



# WIZARD

## WZ-G/GT

USE AND MAINTENANCE MANUAL





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## 1. INTRODUCTION

### 1.1. PURPOSE OF THE USE AND MAINTENANCE MANUAL

This user and maintenance manual (or just manual) provides the user with useful information to appropriately and safely work.

What follows must not be considered as a long and onerous list of warnings, but as a set of instructions to improve the machine performances and prevent damages to people, objects or animals that can result from wrong procedures.

**Every person responsible for the transport, setup, start-up, use, maintenance, reparation and disposal of the machine must carefully read the manual before proceeding with any operations in order, to prevent incorrect maneuvers that could compromise integrity of the machine or be hazardous for people.**

If after reading this manual you still have doubts or uncertainties concerning the machine use, please contact the Manufacturer without any hesitation. The Manufacturing Company is available to assure an immediate and accurate attendance for the better functioning and maximum efficiency of the machine.

Finally, it is important to remind that during all working phases the current regulations on safety, workplace hygiene and environmental conservation must be fully respected. It is therefore the User's responsibility to check that the machine is operated under optimum safety conditions for people and goods as well.

This manual is an integral part of the machine and together with the Conformity Declaration must be stored in a safe place and must accompany the machine if it is resold or until it is demolished.

This manual has been edited according to the regulations in effect at the time of its printing.

The Manufacturing company reserves the right to change the equipment without promptly updating this publication. In case of objection the valid reference text remains the Italian one.

Some images of this manual show details or accessories that might be different from those of your machine. Components or protections might have been removed to ensure clarity of representations.

**Instructions, drawings and documents contained in the manual are property of the company and remain strictly confidential. They may not be reproduced in any way, neither in whole nor partially.**

### 1.2. HOW TO READ THE MANUAL

This manual is subdivided in chapters and each of them addresses to a different operator (INSTALLER, CONDUCTOR AND MAINTAINER) for whom have been defined the necessary abilities to safely work on the machine.

The order of the chapters corresponds to the temporal logic of the machine life.

For a better understanding of the text you can find terms, abbreviations and pictograms, whose significance is explained in the paragraph 1.5.

The manual is made of a cover, an index and a series of chapters.

In the initial page are indicated the identification data, the model and a photo/drawing of the machine described to facilitate the reader in its identification and the related manual.

### 1.3. MANUAL CONSERVATION

The manual must be stored with care and must accompany the machine at all stages of property that the same may have in its life. It must be handled with care, clean hands and it must not be placed on dirty surfaces. No parts must not be removed, torn off or arbitrarily modified.

The manual must be stored in a dry place and/or near the machine it refers to.

The Manufacturer, at the User's request, can provide him with more copies of the manual.

## 1.4. MANUAL UPDATING

Information, descriptions and illustrations in this manual reflect the state of the machine at the moment of its commercialization.

The Manufacturer reserves the right to make changes, at any time for technical or commercial reasons. Such changes do not obligate the Manufacturer to intervene on commercial vehicles sold up to that moment nor to consider this manual an inadequate publication.

Any additions the Manufacturer considers necessary to make in the future will have to be preserved together with the manual and considered an integral part of it.

It is the User's responsibility to substitute in all copies the old chapters, the initial page and the index with the new ones, following the directions that come together with the updated documentation.

The Manufacturer is responsible for the Italian descriptions; translations cannot be completely verified, so if there is an incongruity you must pay attention to the Italian version and eventually contact the sales department, which will make the appropriate changes.

## 1.5. GLOSSARY AND PICTOGRAMS

This paragraph lists those terms which are not common or have a different meaning from the ordinary usage. It also includes the abbreviations used in the manual and the pictograms significance to help identifying the Operator and the machine state. By using them it is possible to give quickly and in an unequivocal way all the necessary information for using the machine correctly and safely.

### 1.5.1. GLOSSARY

The following defines the main terms used in the manual. It is recommended to carefully read it before using the manual.

- **OPERATER:** The person (people) responsible for the setup, operating, adjustment, maintenance, cleaning, repairing and transport of the machine;
- **HAZARD:** a potential source of injury or damage to health;
- **HAZARDOUS AREA:** any area within and/or near the machine in which an exposed person is subject to a risk to his health or safety;
- **HAZARDOUS SITUATION:** any situation in which the User is subject to one or more dangers;
- **RISK:** the combination of probability and the degree of injuries or damages to health that can arise in a hazardous situation;
- **PROTECTION:** safety measures that consist in the use of specific technical devices (Guards and safety devices) to protect Operators from dangers;
- **GUARD:** part of the machine specifically used to protect people with a physical barrier; according to its construction it can be called cover, lid, guards, etc.;
- **EXPOSED PERSON:** any person that is integrally or partially in a hazardous area;
- **USER:** User is the person, the organization or the Company that bought or rented the machine and wants to use it for the intended purposes;
- **QUALIFIED PERSONNEL:** it comprehends people specifically trained and authorized to perform maintenance or fixing operations that require the knowledge of the machine, of its functioning, securities, ways of intervening. They are also able to recognize the machine hazards and avoid them;
- **TRAINED PERSONNEL:** Operators that have been informed and educated about the related tasks and hazards;
- **RESIDUAL RISK:** risk that is not possible to eliminate or sufficiently reduce through planning and against which protections are not (not completely) efficient;
- **AUTHORIZED SERVICE CENTRE:** The authorized Service Center is the structure legally authorized by the Company. The center has the qualified and trained personnel to realize all the operations, even complex, of assistance, maintenance and repairs that are necessary for keeping the machine in perfect order.

### 1.5.2 PICTOGRAMS








The descriptions preceded by this symbol contain very important information/prescriptions, especially in regards to safety.

Non-observance of the information can result in:

- risks for the Operators' safety;
- loss of the contractual warranty;
- Manufacturer's release from liability.

In *Table 1* are listed the PPE (Personal Protective Equipment) to be used during the phases of life of the machine (in every phase there is an obligation to use and/or to put at the disposal the PPE).

The identification and choice of the adequate and suitable type of PPE is Customer's responsibility.

Phase	Protective clothes 	Safety footwear 	Gloves 	Glasses 	Ear protectors 	Mask 	Helmet 
Transport	○	●	○	○	○	○	○
Movement	●	●	●	○	○	○	●
Unpacking	●	●	●	○	○	○	○
Assembly	●	●	●	○	○	○	○
Ordinary use	●	●	●	○	●	●	○
Adjustments	●	●	●	●	●	○	○
Cleaning	●	●	●	●	○	●	●
Maintenance	●	●	●	○	○	○	●
Disassembly	●	●	●	○	○	○	●
Demolition	●	●	●	○	○	○	●

**Table 1**

○ = PPE not expected    ● = PPE expected    ● = PPE to be used if necessary

The PPE used must be CE-marked and comply with Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016.

Descriptions of the machine's life stages (used in Table 1) are given below:

- Transport: Consists of transferring the machine from one location to another using an appropriate means of transport.
- Handling: Involves transferring the machine to and from the vehicle used for transport, as well as movements within the plant.
- Unpacking: This consists of removing all materials used for packing the machine.
- Assembly: This includes all assembly work that initially prepares the machine for set-up.
- Ordinary use: Use for which the machine is intended (or which is considered usual) in relation to its design, construction and function.
- Adjustments: Provide for the adjustment, fine-tuning and calibration of all those devices that

need to be adapted to the normally expected operating condition.

- **Cleaning:** this consists of removing dust, oil and processing residues that could compromise the proper functioning and use of the machine, as well as the health/safety of the operator.
- **Maintenance:** This consists of the periodic checking of machine parts that may wear out or need to be replaced.
- **Disassembly:** This consists of the complete or partial disassembly of the machine, for needs of any kind.
- **Demolition:** This consists of the definitive removal of all parts of the machine resulting from the final dismantling operation, so that the components can be recycled or collected separately in accordance with the methods provided for by current legislation.

**WARNING: It is forbidden to wear protective gloves that can be caught in the moving parts of the machine.**

## 1.6. RESPONSIBILITY

The Company declines all direct and indirect responsibility in case of:

- Improper use of the machine for unexpected activities;
- Use by a non-authorized or non-qualified Operator;
- Serious deficiencies in the planned maintenance;
- Non-authorized modifications or interventions;
- Use of non-specific or non-original spare parts;
- Total or partial failure to comply with the manual instructions;
- Failure to comply with safety regulations of the manual;
- Non-application of regulations on safety, hygiene and health at work.
- Unpredictable exceptional events.

The machine is intended for a professional and non-generalized use. Therefore, its usage has to be committed to qualified person in particular who:

- Have reached the legal age;
- Are physically and psychologically qualified to deal with such machine;
- Have been adequately trained on the use and maintenance of the machine;
- Have been considered qualified to work by the Employer;
- Are capable of understanding and interpreting the Operator's manual and safety directions;
- Know how to activate emergency procedures;
- Are able to activate the specific type of machine;
- Are familiar with specific rules of the case;
- Have understood the operating procedures defined by the Manufacturer;
- The Operator is responsible for checking the functionality of the machine, replacing and repairing wear out parts that could cause damages;
- The Customer has to instruct the personnel on risks of accidents, on the devices provided for the safety and health of the Operator, the risks related to exposure to noise and the general rules for accident-prevention, rules provided by international directives and the legislation of the country of destination of the machine.
- The machine must be used only by qualified Operators that must scrupulously respect the technical and accident-prevention instructions;
- The specific pictograms are placed on machine and the Operator must ensure that they are kept in perfect state and are replaced when illegible as requested by the EC regulations;
- It is User's responsibility to verify that the machine is used only in optimum safety conditions for persons, animals and objects;
- Any arbitrary modification made to the machine relieves the Manufacturer of any responsibility for damages to objects or injuries to Operators or third parties;



The Manufacturing Company declines all responsibilities for possible inaccuracies of the manual, due to printing, translating or transcription mistakes. Possible additions to the manual the Manufacturer considers necessary to send to the Customer will have to be preserved together with the manual and considered an integral part of it.

## **1.7. WARRANTY**

The warranty against any defect of the materials is valid one year from the delivery date of the machine. Check upon delivery that the machine has not been damaged during the transport and that the accessories are integral and complete.

ANY CLAIMS MUST BE MADE IN WRITING WITHIN 8 DAYS FROM RECEPTION AT THE CONCESSIONAIRE'S.

The Buyer can assert his rights on warranty only when he has respected the conditions of warranty that can be found in the supply contract.

