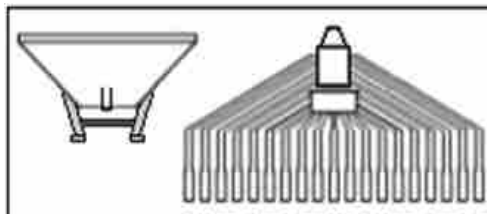




PNEUMATIC FERTILIZER SPREADER



ASF

Codice	Q00A00140	CE		GB	USE AND MAINTENANCE MANUAL
Da matr:					
A matr:					

INSTRUCTIONS TRANSLATED FROM THE ORIGINAL

ALPEGO S.p.a.

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- MACCHINE PER LA LAVORAZIONE DEL TERRENO
- ERPICI ROTANTI FISSI E PIEGHEVOLI
- COLTIVATORI A DENTI ED A DISCHI
- SEMINATRICI MECCANICHE, PNEUMATICHE E COMBinate
- DISSODATORI E RIPUNTATORI
- FRESATRICI E ZAPPATRICI
- TRINCIASARMENTI
- TRINCIASTOCCHI

I	GB	D	F	E
Dichiarazione CE di conformità' ai sensi della direttiva CE 2006/42 La ditta sottoscritta	EC Certificate of conformity conforming to EEC Directions 2006/42 We	EG Konformitätserklärung entsprechend der EG-Richtlinie 2006/42 EWG Wir	Déclaration de conformité pour la CE conforme à la directive de la 2006/42 CE Nous	Declaración CE de conformidad. Conforme a la directiva CE 2006/42 la empresa / el productor
dichiara sotto la propria responsabilità' che la macchina modello :	declare in sole responsibility, that the product model :	erklären in alleiniger Verantwortung, da das Produkt Typ :	déclarons sous notre seule responsabilité' que le produit modèle :	declara bajo su propia responsabilidad que la máquina modelo:

ALPEGO s.p.a
VIA TORRI DI CONFINE N°6
36053 GAMBELLARA (VI)-ITALIA

Codice / Code: TBKP00001 - SEMINATRICE FRONTALE ASF INOX

Serial : 000000000

È' Conforme ai requisiti Essenziali di Sicurezza e di Tutela della Salute di cui alla Direttiva CE 2006/42 Per l'adeguamento delle macchine sono state adottate le norme:	to which this applies, conforms to the basic safety and health requirements of EC Directions 2006/42 For the adaptation of it blots some have been adopted the norms:	auf das sich diese Erklärung bezieht, den einschlagigen grundlegenden Sicherheits und Gesundheitsanforderungen der EG-Richtlinie 2006/42 EWG Für die Anpassung von ihr befeckt einiges sind angenommen worden den Normen:	faisant l'objet de la déclaration est conforme aux prescriptions fondamentales en matière de sécurité et de santé stipulées dans la Directive de la CE 2006/42 Pour l'adaptation d'elle en éponge ont été adoptés les normes :	està conforme a los requisitos esenciales de seguridad y de defeusa de la salud de la directiva CE 2006/42 Para la equiparación de las máquinas nan sido adoptado las normas
UNI EN 708 UNI EN ISO 4254-1 UNI EN 14018 UNI EN 982 ISO 3757-2 ISO 11684	UNI EN 708 UNI EN ISO 4254-1 UNI EN 14018 UNI EN 982 ISO 3757-2 ISO 11684	UNI EN 708 UNI EN ISO 4254-1 UNI EN 14018 UNI EN 982 ISO 3757-2 ISO 11684	UNI EN 708 UNI EN ISO 4254-1 UNI EN 14018 UNI EN 982 ISO 3757-2 ISO 11684	UNI EN 708 UNI EN ISO 4254-1 UNI EN 14018 UNI EN 982 ISO 3757-2 ISO 11684

Gambellara, _____

La ditta _____

Read this manual thoroughly before using the machine. Being well informed is essential for safe machine usage. This manual should be kept for the whole working life of the machine.

Thank you for choosing us. You have purchased an excellent quality product that is guaranteed by decades of experience.

On leaving the factory, each machine is accurately inspected to guarantee the absence of defects.

Should any material defect be found in spite of inspection, please contact your dealer immediately.

Please contact us if you need further information or if something needs to be clarified. Our aim is to constantly improve the product and keep it top level.



AS THE TRIANGLE INDICATES DANGER, PLEASE BE CAREFUL WHEN IT APPEARS!

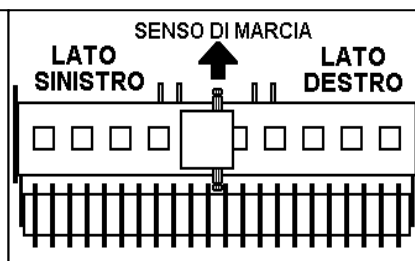


THE TERM MACHINE IS USED TO INDICATE THE COMMERCIAL NAME OF THE PRODUCT TO WHICH THIS MACHINE REFERS

All information contained in this manual is informative and does not bind the producer. The information contained herein can be changed without forewarning

N.B.: view of the machine.

ALPEGO normally considers the **machine** as being **viewed from the rear** to identify better the particulars and to better assemble the parts that must respect the position "right or left" as in description (e.g.: right or left cardan joint, right or left tine, etc.)



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OWNER'S MANUAL OF PNEUMATIC FERTILIZER SPREADER ASF

Old CodQ00A00140

New Cod. -

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1. GENERAL INFORMATION

1.1. PURPOSE OF THE MANUAL

This manual was created by the machine producer and is an integral part of the documentation that accompanies the machine.

The manual defines the purpose for which the machine was produced, it establishes correct machine application and limits of use.

The constant application of the indications given in this manual guarantees the safety of those who use the machine, as well as working economy and longer machine duration.

This manual has been divided into sections. To make it easier to find a specific topic, consult the initial index.

The images that appear in this manual are given as an example. Even if substantially different from the machine you possess, the safety and information are guaranteed.

1.2. DOCUMENTS ACCOMPANYING THE MACHINE

The following documents should be supplied with the machine:

- User and maintenance manual
- Spare parts catalogue
- EC Conformity Declaration

The machine may be supplied complete with different options/fittings. For the assembly and the use of those check the specific manuals supplied with the documents of the machine.

CODE	DESCRIPTION
D16555	Owner's Manual of the DOSAL metering unit
Q00A00129	Owner's Manual of the row-marking discs
Q00A00134	Owner's Manual of the seeding bar
Q00A00132	Owner's Manual of the following harrow
D15686	Owner's Manual of the "Super Plus" Computer

1.3. WARRANTY

When delivered, make sure that the machine and any accessories were not damaged during transport. Any complaints should be presented in writing within 6 days from the date of delivery.

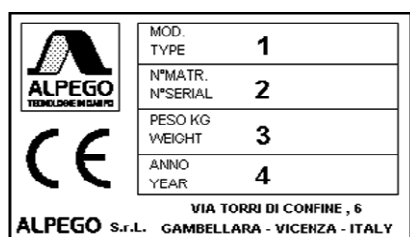
GUARANTEE FORFEITURE

The guarantee is rendered null and void immediately if:

- there is a manoeuvring error
- If the universal joint has not been sufficiently maintained (see owner's manual of universal joint)
- If the maximum power limit allowed is exceeded (see technical data on the table 2.3)
- the instructions described in this manual are not followed
- original spare parts are not used
- any modification is made to the machine without having obtained authorisation from the manufacturer.

1.4. IDENTIFICATION OF THE MACHINE

On the left front section of the seed box there is a machine identification plate which carries the following information:



1. Machine type
2. Serial number
3. Maximum weight of the machine with roller
4. Year of production

The indicated weight refers to the machine complete with standard shoe coulters.

2. TECHNICAL SPECIFICATIONS

2.1. DESCRIPTION

- The seeder/fertilizer spreader mod. **ASF** must only be used for working agricultural lands. Any other use differing from the one described in this manual can damage the machine and be dangerous for the operator.
- The seeder/fertilizer spreader mod. **ASF** can be used with other equipment for working the soil, but only with the addition of a special assembly kit.
- The seeder/fertilizer spreader mod. **ASF** is ideal for sowing cereal: wheat, barley, rye, oats, rice; fine seeds and fodder: rape, clover, alfalfa; and for big seeds: soya, peas.
- The seeder/fertilizer spreader mod. **ASF** is suited for the distribution of various types of fertilizers.
- The seeds are deposited in the soil by coulter organs, sock or discs, and are distributed continuously. A special revolving metering unit driven by a wheel which adheres to the ground regulates the quantities to be distributed.
- The seeds are distributed and transported to the coulters by compressed air that is produced by a fan. The fan is moved by the tractor power takeoff, or hydraulically as in the Plus version.
- The disc or sprint sock coulter is mounted on a super-elastic support that gives excellent depth and pressure control on the soil and regulates the height of the seed bar.

For the development and the construction of this implement the following guidelines of the Standard 98/37CE have been studied and applied:

UNI EN 14018	UNI EN 1553	UNI EN 982	ISO 11684	ISO 3757-2
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The seeder/fertilizer spreader **ASF** has been built in view of combining it with power harrows of the "ALPEGO" type, since this combination guarantees the observance of Standard EN 708.

The machine will work well if used correctly and if maintenance is carried out regularly. Users are strongly advised to scrupulously observe the instructions given in this manual in order to prevent any inconvenience that could impair good machine operation and its durability.

Users must follow the instructions given in this manual because the Manufacturer cannot be held responsible for any damage or injury caused by negligence and the non-observance of such instructions.

The Manufacturer assures complete assistance with regard to immediate and accurate technical service, as well as anything that may be necessary for a better operation and maximum performance of the implement.

