**3rd stage:** if the green control LED is lit up on the  key the gear motor that drives the turning of the distribution shaft and transports the seeds has been activated.

If you turn in a bend or you change field, simply press the  key until the green LED goes out.

The distribution shaft will then stop and only the blower motor will be in operation.

At the end of the work, press the control module key  to deactivate the blower motor and the distribution shaft.

## Distribution test

The distribution test will start if you simultaneously press both the keys and hold them.



**Instruction:** Always make sure that the blower motor is deactivated before starting up the distribution test.



After start-up the distribution shaft will automatically start to turn without the blower motor for precisely one minute.

The distribution test can be ended at any time by pressing the control module keys



or



## Emptying the receptacle

Tank emptying begins when you hold down the  key

and simultaneously press the  key.

The distribution shaft will begin to turn at maximum speed without the blower motor.



**Instruction:** Always make sure that the blower motor is deactivated before starting up the distribution test.

You can stop the current function at any time by pressing the



keys or the  key.

## Automatic deactivation of the machine

If no keys have been pressed for 1.5 hours while the control module is activated and the distribution shaft is not activated, the control module will automatically stop.

## Status messages and troubleshooting

### Control messages

Error messages are sent with an audible signal so that they are noticed more quickly. These messages must be confirmed with the  key and the control device should be deactivated accordingly.



Error messages may be displayed.

The display changes from "E" to the corresponding error code.

Display	Cause	Solution
<b>01</b>	Appears if the operating voltage is too low.	Reduce the number of devices connected, check the battery, check the wiring and check the generator.
<b>02</b>	Appears if the operating voltage is too high.	Check the generator.
<b>03</b>	Appears if the internal control voltage is below a minimum value.	Return to the factory.
<b>04</b>	Appears if the distribution shaft cannot turn or the motor has been subjected to a load within the critical range for too long.	If this message appears you must stop the device and check that no solid matter or similar objects are preventing the distribution shaft from rotating, impeding the mixer or hindering operation.
<b>05</b>	The distribution shaft's gear motor is not connected. Check that the cable and sockets are correctly connected and that there is no damage.	Check the cables and sockets.
<b>06</b>	Displayed if the motor (distribution shaft) is connected and is not overloaded but is jammed.	Check that there is nothing jamming the distribution shaft. If this is the case, contact the after-sales service department.
<b>07</b>	Indicates that the blower motor cannot turn or has been subjected to a load within the critical range for too long.	If this message appears you must stop the device and check that no objects are jamming the blower or hindering operation.
<b>08</b>	Displayed if the wiring is not connected or is faulty.	Check the cables and sockets.
<b>09</b>	Displayed if the motor (blower) is connected and is not overloaded but does not turn.	Please contact the customer service department.



**Warning:** Battery charging using a charger in "Start" operating mode may produce voltage peaks. These may damage the control module's electronics when the control module is connected during battery charging.

## Help in the event of problems

Problems	Possible solution
No display after pressing the  key.	<ul style="list-style-type: none"><li>• Check that the power cable is correctly connected to the control module and also connected with the right terminals to the battery.</li><li>• <b>WARNING:</b> A faulty connection or the removal of the movable fuse from the electric cable's positive terminal may cause damage to the control module.</li></ul>

## Accessories

### Tractor cable set



An additional kit is available as an accessory to provide a power supply to the control module if the tractor is not fitted with a 3-pin standard socket as standard. The cable is 8m long.

It is screwed directly on the battery side onto the battery's terminals while a 3-pin standard socket is fitted on the other end.

### Connection diagram

Red (2 x 2.5 mm <sup>2</sup> cable)	=	+ 12 V
Black (2 x 2.5 mm <sup>2</sup> cable)	=	+ 12 V
Red (2.5 mm <sup>2</sup> cable)	=	- Earth