The warranty is limited to the repair or replacement of the faulty piece, damages to persons or objects are not included. The dealers and the users are not entitled to any indemnification from the Manufacturer for any damages (costs for labor, transport, defective work, direct or indirect incidents, loss of harvest income, etc.).

### **1.7.1. WARRANTY DECLINE**

Beside what is written in the supply contract the warranty declines:

- Should the limits referred to in the technical data table are exceeded;
- If the instructions described in this manual have not been followed carefully;
- If the wrong use, faulty maintenance or other errors made by the customer;
- In case of modifications without the Manufacturer's written authorization and in case of non original spare parts use;
- The use of spare parts not approved by the Manufacturer invalidates every guarantee and releases the Manufacturer or the Retailer from every liability due to malfunctioning or incidents.
- **If the planter is not connected to 12Volt power battery**

However, the Manufacturing Company is at your disposal to ensure immediate and accurate technical attendance and all that can be necessary for a better functioning and maximum performance of the equipment.

## 2. GENERAL INFORMATION

### 2.1. MANUFACTURER'S IDENTIFICATION DATA

MANUFACTURER

**WIZARD S.r.l.**

LEGAL OFFICE

**Via delle Industrie 19 - 33098**

**Valvasone (PN) – ITALY**

CONTACTS

**Tel.: 0039 0434 871461**

**Fax.: 0039 0434 870351**

**e-mail: info@wizardagroind.eu**

### 2.2. IDENTIFICATION DATA AND PLANTER NUMBER PLATE

MODEL

**WZ-X**

SERIAL NUMBER

**WZ-xxx-xxxxx-xx**

SERIES

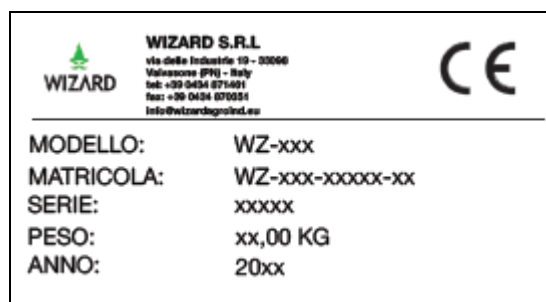
**xxxxx**

WEIGHT

**xx Kg**

YEAR OF MANUFACTURE

**20xx**



**Picture 1**

Every single machine is equipped with an identification plate (Pic. 1), containing the following data:

- 1) CE mark;
- 2) Manufacturer's mark and address;
- 3) Machine model;
- 4) Machine serial number;
- 5) Machine series;
- 6) Total Weight... kg;
- 7) Year of manufacture.

It is recommended to write down the serial number, date of purchase (8) and the dealers's name (9).

8) \_\_\_\_\_

9) \_\_\_\_\_

These data must be announced for any necessity either for assistance or spare parts.

**WARNING**

**Do not remove, tamper or make unreadable the machine "CE" mark.**

**Refer to the data contained in the "CE" mark for eventual relations with the Manufacturer (for instance: to request spare parts, etc.).**

**In demolishing the planter the "CE" mark must be destroyed.**

The plate position on the planter can vary from machine to machine.

**2.3 DECLARATIONS****CE DECLARATION OF CONFORMITY**

(Enclosure II A DIR. 2006/42/EC)

**THE MANUFACTURER**

WIZARD S.r.l.

*Company*

via Delle Industrie 19

*Address*

33098

*Postcode*

PN

*Province*

Valvasone Arzene

*City*

ITALY

*State***DECLARES THAT THE MACHINE**

PNEUMATIC PLANTER

*Machine*

WZ-xxx

*Model*

WZ-xxx-xxxxx-xx

*Serial number*

20xx

*Year of manufacture*

Electric pneumatic planter for compact tractor

*Commercial name*

xxx

*Series*

Planting

*Data***IS FULLY IN CONFORMITY WITH**

**Directive 2006/42/EC** of the European Parliament and Council of 17 May 2006 related to machines and that changes the Directive 95/16/EC.

**References to harmonized standards**

UNI EN ISO 4254-1:2015 Machines for agriculture – Safety – Part 1: General requirements

UNI EN 14018:2010 Manichery for agriculture and forestry – Planters - Safety.

**References to technical specifications**

UNI EN ISO 11684:1995 Tractors, machinery for agriculture and forestry, powered lawn and garden equipment - Safety signs and hazard pictorials - General principles

**AND AUTHORISES THE COMPILATION OF THE TECHNICAL DOSSIER ON HIS BEHALF**

Tullio Fiorido

*Name and surname*

Via Delle Industrie 19

*Address*

33098

*Postcode*

PN

*Province*

Valvasone Arzene

*City*

Italy

*State*

Valvasone Arzene 18/01/2019

Legal representative

Tullio Fiorido

**WIZARD Srl**

via delle industrie 19 - Tel: +39 0434 871481  
33098 Valvasone Arzene (PN)  
info@wizardeurope.it  
P.IVA 01781020936 - REA N.104042

Technician in charge of Certification:



Tracanelli Gastone



1. This Conformity Declaration is made under the Manufacturer's sole responsibility
2. The object of the Declaration above is in conformity with the relevant Union harmonization legislation

**PROHIBITION OF PUTTING INTO SERVICE**

The machine may be put into service only if properly installed, maintained efficient and utilized according to its intended use. It is forbidden to use the machine if it has been subject to structural changes or integrations of other parts that are not expected by the ordinary and extraordinary maintenance. Maintenance has not to be again declared in conformity with the requirements of the directive 2006/42/EC and with other reference directives and current regulations.

Date 18/05/2018

The Manufacturer

## 2.4 SAFETY REGULATIONS AND ACCIDENT PREVENTION

**Read carefully all the instructions before using the planter, in case of any doubt contact the manufacturer's dealers technicians. The Manufacturer declines any responsibility, objective or subjective, for non-observance of safety and accident-prevention regulations mentioned below.**

The Manufacturer has made every effort to design this machine, INTRINSICLY SAFE as much as possible. He has provided the machine with all protections and safety devices considered necessary, together with the information for a safe and correct use.

The User may add to the information provided by the Manufacturer with further working instructions that do not contradict with what is written in this manual to contribute to a safe use of the machine.

When necessary further recommendations about prevention measures, personal protective equipment, information to anticipate human errors and prohibitions related to forbidden and reasonably expected behaviors will be specified by the User.

### IMPORTANT

**The Manufacturer considers himself relieved of any responsibility for damages caused by the machine to persons, animals or property in case of:**

- use of the machine by not properly trained personnel;
- improper use of the machine;
- incorrect setup of the machine;
- lack of expected maintenance;
- unauthorized modifications or interventions;
- use of non-specific or non-original spare parts;
- total or partial failure to comply with the manual instructions;
- use contrary specific national regulation;
- calamities and extraordinary events.

### 2.4.1. GENERAL RULES

- 1) Use adequate Personal Protective Equipment during the use, maintenance, repairing handling, transport or storage of the machine.
- 2) Any work of maintenance, adjustment and cleaning of the machine must be made with the machine on the ground (in a steady condition) and with the engine switched off.
- 3) An adequate lighting system must be used if working during the night or in conditions of poor visibility.
- 4) The machine must be used only by one Operator. A different use from the one suggested is considered improper.
- 5) Pay attention to the symbols of danger shown in this manual and on the planter.
- 6) Labels with instructions on the machine give appropriate advice to avoid injuries.
- 7) Follow the instructions for safety and accident prevention.
- 8) Do not absolutely touch moving parts of the machine.
- 9) Interventions and adjustments on the equipment must be made with the engine switched off.
- 10) It is forbidden to carry people or animals on the equipment.
- 11) Check the perfect integrity of all transport and use securities before switching on the machine.
- 12) Make sure that people, in particular children, or pets are not around the machine before starting it and make sure there is a perfect visibility.

- 13) Use adequate clothes. Avoid wearing loose clothes or clothes with flaps that might be tangled in rotating or moving parts.
- 14) Before using the machine make sure that all safety devices are perfectly working and correctly placed; replace them in case of damages or malfunctioning. The machine must immediately be replaced in case of evident deterioration.
- 15) Before starting to work familiarize with control devices and their functions.
- 16) Start using the equipment only if all safety devices are intact, installed and in the security position.
- 17) It is absolutely forbidden to stay in the area in which the machine is operating, where there are moving parts.
- 18) It is absolutely forbidden to use the machine without protections and covers.
- 19) During use the machine might emit dust. Use adequate breathing protection systems, such as anti-dust masks or filter-masks.
- 20) Check that the machine has not been damaged during the transport and if so, immediately contact the Manufacturing Company.
- 21) Keep the machine clean from foreign items (fragments, tools or various objects) that might cause damages to it and to the Operator as well.
- 22) Before starting the equipment check that it is correctly installed and regulated; check that the machine is in perfect order and that all parts subject to wear and deterioration are efficient.
- 23) Always work in conditions of perfect visibility.
- 24) All operations must be carried out by trained personnel provided with protective gloves in a clean and non-dusty place.

#### 2.4.2 SAFE MAINTENANCE

During operations of work and maintenance, use the appropriate Personal Protective Equipment:

- 1) Regularly check the fittings, screws and wing nuts, and eventually tighten them.
- 2) Spare parts must correspond to the Manufacturer's requirements. Use only original spare parts.
- 3) Worn or defective parts must be immediately replaced. The Manufacturer does not assume any responsibility for damages that might derive if an accident occurs.
- 4) Checking must be made by a qualified person and they have to be functional and visual to ensure the machine safety.
- 5) Check that all bearing structures do not have any crack, breaking, damage, buckling, corrosion, wear or alteration as to original characteristics.
- 6) Check all mechanical parts;
- 7) Functional check of the machine;
- 8) Check the state of the machine.

#### WARNING

**If any anomaly is found, it has to be eliminated before starting the machine again. The specialist that checks the machine has to state in the form the occurred modification, giving in this way his approval of using the machine.**

If the person that checks the machine finds any crack or anomaly, he must immediately inform the Manufacturer.

Put the machine out of order if any working anomaly occurs and then do the opportune control and/or repairs.

Make sure that in the machine parts there are not objects that could compromise the function.

After any maintenance work that there are not objects in the machine moving parts.