2.2. IMPLEMENT COMPONENTS









1. Hopper
2. Ladder for filling ladder
3. 3-point hitch
4. Supporting stands

5. Electric control panel
6. Front lights
7. Fan
8. Metering unit

9. Electric motor
10. Radar
11. Distribution head
12. Seed conveying pipe

2.3. CHART OF TECHNICAL DATA

MODEL.	 cm	 cm	 N °	 cm	 dm ³	 Kg
ASF - 300	300	250	24	12.5	1400	600
ASF - 350	350		28	12.5		
ASF - 400	400		32	12.5		
ASF - 450	450		36	12.5		
ASF - 500	500		40	12.5		
ASF - 600 (40)	600		40	15		
ASF - 600 (48)	600		48	12.5		

2.4. SOUND LEVEL

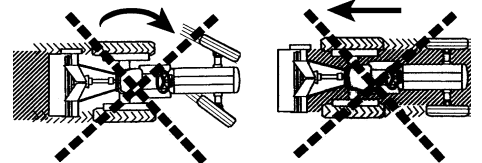
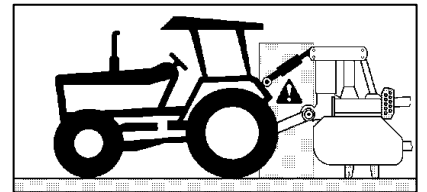


If the tractor is equipped with a cabin, the sound level will depend on the soundproofing level of the cabin itself. If the tractor does not have a cabin or is used with the windows open, the noise level emitted by the machine while working and measured at a distance of 200 mm. from the rear window exceeds 85 dBa. It is therefore advisable to use protective earmuffs as indicated in the regulations of different countries.

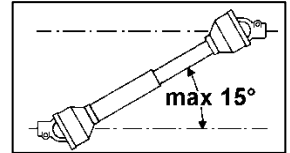
3. SAFETY REGULATIONS

3.1. USE THE MACHINE SAFETY

- Read the user and maintenance manual carefully before starting-up, before using the machine and before carrying out maintenance on the equipment.
- The manufacturer cannot be held responsible for injuries caused to people and animals, or damage caused because the safety regulations have not been observed by the user.
- The machine cannot be used for different purposes other than those expressly indicated in this manual.
- It is forbidden for people to drive the tractor if they do not have a suitable driving licence, if they do not have the necessary experience, or if they are not in good health.
- Examine the adhesive labels on the machine carefully, and make sure you follow their indications.
- While manoeuvring, do not allow people or animals to approach within the working range of the machine.
- While working do not allow people, animals or objects to approach within the area where sods and stones are thrown out by the machine.
- It is absolutely forbidden to enter the space between the tractor and the machine to operate the external controls of the hydraulic lift.
- Always remain seated in the tractor driver's seat. Only leave the driver's seat when the tractor power take off has been disengaged and the handbrake has been pulled.
- During working stops switch off the engine, lower the implement to the ground, disengage the tractor power takeoff and pull the tractor handbrake.
- Make sure never to work if guards have been removed.
- Do not let the implement run when raised (out of the ground).
- While working do not take turns while the machine is set in the ground. Never work in reverse gear.
- Always lift the implement when changing direction and reversing.
- During transportation, or whenever the machine has to be lifted, the tractor lift should be regulated so that the machine is kept at a maximum distance of not more than 45 cm. off the ground. Do not circulate on roads if the machine is dirty with soil, grass or other materials which may soil the roads and/or cause traffic problems . Do not lower the machine to the ground abruptly , but rather do so slowly so as to allow the tines to penetrate into the soil gradually .
- Unless you follow this rule, strong stressing forces will be exerted on all the components of the machine and they may compromise its integrity
- While driving on the road with the machine lifted off the ground, put the lever controlling the hydraulic lifting mechanism of the tractor in the blocked position.
- The implement and its accessories for transit on public roads must be complete with suitable signs and safety guards



- Do not work in terrains or places which may compromise the stability of the implement.
- Use only the universal joint supplied by the manufacturer, complete with the safety device against overloads.
- The protection device of the universal joint must always be in good working order and has to be checked at regular intervals and secured by means of chains in order to prevent it from revolving.
- Always disconnect the power takeoff when the universal joint forms an angle exceeding 15°, see picture.
- The seed-drill may transport chemicals used to coat the seeds. Therefore, never allow people, children or pets to approach the seed-drill.
- Nobody can be allowed to approach the hoppers or to attempt to open them while the seed-drill is working or about to be started



3.2. HYDRAULIC CONNECTIONS

- Make sure that the hydraulic systems of the machine and the tractor are not under pressure when you connect the hydraulic hoses to the hydraulic system of the tractor.
- When linking functional connections, for example between the tractor and the machine tool, colour mark all the intakes and plugs to avoid mistakes. Connection mistakes can cause accidents.
- The hydraulic system is pressurised. To avoid accidents, use suitable auxiliary instruments if you have to search for leaks.
- Never exceed the pressure indicated for the oleodynamic system.

3.3. ASSEMBLY OF ELECTRIC AND ALECRONIC INSTRUMENTS AND COMPONENTS

- The machine is equipped with electronic components which may interfere on other instruments through electro-magnetic transmission. Said interferences may constitute a risk to people, if the following safety instructions are not carefully followed.
- If the assembly of electric or electronic instruments and/or components is done at a later date, the user will have to test, under his own responsibility if the new addition causes any irregularity to the electronic of the tractor or to other electronic components.
- In particular it will be necessary to make sure that the electric or electronic components which are added at a later date comply with the guidelines CEM 891336/CEE in their most recent valid version and they carry the CE brand of approval.
- In case of a later addition of mobile communication systems (i.e. radio, phone etc.) the following requirements must also be taken into account:
 1. Only instruments which comply with the national valid standards may be installed (for instance the BZT homologation for Germany)
 2. The instruments must be installed so they cannot be removed.
 3. The use of mobile or portable instruments inside the vehicle is allowed exclusively through a connection with a fixed external antenna.
 4. The transmitter is to be installed far away from the electronic of the vehicle.
 5. When the antenna is installed make sure that it is properly installed with a good earth connection between the antenna and the earth of the vehicle.

For the laying of the cables, the assembly and the maximum power absorption allowed see also the directions given by the manufacturer of the machine.

3.4. CARRYING OUT MAINTENANCE SAFETY

- Do not allow unauthorised people to carry out maintenance or tamper with the machine in any manner.
- Maintenance and repairs should be carried out in suitably equipped workshops.
- Always use original accessories and spare parts to respect the manufacturer's requirements. Not using original parts and accessories renders the guarantee null and void and can cause function irregularities that prejudice machine safety.
- When carrying out any operation on the machine always disable the tractor power takeoff, insert the handbrake, remove the ignition key and make sure that nobody boards the tractor

3.5. TRAVELLING ON ROADS

If necessary, the machine can be transported on the roads while hitched to the tractor. The operator must check, compare and adapt the implement so that it fully complies with the Highway Code in force in the country of use. Bear in mind the following recommendations:

1. Comply with the instructions in this manual when you hitch the machine to the tractor;
2. The machine must remain blocked and raised from the ground during transport.
3. You must take all possible precautions and comply with the pertinent laws in order to safeguard yourselves and others.
4. Projecting parts and those beyond the width of the tractor must be fitted with the relative protections.
5. The entire implement must be equipped with its own lighting system complete with flashing lights and indicators.
6. Warning boards to indicate the projecting parts of the implement must be affixed where necessary.
7. The braking distance and steering capacity of the tractor are influenced by the weight of the machine hitched to its power lift. When driving round bends, take great care and allow for the action of the centrifugal force that shifts the machine's center of gravity.
8. Comply with the load limits on the axles.
9. Bear in mind the limits imposed by the overhang and projection from the sides of the tractor.

3.6. CLOTHING

Always wear protective clothing without any loose parts that could entangle in the moving components. In addition always remove watches, rings, necklaces etc. that could cause the same danger. Gather long hair into a ponytail.

If requested by current user country norms, the machine operator should wear suitable protection systems: goggles, gloves, helmet, shoes, etc









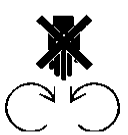

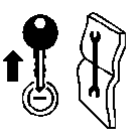


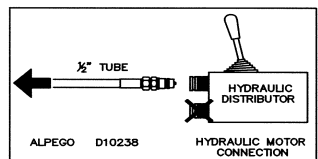
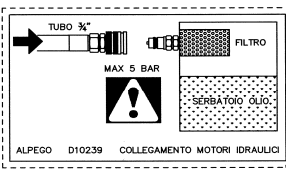
3.7. ECOLOGY

Respect the regulations in your country regarding the use and disposal of lubricating products, maintenance operations and machine cleaning. Carefully follow the instructions given on the packaging of the products used. Respect current standards for machine scrapping.

3.8. SAFETY SIGNALS

The various adhesives on the machine are there to highlight the source of danger. Observe them carefully and follow the indications for using the machine safely. The labels should be kept clean and be legible – if damaged they should be replaced.