### 3.8 Control module with DPA (flow rate proportional to the forward speed)

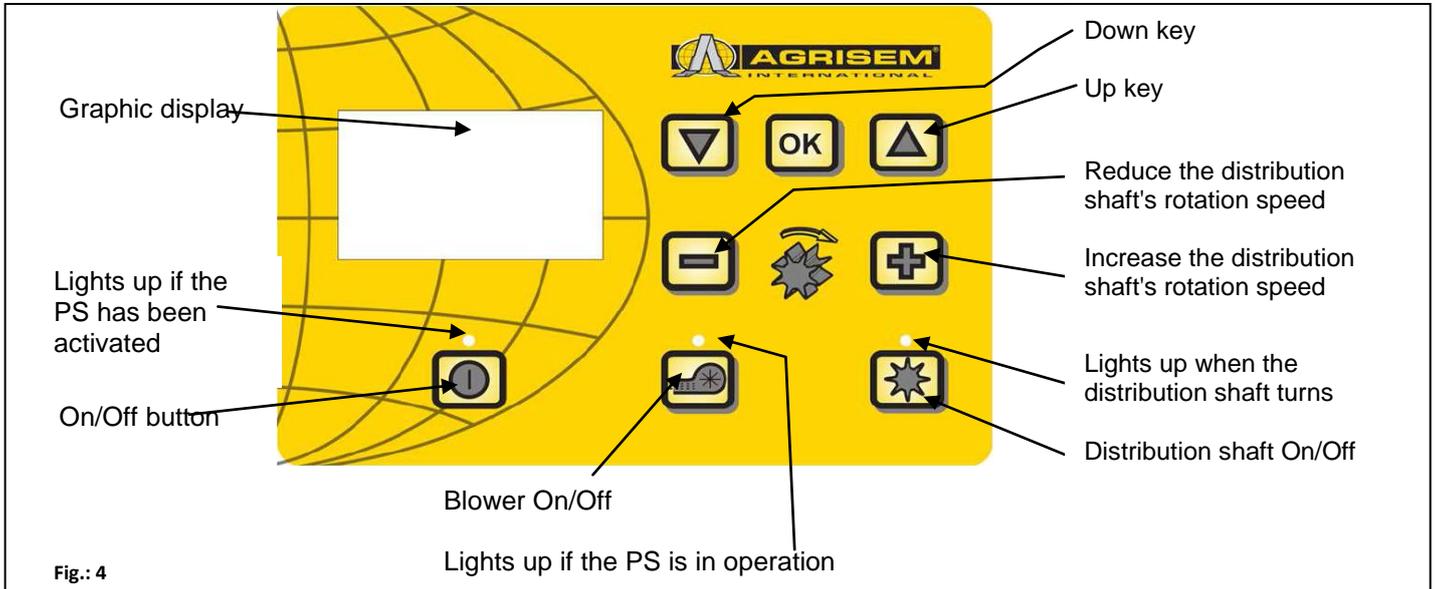


Fig.: 4



The "On/Off" button used to activate and deactivate the device can be found on the bottom left.



These keys are used to set the distribution shaft's rotation speed.



The distribution shaft's On and Off keys can be found below. The shaft will start to turn if you activate the On/Off key. The control indicator light will light up.



Controls the on-board computer (e.g. calculation of surface areas, distribution test, emptying), used to select menu items.



Activates or deactivates the blower

-) for an electric blower:

When the blower is started up, the control indicator light flashes. If the blower is operating continuously, the control indicator light will be lit.

-) for a hydraulic blower (with pressure sensor):

The control indicator light lights up once the blower has generated pressure.

## Main display

### Start-up display



Appears during the start-up process and indicates the device types and version.

This information may be very useful during operating repairs. They are required for troubleshooting in the event of a malfunction.

### During operation without a speed sensor



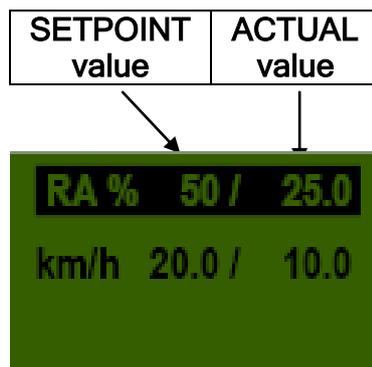
SW %: Sowing shaft rotation speed set (as a %).



To be adjusted using control module keys

Km/h: the speed of travel [km/h] may be set in the "Distribution test" menu item.

### During operation with a speed sensor



	SETPOINT value	ACTUAL value
SW % (sowing shaft)	Sowing shaft rotation speed set (as a %). To be set using the  control module keys	Actual sowing shaft rotation speed (as a %). Calculated using the sensor according to the speed of travel and displayed on the control module.
km/h (speed of travel)	May be set in the "Distribution test" menu item.	Actual speed of travel in km/h. Measured by the sensor and displayed on the control module. Main menu - Selection menu.