However, to ensure the maximum safety in the machine handling it is FORBIDDEN:

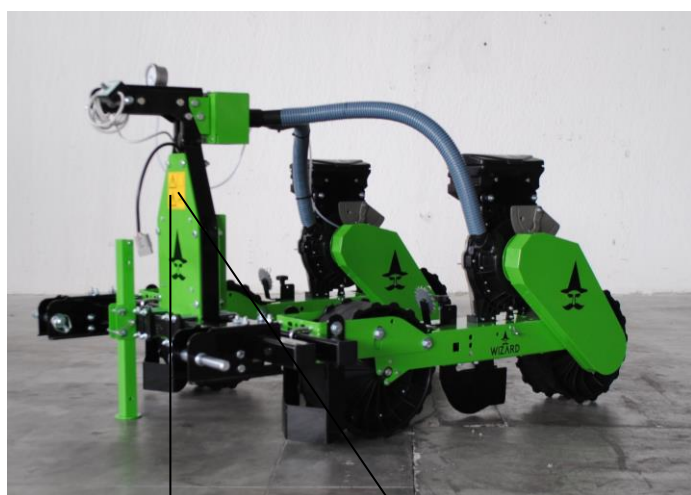
- To force any part of the machine;
- To leave movable parts unattended;
- To use the machine in working order but not completely efficient;

- To modify the machine in order to change the originally specified use without the Manufacturer's explicit authorization or without assuming the full responsibility imposed by the Machine Directive 2006/42/EC;
- To handle movable parts with manual operations in case of energy lack.

### 2.4.3 SAFETY AND WARNING SIGNS

The described labels can be found on the machine (Pic. 2). Keep them clean and replace them if they are loose or illegible. Read carefully what described and memorize their meaning.

- 1) Before working, read carefully the instruction manual;
- 2) Before doing maintenance operations, stop the machine and consult the instruction manual.
- 3) Danger! Moving parts. Keep away from moving parts.
- 4) Equipped yourself with accident-prevention clothes D.P.I.



Picture 2



## 3 PLANTER DESCRIPTION

### 3.1 FUNCTIONING

The planter WZ-G/WZ-GT is a pneumatic precision planter for compact tractors with 12V vacuum fan designed for the following crops: maize, chard, soya beans, sunflowers, rape, sorghum, beans, cotton, peanuts, fennel, tomatoes, asparagus, beets, etc.

The seeds are distributed into the furrow in the soil through a shoe opener. The amount of seeds to distribute are regulated through a gearbox and the wheel drive transmission.

#### WARNING

**The equipment is suitable only for the indicated use. Any other use different from that described in this handbook can damage them and cause serious problems for the User. The planter must be used only by the Customer's qualified personnel. The User must wear adequate personal protective equipment (safety footwear, overall and gloves, etc.).**

**The planter is only for professional use and must be utilized just by personnel previously educated, trained and authorized.**

The correct use of the consists in:

- that the planter is used only by one Operator;
- the respect of all the manual directions;
- the realization of the inspection and maintenance operations written in the handbook;
- the exclusive use of original WIZARD spare parts.

#### 3.1.1 USE PRECAUTIONS

The main precautions for using the planter are:

- make sure that on the ground there are not stones or big rocks;
- make sure that on the ground there are not fragments of tree roots;
- make sure that on the ground there are not metallic elements of any kind, such as wire nets, cables, ropes, tubes, etc..

The regular functioning of the planter depends on the correct use and the adequate maintenance. It is therefore advisable to strictly respect what is written in this handbook to prevent any inconvenience that might affect its correct functioning and duration. It is also important to follow what is described in this handbook because the Manufacturing Company declines any responsibility due to negligence and non-observance of these directions.

The Manufacturing Company is available to assure an immediate and accurate technical assistance and all that can be necessary for a better functioning and maximum performance of the equipment.

### 3.2 STRUCTURAL CHARACTERISTICS

The planter **WZ-G** is composed of:

1. Three point linkage – CAT.1/ CAT. 2
2. Vacuum fan 12V
3. Control box
4. Power box
5. Power cable 500 cm
6. Vacuum gauge
7. Chassis
8. Parking stand
9. Clod remover
10. Soil wheel leveler
11. Vacuum metering unit
12. 3 liter seed tank
13. Shoe opener and seed tube
14. Sowing depth adjustment
15. Gearbox for seeding distance adjustment
16. Heavy closing wheel and metering unit traction



Data on the planter are shown below.

	N° row	Row distance [cm]	Chassis [cm]	Width [cm]	Length [cm]	Height [cm]	Weight [kg]	Power [cv]
<b>WZ-G10</b>	1	-	120	120	140	80	74	15
<b>WZ-G20</b>	2	45/75/90	120	120	140	80	95	15

Technical data will not be binding on WIZARD that reserves the right to modify them without any prior notice.

The planter **WZ-GT** is composed of:

1. Three point linkage – CAT.1/ CAT. 2
2. Double Vacuum fan 12V
3. Control box
4. Power box
5. Power cable 500 cm
6. Vacuum gauge
7. Chassis
8. Parking stand
9. Clod remover
10. Soil wheel leveler
11. Vacuum metering unit
12. 3 liter seed tank
13. Shoe opener and seed tube
14. Sowing depth adjustment
15. Gearbox for seeding distance adjustment
16. Heavy closing wheel and metering unit traction



Data on the planter are shown below.

	N° row	Row distance [cm]	Chassis [cm]	Width [cm]	Length [cm]	Height [cm]	Weight [kg]	Power [cv]
<b>WZ-G10</b>	1	-	120	120	140	80	85	15
<b>WZ-G20</b>	2	45/75/90	120	120	140	80	105	15
<b>WZ-G30</b>	3	45	120	120	140	80	127	25
<b>WZ-G40</b>	4	45	160	160	140	80	162	25

Technical data will not be binding on WIZARD that reserves the right to modify them without any prior notice.

### 3.2.1. NOISE LEVELS

The only noise emitted from WZ-G/WZ-GT is made when the **12V** electric fan is running. The noise has been measured and the value of continuous acoustic pressure is above 80 db (A).

#### WARNING

**When the limit of 80 db (A) is exceeded it is mandatory for the Operator or anyone who approaches the planter while in function has use suitable ear protections, like, for example, earmuffs, earplugs, etc.**

### 3.3. MOVEMENT AND TRANSPORT

Pay maximum attention to safety during loading and unloading operations.

The planters weight is over 65 kg to lift adopt all the necessary safety precautions.

Remember that when lifting weights exceeding 30 kg, more than one Operator is required.

During the machine loading and unloading, the Operator must use suitable Personal Protective Equipment (gloves, overall, helmet, etc.). This operation, for its danger, must be made by trained and responsible personnel.

In the instance where the planter is transported via vans, lorries or other such vehicles, it must be blocked on the vehicle using cable anchorage.

#### WARNING

**The Customer must apply to what provided by Community Directives EEC 391/89 and 269/90 and following changes regarding the risk of the loads manual transport for Operators during loading and unloading operations.**

#### WARNING

- **Packaging materials (pallet, cartons, etc.) must be discharged by authorized companies according to current regulations.**
- **To lift the planter part is forbidden to hitch on to movable or weak parts as casting, hopper, etc.**
- **It is forbidden to stay under hanging loads, non-authorized personnel must not enter the working areas and it is compulsory to wear overalls, safety footwear, gloves and a helmet.**

### 3.4 DRIVING ON A PUBLIC STREET

**If it is required to drive on a public street, it is mandatory to strictly respect the Driving Code paying particular attention to the speed.**

**When driving on the street it is fundamental to respect the driving code of the residing Country.**

**Any accessory used for the transportation must be equipped with specific signals and adequate protections.**

- Before starting to drive, install optional lights.
- It is mandatory to equip the machine with a yellow or orange flashing light.
- Before starting to drive on a public street from a nonpaved or dirty area, it is mandatory to clean the wheels of the tractor carefully from any residue of mud.
- When driving on a public street, the machine must be in the transport position and the power of the tractor must not be connected.
- The weight of the machine modifies the stability of the combination tractor-planter, influencing the steering ability as well as the braking ability, it is thus important to proceed with a moderate speed.
- In particular, always remember that the front shaft must always be loaded with a weight equal to 20% of the combination tractor-planter.
- It is very important to remember that the road-holding and the steering and braking abilities may be influenced, even heavily, from the presence of the of any equipment or bear that is being carried.
- On bends, particular attention must be paid to the centrifugal force on the machine with or without the carried equipment, especially on sloping streets or grounds.
- All transports on street must be made with empty tanks and with a maximum speed that is permitted by the law of where is used.
- When the equipment or other bears obstruct the visibility of the lighting disposals or signals, these must be correctly reproduced on the equipment, as regulated in the driving code of the residing Country.

## 4. PLANTER USE

Before using the equipment follow carefully instructions featured in this chapter and all the use and maintenance manual.

### 4.1. PLANTER PREPARATION

It is necessary to familiarize with all controls and operating abilities before using the planter.

Before coming down from the tractor every operation of maintenance and regulation, action the parking brake, switch the engine off, remove the ignition key from the dashboard and wait for all the moving parts to stop.

The safety of the operator and the persons present around the machine depends on the ability of judgment and caution in using of the machine. Therefore, the position and functions of all controls have to be well known.

The machine must be always found in perfect state of operation and must be repaired and replacement only with original parts.

#### 4.1.1 CONNECTION OF THE PLANTER TO THE TRACTOR

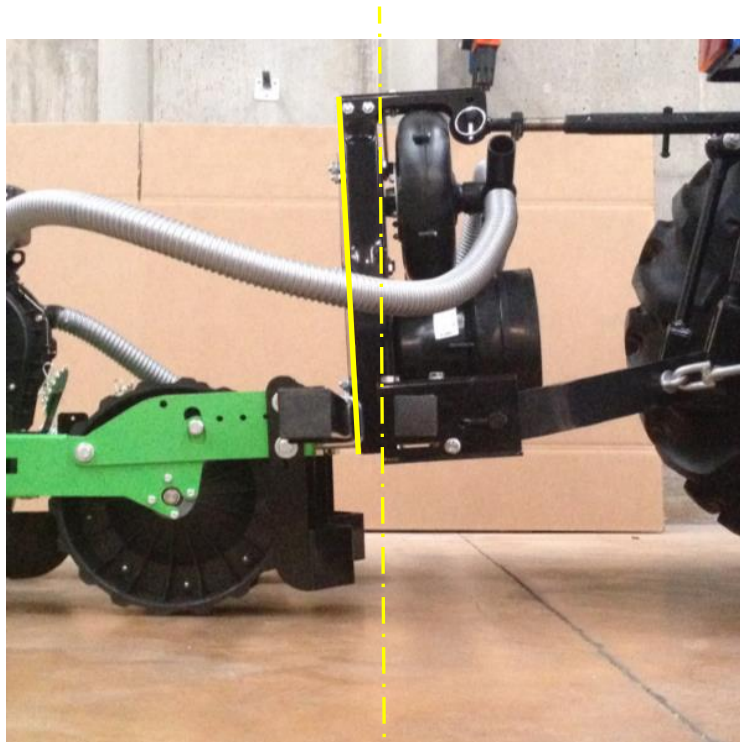
The machine has to be connected to a tractor with the appropriate power (Hp) and weight. All in compliance with legal requirement in the country of use.

