



Pneumatic seed drill  
a-drill

## Instructions

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Reference.	RF31913 A

# Identification of the machine

In order that your dealer may help you as fast as possible. He needs some information regarding your machine.

Please provide this information below.

Description

Pneumatic Seed Drill a-drill

Working width

Weight

Machine No.

Accessories

Dealer's address

Manufacturer's address

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## Target group for this operating manual

This operating manual is intended for trained farmers and individuals who are otherwise qualified to perform agricultural activities and who have received training in the operation of this machinery.

### **For your safety**

Study the contents of this operating manual carefully before assembly or initial operation of the machine. In this way, performance and work safety are optimised.

### **For the contractor**

All personnel are to be trained in the use of the machine regularly. Untrained or unauthorised individuals are not permitted to use the machinery.

## Training

Your dealer will provide instructions for the operation and maintenance of the machine.

## Meaning of symbols

In order to make this manual clear and easy to read, we have used various symbols. They are explained below:

- A dot precedes each item in a list.
- > A triangle indicates operating functions which must be performed.
- An arrow indicates a cross-reference to other sections of this manual.

We have also used pictograms to help you find important instructions easily:

**NOTE** The term "Note" indicates tips and notes on operation.



The spanner indicates tips for assembly or settings.



The warning triangle indicates important safety instructions. Failure to observe these safety instructions can result in:

- Serious operational faults of the machinery;
- Damage to the machinery;
- Personal injury or accidents.



A star indicates examples that help to better understand the instructions.

## For your safety

In this chapter you will find the general safety instructions. Each chapter of the operating manual contains additional specific safety instructions, which are not described here. Please follow the safety instructions

- in the interest of your own safety,
- in the interest of the safety of others,
- to ensure the safety of the machine.

Numerous risks can result from handling agricultural machines in the wrong way. Therefore, always work with special care and never under pressure.

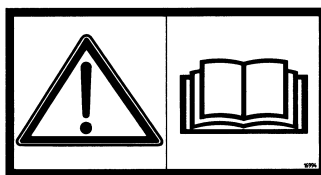
### For the contractor:

Inform personnel working with the machine of these safety instructions at regular intervals and according to statutory regulations.

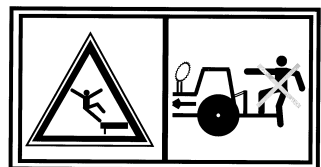
## Warning symbols

On the machine you will find decals for your safety. These decals must not be removed. If decals become illegible or begin to peel off, you can order new decals and affix them in place of the old ones.

## Meaning of symbols



Read and comply with the manual and safety instructions before starting up or carrying out any operations on the machine.



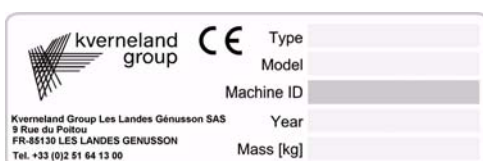
Carrying persons on the machine while in motion (in transit or at work) is strictly forbidden.



Risk of crushing by an articulated part of the machine. Install the safety devices provided and/or check the working order of the automatic safety devices before entering a hazardous area.



Risk of hands being pinched when adjusting the machine. Observe the adjustment instructions.



EC type plate guaranteeing the conformity of the machine according to the "machines" directive 2006/42/EC and adapted to national legislations.

# Safety

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## Safety rules

### Maintenance

No intervention must be made within the radius of the tractor - tool unit without the brakes or vehicle immobilisation system being engaged.

When changing parts on the machine, you are advised to be careful with all parts with sharp edges or corners. We recommend that you wear safety gear (helmet, safety footwear, gloves, etc.).

Before welding, disconnect the electric units (if there are any) and disconnect the tractor alternator and battery if the tractor is hitched up.

Never direct the jet of high pressure cleaners directly onto the bearings, the hydraulic pipes, electric units or other sensitive components on the machine (risk of damage).  
The jet may bounce back off some surfaces.

### Hydraulic system

The hydraulic system is pressurised.

When making the hydraulic connections in accordance with the operating instructions, mark the adaptors with a colour code in order to avoid incorrect connections (a function reversal can cause accidents).

Before any intervention on the hydraulic system, block the folding extensions and hydraulically controlled accessories in their rest position, reduce the pressure and stop the tractor engine.

### Other instructions

Following the instructions

In addition to the instructions listed above, always obey:

- Accident prevention regulations
- Generally recognised safety regulations, occupational health requirements and road traffic regulations
- Remarks made in this operating manual
- Regulations pertaining to operation, maintenance, and repair.

This chapter contains general information about your accessory as well as information concerning the following points:

- Scope of use
- Features
- The description of groups and technical data

## Usage clause

This accessory has been designed solely for normal agricultural use, i.e. for cultivating farmland. Any other use or misuse, for example, transportation, clearing or transmission of forces to another machine is considered to be non compliant with the intended use.

The manufacturer and the specialised retailer decline all liability for damage resulting from use that does not comply with the intended use. The user is responsible for taking all the risks.

Compliance with the conditions of use includes compliance with the manufacturer's operating instructions.

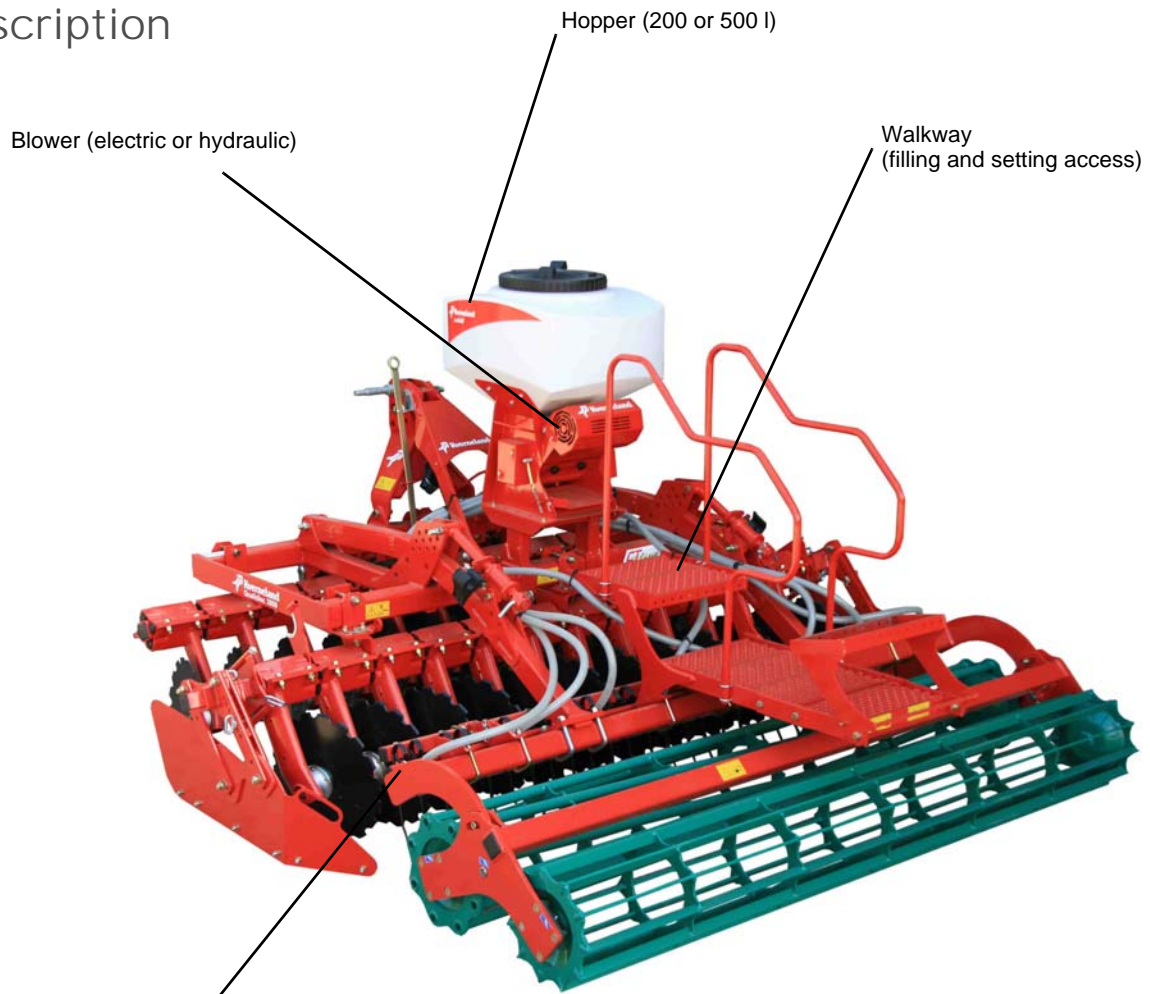
The safety requirements (specified above) as well as the general rules for safety, occupational health and road traffic must be respected.

A modification of the accessory by the customer or use of spare parts or accessories that are not original, will result in KVERNELAND effectively canceling the manufacturer's responsibility for damage resulting from this modification.

The manufacturer may not be held liable for damage resulting from errors in setting, choice of equipment, seeds, fertiliser, treatment products or operating strategy as well as for any other damage that may not have occurred directly on the accessory.

# Accessory presentation

## General description



Spreader ramp (in front of the roller)





## Seed drill type

The pneumatic seed drills a-drill are seed drills with electrically driven plain roller rotor feed.

The seed drill does not have any sowing element, the sowing is done by broadcasting by 8 spreaders.

The output setting is done by varying the speed of the grooved rotor, 3 rotors are available. A support blower ensures the transportation of grains from the distribution to the spreaders.

Pneumatic seed drills are available in several versions:

- Hopper volume 200 l or 500 l
- Control unit:

**Version 3.2 (manual output adjustment)**

**Version 5.2 (output proportional to the penetration)**

- Electric or hydraulic blower on mounted machine, hydraulic on trailed machine.

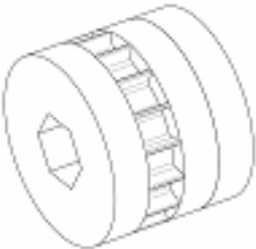
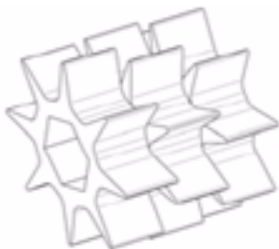



The unit 5.2 provides the following additional services:

- End of field sensor (automatic shut-down and restarting)
- DPAE (Rate proportional to the electronic advance) by radar sensor or ISO connector with 7 terminals.

To offer both functions simultaneously, the unit 5.2 is equipped with a branch cable, which enables to provide 2 connectors of 12 terminals.

**3 grooved distribution rotors are available:**

	Standard equipment		Available as an option
<b>Rotor type</b>			
	<b>fb-f-fb-fb</b>	<b>GGG</b>	<b>Flex40</b>
	dummy end end dummy end dummy end	COARSE COARSE COARSE	Flex 40
<b>Application</b>	<b>Fine groove:</b> Sowing of small seeds or low density e.g.: mustard, rape seed, phacelia, anti-snail pellets, etc.	<b>Large grooves:</b> Sowing cereal e.g.: mixtures of grass, rye, barley, wheat, oats, etc.	<b>Large flexible grooves:</b> Sowing of big seeds, or large density. e.g.: peas, horse beans, manure, etc.

# Accessory presentation

## Technical specifications

<b>Model</b>	<b>200 l</b>	<b>500 l</b>
<b>Weight of only the seed drill (in kg)</b>	60	100
<b>Dimensions (LxDxH) (in cm)</b>	70x88x100	80x122x117

## Power supply

12 V, 25 A

## Hydraulic supply

Maximum pressure: 200 bars  
Maximum output: 120 l/min  
Dimensions (LxDxH): 400 x 460 x 270 mm

## Checking on reception



The accessory may be delivered partially dismantled.

In this case, follow carefully the assembly instructions in this manual.

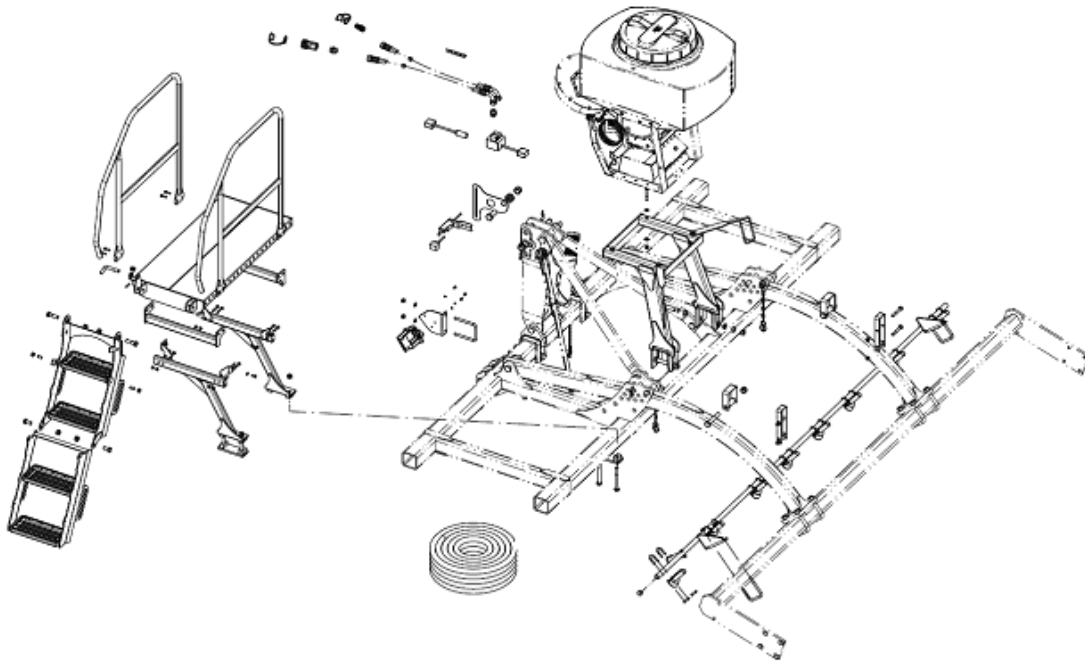
Every machine requires specific adaptation of the seed drill.

The adaptation kits have:

- An access walkway for filling or setting the seed drill
- A specific support in order to fix the seed drill on the machine
- A spreader ramp enabling to spread the seeds over the entire width of the machine
- Flexible pipes connecting the seed drill to the spreaders.