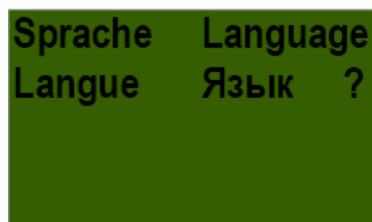
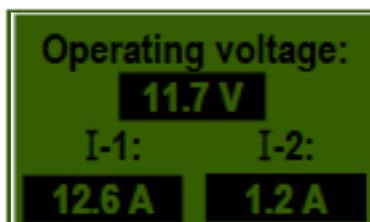
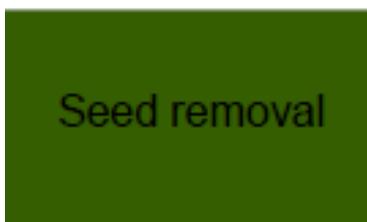
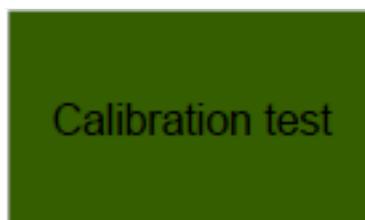
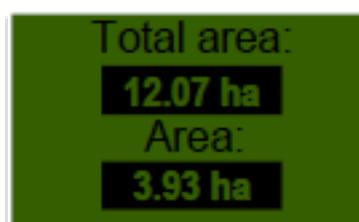
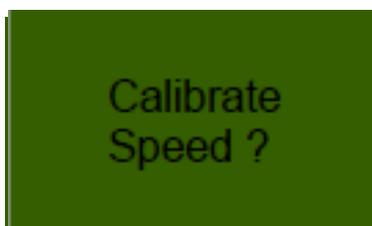
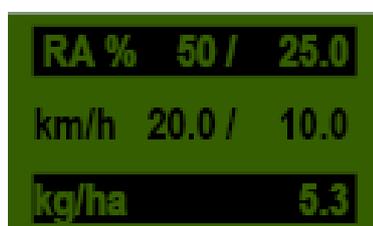
## Selection menu

After the machine has started up you can move within the menu using the following three keys:



Within the menu, the cursor keys   allow you to move up or down between menu items.

The following menu items are available:



Select a menu item allowing value adjustments. Use the value adjustment mode.



key to access

Next change the value using the   keys.

## Distribution test



**Instruction:** As well as allowing you to conduct a distribution test, this menu item enables you to set certain setpoint values, including the sowing shaft speed, working width and speed of travel. The values entered are also applied to the calculation of surface areas (surface area sown).

### Calibration test

Go into the "Distribution test" menu item and set the following values:

The settings can be entered using the   keys.

If you wish to change a value, select it using the  key before changing the value using the   keys.

Confirm the value entered using the  key.

The following information must be indicated for the automatic distribution test:

### Working width ?

You must enter the working width.

### Tractor-speed ?

Indicate the distribution speed here.

### kg/ha ?

Enter the required quantity spread (e.g. 103.5 kg/ha).

### Calibration time ?

Set the duration of the distribution test here.

0.5 min

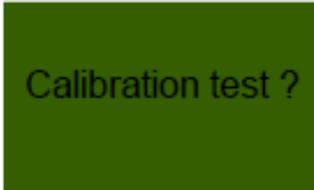
### RECOMMENDATION:



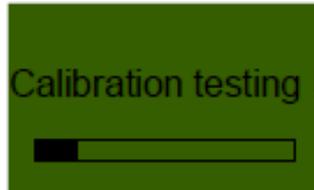
- For small seeds such as rape, phacelia or poppy a distribution time of 2 minutes is recommended.
- The distribution time is set to 1 minute by default.
- For larger seeds such as wheat, barley, peas, etc., a 0.5 minute distribution time is recommended.



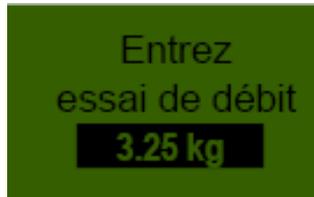
**INSTRUCTION:** Before starting the test, also check that you have removed the distribution cover and used either it or the slide. Check that the distribution bag or a collection tank has been placed right below.



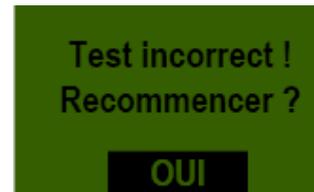
Launch the test if all of the values have been set correctly.