**During the phases of use, regulation, maintenance, repair or handling the operator must use appropriate Individual Protection Devices (DPI).**



When hitching the tractor to the machine, the operator must drive the tractor in reverse gear until it reaches the connections on the machine with rear lifting links.

- Action the parking brake of the tractor, switch the engine off, remove the ignition key and step down.
- Insert the pins and the relative plugs/safety clips.
- Connect the third point (tighter) of the tractor to the machine. Lift the machine and put it into a horizontal/slightly inclined backward position( Pic.1) Make sure that the pin of the planting unit is approx. In the middle position in the slot (Pic.2)
- Block the lifting bars of the tractors, in order to avoid the sideways oscillating, compromising the cross-sectional stability of the complex.
- It can happen that the rear compression wheels of the planter are not in line with the furrow made by the shoe or double disc openers. And therefore do not close and compress well the soil. This is due to the fact that the planter is not well regulated on the three point linkage. It is the necessary to adjust them fixing not too rigidly



Picture 1

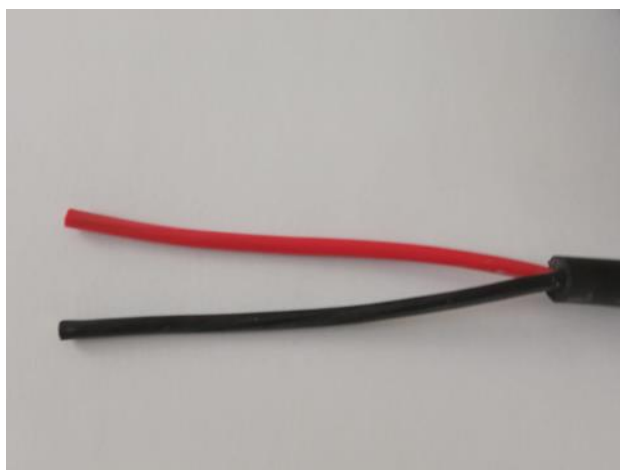


Picture 2

#### 4.1.2 WIRING CONNECTION TO THE TRACTOR OR TOOL CARRIER

##### WARNING

The planter will be delivered from the manufacturer to the dealer or final user with a red and black bipolar power cable, 5 meters long without connector at one end ( Pic.3)



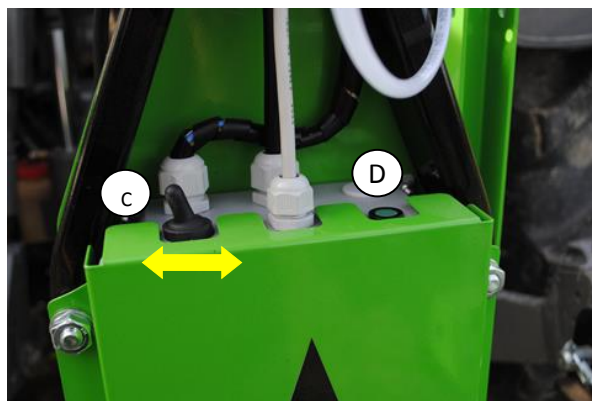
Picture 3

The user will be able to apply the system that is most convenient of him to connect the planter to the tractor or tool carrier 12V. **Paying attention to the polarity (+) red ,(-) black.**

- It is important that when connecting the power cable to a 12 voltage battery that the other end is not connected/plugged in with the planter.
- Place the console (Pic.4) near the driving position of the tractor and ensure that the vacuum is adjusted to the minimum position (-).
- Plug-in the power cable from the tractor to the alimentation cable of the planter.
- Turn on the switch (C) that is located on the back of the planter and check that the green light is lit (D) (Pic.5)



Picture 4



Picture 5

#### WARNING

**The whole system of the WZ-G and WZ-GT have to be connected and powered only 12Volts.**

## 4.2 CONFIGURATION

To obtain correct planting it is necessary to properly adjust the distribution and working parts such as the gearbox, the metering unit and the shoe opener.

Knowing the type of seed (maize, beets, etc.), from the planting table (Tab. 1) it is possible to deduce the approx. seed distance on the row.



**WARNING**

The WZ-G series support the following seed discs

MODELS \ N°HOLES	4	18	36	72
WZ-G10	ALL	ALL	ALL	ALL
WZ-G20	ALL	ALL	≤ Ø4,0mm	≤ Ø2,5mm
WZ-GT10	ALL	ALL	ALL	ALL
WZ-GT20	ALL	ALL	ALL	ALL
WZ-GT30	ALL	ALL	≤ Ø4,0mm	≤ Ø2,5mm
WZ-GT40	ALL	ALL	≤ Ø4,0mm	≤ Ø2,5mm

**4.2.1 SEED DISTANCE**

The table below is similar to the one you receive with the planter.

A	B	4 Fori	18 Fori	36 Fori	72 Fori
18	10	34,7	7,7	3,9	1,9
18	11	38,2	8,5	4,2	2,1
18	12	41,7	9,3	4,6	2,3
18	13	45,1	10,0	5,0	2,5
13	10	48,1	10,7	5,3	2,7
13	11	52,9	11,8	5,9	2,9
13	12	57,7	12,8	6,4	3,2
13	13	62,5	13,9	6,9	3,5
10	11	68,8	15,3	7,6	3,8
10	12	75,0	16,7	8,3	4,2
10	13	81,3	18,1	9,0	4,5
13	18	86,5	19,2	9,6	4,8
12	18	93,8	20,8	10,4	5,2
11	18	102,3	22,7	11,4	5,7
10	18	112,5	25,0	12,5	6,3

**Table 1**

The data specified in the table are purely theoretical and might change based on the soil and the wheels conditions.

The table shows:

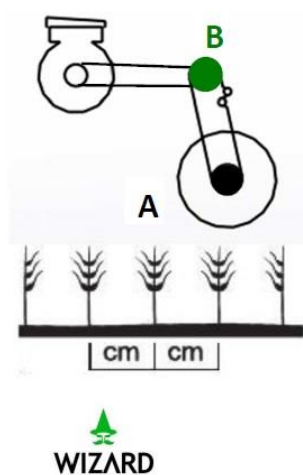
- Part 1 the different combinations that can be obtained from sprockets A and B;
- Part 2 some types of discs that can be used;
- Part 3 the planting distances that can be obtained based on the ratio and the types of discs used.

**Example:**

You wish to plant some beans at a distance of **16 cm** with a **18 hole** disc.

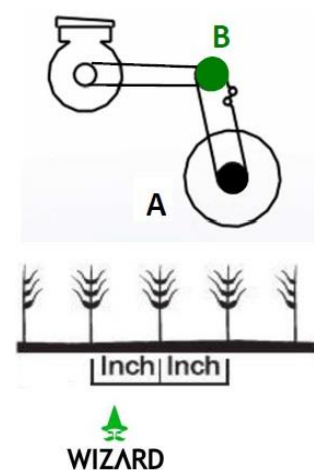
Find the pair of sprockets to be used, you should:

- Find the distances closest to the required one in the column of **18 hole** disc (in this case = **15.3 cm**);
- Obtain the pair of sprockets to be used on the same line in the two columns marked (A) and (B) (in this case **A = 10 e B = 11**).



A	B	4	18	36	72
		Fori	Fori	Fori	Fori
18	10	34,7	7,7	3,9	1,9
18	11	38,2	8,5	4,2	2,1
18	12	41,7	9,3	4,6	2,3
18	13	45,1	10,0	5,0	2,5
13	10	48,1	10,7	5,3	2,7
13	11	52,9	11,8	5,9	2,9
13	12	57,7	12,8	6,4	3,2
13	13	62,5	13,9	6,9	3,5
10	11	68,8	15,3	7,6	3,8
10	12	75,0	16,7	8,3	4,2
10	13	81,3	18,1	9,0	4,5
13	18	86,5	19,2	9,6	4,8
12	18	93,8	20,8	10,4	5,2
11	18	102,3	22,7	11,4	5,7
10	18	112,5	25,0	12,5	6,3

Table 2 (cm)



A	B	4	18	36	72
		Fori	Fori	Fori	Fori
18	10	13,7	3,0	1,5	0,8
18	11	15,0	3,3	1,7	0,8
18	12	16,4	3,6	1,8	0,9
18	13	17,8	3,9	2,0	1,0
13	10	18,9	4,2	2,1	1,1
13	11	20,8	4,6	2,3	1,2
13	12	22,7	5,0	2,5	1,3
13	13	24,6	5,5	2,7	1,4
10	11	27,1	6,0	3,0	1,5
10	12	29,5	6,6	3,3	1,6
10	13	32,0	7,1	3,6	1,8
13	18	34,1	7,6	3,8	1,9
12	18	36,9	8,2	4,1	2,1
11	18	40,3	8,9	4,5	2,2
10	18	44,3	9,8	4,9	2,5

Table 3 (inches)

#### 4.2.2. TRANSMISSION RATIO

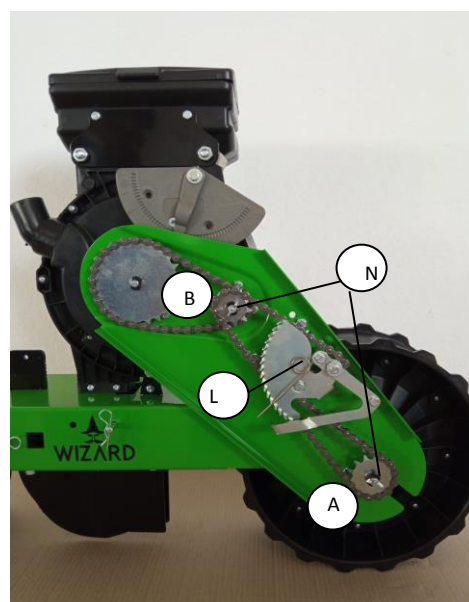
From Table 2 or 3 it is possible to determine the pair of sprockets to be used to obtain the desired planting distance.