# Delivery and assembly

## CLC

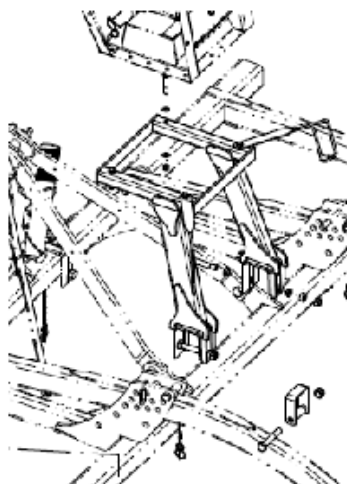


### Installation of the hopper support

The support is fixed on the 2nd beam of the main frame, using U-shaped clamps of the support.

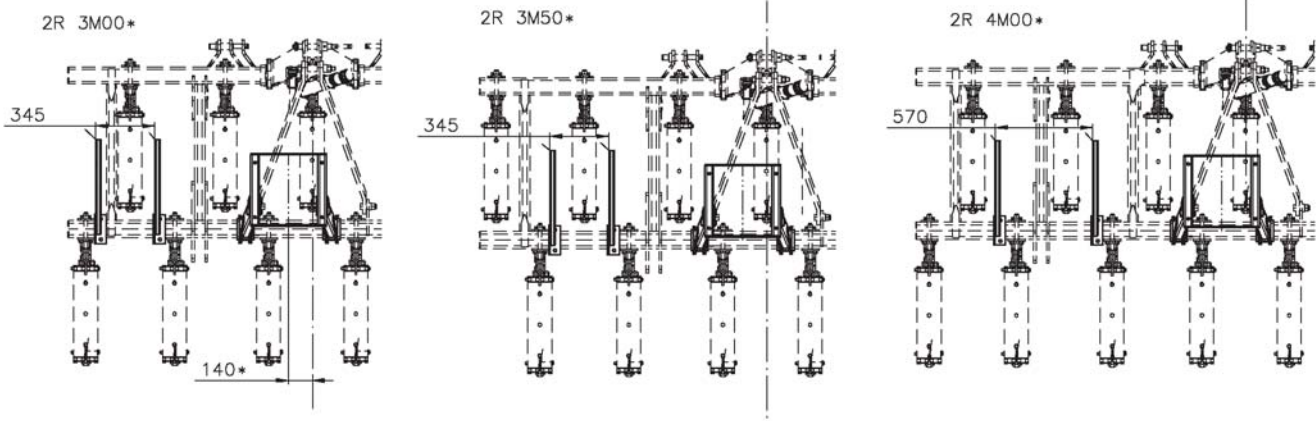
There are two types of assembly; "centred" or "off centre" hopper. The off-centring by 14 cm to the left (direction of penetration) is necessary on:

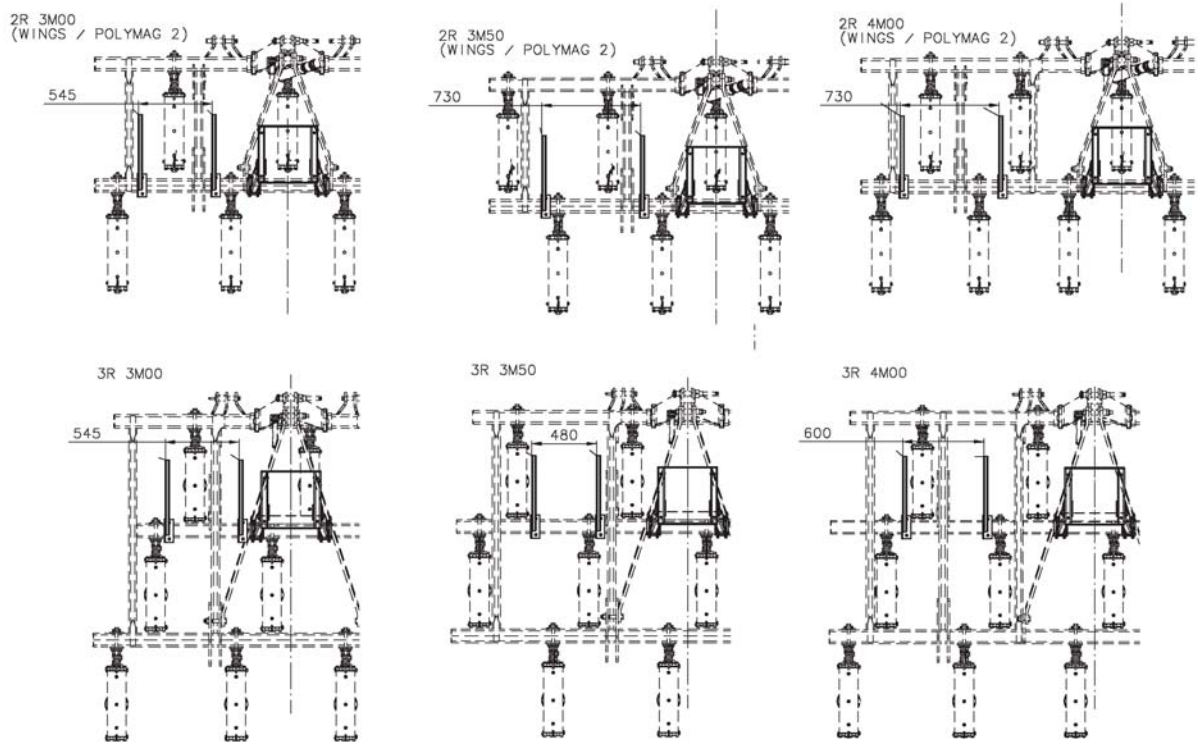
- CLC EVO 3M00 11 teeth
  - CLC EVO 3M50 13 teeth
  - CLC EVO 4M00 15 teeth
- (See diagrams below - machine top view)



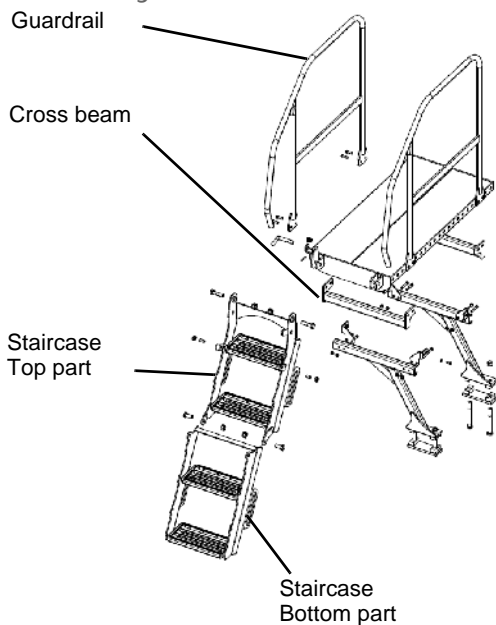
The hopper is fixed on this support by 4 screws going through the tubes of the hopper support. The hopper must be directed so that the pipes come out behind.

On the 2-row frames, pipe supports are fixed under the rear screw of the hopper support (see the "Pipes passage" paragraph).

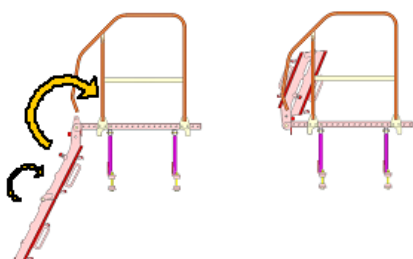




## Installing the walkway



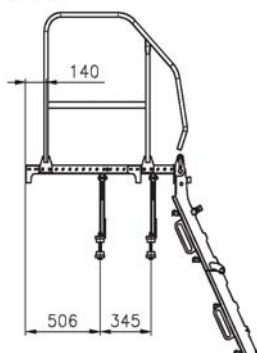
- > 1/ Position the legs of the walkway on the frame at the dimensions indicated in the diagrams on the next page.
- > 2/ Install the platform on the legs using "square" tabs (figure opposite).
- > 3/ Fix using the same screws the guardrails as well as the cross beams.
- > 4/ Fix the staircase at the end of the walkway. Adjust the ball screws to hold the bottom part of the staircase on the top part.



# Delivery and assembly

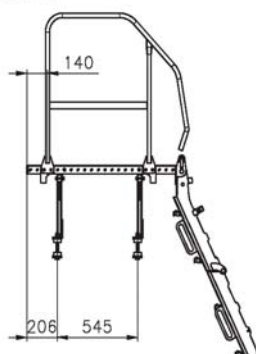
## CLC EVO 2 Rangées/Range

3m00



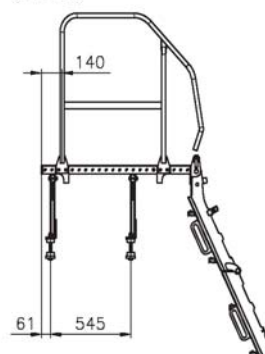
## CLC EVO WINGS 2 Rangées/Range

3m00

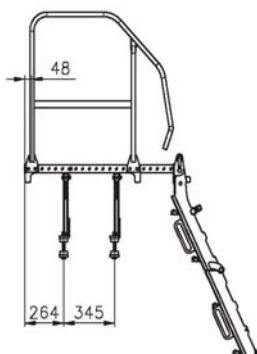


## CLC PRO 3 Rangées/Range

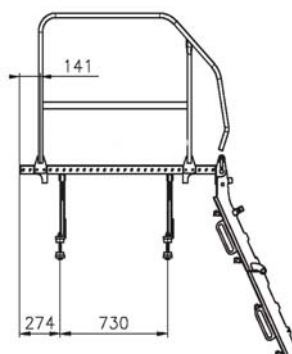
3m00



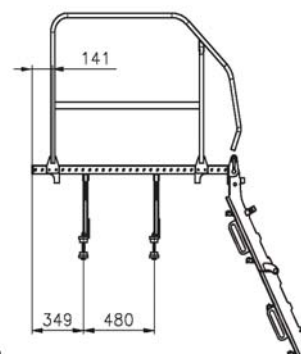
3m50



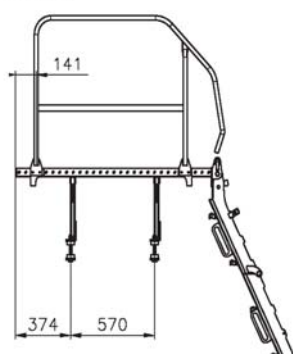
3m50



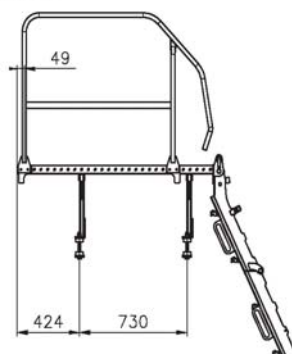
3m50



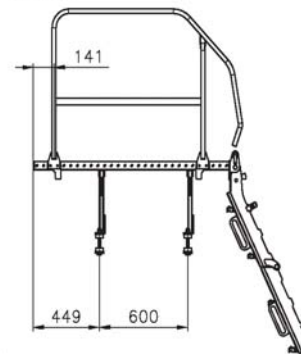
4m00



4m00



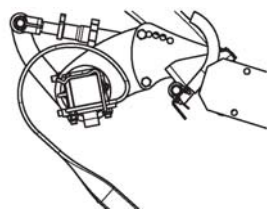
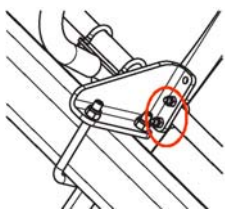
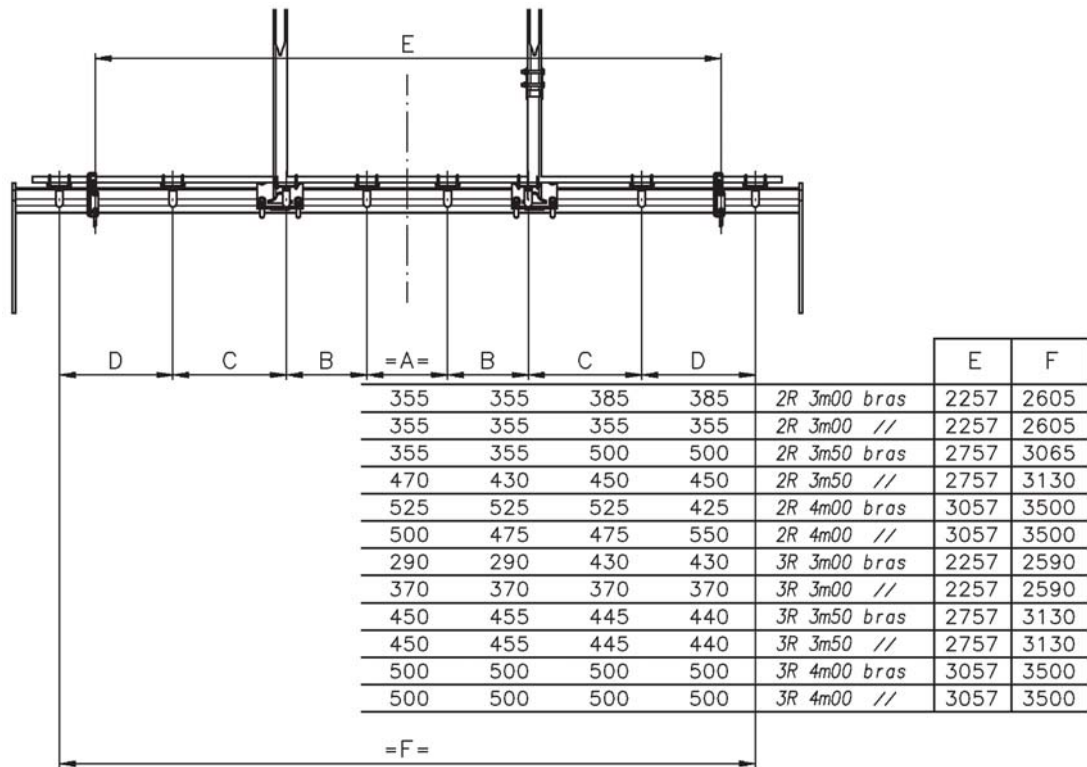
4m00



## Positioning the spreaders

The spreaders must be distributed homogeneously, if possible. The position must be slightly off centred in relation to machines. The following table specifies the installation dimensions of different machines.

(2R = machine with 2 rows of teeth; 3R = 3 rows of teeth; arm = rear accessory installed on curved arm; // = rear accessory installed on parallelogram).



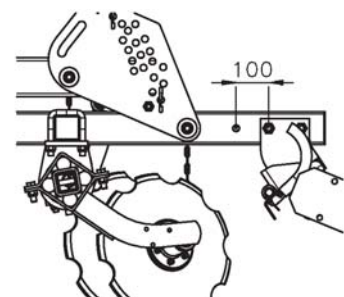
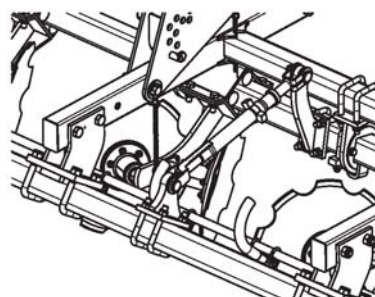
In the case of installation of leveling tines fixed on the roller beam, the spreader ramp must be installed in the low position on the support.