The distribution test will start:  
After start-up, the sowing shaft will automatically start to turn without the blower motor. After a set time, the sowing shaft will automatically stop.



Next weigh the seeds distributed and indicate the value.



If the jump in the sowing shaft's speed is too large, this display will appear.



**RECOMMENDATION:** To guarantee that you actually distribute the quantity required, we recommend repeating the distribution test until the "Test imprecise!" Repeat? message no longer appears.



**Instruction:** If the automatic adjustment of the sowing shaft is less than 3% (difference), the check mark symbol will appear and the quantity distributed in kg/ha will be displayed on the screen.



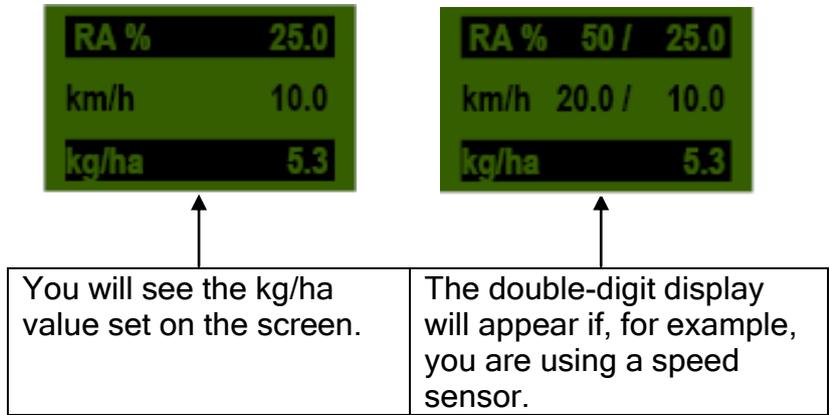
The sowing shaft's speed will now be calculated automatically. The display will then return before to the main menu



**Instruction:** The distribution test may be stopped at any time by pressing the control module's  or  key.



**RECOMMENDATION:** If a level sensor is fitted and the message "Receptacle almost empty" appears on the screen during the distribution test, the test will continue. If there are not enough seeds in the receptacle, this may, however, reduce the distribution test's accuracy.



This menu item is used to roughly set the sowing shaft's speed beforehand. The sowing shaft's speed (%) must not be changed as the settings are transmitted directly based on the results of the distribution test.

## Settings - Professionals



### Hectare counter (surface area covered)

Displays the hectares sown.

**RECOMMENDATION:** The values are automatically set if the distribution test is performed. See menu item 2.6. The calculation of the surface area sown begins as soon as the sowing shaft starts to turn.

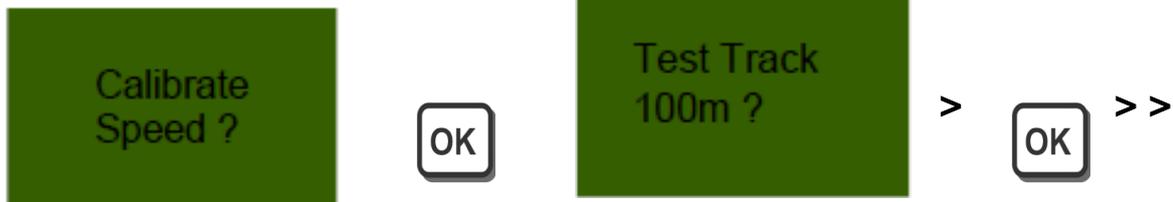
Hold down the  key for 5 seconds to reset the surface area value. The total surface area cannot be reset to zero.

## Calibrating the speed of travel (speedometer)

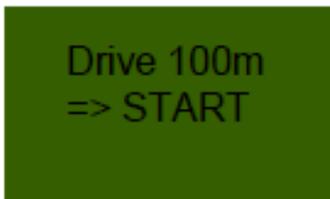
Calibration is required given that the control mode is based on this value for all of the calculations (speed display, batching, surface area calculation).

There are three calibration options.

### 100m test distance



Travel exactly 100m



**RECOMMENDATION:** The simplest option is to measure a distance of precisely 100m, marking the start and the end, beforehand.



After 100m, stop calibration using the  key.



This message will appear once calibration is complete.