FIGURE	CODE	INDICATIONS
  <p>PRIMA DI USARE L'ATTREZZATURA E' OBBLIGATORIO LEGGERE IL LIBRETTO USO & MANUTENZIONE ED I CONSIGLI DATI A SUPPORTO E IN PRESSIONE TUTTE</p>	D02612	You MUST read the user and maintenance manual and the safety instructions before using the equipment. The manual and the instructions must be followed during use
	D02627	Indicates the hooking point for machine transportation

		D02624	Indicates the danger caused by pressurised oil if the hydraulic pipes break. Consult the instruction manual before repairing the hydraulic system
		D02608	Indicates the danger of entanglement while working on the universal joint shaft. Do not approach the shaft while it is rotating
		D02615	Indicates the need to switch off the tractor and remove the ignition key during maintenance operations
		D02616	Indicates the position of a support leg that must always be locked into place when the machine is not being used to keep the machine stable
		D10238	Indicates that the hydraulic hose driving the 1/2" turbine must be connected to the tractor hydraulic connection having priority delivery
		D10239	Indicates that the hydraulic 3/4" return hose must be connected to the tractor oil tank, and that the return counter-pressure can not exceed 5 Bar

4. INSTALLATION

4.1. TRANSPORT



The machine can easily be transported even over long distance with suitable means of transportation: lorries, trailers, train cars etc.



The loading and unloading of the machine can be rather dangerous operations, unless they are performed with the utmost care: have all unauthorized personnel leave the area; clear and circumscribe the loading area; check that the available means of transportation are in good working order and strong enough for the job at hand.



It is also necessary to make sure that the area of operation is free and that there is enough escape space, i.e. a free and safe area where it is possible to move quickly should the machine fall down. Said operations are to be performed exclusively by personnel trained to perform this type of work.

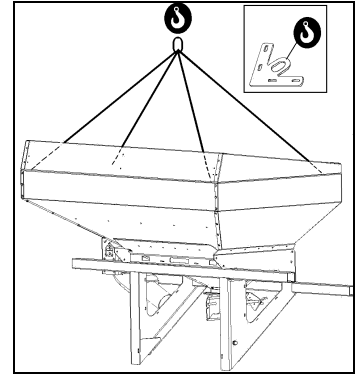
Before beginning the loading operation make sure that the available means is certified for this type of transportation and that it is strong enough to support the weight of the machine. To this end see CHART OF TECHNICAL DATA (see Par. 2.3) for the weight of the machine.

This chart is also useful to check the possibility of transit of the machine through narrow passages.

4.2. LIFTING



The Lifting and moving operations must be performed with means strong enough to carry the weight of the machine and by personnel trained in this type of work. If it becomes necessary to lift the machine, hook the machine as shown in the picture and move it: during this operation the machine should not be lifted by more than 200 mm. from the ground. In order to avoid damages to the hopper metal plates, use approved lifting belts



4.3. CONNECTING THE FRONT HOPPER TO THE TRACTOR

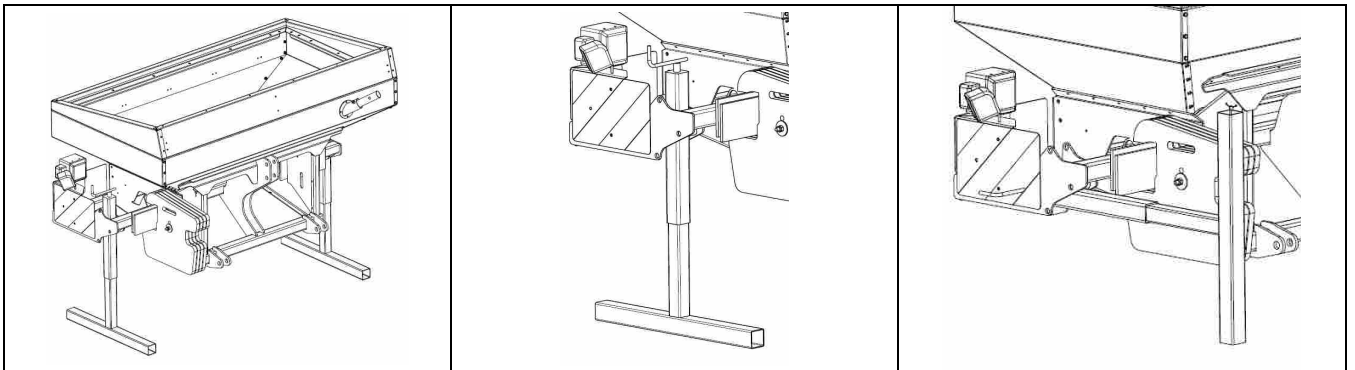


This operation must be carried out on a horizontal surface, with the seed-drill in a stable position on its support legs

The front hopper is supplied STANDARD with a cat. 2 hitch for tractors with front lifter. If your tractor does not have this device, you can fix the box to the tractor ballast frame, but only after the Manufacturer has carried out a technical check.

When the hopper has been connected solidly to the tractor, make sure that the equipment is perpendicular to the ground. If necessary, you can use the upper arm to correct the position of the equipment.

Support the hopper with the tractor lift and lift the legs toward the tractor. Block them into position by inserting the pin into the corresponding bushing (see pct. below)



If your tractor does not have this device, you can fix the box to the tractor ballast frame, but only after the Manufacturer has carried out a technical check.

4.4. RADAR INSTALLATION

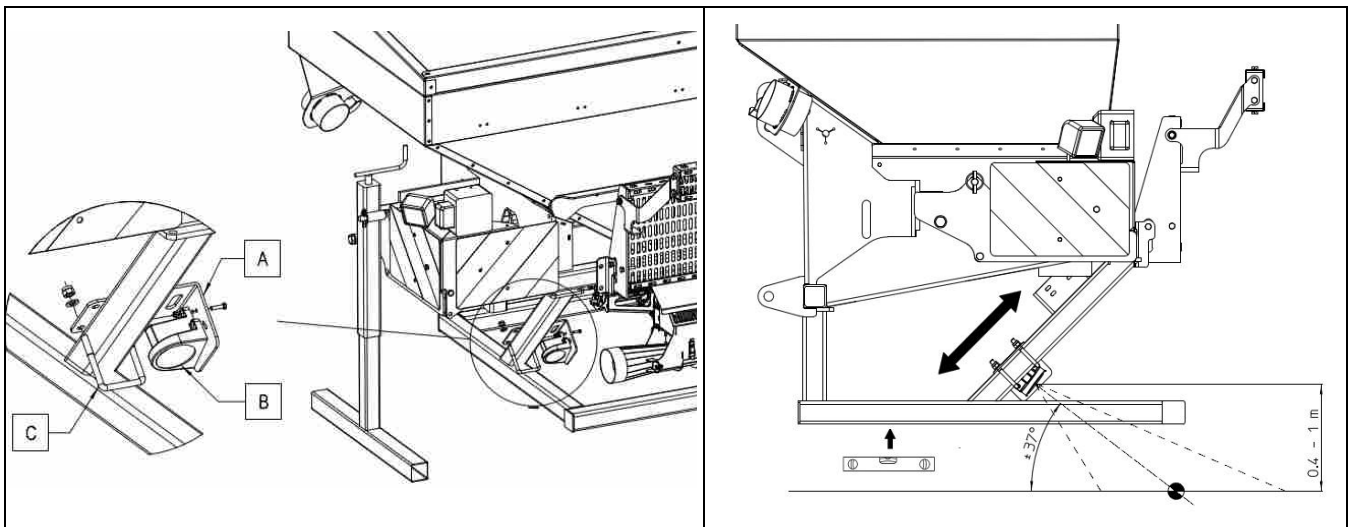
The radar is to be positioned as follows on the frame supporting the hopper:

1. Attach the support **A** to the lower frame of the hopper by means of the U-bolts clamps **C**
2. Attach the radar **B** to the support **A**.

There is only one possible position of the radar on its support, while the latter can be displaced along the slanted pipe of the frame, so as to guarantee, in the working position, a height from the ground which can vary between 0.4 and 1 m.



In order for the radar to work at its ideal position of $\pm 37^\circ$ the hopper must be parallel to the ground while it is working.

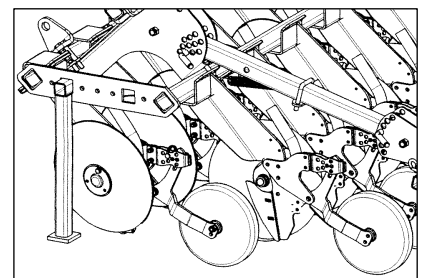


4.5. ASSEMBLING THE SEEDER BAR



The operation should be carried out on a horizontal surface, with the harrow in a stable position and the seed bar positioning legs inserted.

For the assembly of the seeding bar follow the directions given in the relevant Owner's Manual.



4.6. FITTING THE SEED COVERING HARROW



Then the seeder is delivered, the seed covering comb is supplied separately from the machine. Together with the documents of the machine you will find also the Instructions Manual concerning the following harrow: it is mandatory to follow it scrupulously.