To set the ratio on the gearbox proceed as follows:

- Remove cover **M**; (Pic.6)
- Release the lock spring of the chain tightener **L**; (Pic.7)
- Release the sprockets **A** and **B** from the chain; (Pic.7)
- Unscrew wing nut **N** that holds the sprockets; (Pic.7)
- Remove the sprockets and mount those selected for planting distance required;
- Pay attention not to invert their positions;
- Screw the wing nut **N** again and check that the sprocket fastener is set to its correct position;
- Re-assemble the chain on the two sprockets and tighten the chain with the tightener, turn the drive wheel forward to tension the chain, and finally further tighten the chain tightener's spring again.



Picture 6



Picture 7

#### 4.2.3. SEED DISC AND GUIDE ASSEMBLY

##### Seed disc assembly

To assemble the seed disc correctly, follow these instructions:

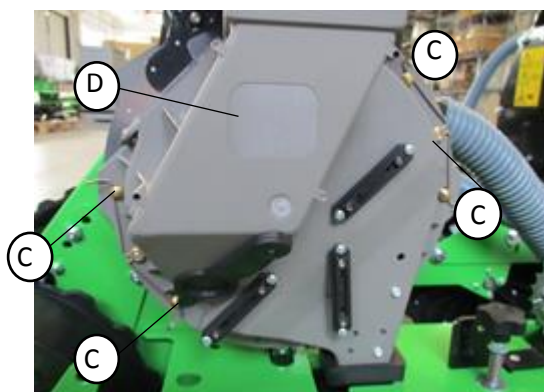
- Release the lock springs **C** from the fixed slots (Pic. 8);
- Remove the metering unit cover **D** (Pic. 8);
- Assemble the seeding disc on the metering unit disc holder **E**; (Pic.9)
- Assemble the selector **F** in the appropriate pins **G** and on the seed disc, the selector must raze the disc (Pic. 9);
- Reassemble the metering unit cover by inserting the bottom first (Pic.8) and then on the appropriate pins, securing it with relevant lock springs (**C**).

**The seeds singulator is magnetic (H) and this will keep it in constant contact with the disc while working (Pic.16).**

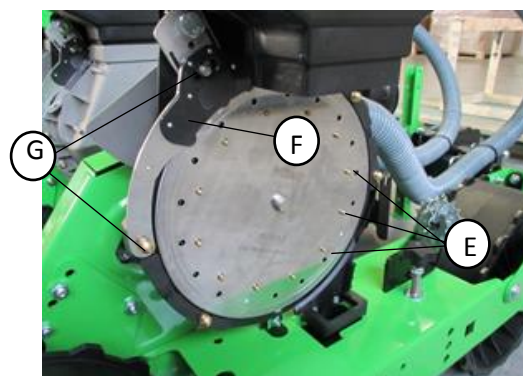
**WARNING**

If possible, make adjustments in clean, dry and dust-free areas. Dust and humidity might cause damages to the discs and the gaskets. The disc must be assembled with the WIZARD brand name and the disc specification data (code, hole diameter) facing the cover.

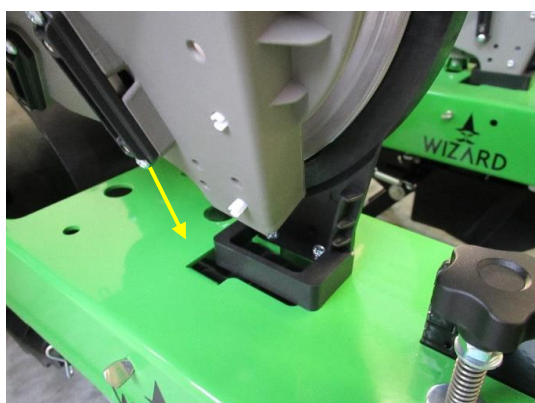
It is important that the disc is correctly assembled in the disc holder pins E (Pic.16).



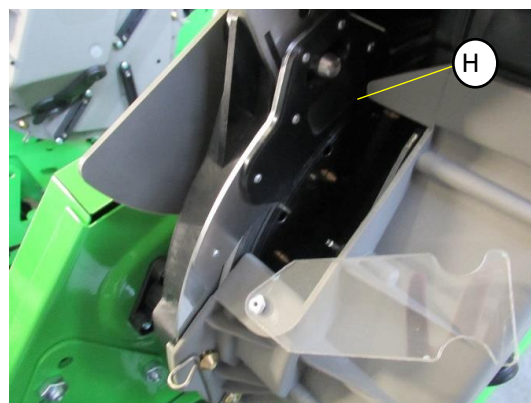
Picture 8



Picture 9



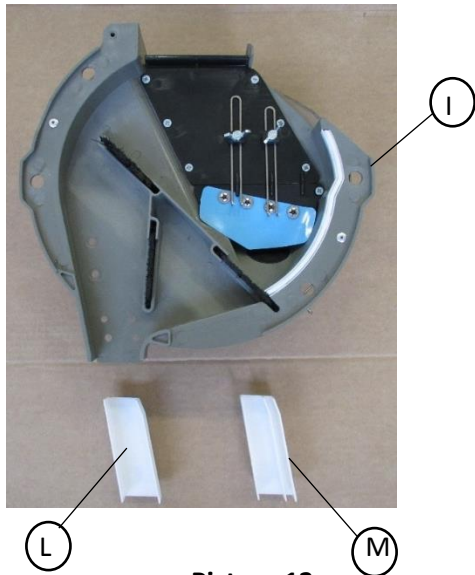
Picture 10



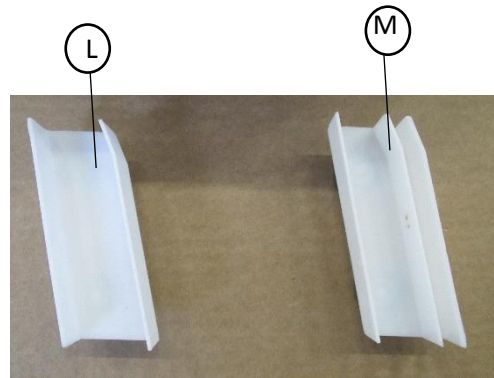
Picture 11

**Seed guide assembly**

- The seed guides that can be used are 2, based on the size of the seeds (Pic.13).
- The seed guide (L) is used for medium-large seeds and the guide (M) is used for small seeds with dimensions less than or equal to 3 mm.

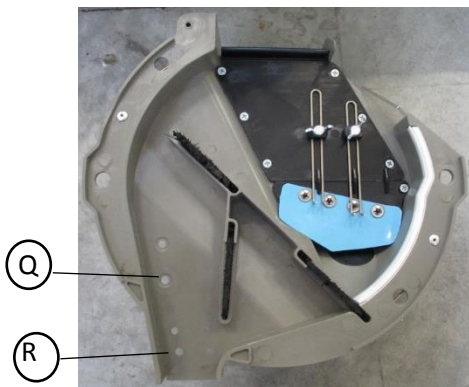


Picture 12

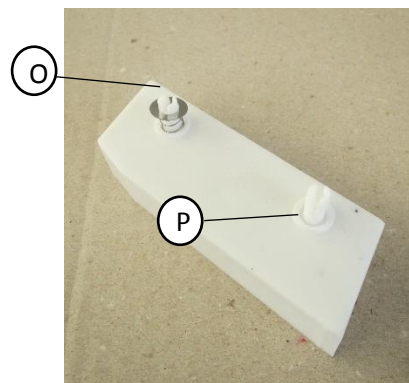


Picture 13

It's possible to use the cover without any guide (Pic.14) for larger seeds.  
 The seed guides both have 2 couplings in the rear that are used for the assembly (Pic.15.).  
 The upper coupling with the spring (O) must be inserted in its housing (Q) and the lower coupling (P) in its respective housing (R).

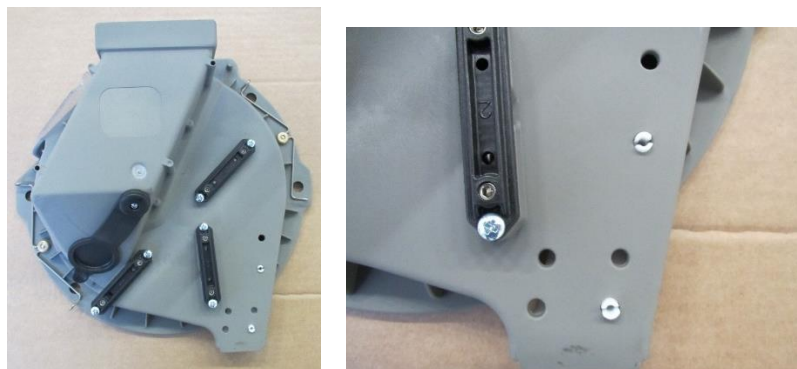


Picture 14



Picture 15

Once assembled, control the correct position. (Pic. 16)

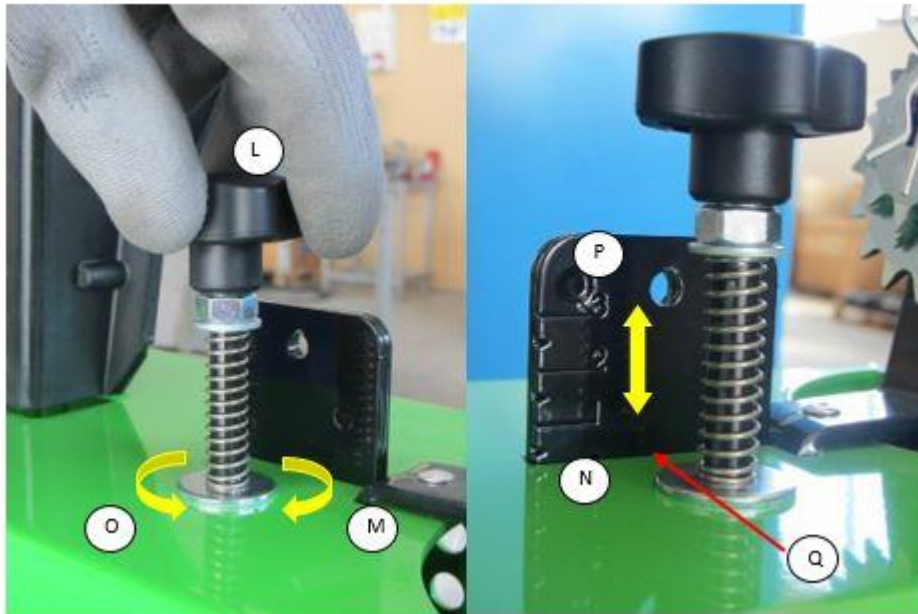


Picture 16

#### 4.2.4 SHOE OPENER ADJUSTMENT

For a good sprout emerge it is important to place the seed at the correct depth in the soil. To adjust the shoe opener following the instructions (Pic. 17):