The installation of the spreader ramp with leveling disks requires reversing of the roller.

The roller supports must be installed in the rear position, by using the last two attachment holes on the H.

The toothed bar will also have to be longer. For machines prior to June 2012 not equipped with the rear installation position of the roller, the dedicated adaptation kit must be used.

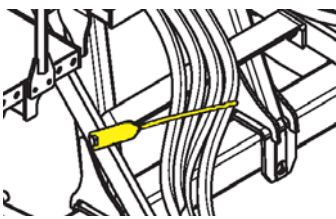
## Pipes passage



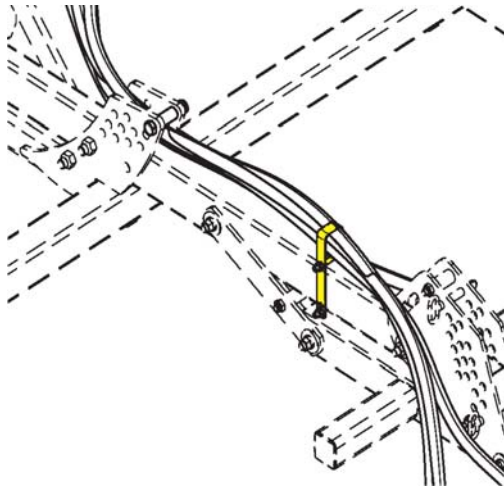
# Delivery and assembly



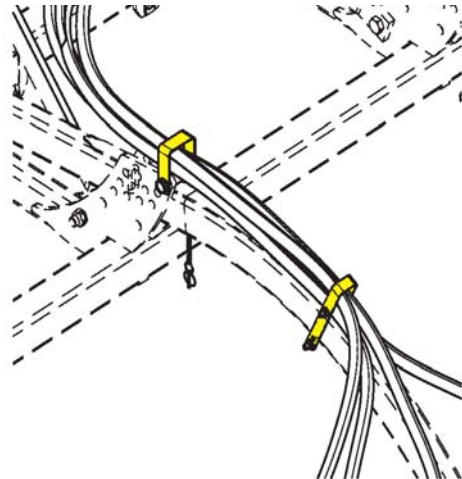
Specific pipe supports enable to ensure optimum passage of pipes on the tools.  
On mounted tine cultivators, the pipes always pass above the roller arms. The dedicated supports are fixed to them allowing the pipes to slide.



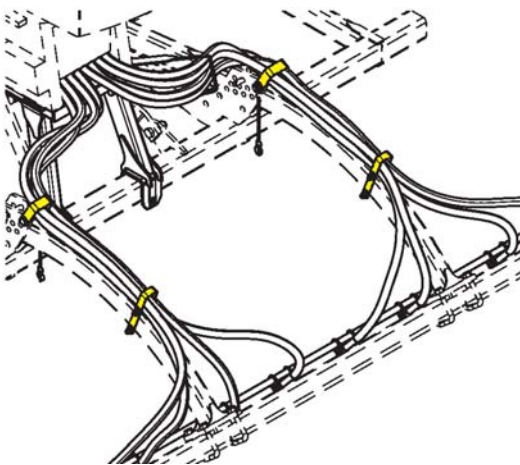
Pipe guide on stays (3-row machine)



Installation on parallelogram



Installation on curved arm

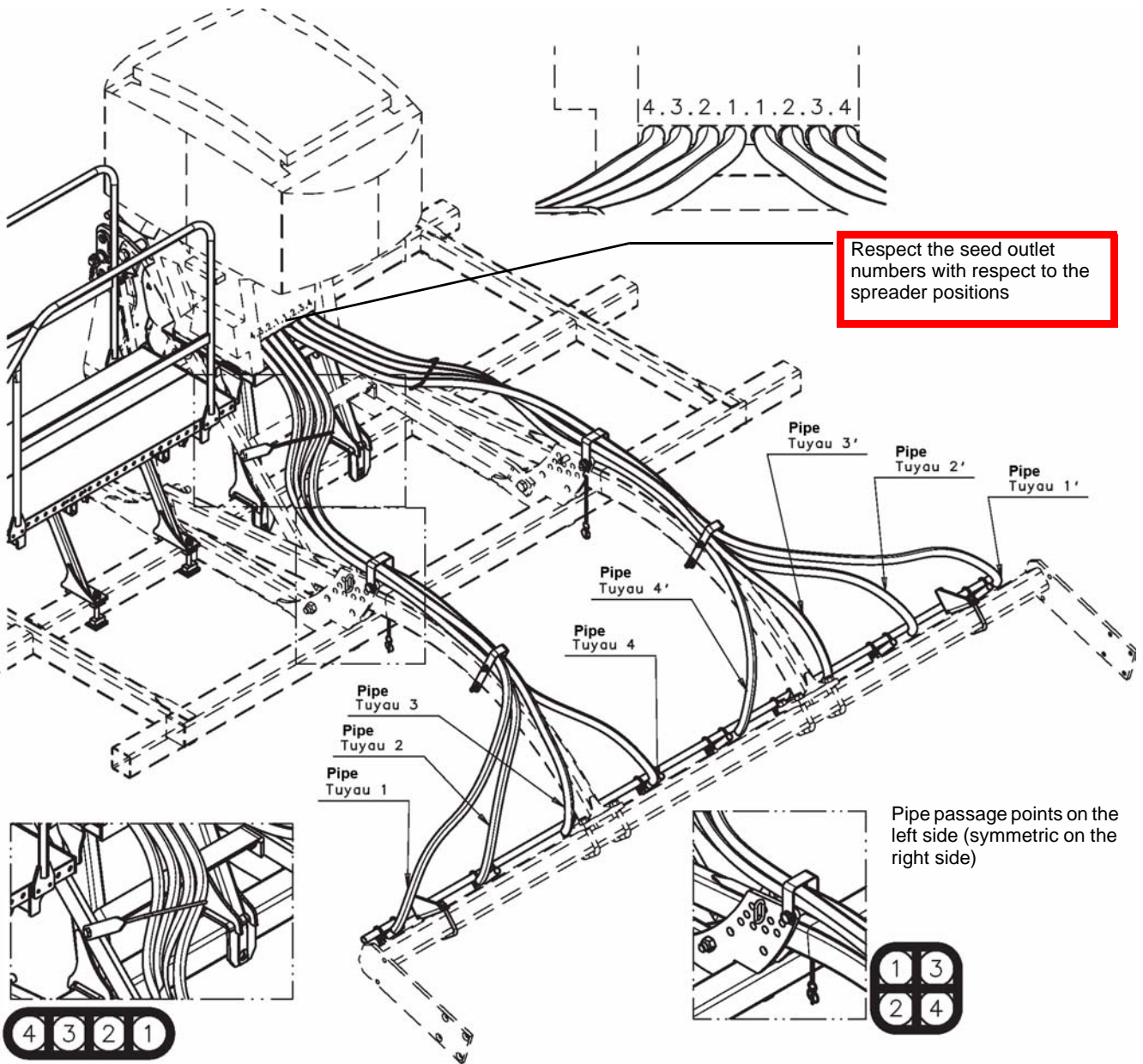


Installation on 2 R: be careful of the support(s) position on stay(s)

It is important to "cross" the seed pipes when connecting them to the pump. This is so that the pipes that come out at the centre of the seed drill feed the spreaders outside the machine.



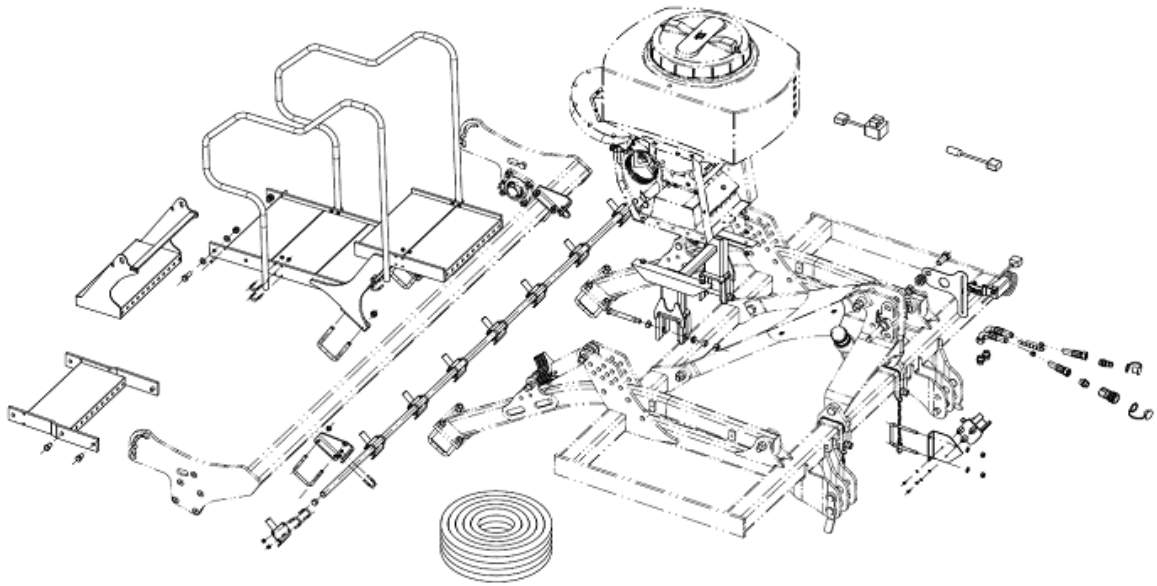
## Distribution order of seed pipes



		Pipe lengths				
		Left side/rollers				
	Hopper	No. 1	No. 2	No. 3	No. 4	
CLC 2R	3m00	Off centred	3335	3095	3075	2940
CLC 2R	3m50	Off centred	3335	3095	3075	2940
CLC 2R	4m00	Off centred	3550	3355	3645	3825
CLC 2RW	3m00	Centred	3195	2955	2935	2800
CLC 2RW	3m50	Centred	3195	2955	2935	2800
CLC 2RW	4m00	Centred	3410	3215	3505	3685
CLC 3R	3m00	Centred	3630	3260	3400	3120
CLC 3R	3m50	Centred	3630	3260	3400	3120
CLC 3R	4m00	Centred	3700	3605	3905	3975

# Delivery and assembly

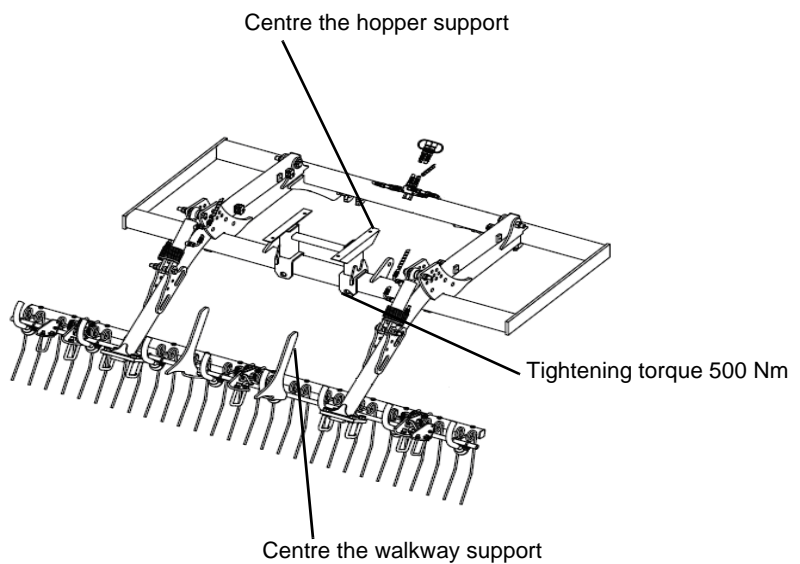
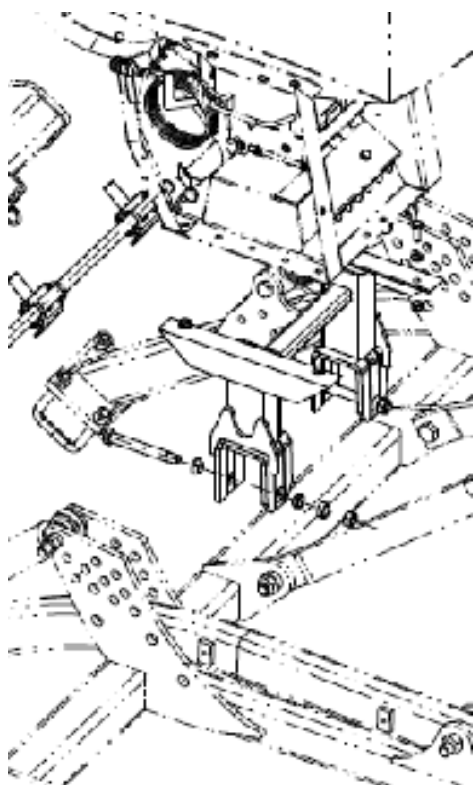
## QUALIDISC



### Installation of the hopper support

The support is fixed on the 2nd beam of the main frame, using U-shaped clamps of the support.

The hopper is bolted on this support by means of 4 screws crossing the hopper support angles. The hopper must be directed so that the pipes come out in front.