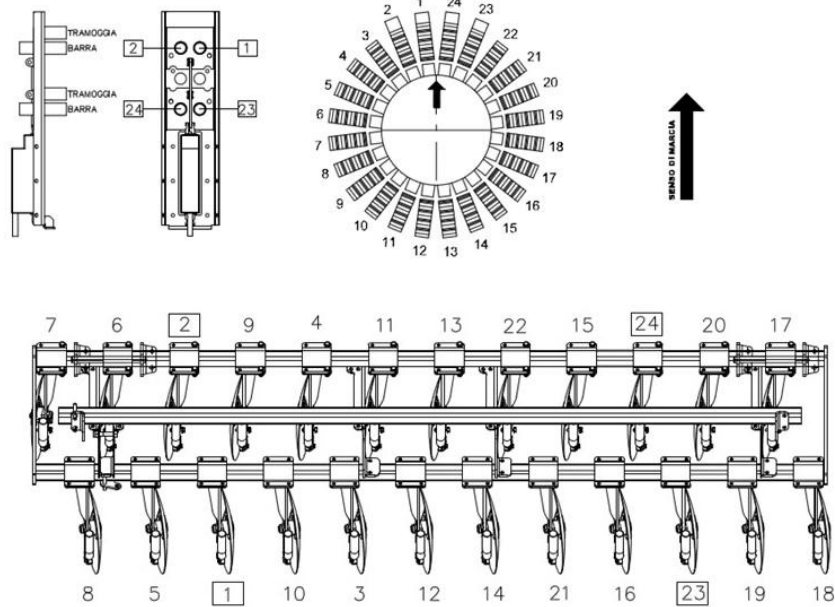
4.7. ASSEMBLING THE SEEDER PIPES

! When the seeder/fertilizer spreader is delivered, the seeding pipes are not connected with the seeding bar. Depending on the bar which will be used (Suffolk or disc coulters) it is mandatory to connect all the pipes and to follow the relevant directions below

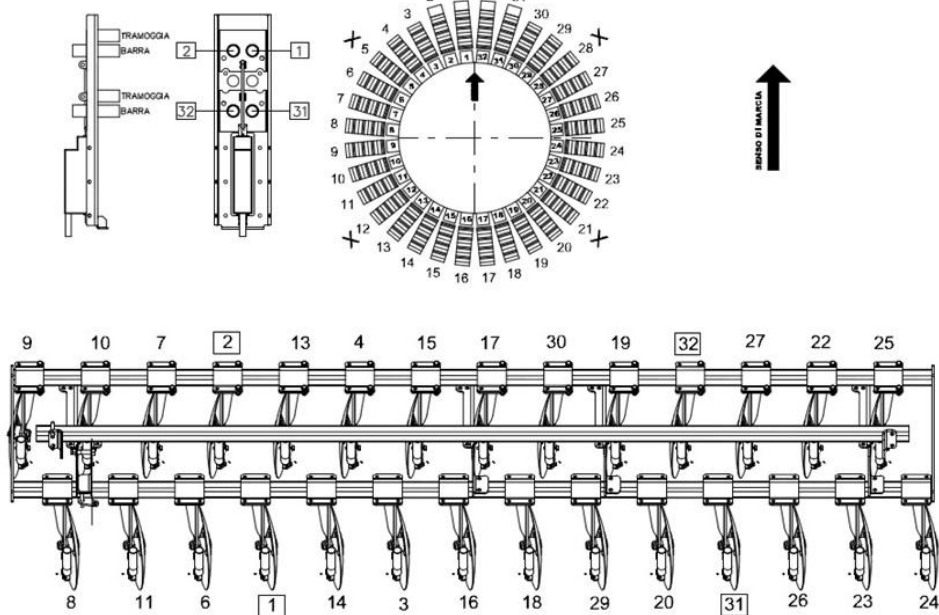
1. Position the seeder pipes following the drawing:

! Make sure that the arrow on the distributor is in the direction of the hopper

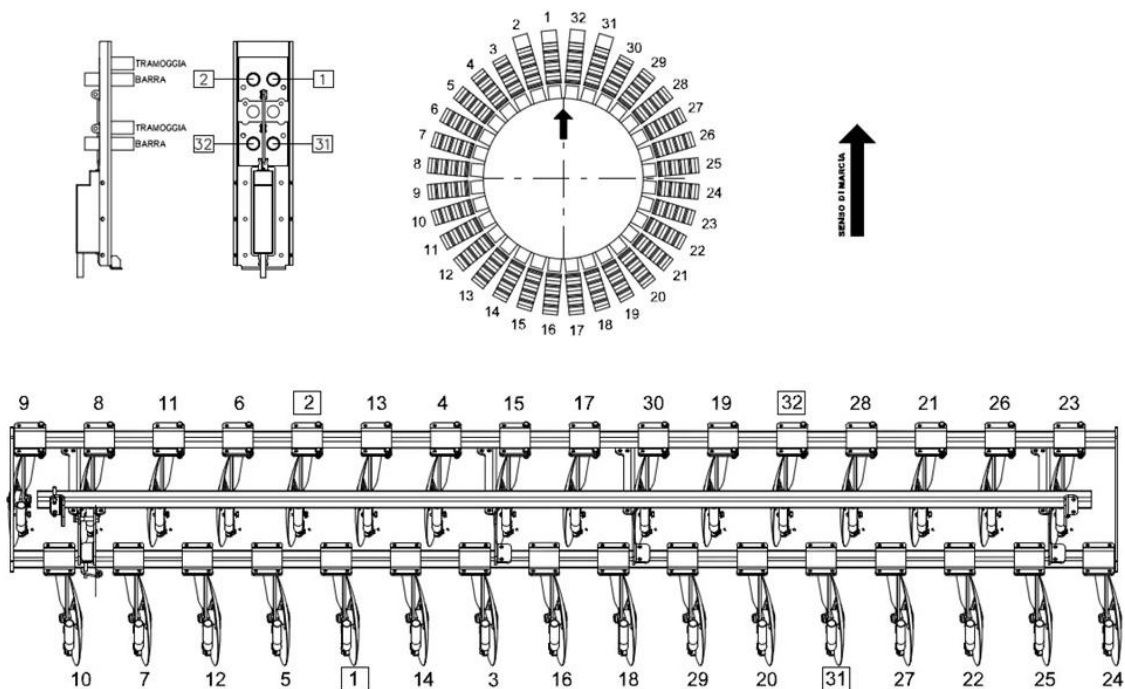
ASF – 300 rigid



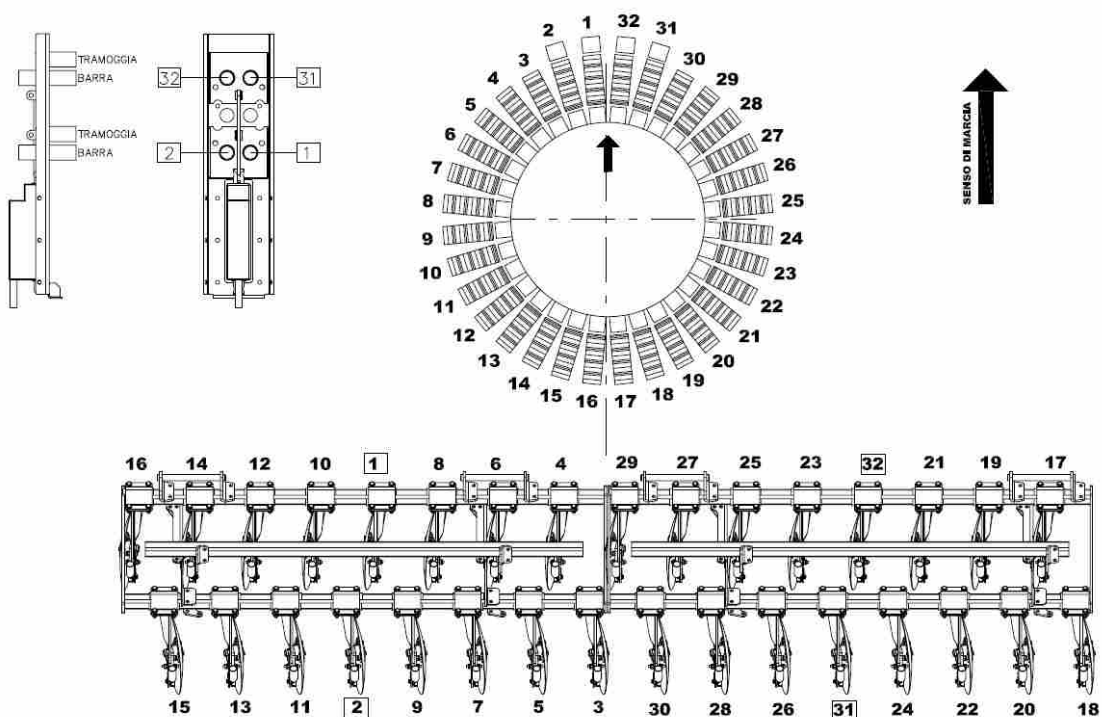
ASF - 350 rigid



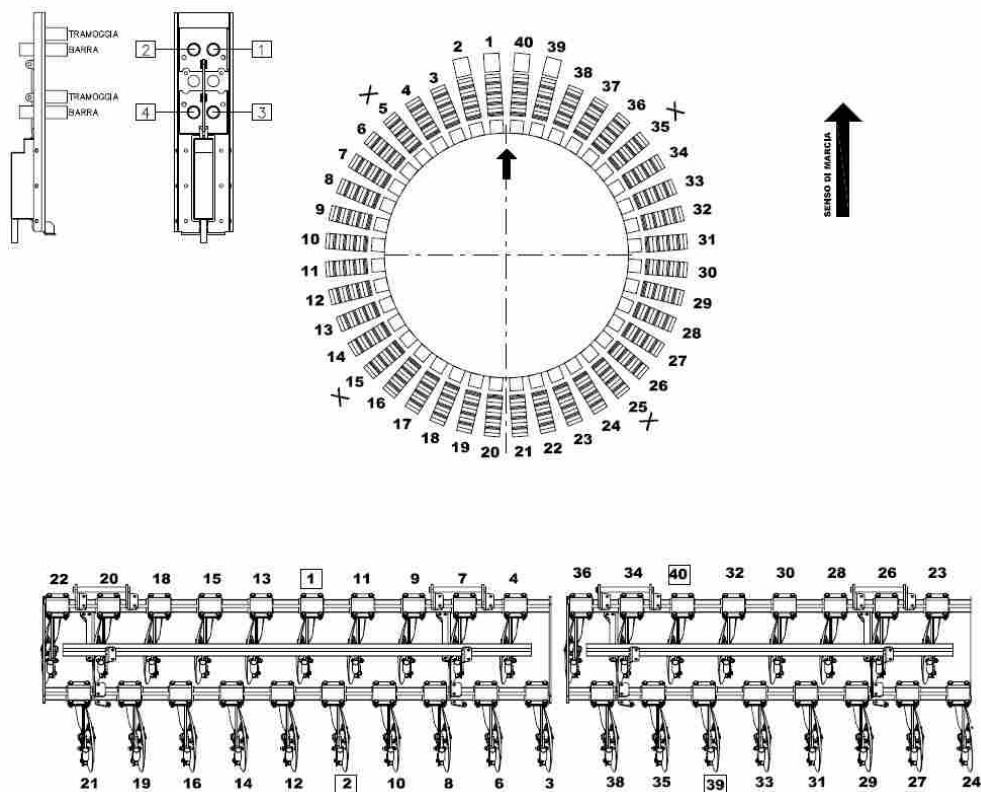
ASF - 400 rigid



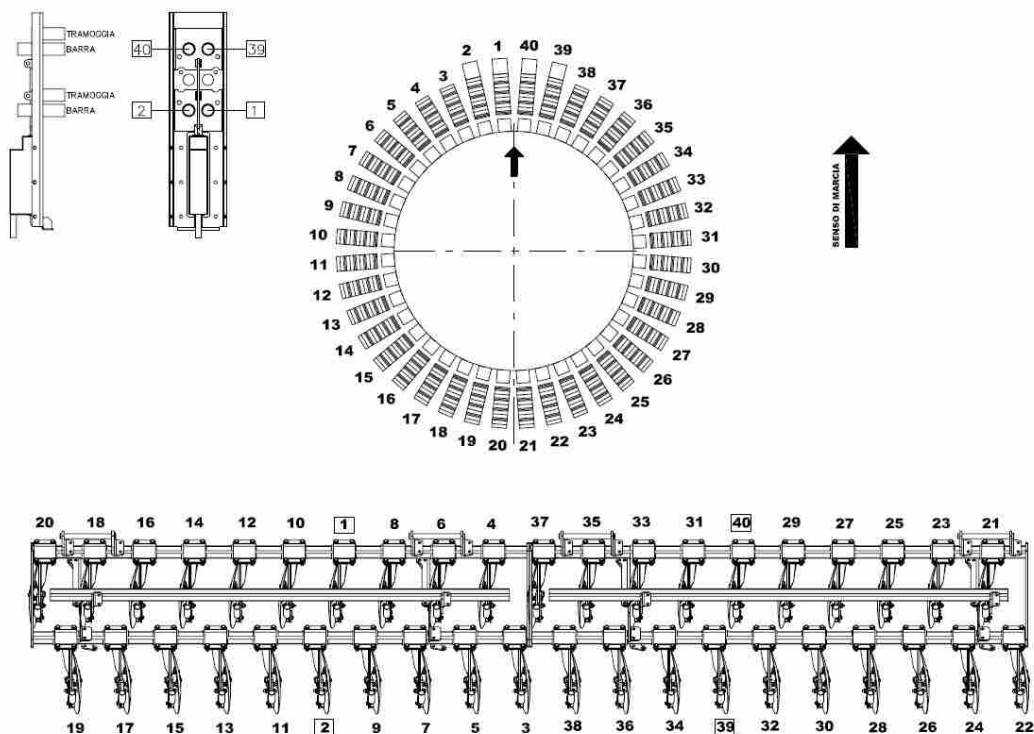
ASF - 400 folding



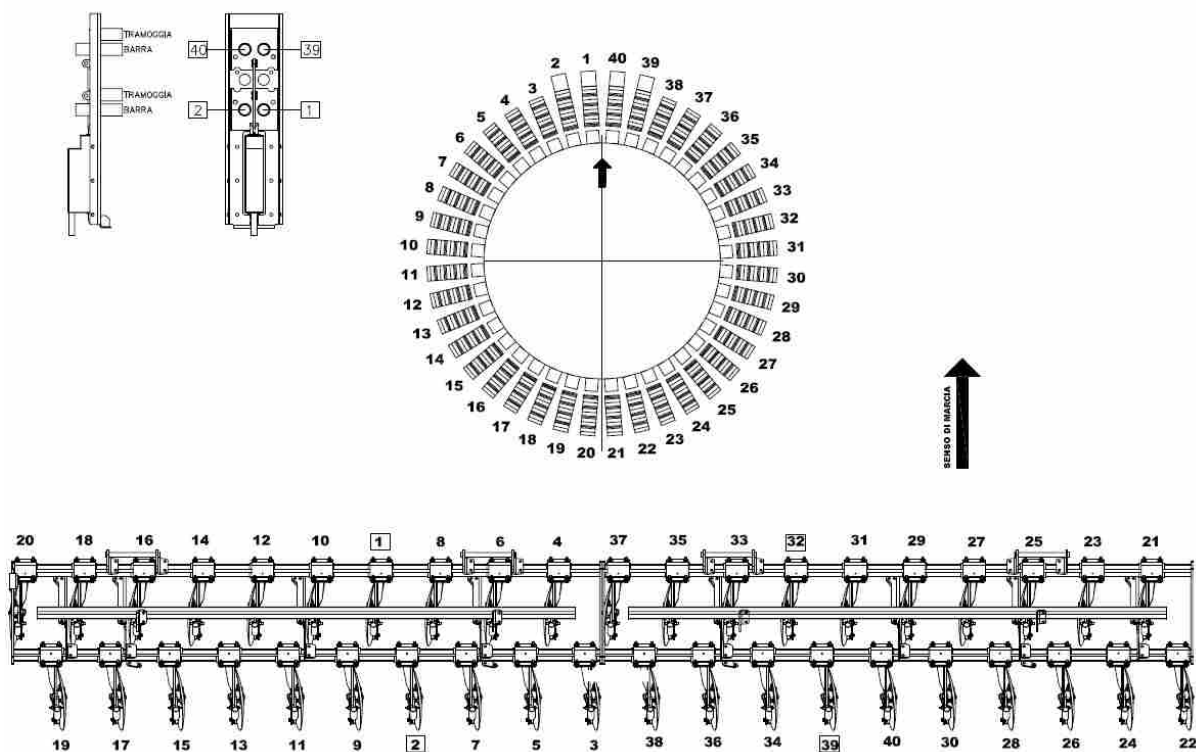
ASF - 450 folding



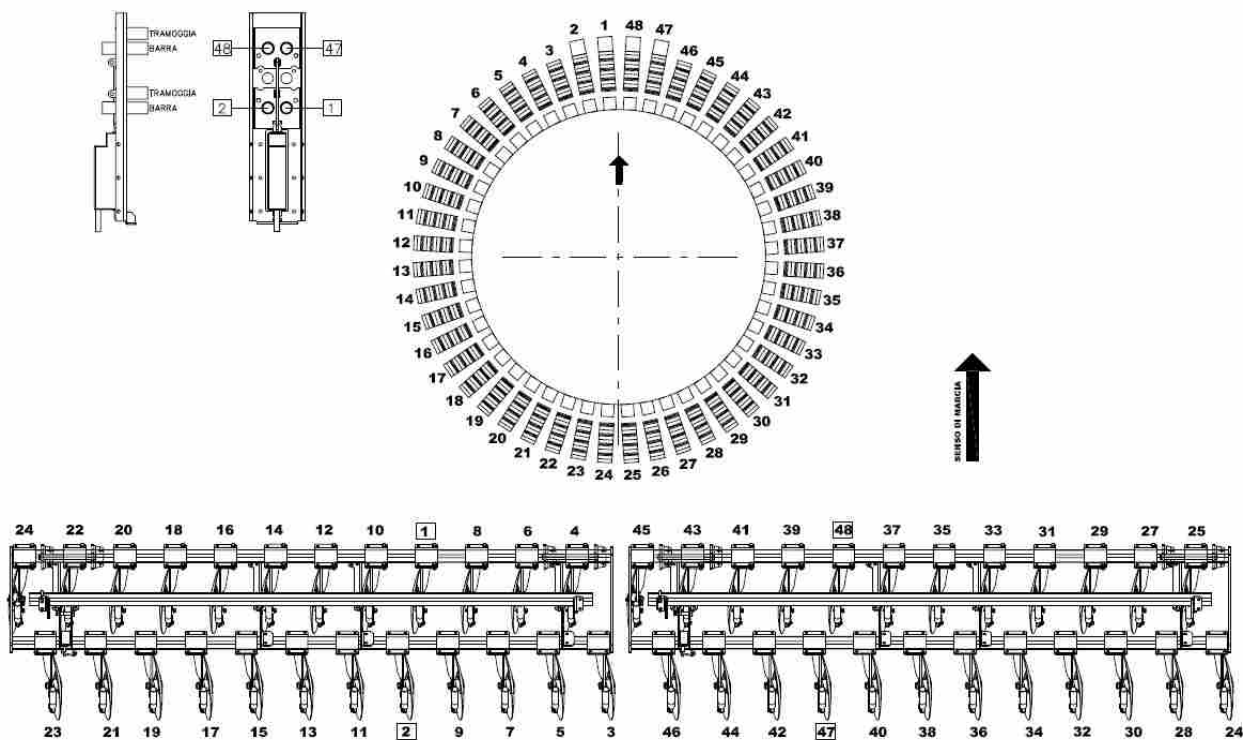
ASF - 500 folding



ASF - 600 (40 uscite) *folding*



ASF - 600 (48 uscite) *folding*



- The seeder pipe closing springs (**D**) can be found inside the hopper (or connected to the corrugated pipe of the distribution mushroom). Insert these springs into the metal tubes of the cutter bars or discs. Once all the seeder pipes have been positioned fix them to the rubber reduction as shown on the right (**D**)