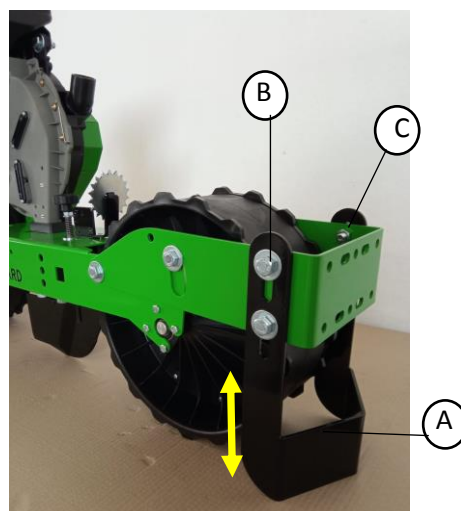
- Rotate the knob (L) to adjust the depth of the shoe opener;
- Rotate clockwise (M) to decrease the depth. The position 0 (ground level) (N) is the minimum depth possible.
- Rotate counterclockwise (O) to increase the depth. The position 3 (3 cm) (P) is the maximum depth possible.
- The depth regulation position is referred to the surface of the planting unit (Q)



Picture 17

#### 4.2.5 CLOD REMOVER ADJUSTMENT

To adjust the clod remover (A) loosen the bolts (B) and nuts (C). Adjust it to the height needed and lock all the bolts and nuts again. (Pic. 18)



Picture 18

## 4.3 PLANTING ADJUSTMENTS

### 4.3.1 SEED SINGULATOR ADJUSTMENT

The seeding selector adjustment has to be made after the seed hopper has been filled (BE CAREFUL THAT THE SEED DISCHARGE CAP IS CLOSED).

It is then possible to adjust the selector.

- 1) Adjust the selector lever **L** in the intermediate position; (Pic.19)
- 2) Rotating the rear press wheel (always forwardly) once or twice to obtain a couple of turns of the seed disc;
- 3) Check through the inspection window on the cover that the seeds are distributed on the disc.
- 4) Pay attention to moving parts and adjustments carefully.

From this control there can be three different situations:

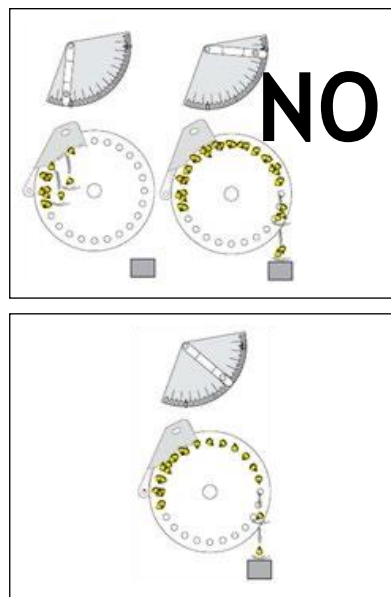
- A)** After passing the selector the holes of the seeding disc may have no seeds or very few. The selector is adjusted at the lowest value, shift the lever **L** towards higher values and start again from point 2).
- B)** After passing the selector the holes on the distributor have more than one seed (generally two or three). The selector is adjusted at the highest value, shift the lever towards lower values and start again from point 2).
- C)** After the selector adjustment each hole of the disc has to have only one seed. The selector is correctly adjusted. However, it is recommendable to move the lever some notches in both directions to find the range in which the adjustment is considered satisfying. Then place the lever at the center of this range. (Pic.20)

#### WARNING

**The regulation of the selector has to be made each time there is a change of seed discs or of seeds (type and seed size). However, it is advisable to adjust the selector at every important change of the planting conditions.**



Picture 19

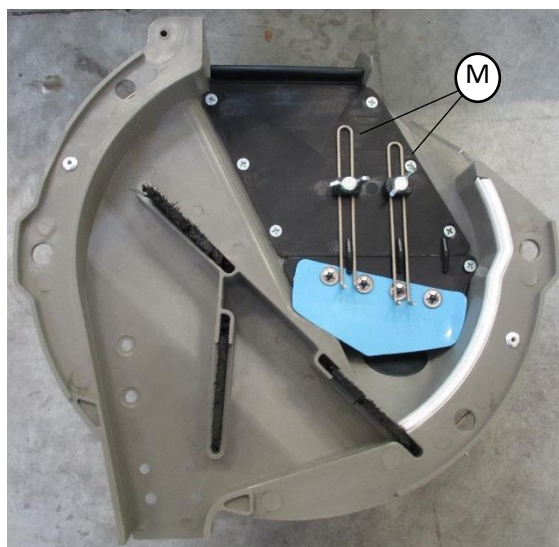


Picture 20

### 4.3.2 SEED BULKHEAD ADJUSTMENT

The bulkhead help to adjust the flow and level of the seeds in special condition such as sloping terrain.

- This bulkhead adjusts the seed outlet in order to prevent the seed from coming out of the metering unit in case of overflow);
  - The bulkhead adjustment is made through the springs **M** on the cover (Pic.21);
- A rigid bulkhead is employed in case of small seeds or rape seeds.



Picture 21

Should the adjustable bulkhead NOT be enough to prevent the overflow, it should be replaced by the rigid one after making an opening as shown in the picture below.(Pic.22)



Picture 22

#### WARNING

For the correct functioning of the metering unit it is recommendable to keep all gaskets, bulkhead, brushes, guide pins, seed disc and selector clean and in good working conditions.



### 4.3.3 BRUSH ADJUSTMENT

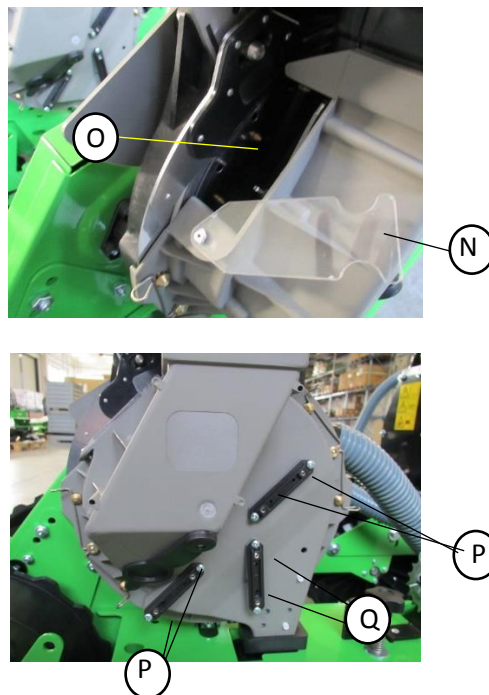
In case of small seeds, such as tomato seed or rape, check that the brush inside the metering unit fits closely to the seed disc entire surface. To adjust and check the brushes carry out the following operations:

- Open the inspection window **N** to check the brush. (Pic.23)

If brush **O** does not fit closely to the seed disc surface, then adjust it as follows:

Screw in the screws **P** with an Allen key until the brushes are in contact with the seeding disc. Also adjusts the vertical brush **Q** .(Pic.23)

**N.B. Do not compress the brushes too much against the disc to avoid friction.**



Picture 23

### 4.4 START-UP

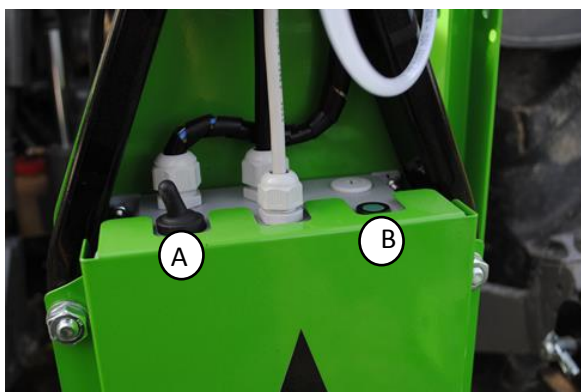
Once followed all instructions, connections, adjustments and warning. Fill up all the seed hoppers with the selected seeds and take care that no foreign items are introduced into the aforementioned.

Proceed with:

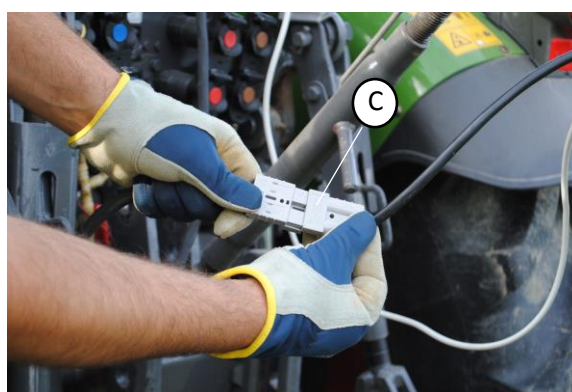
- Turn on the tractor/tool carrier engine following its instruction manual
- Check that the switch (A) on the planter is on (green light lit) (B) (Pic.24)
- Check that the power cables are plugged in (C) (Pic.25)
- To start the vacuum must be at the maximum (+) turning the knob on the console (Pic.26)
- With the seeds inside the hopper and the vacuum at maximum (+), drive forwardly for a few meters and check the seed discs are loaded of seeds in each hole. Then adjust the vacuum according to the type of seeds.

#### WARNING

The vacuum inside the metering units is indicated on the vacuum gauge (Pic.27).It should be kept from minimum -20mbar for smaller and lighter seeds, to maximum of -40mbar for larger and heavier seeds. For seeding discs follow carefully the chart indicated in paragraph 4.2.



Picture 24



Picture 25



Picture 26



Picture 27

#### 4.4.1 SEED DISTANCE CONTROL

Once all the previous operations have been made, the planter is ready to work.

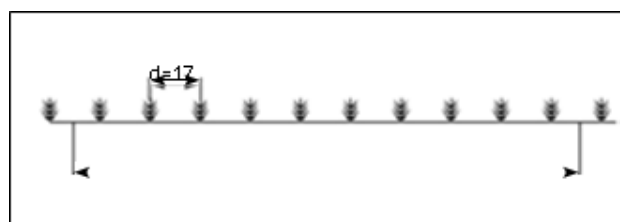
For accurate seeding, it is advisable to try first, planting a few meters to check that the seeding distance is as desired.

In particular:

- Make sure that the number of seeds per linear meter corresponds to the required one.