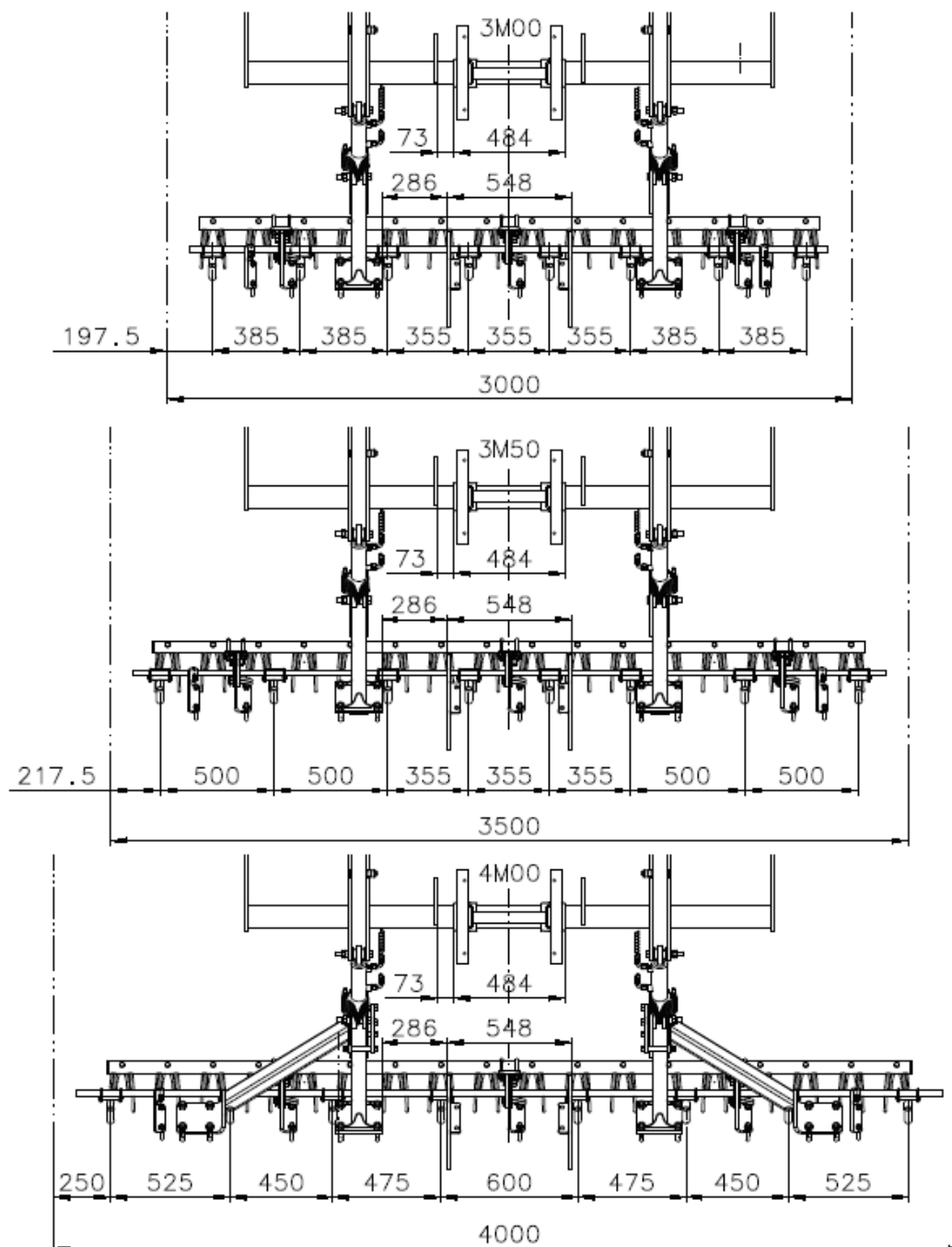
## Installing the walkway

On the mounted disk cultivator, the walkway is installed on the roller beam, it consists of a retractable step and guardrails fixed on the platform. Ensure that the walkway support is centred on the roller beam.

In case the machine is equipped with double rollers, a walkway extension is fixed between the platform and the retractable step.

## Positioning the spreaders

The mounted disk cultivator may be equipped with different rollers and a comb harrow. The installation of the spreader ramp is identical for a given width.

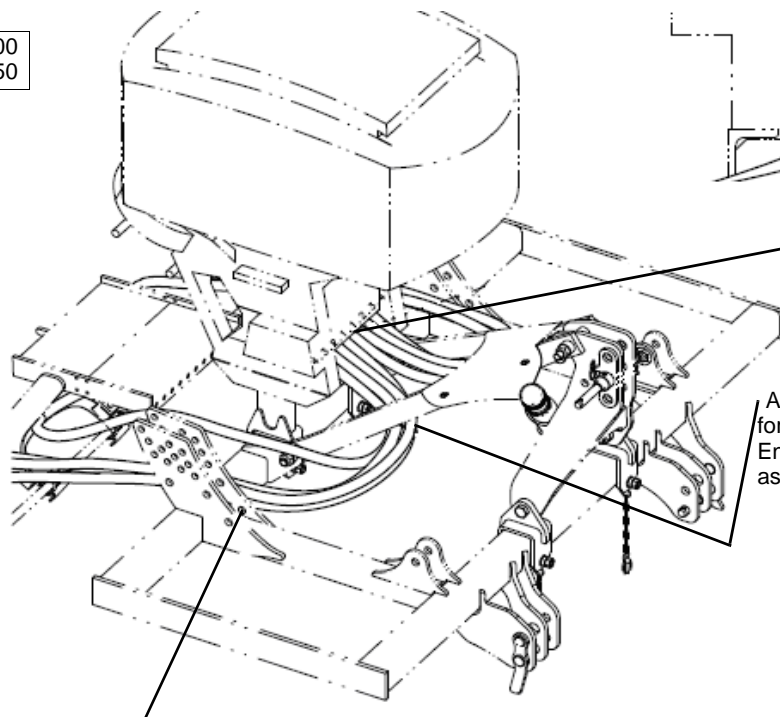


# Delivery and assembly

## Pipes passage

On the mounted disk cultivator, the seed pipes come out from the hopper in front.

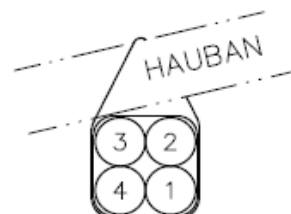
3M00  
3M50



Respect the seed outlet numbers with respect to the spreader positions

Attach the 4 pipes together using a colson by forming a square then attach all to the stay. Ensure that the curvature of pipes is as natural as possible

Attach the 3 pipes together using a colson then attach them in this hole.

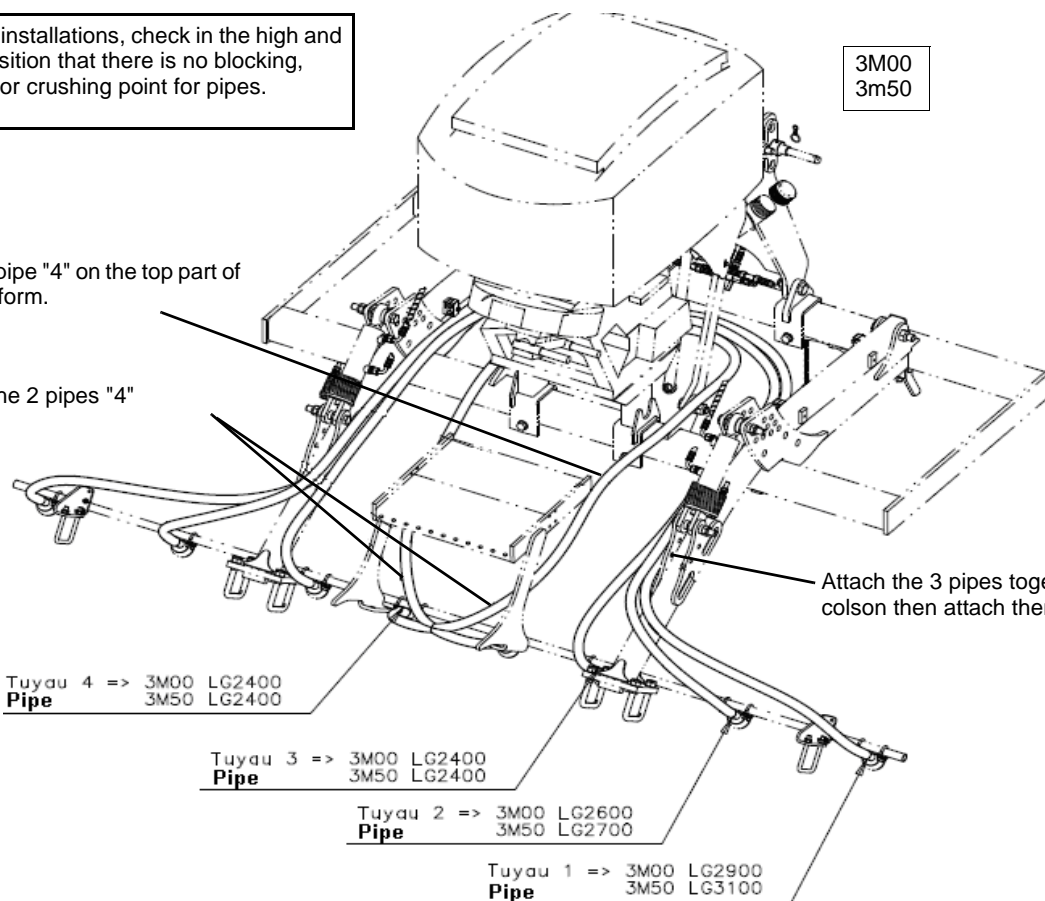


For all installations, check in the high and low position that there is no blocking, stress or crushing point for pipes.

3M00  
3m50

Fix the pipe "4" on the top part of the platform.

Cross the 2 pipes "4"



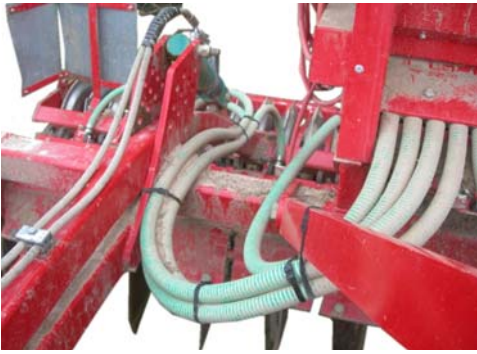
Attach the 3 pipes together using a colson then attach them in this hole

Tuyau 4 => 3M00 LG2400  
**Pipe** 3M50 LG2400

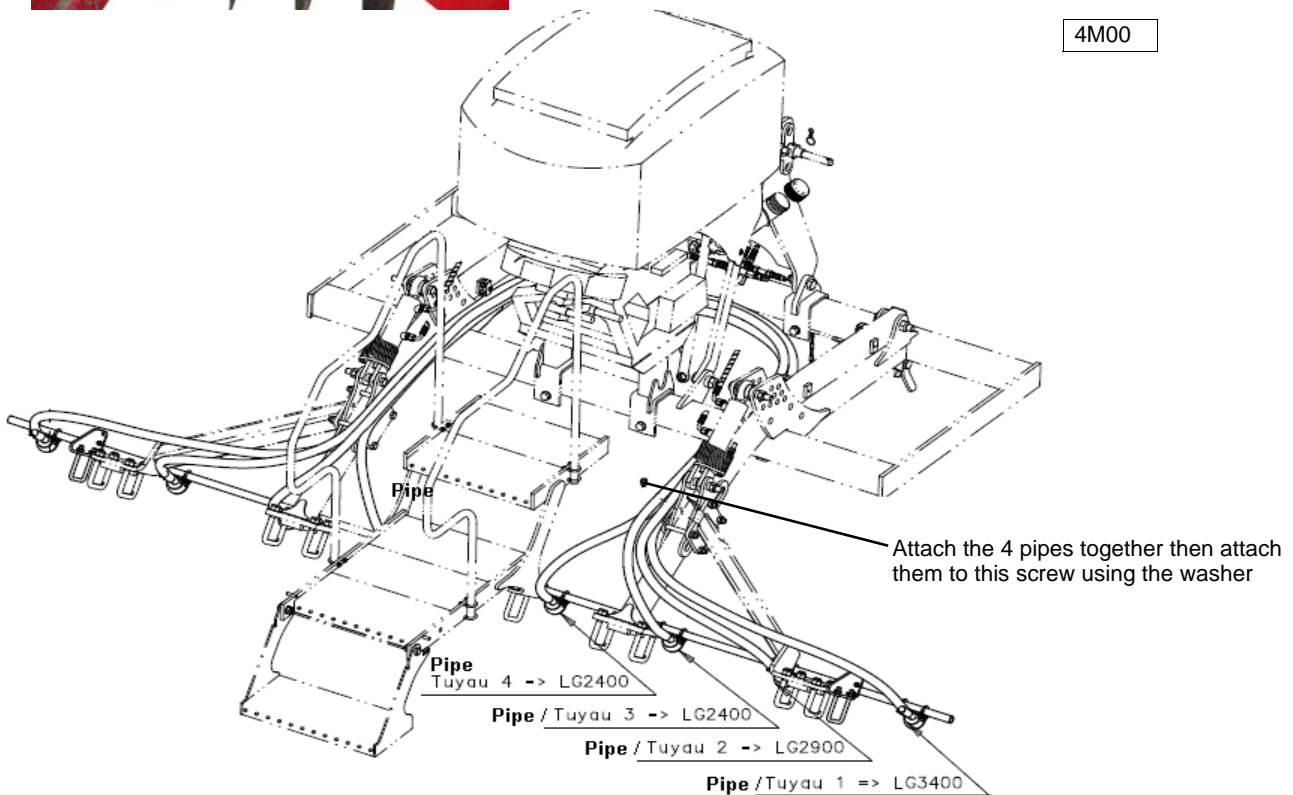
Tuyau 3 => 3M00 LG2400  
**Pipe** 3M50 LG2400

Tuyau 2 => 3M00 LG2600  
**Pipe** 3M50 LG2700

Tuyau 1 => 3M00 LG2900  
**Pipe** 3M50 LG3100



4M00



## Equipment on mounted machines

### End of field sensor

The electromechanical end of field sensor is fixed on the coupler head of the machine. The contact is normally closed. The distribution of the seed drill is cut-off when the sensor rod is operated.

- > Adjust the position of the sensor so that the top link of the tractor operates the sensor when lifting the machine.



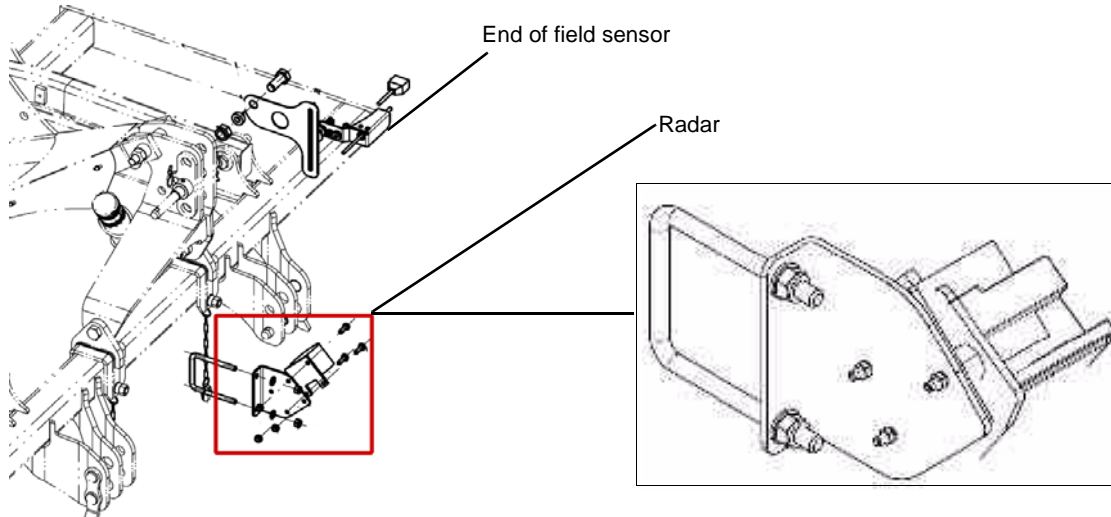
# Delivery and assembly

## Radar sensor

- > Install the radar using its support on the front beam of the frame, at the centre of the coupling as in the illustration below.
- > Ensure that there is no object (cable, hose, drawbar, etc.) between the detection face of the radar and the ground.