4.7.1. ASSEMBLYING THE SEEDING PIPES ON THE POWER HARROW

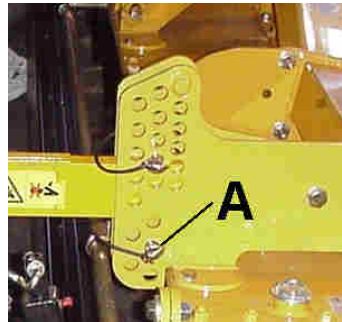
To connect the pipes to the bar:

- make sure that the seed bar is connected to the harrow roller correctly
- Position the lower pin **A** of the roller blade regulation

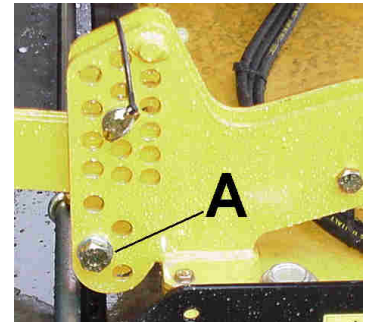


Never change the position of pin A. Doing so could compromise pipe connection to the cutter bar and the distributor

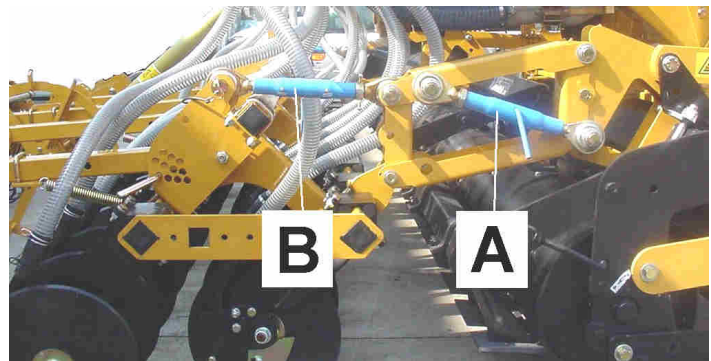
RH / DX



RK / DK / DP



- Regulate the height (lengthening tension rod **A** raises the bar, shortening the tension rod lowers it) and slope (tension rod **B**) of the seed bar that is to be used



4.8. CONNECTING SYSTEM BETWEEN FRONT HOPPER AND REAR DISTRIBUTION HEAD

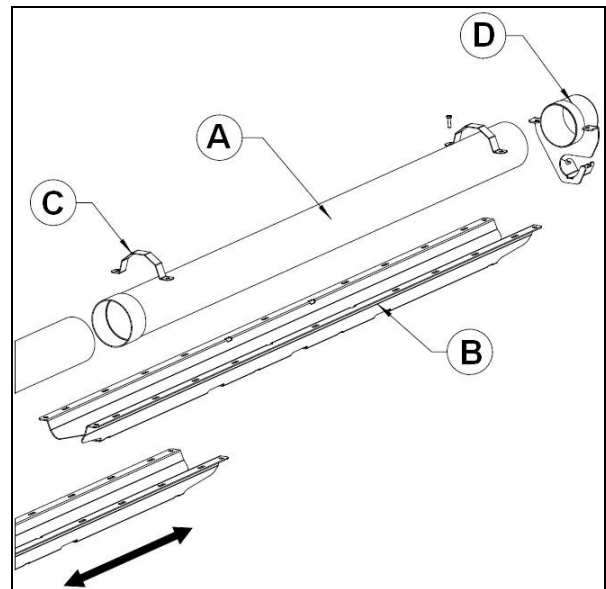
The seeder/fertilizer spreader ASF is complete with a connecting system between the front hopper **(A)** and the distribution head **(B)**. Such connection can be adjustable and must be firmly attached to the tractor, so as to avoid loops and to guarantee the correct performance of the power or disc harrow when working up or downhill.



4.8.1. MAIN COMPONENTS

The connecting system consists of:

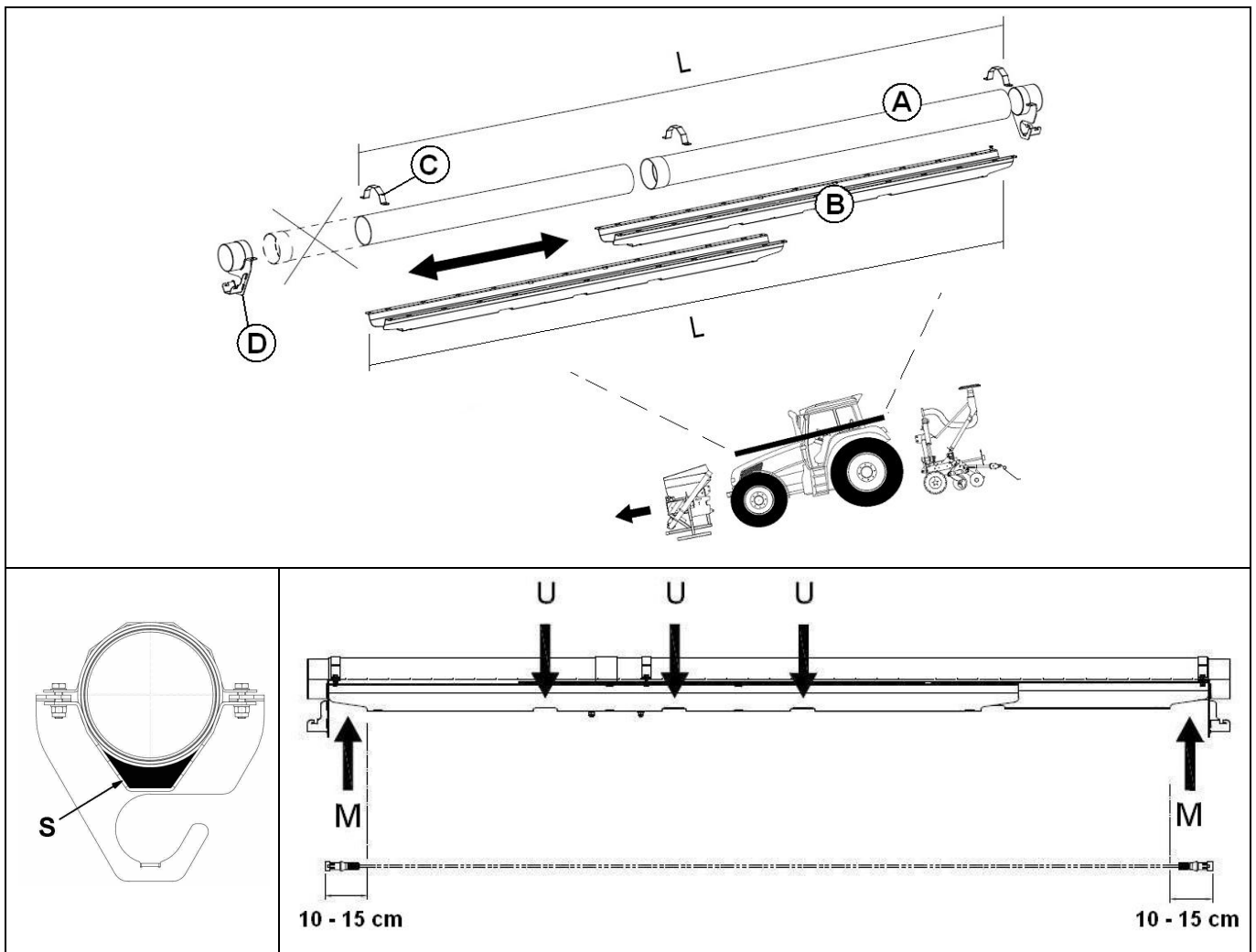
- A. 2m long rigid PVC pipes
- B. Supporting plates
- C. Blocking rings
- D. Connecting flanges between the rigid and the flexible pipes
- E. Different tightening elements
- F. Connecting electric wires



4.8.2. INSTALLATION OF THE CONNECTING SYSTEM ON THE TRACTOR

When the seeder/fertilizer spreader is delivered, the system for connecting it to the tractor is not assembled. Its assembly is a task to be performed by the end user, who must perform said assembly depending on his tractor and following the steps below:

1. Determine the length (**L**) from the possible ones: 3860, 3660, 3460, 3260, 3060, 2860, 2660, 2460
2. Assemble the plates (**B**) on the length (**L**) and attach them firmly to the tractor
3. Insert in the receptacle (**S**) the wire extensions and keep the connection protruding by 10/15 cm from their seats (**M**)
4. Pull out from their seats (**U**) the wires which will be connected with the tractor (es: monitor, battery) calculating their necessary length
5. Coil possible exceeding lengths of cables inside their receptacle (**S**)
6. Secure all the pipes with plastic strips
7. Insert the pipes into each other (**A**) and cut a piece off the end to adjust to the length (**L**)
8. Place the pipes over the plates, assemble the flanges (**D**) at the ends and secure them with the fastening metal rings (**C**)