***Example:***

If the set distance is  $d=17\text{cm}$  it means that there should be 10 seeds in 170 cm, counted as shown in the picture below. (Pic.28)



Picture 28

- In case of safety pin, screw breakage, etc., stop the planter immediately, remove the broken parts and replace them;
- The use of not original items, may seriously damage the planter;
- Check the metering unit frequently during seeding operations: adjust the selector if the seed distribution is irregular;
- If the vacuum falls, check the pipes if plug or broken. If so, replace or clean them.

#### **4.4.2 CHECKING OPERATIONS DURING WORK PHASES**

##### **START OF WORK**

- Carefully check moving parts, transmission and distribution components;
- Adjust the metering unit as described in the previous chapters;
- Make a seed distance test as described above;
- Proceed with the distribution: after a few meters, check for regular distribution.

**It is important for a successful work, to distribute the product over a short distance and to check that the deposition of the seeds in the soil is regular.**

##### **DURING WORK**

For quality work, the following standards must be observed:

- Check that the operating elements are not encased in plant residues or clogged with soil to the extent that they retain seeds;
- Check that the metering units is clean and that foreign objects haven't accidentally entered the hopper could impair proper functioning;
- In any case, check that the seed tubes are not clogged;
- Maintain a working speed compatible with the soil type and tillage in order to avoid breakage or damage;
- Check the result of the deposition of the seeds in the soil periodically;
- Avoid making turns and reverse with the machine in working position. Always lift it for changes of direction and reversing.

##### **WARNING**

**The planter can carry chemicals that are mixed with the seed. Therefore, do not allow people, children or pets to come close to the planter. No one must be allowed to approach the seed hopper or attempt to open it when the planter is working or about to work.**

## 5. ACCESSORIES

### 5.1 R2-R3 SOLUTIONS

#### 5.1.1 Configuration

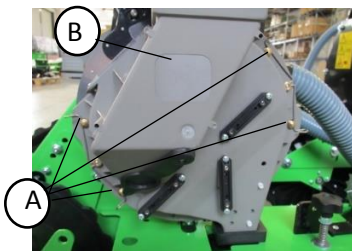
Multiline systems R2 & R3 respectively allow to sow 2 and 3 sowing lines per row. In the R2 system the sowing distance between the lines is 9 cm while in the R3 system it is 4.5 cm.

These are specific solutions for sowing small seeds, mainly vegetables.

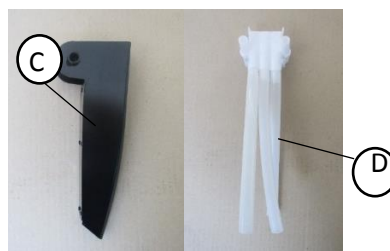
The compatible seed discs are for small seeds (DS2 and DS3). The maximum size of the holes in the discs is  $\varnothing 1.5$  mm and the size of the seeds approx. 3 mm.

The preliminary phase passing from single row to multirow seeding. Follow the instructions below:

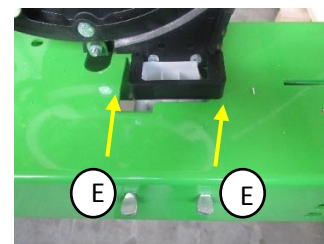
- Release the lock springs A from fixed slots (Pic.1)
- Remove the metering unit cover B (Pic.1)
- Remove the single row seed tube C (Pic. 2)
- Insert the multiline seed tube D (Pic.2) always from the bottom then insert the 2 pins E (Pic.3)



Picture 1

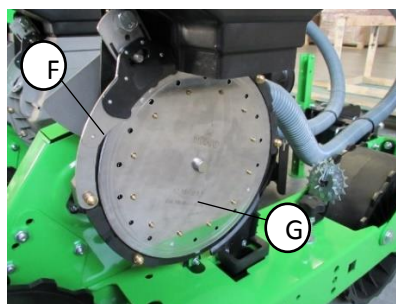


Picture 2



Picture 3

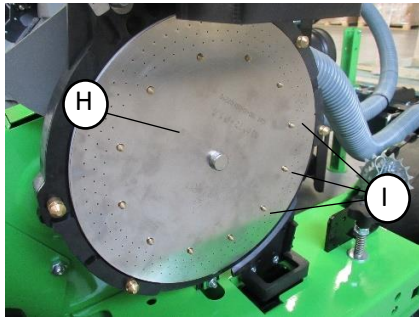
Once the seed tube has been replaced, before mounting the R2 or R3 multiline system, you must first remove the singulator F and then the previous seeding disc G (Pic.4)



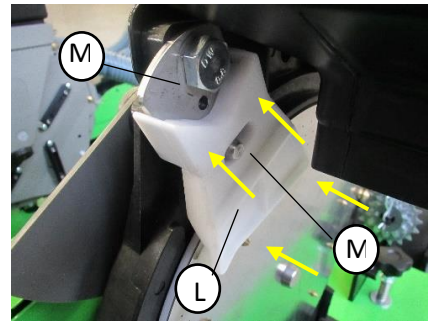
Picture 4

Steps to follow for assembling the R2 & R3 multiline system:

- Assemble the multiline seeding disc H on the metering unit holder I (Pic.5)
- Assemble the multiline singulator L in its appropriate pins and housing M and press it carefully as shown to make sure it adheres completely to the distributor and the 3 toothed sectors to the disc (Pic.6)



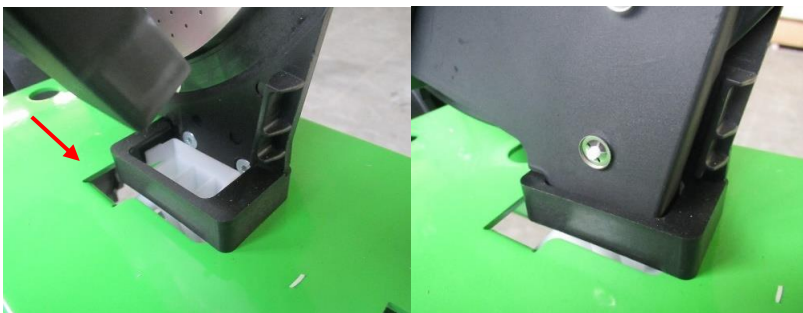
Picture 5



Picture 6

- Assemble the multiline metering unit cover (dark cover) by inserting the bottom first (Pic.7)

When inserting the cover, make sure that the seed guide of the cover N fits correctly the lower seed guide O (Pic.8).

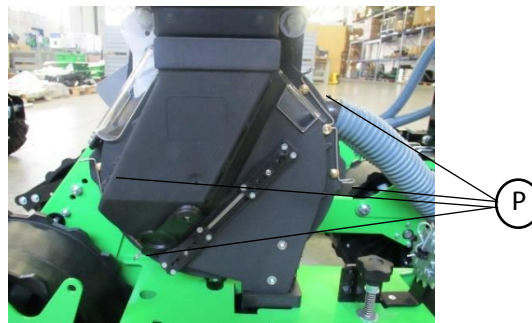


Picture 7



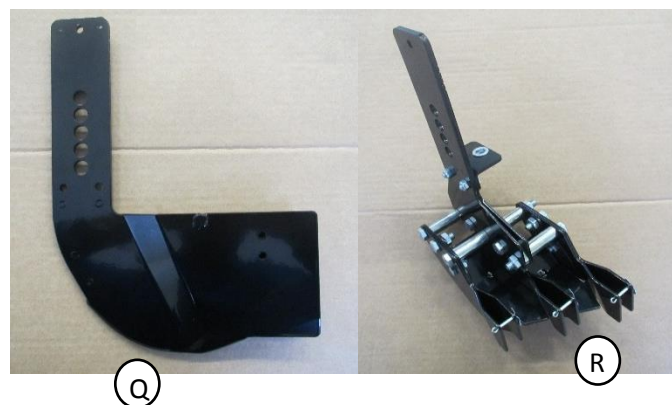
Picture 8

- Replace the appropriate pins in close position, securing it with relevant lock springs (P) (Pic.9)



Picture 9

Remember to also replace the single row shoe opener Q with multi-row shoe opener R. (Pic.10)



Picture 10

### 5.1.2 PLANTING ADJUSTMENTS

#### SEED SINGULATOR ADJUSTMENT

The seeding selector adjustment has to be made after the seed hopper has been filled (BE CAREFUL THAT THE SEED DISCHARGE TAP IS CLOSED).

It is then possible to adjust the selector.

- 1) Adjust the selector lever **S** in the intermediate position; (Pic.11)
- 2) Rotating the rear press wheel (always forwardly) once or twice to obtain a couple of turns of the seed disc;
- 3) Check through the inspection windows **T** on the cover that the seeds are distributed on the disc. (Pic.12)

From this control there can be three different situations:

**A)** After passing the selector the holes of the seeding disc may have no seeds or very few. The selector is adjusted at the lowest value, shift the lever **S** towards higher values and start again from point 2).

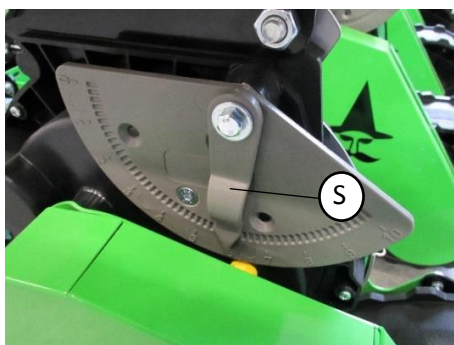
**B)** After passing the selector the holes on the seeding disc have more than one seed (generally two or three). The selector is adjusted at a the highest value, shift the lever towards lower values and start again from point 2).

**C)** After the selector adjustment each hole of the seeding disc has to have only one seed. The selector is correctly adjusted. However, it is recommendable to move the lever some notches in both directions to find the range in which the adjustment is considered satisfying. Then place the lever at the center of this range.