**Never look at the detection face of the radar in operation. Risk of eye injury.**



## Tractor speed information cable



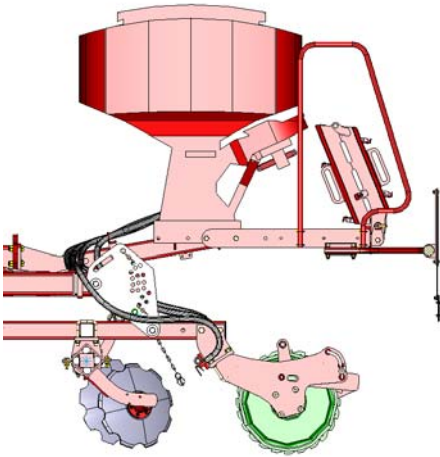
12-pin connector:  
Control unit

7-pin connector:  
Tractor

The speed information can also be communicated to the unit by the tractor via the 7 terminals cable. The tractor must be equipped with a 7 terminals speed information connector.

## CTC

### Installing the hopper support

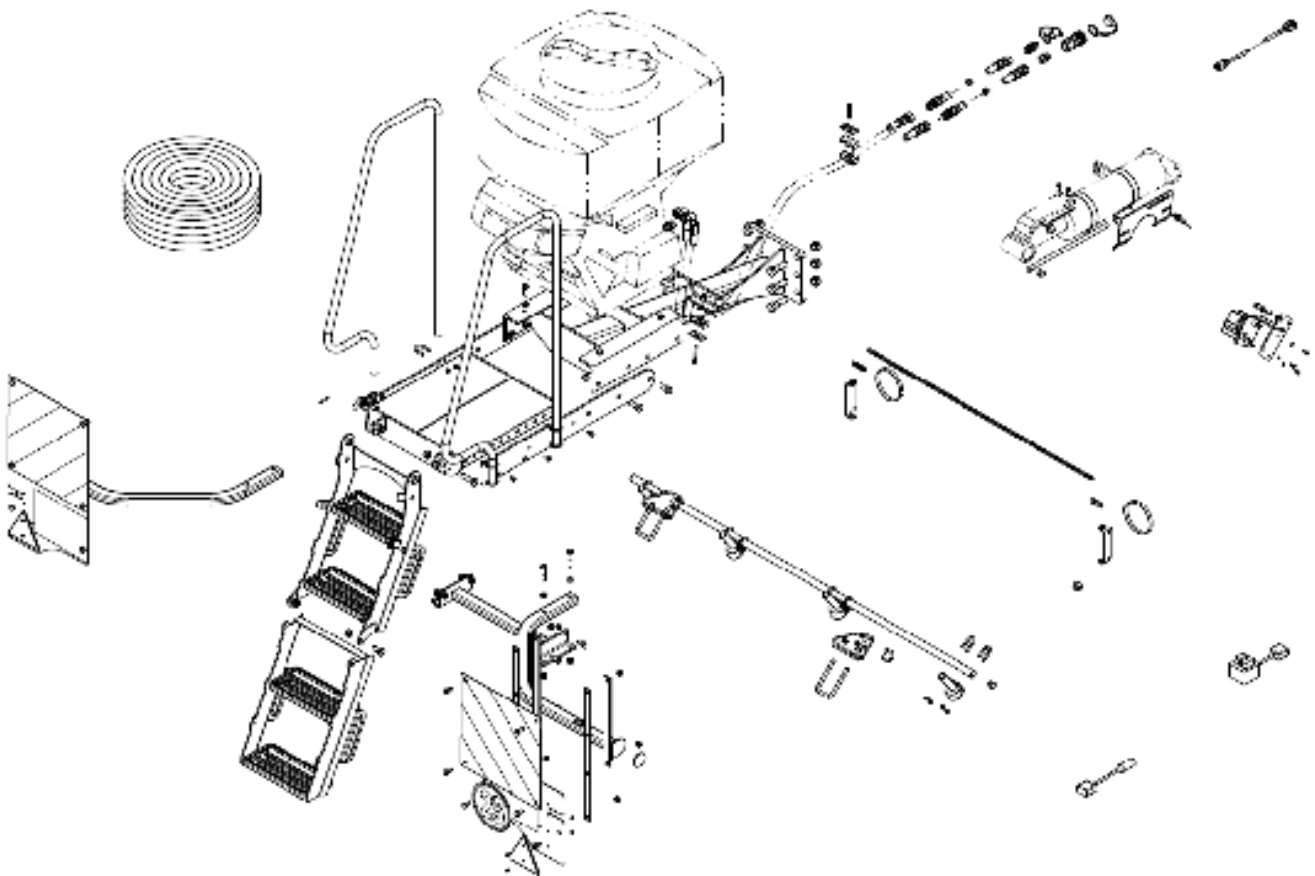


On the trailed tine cultivators, the hopper support is fixed to the rear of the central frame.

Access to the hopper for filling is from the rear of the machine. Turbine settings (pumping test, etc.) may be carried out either from the walkway or from the ground from the rear of the machine.

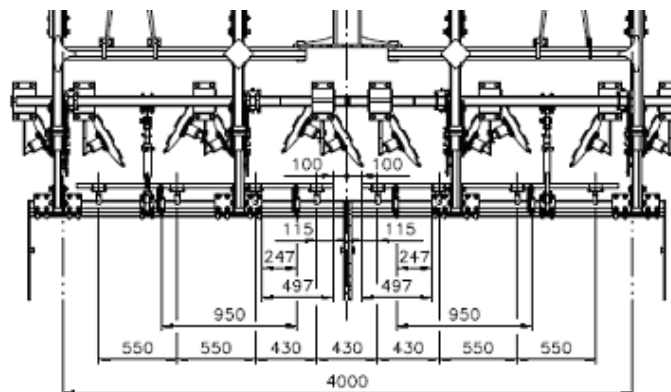
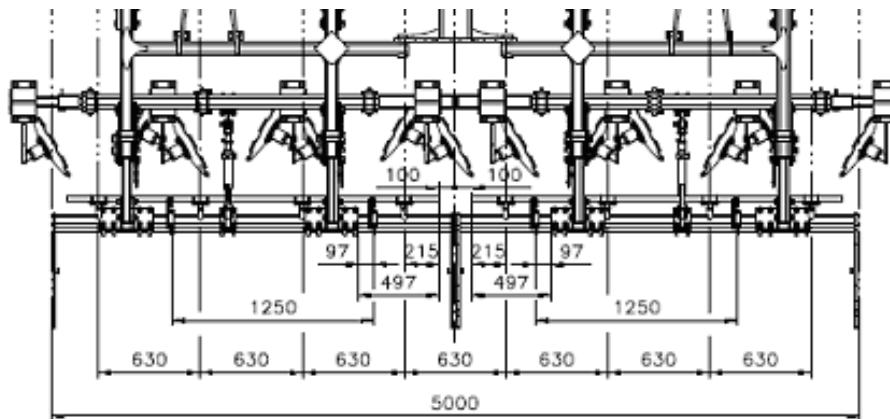
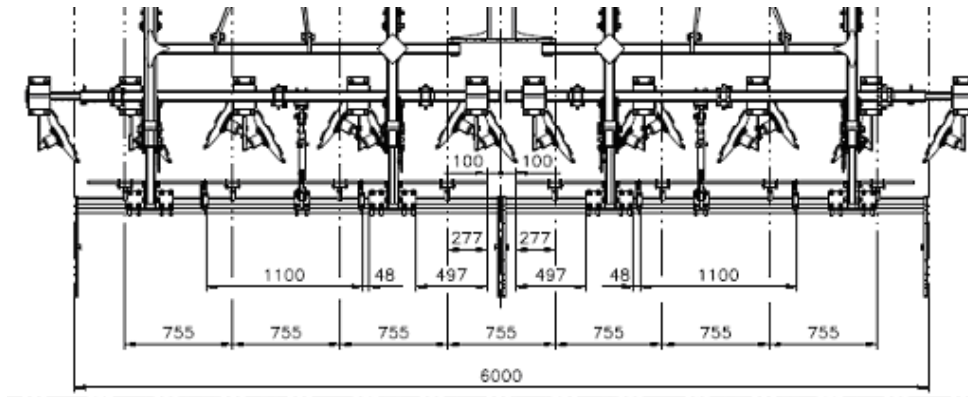
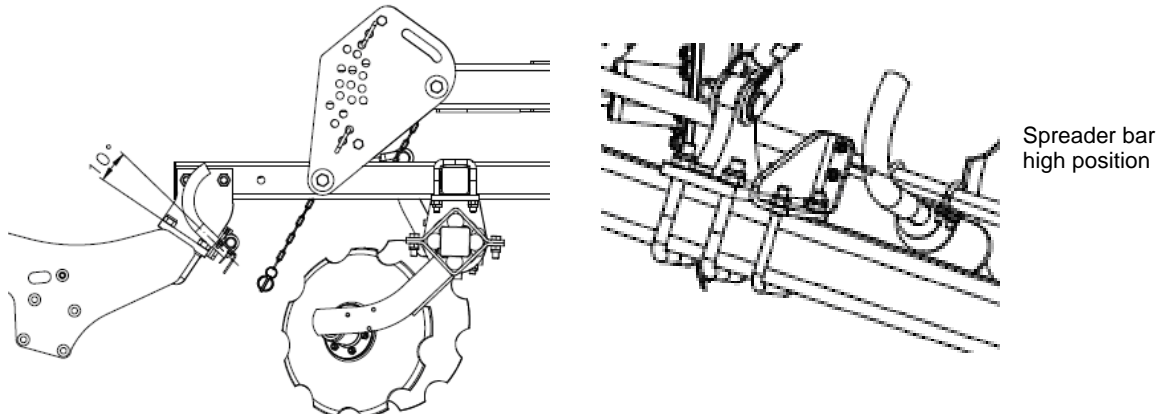
### Installing the walkway

The walkway is bolted on the hopper support. The guardrail and staircase are bolted on the walkway.



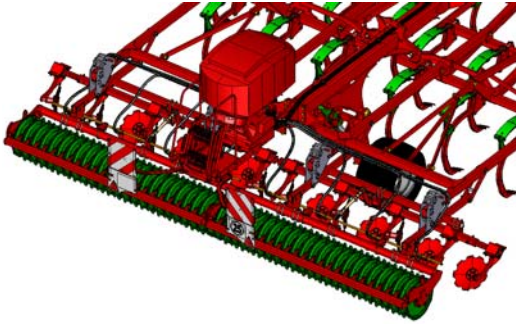
# Delivery and assembly

## Positioning the spreaders





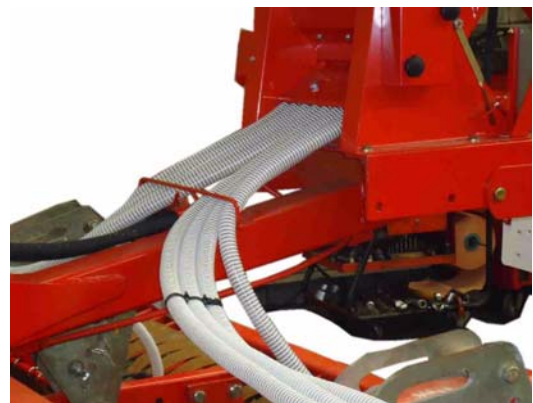
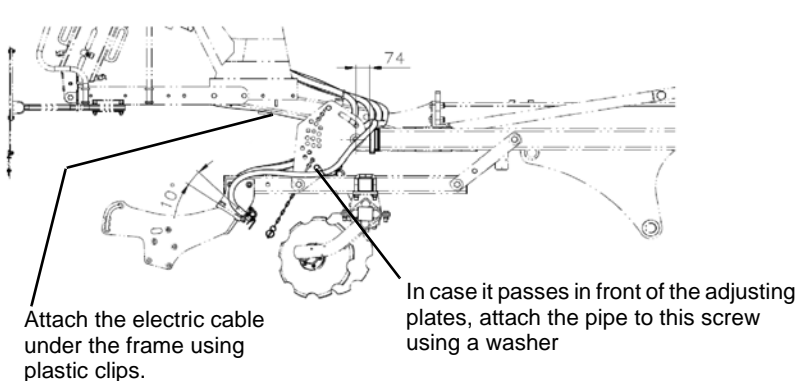
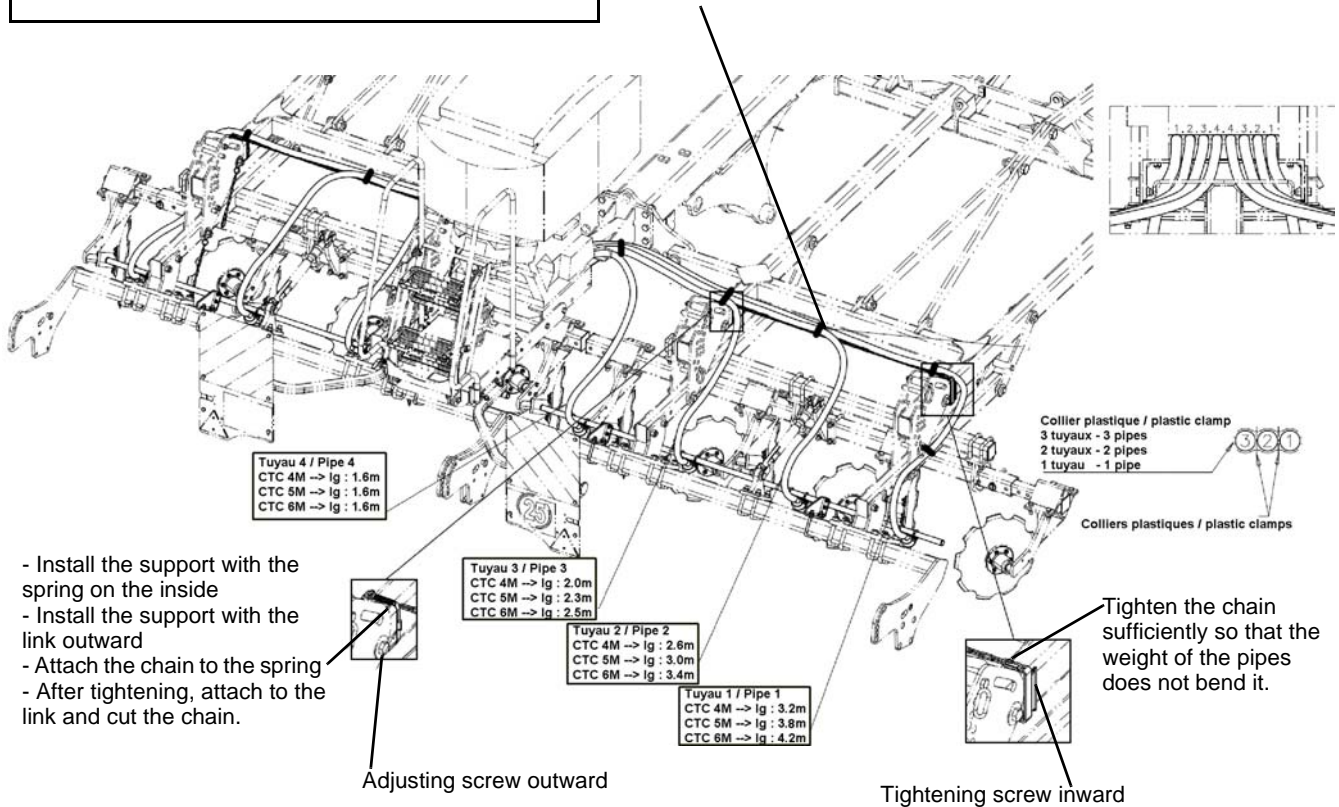
## Pipes passage



The seed outlets of the hopper are directed forward. The pipes are directed to the right and to the left of the support then towards the rear to feed the spreader ramp.