### Manual calibration



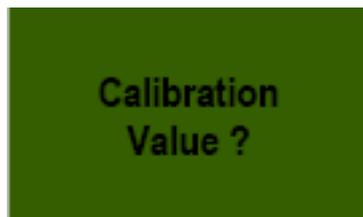
As you drive, compare the speed on the display with the speed on the tractor's display.

Adjust the value using the   keys until the values correspond.



**RECOMMENDATION:** Calibration may be carried out manually without having to cover 100m.

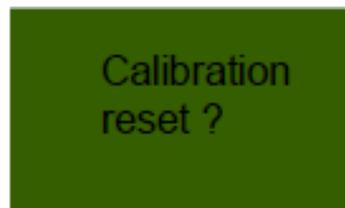
### Calibration value



The pulses/100m may be set manually here.



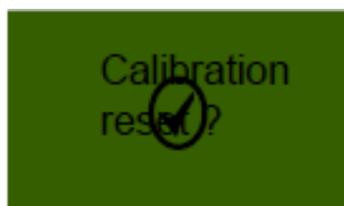
**RECOMMENDATION:** If you have already calibrated your machine, note the value and enter it here again if necessary.



### Restoring the calibration

Confirm using the  key.

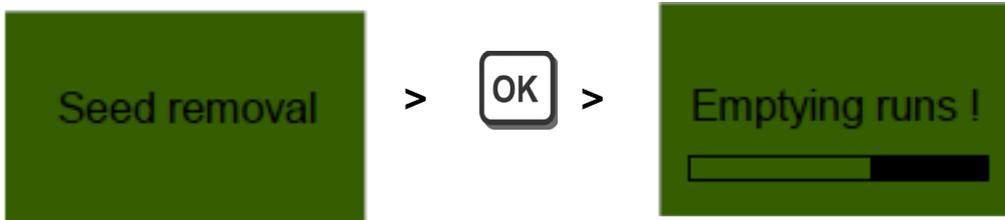
Restore the value to its factory setting.



This message will appear once the calibration has been restored.

## Emptying

This menu item provides an easy way to empty the receptacle (e.g. on the completion of work, if the type of seed used is changed or if the sowing shaft is changed).



The motor carries out distribution at the maximum rotation speed (without blower).



**RECOMMENDATION:** Emptying may be stopped at any time by pressing the



keys or the



key.

The display will then return to the main menu.



**RECOMMENDATION:** Before starting the emptying process, also check that you have removed the distribution cover and used either it or the slide. Check that the distribution bag or a collection tank has been placed right below.

## Hour counter

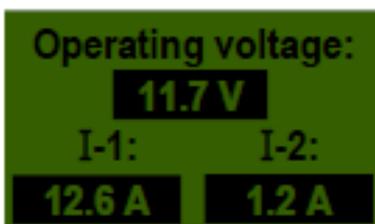


Hour counter = the sowing shaft's operating time.  
Displays the total hours and the hours per day.



**RECOMMENDATION:** Hold down the  key for 5 seconds to reset the hours per day. The total hours cannot be reset to zero.

## Operating voltage / Power display

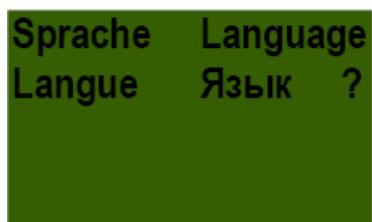


Displays the current operating voltage.  
If this value fluctuates during operation it is because of problems with your on-board electronics. This may lead to an unsatisfactory distribution result.

**I-1:** Indicates the blower motor's power consumption in amperes.

I-2: Indicates the electric sowing shaft motor's power consumption in amperes.

## Languages



Select the language required and confirm using the



**RECOMMENDATION:** If a hydraulic blower is mounted on your DS 500 and you wish to change the language, follow the steps below.

If the display "**Motor not connected! (blower)**" appears, press the  key. You will then have 15 seconds in which to change the language in the menu. You can then enter the required settings in the programming menu in the language chosen.