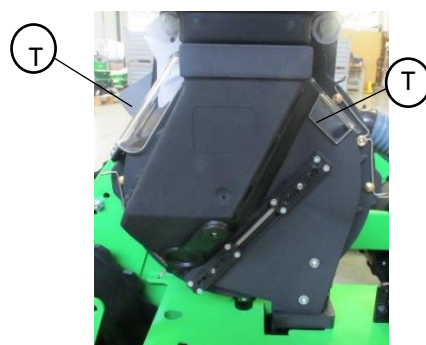
#### WARNING

**The regulation of the selector has to be made each time there is a change of the seed disc or of the seed (type and seed size). However, it is advisable to adjust the selector at every important change of the planting conditions.**

Once the multiline singulator has been adjusted satisfactorily, check that the toothed sectors raze the seed disc. If not, press the singulator again (Pic.13)



Picture 11



Picture 12



Picture 13

### 5.1.3 BRUSH ADJUSTMENT

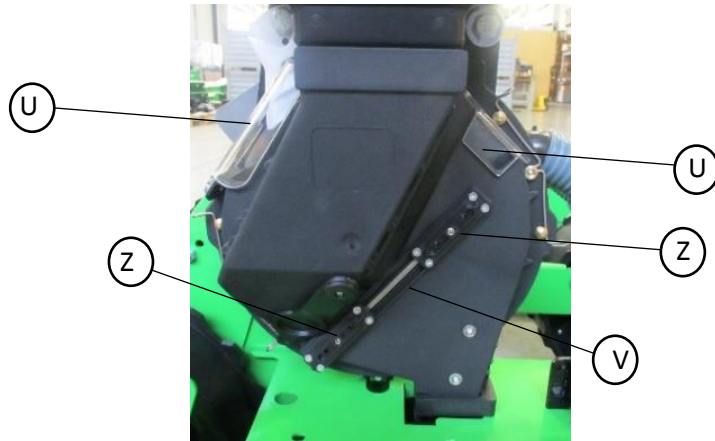
Check that the brush inside the metering unit fits closely to the seed disc all over its surface. To adjust and check the brushes carry out the following operation:

- Open the inspection window **U** to check the brush.(Pic.14)

If brush **V** does not fit closely to the seed disc surface, then adjust it as follows:

- Screw the screws **Z** with an Allen key until the brush is in contact with the seeding disc.

**Do not compress the brush too much against the disc to avoid friction**



Picture 14

## 5.2 ADDING A VACUUM LINE

If you need to add an extra planting unit or a vacuum seed clean out device, you have to work on the manifold that is attached to the vacuum fan, or vacuum pipe connections ( depends on the model).

### WZ-G:

Before start the operation ensure that you have all the protections required (gloves, eyeglasses, etc.) and follow the instructions below:

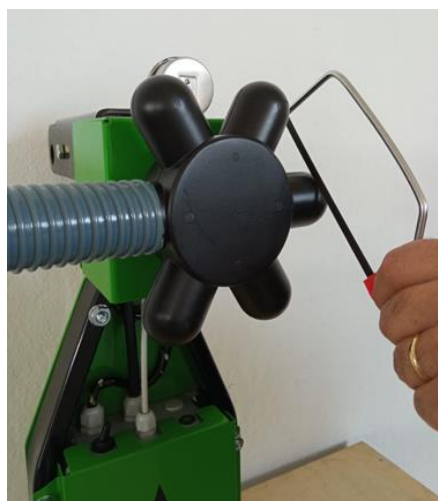
- vacuum fan manifold (Pic.15)
  - use a cutting tool such as a saw, cut the number of outlets needed (Pic.16)
  - once finished connect the vacuum pipe on the manifold's outlet. (Pic.17)
- Pay attention to the instruction manual to see how many outlet can be cut off.

### WARNING

**On this model can be assembled maximum 2 planting units plus a vacuum seed clean out device**



Picture 15



Picture 16



Picture 17

**WZ-GT:**

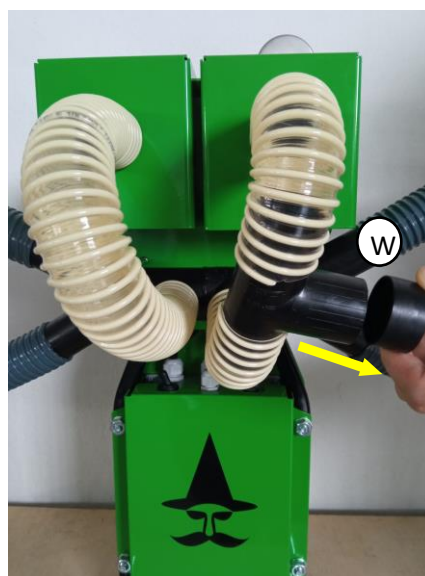
If needed to use an extra outlet for adding a vacuum seed clean out device just take of the cap W (Pic.19) and insert the vacuum pipe.

**WARNING**

**On this model can be assembled maximum 4 planting units plus a vacuum seed clean out device.**



Picture 18



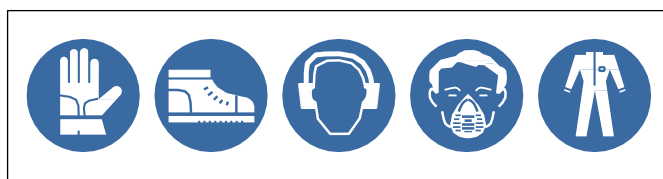
Picture 19



## 6. MAINTENANCE

Various maintenance operations that need to be periodically made have been listed below. The minor cost of working and the longer duration of the planter also depend on the constant and methodic observance of these regulations. The terms of maintenance listed in this handbook are only for information and they relate to normal using conditions, so they can vary in relation to the type of service, the more or the less dusty workplace, seasonal factors, etc. In case of more demanding service conditions, maintenance assistance have to be logically increased.

Please note that all maintenance operations must be made by qualified and trained persons when the machine is off. Moreover, the maintenance or reparations must be made outside but in a specific equipped area. During the adjustments, regulation, maintenance, repair or movement, the user must wear Personal Protective Equipment.



**Picture 1**

Before starting all maintenance operation, the instructions below must be followed:

- Use the accident-prevention means relative to the operation under way;
- Where using compressed air to clean the planter, it is necessary to use protective eye wear;
- Do not make unfamiliar reparations;
- Always follow instructions and where they are missing, contact the Manufacturing Company or expert personnel;
- Avoid prolonged and repeated contact of skin with combustibles/oils/fluids, as they might incite skin irritation or other symptoms.

### ***Oils and greases use***

- Before using lubricating oil clean accurately all the constituents to prevent mud, dust or foreign objects blending with oil and reducing, or even cancelling, the lubricating effect;
- Always keep oils and greases out of reach of children;
- Always carefully read warnings and precautions on containers;
- Avoid skin contacts;
- After using them rinse thoroughly;
- Use the oils according to current regulations.

### **6.1. MAINTENANCE PLAN**

The maintenance described in the following paragraphs do not require a technical specialization.

The user must know and precisely follow the indications and must have the tractor engine turned off.

Periodical check-ups and maintenance operations must be made in the periods and modalities described. This is followed by the user.

Not observing the periods and modalities of maintenance will endanger the correct functioning of the planter, thus breaking the warranty validity.

Intensify the frequency of maintenance interventions in case of hard use (frequent stops and start-ups, very hard soils, etc.).

Maintenance to be made are:

- Regularly check the condition of painted and galvanized parts of the seeder. Avoid leaving residues from chemical products on the planter;
- Regularly check that all connecting parts and fixtures (tie rods, screws, wing nuts, etc.) are intact;
- Check that they are tight and in the correct position;

- Do not use the planter if all the attachments are not in order or correctly made;
- It is good practice to keep the planter clean, it is advisable to wash it with water, including all the individual parts after using it each time;
- Do not bring the nozzle in contact with equipment parts in case of clearing with pressure water. Keep at a distance of at least 30 cm from the surface that has to be cleaned;
- Accurately lubricate the equipment, especially after having cleaned it with pressure clearing systems.

### ***Table on frequency of interventions***

Below there are some information on intervention time frames for some operations to be carried out in order to prolong the perfect operation of the seeder. The frequency suggested is purely used by way of example and is subject to change dependent on the type of service, environment, seasonal factors, etc.

PERIOD	INTERVENTION
NEW PLANTER	<ul style="list-style-type: none"> <li>- Check that all screws and wing nuts are tightly secured, check that all levers and transmissions operate freely.</li> </ul>
BEGINNING OF PLANTING SEASON	<ul style="list-style-type: none"> <li>- Check and verify the correct connection of the planter with the tractor;</li> <li>- Check the condition of the tractor;</li> <li>- Check the condition of the vacuum fan;</li> <li>- Check the condition of the shoe opener;</li> <li>- Check the condition of the seed discs;</li> <li>- Check the condition of the metering unit's gaskets;</li> <li>- Check the condition of the vacuum pipes.</li> </ul>
DAILY	<ul style="list-style-type: none"> <li>- Wash the planter with water (not electrical parts), particularly all the parts that have been in contact with chemical products, hoppers, metering units, seed tubes;</li> <li>- Check that there are not residues from chemical products inside the transmissions – they might cause blockages and/or bad functioning.</li> <li>- Check the correct connection of the planter to the tractor.</li> </ul>
LONG-TERM STORAGE	<p>At the end of the season or when the machine will not be used for a long time, it is advisable:</p> <ul style="list-style-type: none"> <li>- To wash the equipment with water ( not electrical parts)and then dry it;</li> <li>- To accurately check all parts and then replace those damaged or worn;</li> <li>- To fully tighten all screws and bolts;</li> <li>- To protect the equipment with a cover and place it stably in a dry place, out of reach of those not qualified to use it;</li> <li>- To remove any seed residue from the seed metering unit.</li> </ul>

## 7. DEMOLITION AND DISPOSAL

Operations to be made by the Customer.

Before demolishing the planter, it is recommended to carefully verify its state, evaluating the presence of parts subject to structural failures or breakages during demolition.

The Customer shall operate in compliance with the current regulations on respect and protection of environment in force in his country.

### **WARNING**

**Demolition operations must be done only by qualified personnel, provided with adequate personal protective equipment (safety footwear and gloves), tools and auxiliary means.**

All dismantling operations must be made when the planter is disconnected from the tractor and all electrical parts disconnected.

Before starting the demolition, it is recommended to render innocuous all the parts susceptible of danger and then:

- the demolition must be made by a specialized structure.
- recover separately oils and greases for disposal. This operation must be done by authorized structures in accordance with the regulations of the country in which the machine is used.

On demolishing the planter, the CE mark must be destroyed together with the handbook.

Finally, it is recalled that the Manufacturing Company is available for any necessity of attendance and replacements.

## 8. SPARE PARTS

Repairs and replacement parts should be made using original spare parts requested from an authorized Dealer. It is important to remember that any request for spare parts should be accompanied by the following information:

- model of planter;
- planter series/serial number;
- spare part item code available from the Spare Parts Catalogue.

## 9. ATTACHED DOCUMENTS

### 9.1 MANUAL

Planter use and maintenance manual.

### 9.2 EC DECLARATION OF CONFORMITY



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