For all installations, check in the high and low position that there is no blocking, stress or crushing point for pipes. Adjust the length of pipes if necessary.

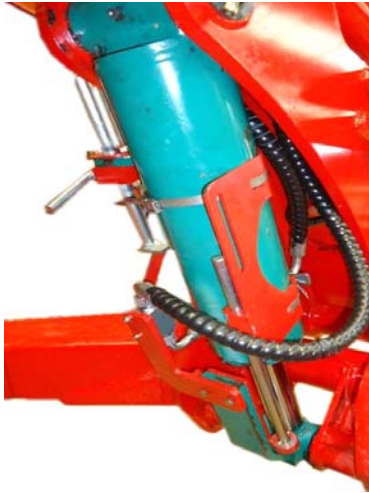
Before every bifurcation but after the first one, connect the pipes together and fix them to the chain. Follow the diagram below in order to fix them flat. The pipes must arrive at the spreaders as straight as possible.



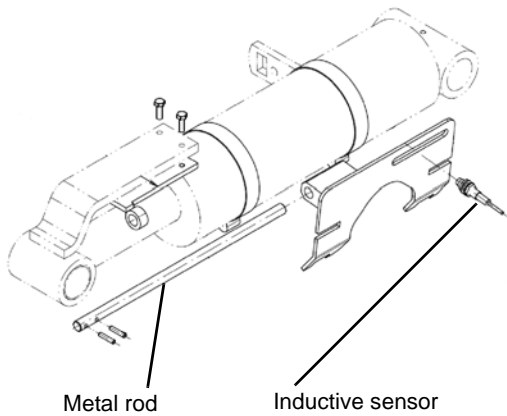
# Delivery and assembly

## CTC equipment

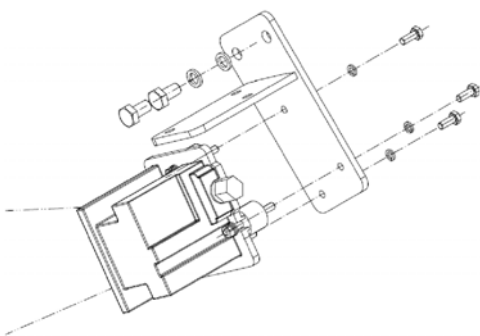
### End of field sensor



On the trailed tools, the end of field sensor is installed on the lift cylinders. The sensor is of the inductive type, it detects the sliding metal rod fixed on the cylinder. The contact is normally open. The distribution of the seed drill is cut-off when the metal rod comes out of the sensor's detection field.



### Radar sensor



The radar is installed below the central frame in front of the machine. The radar support is bolted on the machine frame.



**Never look at the detection face of the radar in operation. Risk of eye injury.**

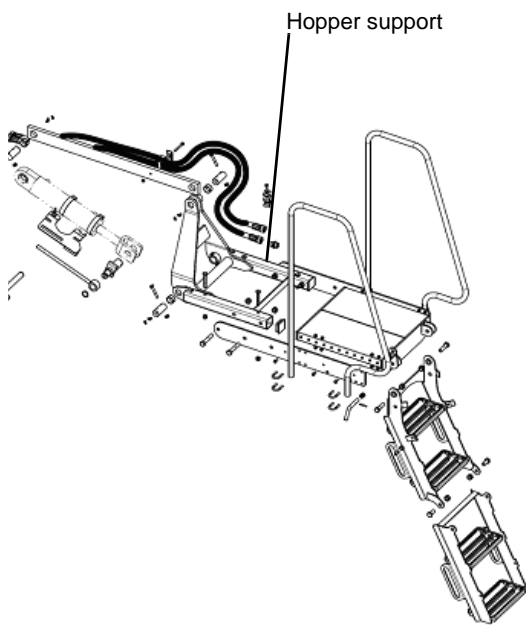
### Tractor speed information cable

Installation identical to that on mounted machines

## QUALIDISC T



### Installation of the hopper support



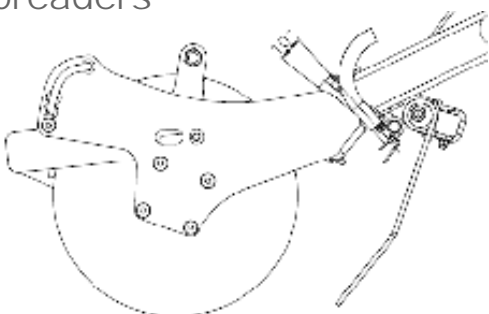
On the trailed disk cultivators, the hopper is fixed on an articulated support attached to the transport trolley. Thus, irrespective of the machine's position, lowered or raised, the seed drill is always horizontal.

The seed drill is accessible from the rear of the machine via the staircase and the walkway. The seed drill adjustments may be done either from the walkway or directly from the ground from the rear of the machine.

### Installing the walkway

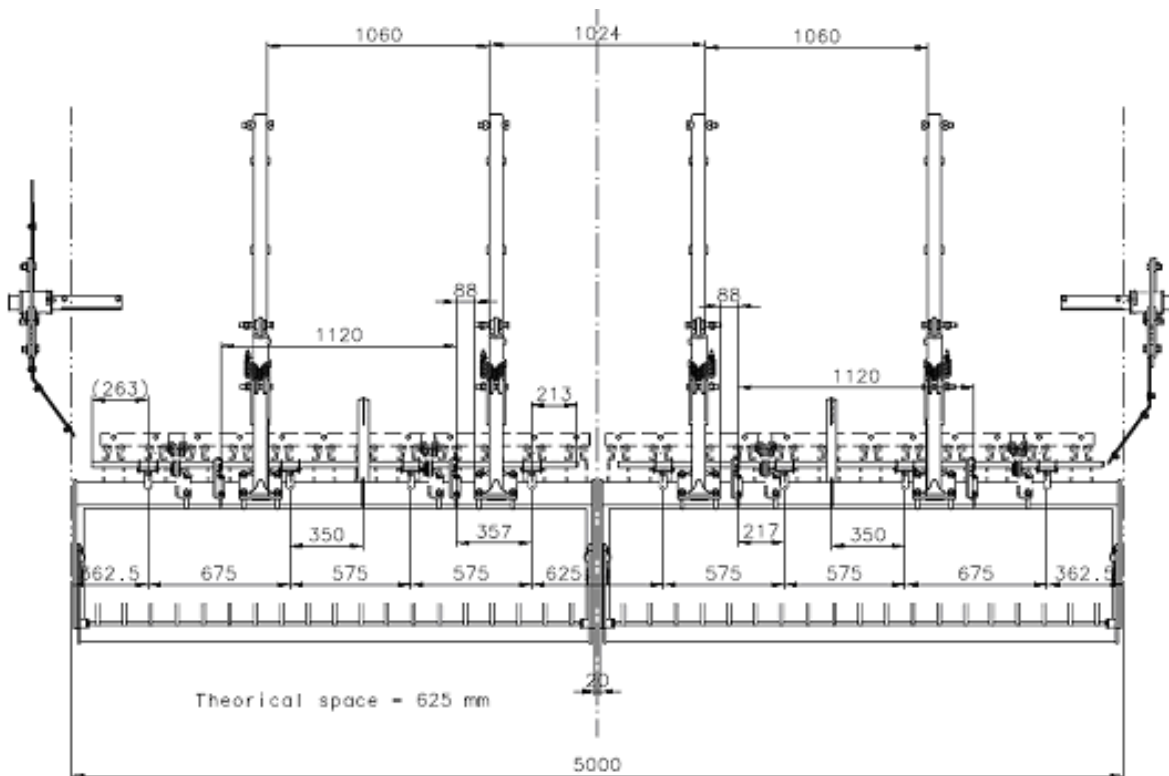
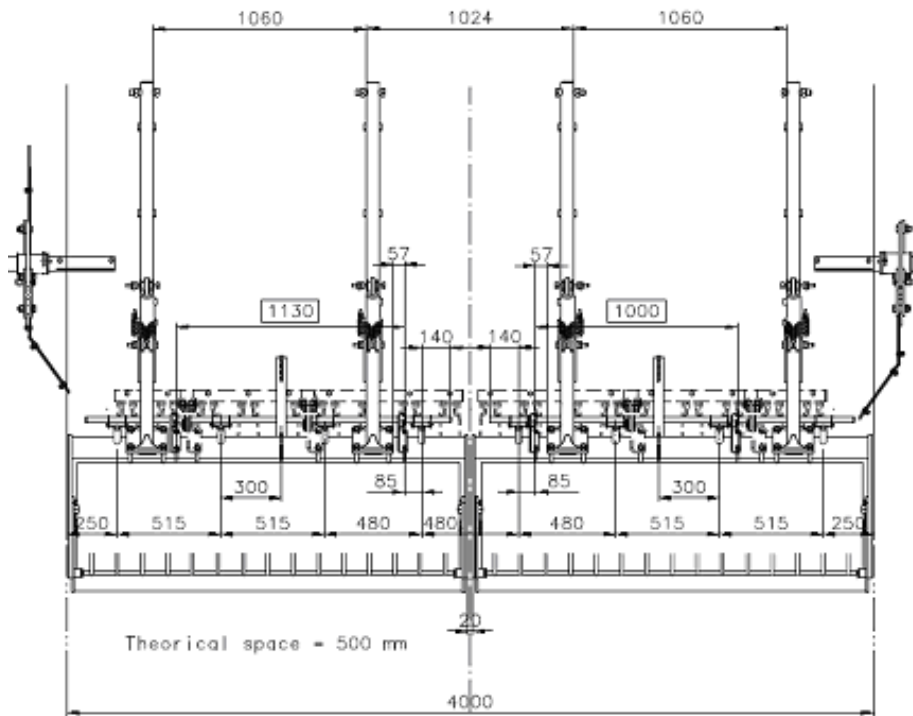
The walkway is bolted on the hopper support frame. The guardrail and staircase are bolted on the walkway.

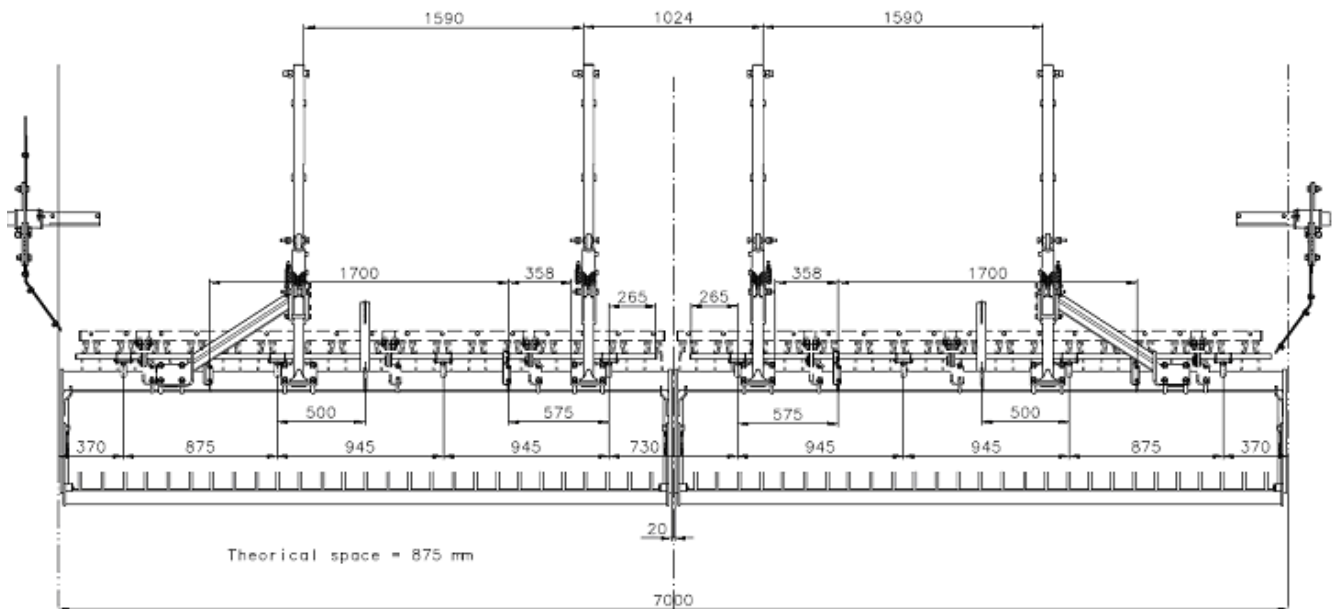
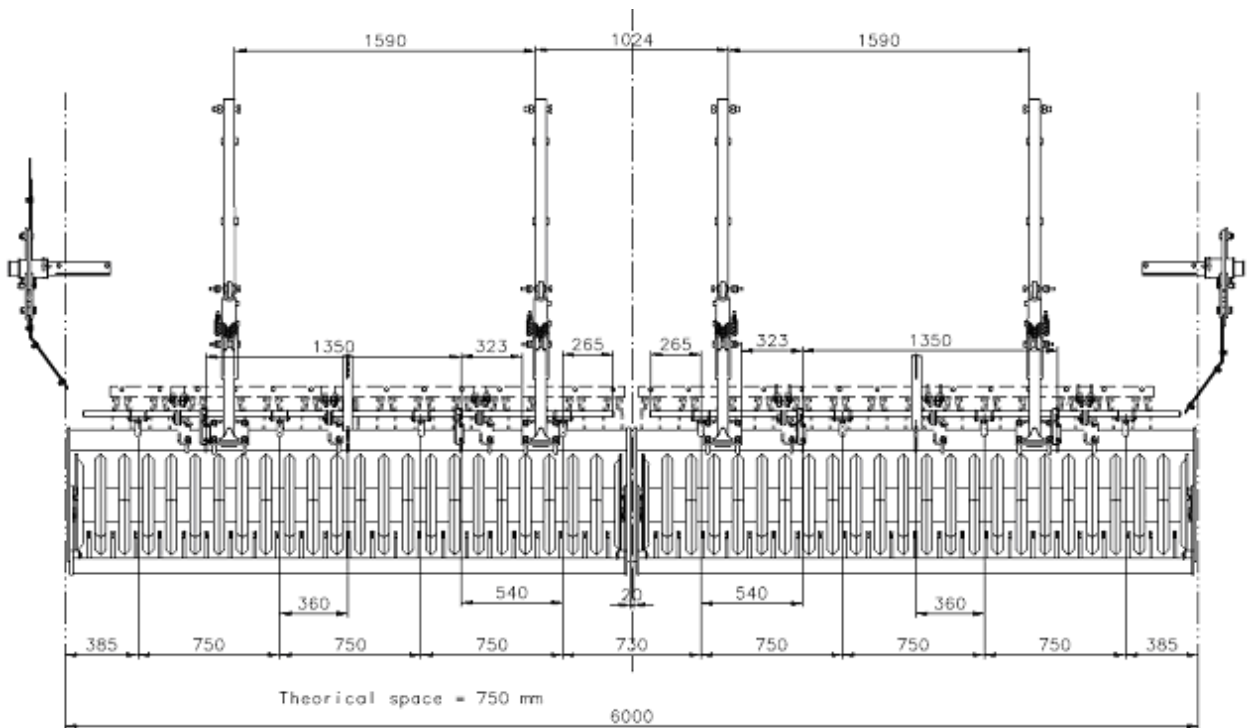
### Positioning the spreaders