## Control messages

### Instructions

Display	Cause	Solution
 <p>Internal VCC (5V) not OK!</p>	Appears if the internal control voltage is below a minimum value.	Return to the factory.
 <p>Operating voltage low!!</p>	Appears if the operating voltage is too low.	Reduce the number of devices connected. Check the battery. Check the wiring. Check the generator.
 <p>Operating voltage high!</p>	Appears if the operating voltage is too high.	Check the generator.
 <p>Hopper almost empty</p>	This message appears once the filling level sensor is no longer covered by seeds (for more than 30 seconds).	Add more seeds. With the PS 800 model, the sensor may be moved (it must continue to point downwards).
 <p>Calibration Value too high!</p>	Appears if the number of pulses during calibration is too large.	Reduce the number of magnets on the wheel sensor. Please contact the customer service department for all other sensors.
 <p>Calibration Value too low!</p>	Appears if the number of pulses during calibration is too small.	Fit several magnets on the wheel sensor. Please contact the customer service department for all other sensors.

 <p>Tractor speed too high !</p>	<p>Appears if the driving speed is too high.</p>	<p>Compare the settings with the speed actually applied and reduce.</p>
 <p>Tractor speed too low !</p>	<p>Appears if the driving speed is too low.</p>	<p>Compare the settings with the speed actually applied and increase.</p>
 <p>Switch off !</p>	<p>Appears during the stopping process. The message disappears after a few seconds.</p>	

## Errors

Display	Cause	Solution
	Appears if the operating voltage falls below a minimum value or excessively large voltage fluctuations occur.	Check the wiring and the connectors. Check the battery. Check the generator. Stop the other connected devices (e.g. work lamp).
	Appears if the sowing shaft cannot turn or the motor has been subjected to a load within the critical range for too long.	If this message appears you must stop the device and check that no solid matter or similar objects bodies are preventing the sowing shaft from rotating, impeding the mixer or hindering operation. For seeds that flow easily, the agitator may also be disconnected.
	Appears if the motor is subjected to a load in the critical range for too long.	If this message appears you must stop the device and check that no objects are jamming the blower or hindering operation.
	If you have not activated the hydraulic blower, the pressure sensor will not be actuated in the air flow and this status message will appear.	Activate the hydraulic blower and wait until the LED lights up. You can then activate it. If there is no pressure switch, see point 6.10 <a href="#">Pressure sensor</a> .
	Displayed if the wiring is not connected or is faulty.	Check the cables and sockets.
	Displayed if the wiring is not connected or is faulty.	Check the cables and sockets.

 <p>No motor rotation speed (Sowing shaft) !</p>	<p>Displayed if the motor is connected and is not overloaded but does not turn.</p>	<p>Please contact the customer service department.</p>
 <p>No motor rotation speed (Fan) !</p>	<p>Displayed if the motor is connected and is not overloaded but does not turn.</p>	<p>Please contact the customer service department.</p>
 <p>Ground wheel not OK !</p>	<p>Appears if the control module does not retain any signals from the speed sensor.</p>	<p>Check the cables and the connectors. If no defects can be seen in the sun wheel that might have caused a malfunction, please contact the customer service department.</p>

## 3.9 Maintenance

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Comply with the safety instructions regarding servicing and maintenance. Your machine has been designed and built for maximum yield, profitability and comfort under many different usage conditions. Your machine has been checked at the factory and by your dealer before its delivery to ensure that you receive a machine in perfect condition. To maintain it in good working condition, it is important that servicing and maintenance operations are performed at the recommended frequency.

In order to ensure that your machine always operates correctly and to obtain an optimum performance, you must clean and maintain it at regular intervals. The hydraulic components and bearings must not be cleaned with a high-pressure washer or directly hosed down. The units, screwed connectors and bearings are not watertight to VERY high pressure cleaning.

### 3.9.1 Servicing frequency

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The servicing frequency is determined by various factors. Different usage conditions, the weather, driving and working speeds, dust and the type of soil, etc. affect the frequency, and the lubrication and maintenance products used also determine the time until the next servicing work is required.

The servicing frequency indicated is therefore only to be used as a reference. If you deviate from the normal conditions of use, you must adapt the frequency at which this maintenance and servicing is carried out to suit the conditions:

#### **1/ After the first 10 hours of use:**

- Check the tightness of the nuts and screws
- Check the hydraulic system (tightness and sealing)
- Check the tightness of the wheels
- Perform a complete diagnosis of the machine to ensure that there are no elements causing problems.
- Clean the soil off the machine

#### **2/ Every 50 hours of use**

- Check the tightness of the nuts and screws
- Check the hydraulic system (tightness and sealing)
- Check the tightness of the wheels
- Perform a complete diagnosis of the machine to ensure that there are no elements causing problems.
- Lubricate the joints with greasers
- Clean the soil off the machine

### 3.9.2 Storage

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If the machine is not going to be used for an extended period:

- Store the machine under a roof if possible.
- Disconnect the electrical control devices and store them in a dry place.
- Protect the machine against rust. Only spray with oils that are easily biodegradable, e.g. rape oil.