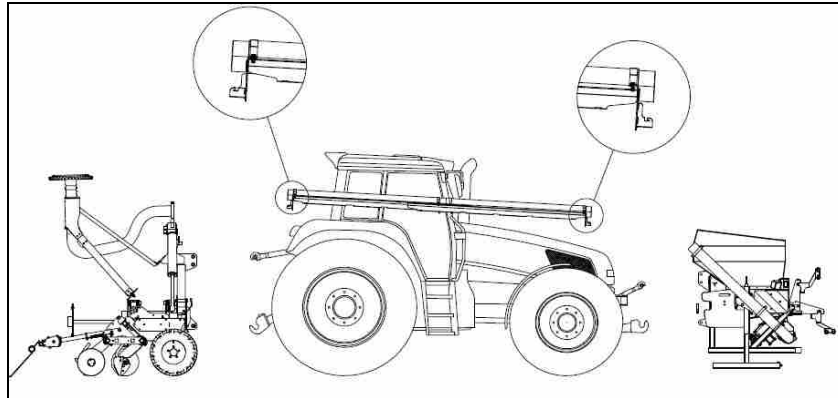


4.8.3. CONNECTING THE HOPPER WITH THE IMPLEMENT



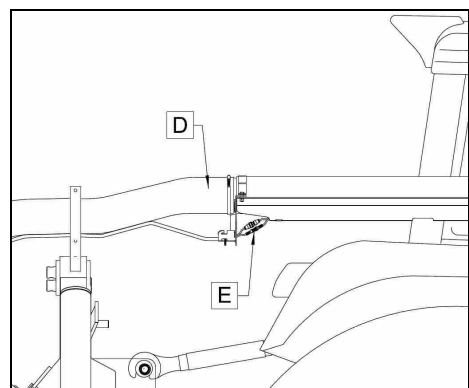
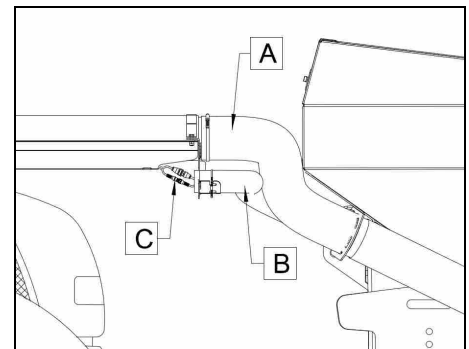
Be very careful when performing this operation and follow instructions closely. The operation is to be performed on a level surface, with the seeder/fertilizer spreader and the implement firmly supported by their supporting stands.

The newly assembled connecting system can be left permanently attached to the tractor. It presents at its ends two quick hitching flanges for the front hopper and the rear implement.



Once the hopper and the implement have been hitched to the tractor, connect them pneumatically and electrically, following the steps illustrated below:

1. Connect the Ø130 mm seed-conveying pipe (A), already attached to the hopper with the front hitching flange of the connecting system and secure it with an metal clamps.
2. Insert the Ø 60 mm pipe containing the electric wires (B), already attached to the hopper, into the lower hole of the front quick-hitching flange and secure it with a metal clamp.
3. Connect the electric wires coming from the hopper with the respective extensions previously installed on the connecting system (C)
4. Hitch the implement to the tractor.
5. Connect the seed-conveying Ø130 mm hose (D), coming from the distribution head with the rear quick-hitching flange of the connecting system and secure it with a metal clamp.
6. Connect the electric extensions of the connecting system with the relevant wires of the electronic components installed on the implement (E) and seure them with a plastic strip.



In order to use the tractor with other implements it is possible to unhitch the hopper and the implement, from the tractor without removing the system for the connection with the tractor.

4.9. CHECK OF THE TRACTOR STABILITY AND ITS LIFTING POWER



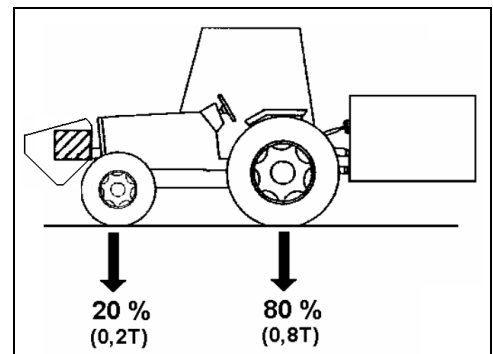
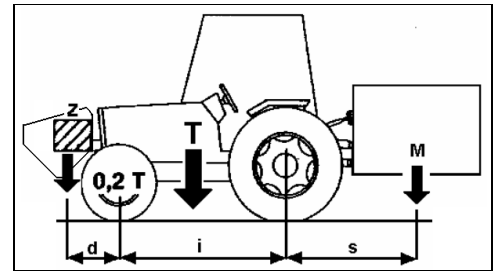
When an implement is hitched to a tractor and, as far as circulating on public roads is concerned, it becomes an integral part of it, it can alter its stability and make it difficult to drive it and to work.

When you add a machine to the tractor, you will change the weight distribution over the axles. It is therefore recommended to add suitable ballast to the front of the tractor, so as to distribute adequately the weight over the axles.

Calculate the ballast to be used with the following formula:

$$M \times s < 0,2 T \times i + Z (d + i)$$

$$Z > \frac{(M \times s) - (0,2 T \times i)}{(d + i)}$$



CALCULATING TRACTOR STABILITY.

were:

i = inter-axle (m) of the tractor wheel

d = distance between the front axle and the front ballast (m)

s = projection of the implement from the rear axle (m)

T = tractor mass (kg)

Z = ballast mass + hopper with seeds (Kg)

M = implement mass (Kg)

At least **20%** of the total tractor-implement mass must weigh on the front bridge of the tractor. It should be remembered, however, that stability can be improved with the right choice of tractor/implement combination and with the application of ballast to the front, in the limits and methods indicated by the tractor manufacturer. Moreover, when the tractor is stopped, the machine must be lowered to the ground, thereby improving stability.

Tractor wheel base	i = m
Distance between the front axle and the front ballast	d = m
Projection of the implement from the rear axle	s = m
Tractor mass	T = Kg
Ballast mass	Z = Kg
Implement mass	M = Kg

5. INSTRUCTIONS FOR USE

5.1. OPERATION OF THE BLOWER

⚠ The implement is suited only for the use described. Any other use differing from the one described in this owner's manual can damage the machine and be a hazard to the user.

The good performance of the implement depends on its proper use and an adequate maintenance. It is, therefore, advisable to follow closely the directions contained herein, so as to prevent any inconvenience which may impair the good performance and the life span of the machine. It is also important to follow the directions contained in this owner's manual, because the Manufacturer cannot be held responsible for damages caused by negligence or the non-observance of the directions. The hydraulic system driving the air-pump must be used, serviced and repaired by personnel having a perfect knowledge of the unit itself and of the hazards it may present. Check the correct plugging of the quick couplings: unless they are correct, damages may occur to the components of the system. Only disconnect hydraulic connections after they have been de-pressurized.

⚠ The leaking of oil under pressure may cause skin wounds and severe infections. Should this happen, consult a doctor immediately. It is absolutely forbidden to install hydraulic components inside the tractor cab.

5.1.1. HYDRAULIC CONNECTION WITH THE TRACTOR

Check in the Owner's Manual of the tractor its hydraulic features, which must be as follows:

- Hydraulic system of the "CLOSED CENTER" (also called LOAD SENSING)type
- Pump with variable displacement
- Oil delivery exceeding 50l/min. the hydraulic operation requires 24 l/min.
- Working pressure: 100 ÷ 130 Bar Max 150 Bar
- Oil cooling: should the tractor not be equipped with an adequate cooling system it is necessary to install one
- The tractor must be suited to receive a free-return flow connector (NO COUNTERPRESSURE).

The oil flow necessary to drive the blower is taken from the tractor hydraulic distributor, through a **delivery hose ½ A.**

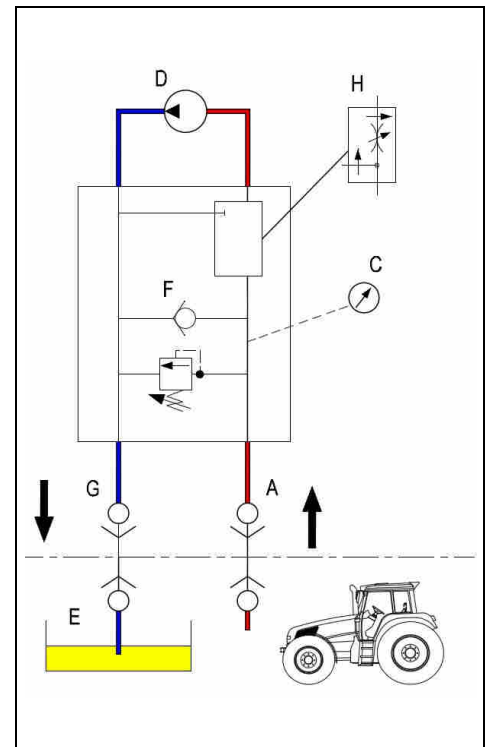
The rotational speed of the hydraulic motor and, as a consequence, of the suction unit depends on the flow pressure, which is shown on the manometer.

The system is complete with a safety valve which makes it possible for the device to keep on turning by inertia even after the system has been shut off or a sudden break down of the system has occurred.

For a correct performance it is important to connect the flow **discharge hose ¾ G** of the hydraulic motor to a **free flow discharge plug of the tractor**; this free discharge **cannot present any counter-pressure exceeding 3 Bar.**

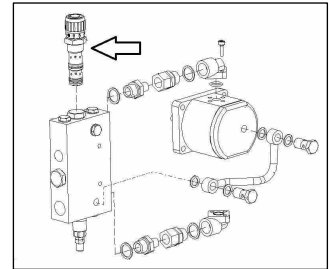
This connection is of basic importance above all to protect the hydraulic seals of the motor, which, if damaged, would allow very dangerous oil leaks.

- A) Quick coupling on the **delivery side ½**
- B) Three-way electro-valve
- C) Manometer
- D) Motor
- E) Free-flow discharge
- F) Safety valve
- G) Quick coupling on **free-flow discharge ¾**
- H) Flow-adjusting device (option)



5.1.2. ADJUSTEMENT OF THE OIL FLOW WITHOUT A VARIABLE DISPLACEMENT PUMP

If the tractor does not have a variable displacement pump, there is a special kit for this purpose which is supplied on demand.