The spreaders are distributed according to the working width (see following diagrams). The orientation of spreaders is optimum when the pipe is in contact with the roller beam.

# Delivery and assembly

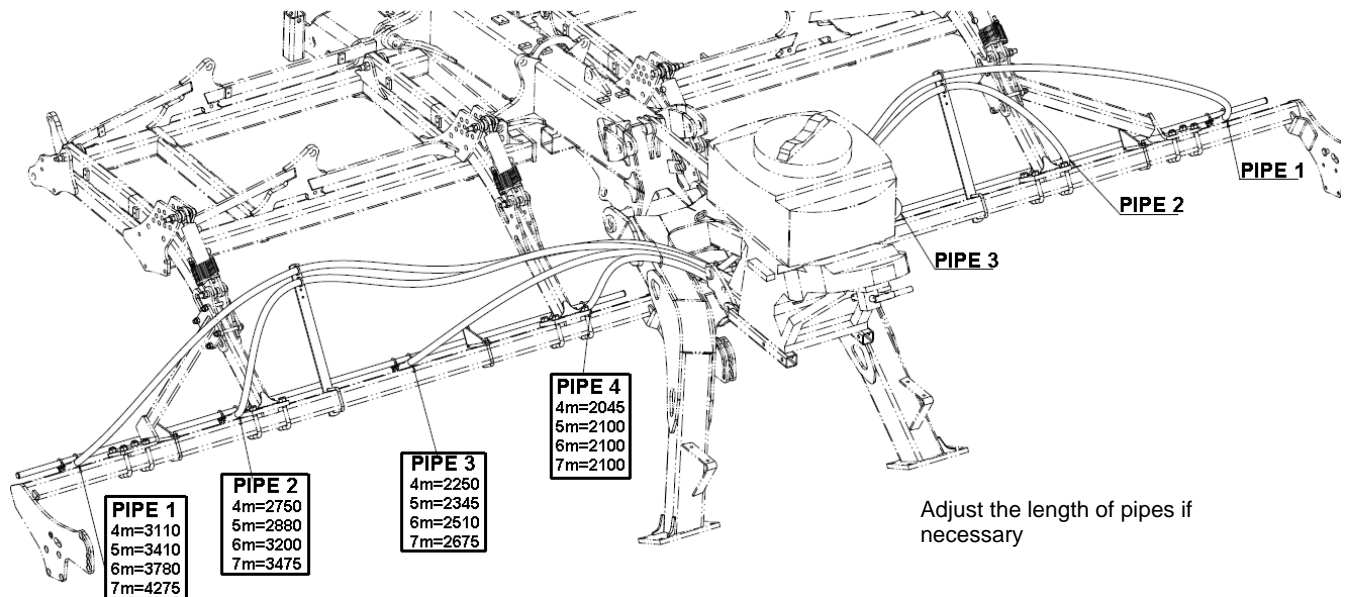




# Delivery and assembly

## Pipes passage

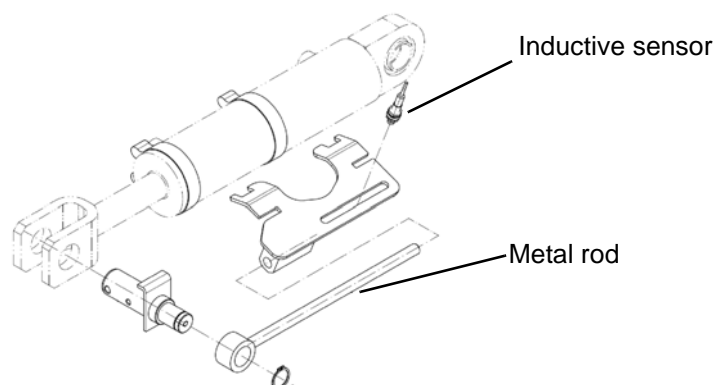
The seed outlets of the hopper are directed forward. The pipes are directed to the left and to the right of the seed drill to feed the spreaders. The connection order of pipes must be respected.



## QUALIDISC T equipment

### Lifting sensor

On the trained tools, the end of field sensor is installed on the lift cylinders. The sensor is of the inductive type, it detects the sliding metal rod fixed on the cylinder. The contact is normally open. The distribution of the seed drill is cut-off when the metal rod comes out of the sensor's detection field.



## Radar sensor

The radar is installed below the central frame in front of the machine. The radar support is bolted on the machine frame.



**Never look at the detection face of the radar in operation. Risk of eye injury.**

## Tractor speed information cable

Installation identical to that on mounted machines.

## Hydraulic blower

For the oil supply of the hydraulic blower, 2 hoses must be fixed on the central frame by means of clips.

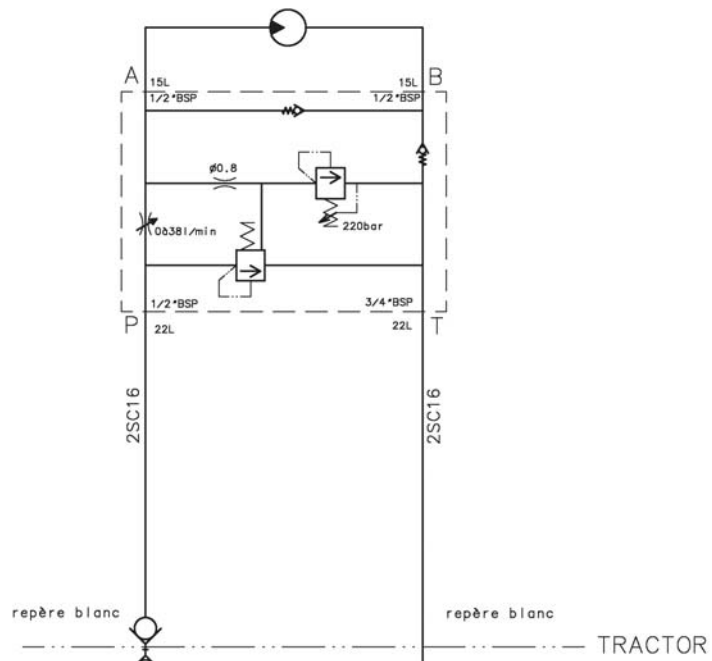
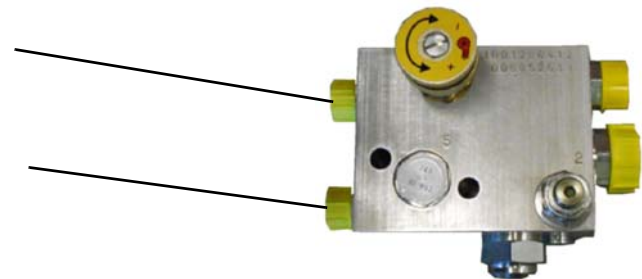
The hydraulic unit must be connected to a single acting control valve for oil supply and to a free return to the reservoir for the return.

**NOTE The maximum return pressure is 5 bars.**



"T" port  
Free return

"P" port  
Oil supply



# Settings

## Distribution

### Choice of the distribution rotor

Depending on the type of sowing to be carried out, it is recommended to select the proper seed shaft. For this, consult the sowing table.

For replacing the shaft, proceed as follows:

- > 1. Empty the hopper completely
- > 2. Remove the side cover by unscrewing the nut and the two adjusting knobs
- > 3. Remove the drive belt of the agitator
- > 4. Unscrew the knurled nuts from the sowing rotor bearing
- > 5. Remove the distribution rotor assembly and its bearing
- > 6. Place the new seed shaft
- > 7. Reassemble the parts in the reverse order



### Brush adjustment



This brush is installed on the distribution rotor in order to regulate the seed flow. It can be adjusted with a lever on the seed drill frame on a scale from +4 to -5. This enables to refine the adjustment of the output according to the specific seed weight.

When the brush is in contact with the distribution rotor (from -1 to -5), the sowed quantity reduces slightly. If the brush is moved away from the distribution rotor (from +1 to +4), the sowed quantity increases slightly.

**NOTE** The sowing tables provided were determined with the setting 0.

For fine seeds that flow well, the brush must be close to the distribution rotor (setting -5 to 0). For larger seeds, the brush must be further away from the distribution rotor (setting 0 to +4).

### Agitator



The agitator can be stopped when sowing large seeds.

- > For this, remove the drive belt located under the protective cover on the side of the seed drill. (refer to the paragraph on replacing the distribution rotor).



## Hopper level sensor



The sensor equips 500 l hoppers. It operates only with the unit 5.2. An alarm sounds when the sensor is no longer covered with seeds.

## Working width/ sowing tables

The sowed quantity depends on the speed of the distribution rotor. It can be manually adjusted with the unit 3.2 or automatically according to the working speed with the unit 5.2 and a speed sensor.

To define the desired sowed quantity, you can perform a stationary test before starting the work.

The sowing tables indicate the quantity sowed for the different types of seeds in kilogramme per minute (quantity restored during the stationary output test).

The values in these tables may be used as approximate values. Numerous factors such as the specific weight, weight of thousand grains, seed humidity, modification of the fluidity, etc. generate differences with respect to these values.

The stationary output test enables to correct these differences. To determine the desired grain output, use the following formula:

$\frac{\text{Desired quantity distributed [kg/ha]} \times \text{Travelling speed [km/h]} \times \text{Working width (m)}}{600} = \text{Weight [kg/min]}$
--

Example:

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

600

## Emptying the hopper



The hopper is emptied from the side opposite the connection of pipes on the seed drill.







To empty the hopper, proceed as follows:

- > Remove the adjusting knobs of the distribution cover.
- > Rotate it and place it in front on the bottom plate so that it serves as a slide.
- > Use the "empty" function of the control unit to empty the hopper (see paragraph "using the unit").

Instead of the distribution cover, you can also take the distribution plate. It has the advantage of being larger and being easily placed under a bag or container.

## Sowing tables

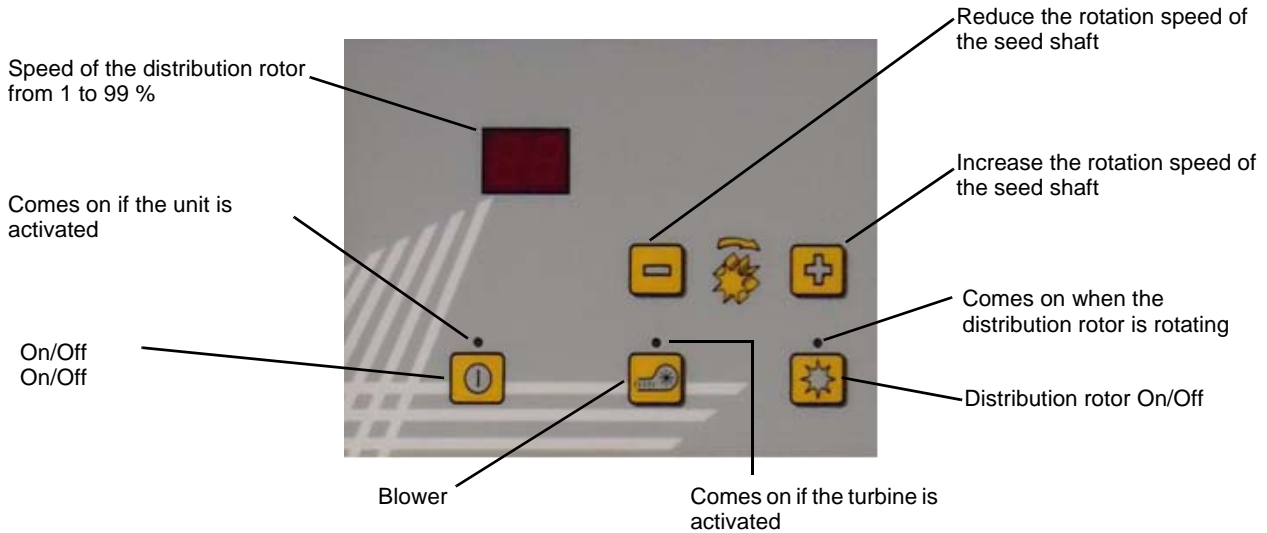
Gras Grass Herbe <i>Lolium perenne</i>	Weizen Wheat Blé <i>Triticum</i>	Gerste Barley Orge <i>Hordeum</i>	Rettich Radish Radis <i>Raphanus raphanistrum</i>	Buchweizen Buckwheat Blé Noir <i>Fagopyrum</i>	Blaue Lupine Blue Lupine Lupin Bleu <i>Lupinus angustifolius</i>	Grünroggen Green Rye Seigle vert <i>Secale cereale</i>	kg/min	
							GGG	GGG
	2	0,27	0,52	0,54	0,66	0,42	0,46	
	5	0,61	1,18	0,87	1,18	1,11	0,99	
	10	1,17	2,30	1,41	2,05	2,26	1,87	
	15	1,73	3,41	1,96	2,92	3,41	2,74	
	20	2,30	4,52	2,51	3,79	4,56	3,62	
	25	2,86	5,64	3,06	4,66	5,71	4,50	
	30	3,42	6,70	3,61		6,87	5,33	
	35	3,98	7,76	4,16		8,03	6,16	
	40	4,55	8,82	4,71		9,19	6,98	
	45	5,11	9,88	5,26		10,35	7,81	
	50	5,67	10,94	5,81		11,51	8,64	
	55	6,23	11,21	6,70		12,48	9,45	
	60	6,79	11,48	7,59		13,44	10,27	
	65	7,36	11,76	8,48		14,41	11,08	
	70	7,92	12,03	9,38		15,37	11,89	
	75	8,48	12,30	10,27		16,33	12,71	
	80	9,05	12,57	11,16		17,30	13,44	
	85	9,61	12,84	12,05		18,26	14,18	
	90	10,17	13,12	12,95		19,23	14,92	
	95	10,73	13,93	13,84		21,71	15,14	
	100	11,30	14,75	14,73		24,20	18,10	