- Unload the wheels.
- Protect the hydraulic cylinder piston rods against corrosion.

Do not spray plastic and rubber parts with oil or an anti-corrosion agent or these parts may become fragile and break.

### 3.9.3. Cleaning

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Before folding the machine, the beam under the cylinder must always be cleaned. A build-up of soil, stones or other obstacles can damage the cylinder. Failure to comply with this instruction will invalidate the warranty.

### 3.9.4. Lubrication

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Lubricating the machine:

The machine must be lubricated regularly and after each pressure wash. This keeps the machine in good working order and reduces the costs of repairs and downtime.

Hygiene:

Using lubricants and mineral products in line with the recommendations does not present any health risks. However, avoid prolonged contact with the skin or inhaling the vapours.

Handling lubricants

**WARNING:**

Protect yourself from direct contact with oils by wearing gloves or protective cream. Carefully wash all traces of oil off your skin with soap and hot water. Do not clean your skin with petrol, diesel or other detergent products. Oil is toxic. If you swallow oil, consult a doctor immediately.

- Keep lubricants out of reach of children.
- Never store lubricants in open containers or containers that are not labelled.
- Avoid your skin coming into contact with clothes that are soaked in oil. Change clothes when they are dirty.
- Do not keep cleaning cloths impregnated with oil in your pockets.
- Dispose of shoes impregnated with oil as dangerous waste.
- If oil splashes in your eyes, rinse with clean water and consult a doctor.
- Soak up spilt oil with a binder product and dispose of it.
- Never extinguish fires caused by oil with water. Only use authorised, appropriate extinguishing products and wear breathing apparatus.
- Waste polluted by oil and used oil must be disposed of in line with current regulations.

Lubricate / grease the machine at the stated frequency.

Carefully clean the lubrication points and the grease pump before lubrication to avoid any dirt getting into the bearings. Drain contaminated grease out of the bearings and replace with new grease!

### 3.9.5. Greasing

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The cage rollers are attached using two self-aligning bearings with greasers.

To ensure that the self-alignment operates correctly, the bearings must be greased at the start of each new season and then regularly throughout the season.

Use lithium grease reinforced with molybdenum disulphide / Grade NLG12. AGRISEM INTERNATIONAL may not be held liable if another type of grease is used.

### 3.9.6. Maintenance

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#### **- Hydraulic maintenance**

Risk of infection caused by the oil in the hydraulic circuit penetrating the skin under high pressure.

- Operations on the hydraulic circuit must only be performed by a specialised workshop.
- Depressurise the hydraulic circuit completely before carrying out any operations on it.
- Only use appropriate tools to look for leaks.
- Under no circumstances must you try to plug a leak in the hydraulic hoses with your hand or fingers.
- Liquid leaking under high pressure (hydraulic oil) can penetrate the skin and cause serious injury.
- In the event of an injury caused by hydraulic oil, consult a doctor immediately. Risk of infection.
- When connecting hydraulic hoses to the tractor's hydraulic circuit, ensure that the hydraulic circuits on the tractor and machine are not under pressure.
- Check that the hydraulic hoses are correctly connected.
- Regularly check that the hydraulic hoses and connections are in good condition and are clean.
- Have the hydraulic hoses checked by a specialist at least once a year to ensure that they are in good condition.
- Replace damaged or worn hydraulic hoses.
- Only use genuine AGRISEM hydraulic hoses.
- Hydraulic hoses must not be used for more than six years, including a possible storage time of two years maximum. Even under appropriate storage and usage conditions in line with permissible stresses, it is completely normal for hoses and connectors to age, which is why they have a limited storage time and service life. Nevertheless, the duration of use can be established in line with empirical values, in particular taking potential risks into account. Other reference values can be taken into consideration for thermoplastic hoses and pipes.
- Dispose of used oil in accordance with current regulations. If this poses a problem, contact your oil supplier.
- Keep hydraulic oil out of reach of children.
- Ensure that you do not contaminate the soil or water with hydraulic oil.