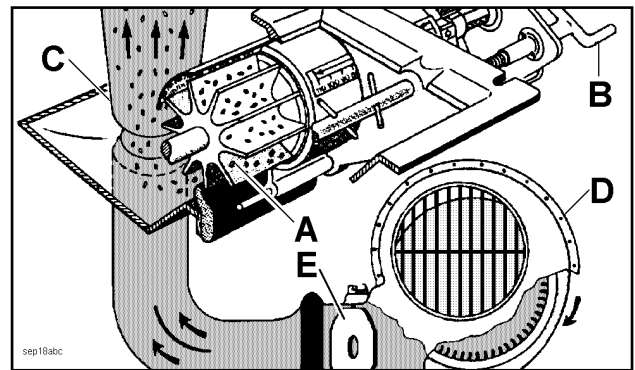


5.2. DISTRIBUTION

The metering unit is the main element that makes the seed-drill work. It is positioned under the seed hopper and it is driven by the driving wheel through a mechanical chain transmission and a universal joint.

The metering unit, which consists of a cylinder containing longitudinal hollow sections **A**, distributes a certain quantity of seed - depending on the calibration set using the control **B** - to the "Venturi" -type ejector **C**.

The air flow generated by the fan blower **D** and regulated by the butterfly throttle **E** transports the seeds to the distributor head that can be found at the end of the "Venturi" tube. From here, the seeds are taken to the coulters and then sown. The metering unit can work with seeds of between 1 and 10 mm. The main seeds are:



- Cereal: wheat, barley, oats, rye, triticale, sorghum, rice
- Large seeds: corn, peas, beans, soya
- Small seeds: grass, clover, rape

5.3. UNHITCHING THE FRONT HOPPER



The unhitching of the hopper from the tractor can be a very hazardous operation. Use extreme caution while performing the entire operation and follow directions strictly.

To unhitch the seed-drill correctly, you must work on a horizontal surface as follows:

- Lower to the ground the supporting stands and secure them firmly with the appropriate pins.
- Disconnect all hydraulic and electric connectors supplying the seeder/fertilizer spreader
- Remove the conveying corrugated hose from the connecting system
- Unhitch the hopper from the tractor and make sure it remains in a stable position

5.4. UNHITCHING THE REAR IMPLEMENT



The unhitching of the disc or power harrow from the tractor can be a very hazardous operation. Use extreme caution while performing the entire operation and follow directions strictly.



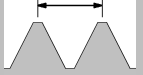
To unhitch disc or power harrow correctly, you must work on a horizontal surface as follows:

- Lower to the ground the supporting stands and secure them firmly with the appropriate pins.
- Disconnect all hydraulic and electric connectors supplying the seeder/fertilizer spreader
- Remove the conveying corrugated hose from the connecting system
- Unhitch the hopper from the tractor and make sure it remains in a stable position

6. MAINTENANCE

6.1. CHECKS AND CONTROLS

During the first 8 working hours it is important to check that all the bolts are perfectly tight, because the stress generated while the machine is at work causes the structure to settle. If necessary, tighten the bolts as shown in the following chart. Repeat this check on the coulters and the following harrow springs every 50 working hours..

			8.8 [Nm]	10.9 [Nm]	12.9 [Nm]
13	M 8	1.25	25	37	44
		1.00	27	40	47
17	M 10	1.50	50	73	86
		1.25	53	78	91
19	M 12	1.75	86	127	148
		1.25	95	139	163
22	M 14	2.00	137	201	235
		1.50	150	220	257
24	M 16	2.00	214	314	369
		1.50	229	336	393
27	M 18	2.50	306	435	509
		1.50	345	491	575
30	M 20	2.50	432	615	719
		1.50	482	687	804
32	M 22	2.50	502	843	987
		1.50	654	932	1090
36	M 24	3.00	744	1080	1240
		2.00	814	1160	1360

6.2. LUBRICATION



Read the warnings written on the containers carefully. **ALWAYS** keep oils and greases out of the reach of children. Avoid contact with the skin. After using the product, wash hands well. You must follow the current environment protection laws when handling spent oil.

When you start the implement for the first time, check and if necessary lubricate the following components:

6.2.1. LUBRICATING THE GREASERS

INTERVAL h=hours	OPERATION
every 8/10h working hours	<ul style="list-style-type: none"> - GREASE THE TIE-ROD NIPPLES - GREASE CROSSES, PIPES AND FREE WHEEL - GREASE ROW-MARKING DISC GREASE NIPPLES

6.3. END OF SEASON OPERATIONS

At the end of the season, or if you believe that you will not use the machine for a long period of time, the following operations should be carried out in order to maintain its integrity:

- Carefully remove all the seeds from the hopper and the distribution organs.
- Wash the machine with plenty of water, especially the hoppers, then dry it. While doing this keep flap B open (figure above) and remove the connection bend to the Venturi. Do not use a water cleaner.
Leave flap B open (figure above) to protect against mice that can damage the machine.
- Carefully check and, if necessary, replace any worn or damaged parts
- Tighten all screws and bolts
- Protect all unpainted parts with lubricant
- Cover the machine to protect it
- Position it on a flat surface in a dry area, out of the reach of unauthorised people.

It is an advantage to have the machine ready for use the next time you need it.

7. ACCESSORIES



The machine can be equipped with different options: for each addition keep in mind that the weight of the machine changes. Therefore, make sure that the stability of the tractor is not compromised

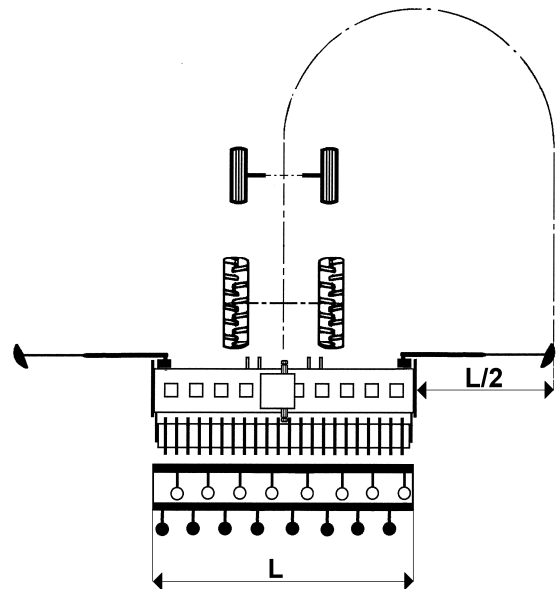
For the assembly and the use of eventual options check the relevant documents attached to the options.

7.1. ROW MARKING DISC

The row marker is a device that traces a reference line parallel to the run of the tractor on the ground.

When the tractor has finished its run and inverted its direction, it proceeds along the reference line with half of the tractor track. In this manner the sowing rows are allotted equally.

- Position the row marking discs in a more or less oblique manner to obtain a sufficiently deep track, even with hard ground.
- The length of the disc arm should be equal to half of the width of the machine.
- When the running direction is inverted, the row markers should be moved using the manual electric/hydraulic command.

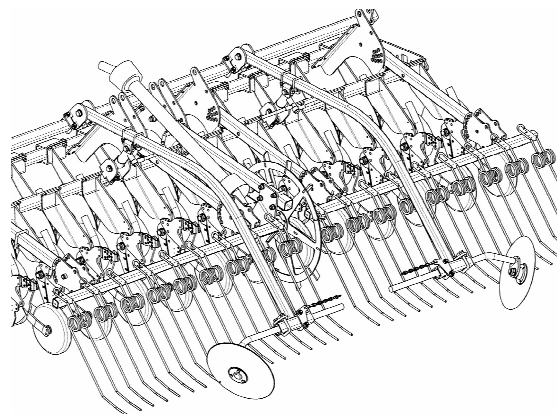


7.2. PRE-SPROUTING DISCS

The pre-sprouting discs trace two reference lines in correspondence with the coulters, to which seed exclusion solenoid valves are applied.

They can only be used with the Plus models because they are directly managed by the supplied computer.

This device allows the user to treat the sown ground without treading on it.

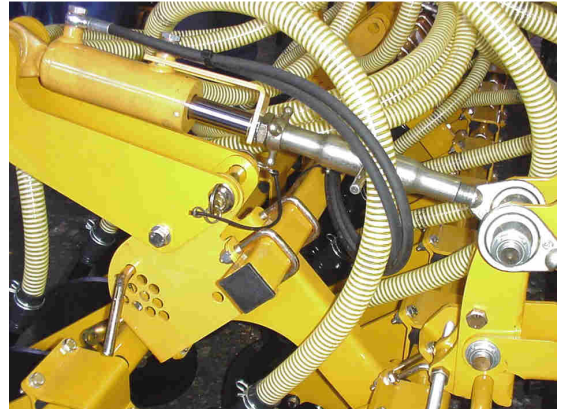


7.3. HYDRAULIC SEEDING EXCLUSION

This device excludes sowing by raising the bar from the ground.

This is possible thanks to the use of two hydraulic cylinders that replace the mechanical tie rods which regulate the bar slope.

With this accessory, the ground can be worked without sowing.



7.4. DEPTH LIMITING WHEEL

The depth limiting wheel is a device that sets the sowing depth for each single sowing disc (not possible with cutter bars).

Very precise sowing depths can be obtained thanks to rack regulation.



7.5. HOPPER EXTENSION

The hopper extension increases the hopper capacity from a basic 1400 litres to 1800 litres (+400 lit).



USATE SEMPRE RICAMBI ORIGINALI
EMPLOYEZ TOUJOURS LES PIECES DE RECHANGE ORIGINALES
IMMER DIE ORIGINAL-ERSATZTEILE VERWENDEN
ALWAYS USE ORIGINAL SPARE PARTS
USAR SIEMPRE REPUESTOS ORIGINALES



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