#### **After 10 hours of service, and then every 50 hours of service**

1. Check that all of the hydraulic circuit's components are sealed.
2. If necessary, tighten screwed connectors.

#### **Before each start-up**

1. Visually check the hydraulic hoses for faults.
2. Remove any friction points on hydraulic hoses and tubes.
3. Replace damaged or worn hydraulic hoses immediately.

Inspection criteria for hydraulic hoses.

For your own safety, comply with the following inspection criteria.

Replace the hydraulic hoses if you notice any of the following when examining them:

- Deterioration of the outer layer down to the lining (e.g. friction points, cuts, splits).

- Embrittlement of the outer layer (formation of cracks on the outer layer).
- Distortions which do not correspond to the natural shape of the hose or pipe, whether or not they are under pressure or bent (e.g. separation of the layers, bulges, crushed areas, bending).
- Areas that are leaking.
- Damaging or distortion of the end fitting (affecting its leaktightness). Slight superficial damage does not warrant replacement.
- Hose becoming detached from the end fitting.
- Corroded end fitting leading to reduced solidity and function.
- Non-compliance with mounting specifications.
- Exceeding of the 6-year usage period. The following information is vital: the date of manufacture of the hydraulic hose marked on the end fitting, to which you must add 6 years. If the date of manufacture indicated on the connector is "2004" the usage period will end in February 2010. See the "Marking of hydraulic hoses" section for further information.

#### Fitting and removing hydraulic hoses

When fitting and removing hydraulic hoses, the following instructions must be strictly adhered to:

- Only use genuine AGRISEM hydraulic hoses.
- Pay particular attention to cleanliness.
- You should always fit hydraulic hoses so that in all operating conditions,
  - ✓ They are not subject to traction, apart from that caused by their own weight.
  - ✓ No short lengths are flattened.
  - ✓ There are no external mechanical stresses on the hydraulic hoses.
  - ✓ Avoid hoses rubbing against parts of the machine or against each other by arranging and attaching them correctly. Protect hydraulic hoses with protective sheaths if necessary. Cover parts with sharp edges.
  - ✓ The authorised bending radii must not be exceeded.
- If hydraulic hoses are connected to moving parts, measure the length of the hose to ensure that the total range of movement is no less than the smallest authorised bending radius and/or that the hose is not subject to traction.
- Attach hydraulic hoses at the places intended for this purpose. Avoid mountings that may hinder the natural movement of the hose and modifications to its length.
- Hydraulic hoses must not be painted.

#### **Wear ring maintenance:**

Some joints on AGRISEM tools have wear rings. These must be changed at the first sign of lateral play.

#### **Tyre maintenance:**

The tyres must always be inflated to a pressure appropriate to their use. The pressure may need to be changed when moving between the road and the field. The average pressure of all Flexi-Pack tyres is 2.5 bars.

Using the pneumatic seeder correctly ensures that work on crops takes place safely under optimum conditions. It is up to the user to decide on and take full responsibility for the risks linked to the incorrect or inappropriate use of the pneumatic seeder.

AGRISEM INTERNATIONAL cannot be held liable under any circumstances for soil damage or a result that does not meet the user's expectations if the use and safety instructions have not been complied with.





**AGRISEM**<sup>®</sup>  
INTERNATIONAL

## WARRANTY CLAIM FORM N°

<b>Dealer's name :</b>		Dealer's stamp	
File followed by :			
Date of purchase of the machine :	N° Invoice AGRISEM		
Customer's name and address :			
Delivery date : <i>(join a copy of invoice and dealer's delivery note)</i>		Area of farm :	

Serial Number of the machine :	Working width :
Description of the equipment combination (make and type):	
Type of tractor used :	Horse Power :
Model of tractor :	

<b>Detailed description and presumed causes of incident :</b>	
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Date of problem :	Date present :
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Reference of Defective part	Quantity	Désignation	Price List	Coef SAV	TOTAL (€)

Pictures attached :	<input type="checkbox"/> YES	Parts returned :	<input type="checkbox"/> YES
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*Freight costs paid by the sender*

The warranty is limited to replacement of defective parts excluding reparation of all other damage

## RESULT OF AGRISEM INTERNATIONAL EVALUATION

<b>Comments :</b>	
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Date :		Signature :
The after-sales service technician		
<a href="mailto:yoann.jaunasse@agrisem.com">yoann.jaunasse@agrisem.com</a>		