Quantité (%)	Wicke Vetch Vesce		Hafer Oat Avoine		Senf Mustard Moutarde		Luzerne Alfalfa Luzerne		Rotklee Red Clover Trèfle rouge		Phacelia Phacelia Phacélie		Raps Rape Colza	
	kg/min fb-f-fb-fb	<i>Vicia</i>	kg/min fb-f-fb-fb	GGG	kg/min fb-f-fb-fb	<i>Sinapis Alba</i>	kg/min fb-f-fb-fb	<i>Medicago Sativa</i>	kg/min fb-f-fb-fb	<i>Trifolium</i>	kg/min fb-f-fb-fb	<i>Phacelia tanacetifolia</i>	kg/min fb-f-fb-fb	<i>Brassica Napus</i>
2	0,76		0,01	0,15	0,04		0,10		0,04		0,14		0,110	
5	1,42		0,02	0,46	0,15		0,21		0,15		0,31		0,211	
10	2,51		0,04	0,98	0,33		0,40		0,33		0,61		0,380	
15	3,61		0,06	1,50	0,50		0,60		0,51		0,90		0,548	
20	4,71		0,07	2,02	0,68		0,79		0,70		1,19		0,717	
25	5,81		0,09	2,54	0,86		0,98		0,88		1,49		0,885	
30			0,12	3,03	1,00		1,15		1,06		1,52		1,031	
35			0,14	3,52	1,15		1,32		1,23		1,56		1,178	
40			0,17	4,01	1,29		1,49		1,41		1,59		1,324	
45			0,19	4,50	1,43		1,65		1,58		1,63		1,470	
50			0,22	4,99	1,58		1,82		1,76		1,66		1,617	
55			0,23	5,42	1,65		1,86		1,82		1,75		1,685	
60			0,24	5,85	1,72		1,90		1,87		1,85		1,754	
65			0,25	6,29	1,79		1,93		1,93		1,94		1,823	
70			0,26	6,72	1,86		1,97		1,98		2,04		1,892	
75			0,27	7,15	1,93		2,01		2,04		2,13		1,960	
80			0,27	7,58	2,00		2,04		2,09		2,23		2,029	
85			0,27	8,02	2,07		2,08		2,15		2,32		2,098	
90			0,27	8,45	2,14		2,12		2,20		2,42		2,167	
95			0,28	8,73	2,31		2,24		2,33		2,52		2,303	
100			0,31	10,23	2,48		2,36		2,46		2,62		2,440	

# Settings

## Using the unit 3.2

### Control module



The "On/Off" button, which enables to activate and deactivate the unit, is located on the bottom left.



These buttons enable to adjust the rotation speed of the seed shaft.




Below is the On/Off button of the seed shaft. When you press the On/Off button of the seed shaft, the latter begins to rotate. The control light comes on.






Activates or deactivates the blower. (Operates only with an electric blower)

## Commissioning

After activating the device with the button  the version is displayed. The control lamp above the button comes on. This indicates the presence of a supply voltage.

On the screen, the rotation speed of the seed shaft (speed in %) is displayed.


You can then adjust the rotation speed of the seed shaft with the buttons  .

Pressing the button  starts the motor of the electric blower.


As soon as you press the button  the seed shaft begins to rotate.

## Use in the field


### **First stage:**


The red control LED flashes on the button  (the turbine motor starts).

### **Second stage:**


After a few seconds, the red control LED lights steadily on the button  (the turbine motor operates).

### **Third stage:**



When the green control LED is illuminated on the button  the gear motor that rotates the seed shaft and transports the sowing is activated.

When you turn a bend or change a field, press only on the button  until the green LED goes off.

The seed shaft then stops and only the turbine motor operates.

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

## Distribution test

The distribution test starts when you simultaneously press the two buttons   and keep them pressed.

**NOTE** Always ensure that the turbine is deactivated before starting the distribution test.




After start-up, the seed shaft automatically starts rotating without the turbine for exactly one minute.

The distribution test can be stopped at any time by pressing the button





   or the button  of the control module.

# Settings

## Emptying the hopper

Emptying the hopper begins when you keep the button  pressed and simultaneously press the button .

The seed shaft starts to rotate at maximum speed without turbine.

You can stop the current function at any time by pressing the buttons    or the button .

## Automatic deactivation of the device

If no button is pressed for 90 minutes when the control module is activated and the seed shaft is not activated, the control module automatically goes off.

## Solutions search status message

### Error messages

The error messages are emitted with an audible signal so that they are recognised more quickly. These must be confirmed with the button



and the control device must thus be deactivated.

The error messages may be displayed.


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

Display	Cause	Solution
01	The operating voltage is insufficient.	Reduce the devices connected Check the battery, wiring and the generator.
02	The operating voltage is too high.	Check the generator
03	The internal control voltage is below the minimum value.	Return to the factory
04	The seed shaft cannot rotate or the motor is subjected to a load within the limiting range for too long.	Stop the device and check if solids or similar materials are preventing the seed shaft from rotating, restricting the mixer or interfering with the operation.
05	The gear motor of the seed shaft is not connected	Check that the cable and connectors are properly connected and that there is no damage. Check the cables and connectors.
06	Is displayed if the motor (seed shaft) is connected, is not overloaded but is jammed.	Check whether a foreign body is blocking the seed shaft. If this is not the case, contact the after sales service.
07	Indicates that the blower motor cannot rotate or that it is subjected to a load within the limiting range for too long.	Stop the device and check whether objects are blocking the blower or interfering with the operation.
08	The wiring is not connected or is defective.	Check the cables and connectors.
09	Is displayed if the turbine motor is connected, is not overloaded but is not rotating.	Contact the after sales service.






If your battery is charged by a charger in "Start" operating mode, this can cause voltage peaks. These can damage the electronics of the control module when the control module is connected when the battery is being charged!



## Assistance in case of problems

Problem	Possible solution
After pressing the button  no display	<p>&gt; Check that the power cable is properly connected to the control module and also connected with the correct polarity to the battery.</p> <p><b>Warning: A defective connection or removal of the in-line fuse on the plus terminal of the electrical cable can cause damage to the control module.</b></p>

## Programming 3.2

To access the programming menu, the following buttons (see illustration) must be pressed.

Make sure that the button  is pressed first then immediately afterwards the button  or the button .

Confirm the programming set by pressing the button  or the button .



## Blower

This menu item is necessary when a hydraulic turbine is installed instead of the electric turbine.

**ON** - Electric blower available

**OF** - Hydraulic blower available

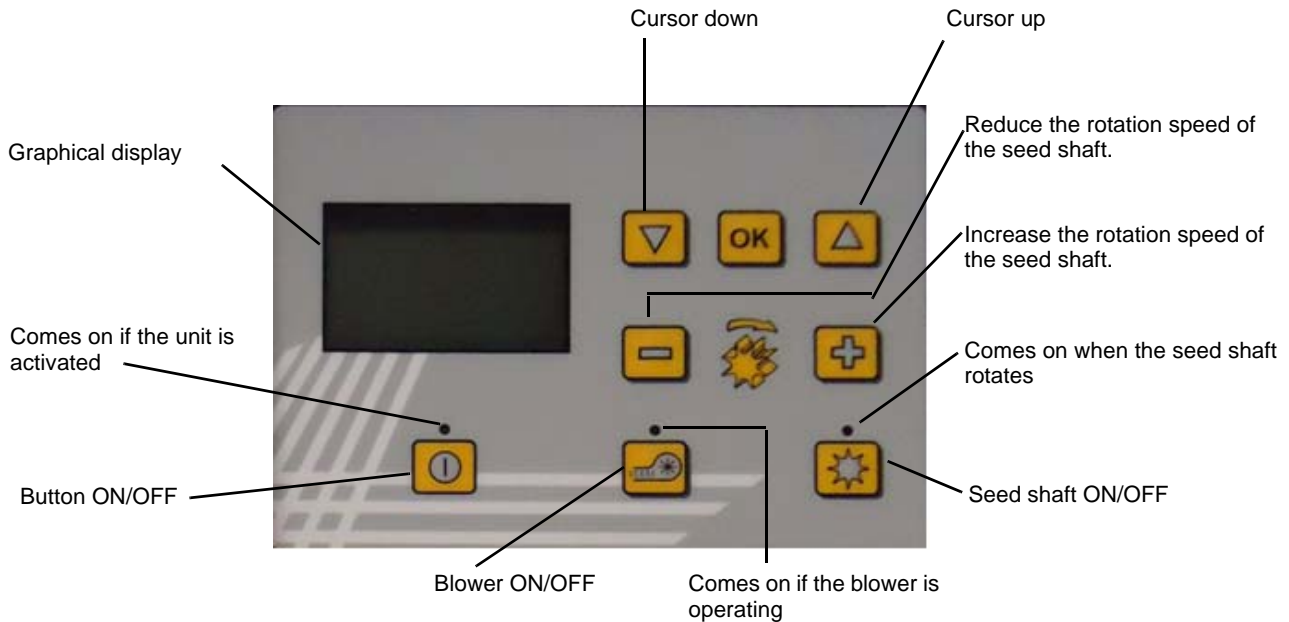
Select by pressing the button  "ON" or "OF".

See the screen and confirm with the button  or the button .

# Settings

## Using the unit 5.2

### Control module



The "ON/OFF" button that enables to activate and deactivate the control unit is located on the bottom left.



These buttons enable to adjust the rotation speed of the seed shaft.



Below are the ON and OFF buttons of the seed shaft. When you press the ON/OFF button of the seed shaft, the latter starts rotating. The control light comes on.



On-board computer control (for example, surface calculation, distribution test, emptying), selecting menu items.



Activates or deactivates the blower

1/ **For an electric blower**, the control lamp flashes when the blower starts-up. If the blower is operating continuously, the control lamp is illuminated.

2/ **For a hydraulic blower**, the control lamp comes on as soon as the blower has generated pressure.

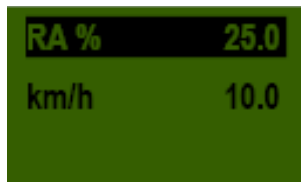


## Main display



Start-up display: is displayed during the start-up process and indicates the types and version of the control unit.

This information may be very useful for servicing. In case of a malfunction, it is necessary to carry out a diagnosis.

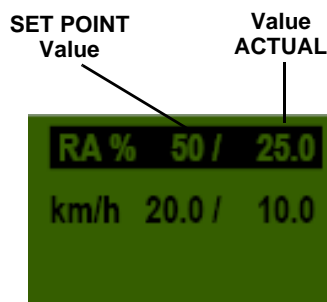


During operation without speed sensor



**RA %:** set rotation speed of the seed shaft (in %)

To be set using the buttons   of the control module.

**Km/h:** The travel speed [km/h] can be set in the "distribution test" menu item.



During operation with speed sensor

	Set point value	Actual value
<b>RA % (seeding shaft)</b>	Set rotation speed of the seed shaft (in %). To be set with the buttons   of the control module	Actual rotation speed of the seed shaft (in %). Calculated using the sensor according to the travel speed and displayed on the control module.
<b>km/h (travel speed)</b>	Can be set in the "Distribution test" menu item	Actual travel speed in km/h. Measured by the sensor and displayed on the control module. Main menu - Selection menu.

## Selection menu



After starting the device, you can navigate the menu using the three buttons opposite.



In the menu, the cursor keys (opposite) allow you to go down or go up in a menu item.

# Settings

The following menu items are available.



Select a menu item enabling the setting of values. The "OK" button allows you to access the values setting mode.

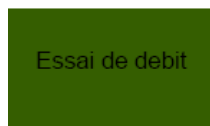


Then modify the value using the keys opposite.

## Distribution test (output test)



Apart from carrying out a distribution test, this menu item also enables to set certain set point values: seed shaft speed, working width and travel speed. The input values are also respected for area calculation (sowed area).



Access the "Output test" menu item and set the following values.



The presence settings can be done using the buttons opposite.



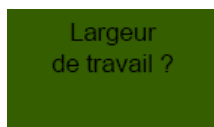
To modify a value, select it with the button



value using the buttons , then confirm with the button



The following points must be indicated in view of the automatic distribution test:



You must enter the working width here.

Vitesse  
d'avancement?

Indicate here the average ground speed envisaged.

kg/ha ?

Enter here the desired quantity distributed  
(for example: 103.5 kg/ha)

Temps de l'essai  
de débit ?

Set here the distribution test duration.

- NOTE**
- In the case of small seeds such as rape seed, phacelia, poppy, etc. it is recommended to configure a 2-minute distribution.
  - By default, the distribution time is set at 1 minute.
  - In the case of larger seeds, such as wheat, barley, peas, etc., a distribution of 0.5 minutes is recommended.




Before starting the test, also check that you have removed the distribution cover and used it. Check that the distribution bag or a collection tank is placed precisely below.

Demarrer  
calibrat. ?

If all values are set correctly, start the test.

Calibrat. en cours



The distribution test is started:  
After starting, the seeding shaft automatically begins to rotate without turbine. At the end of the time set, the seed shaft automatically stops.

Entrez  
essai de débit  
**3.25 kg**

Then, weigh the seeds distributed and indicate the value.

Test incorrect !  
Recommencer ?  
**OUI**

If the difference with the theoretical value to be obtained is too large, this display appears.



When the automatic adjustment of the seeding shaft is less than 3% (difference), the check mark appears and the quantity distributed in kg/ha is displayed on the screen.

Entrez  
essai de débit  
**3.25 kg**

The seed shaft speed is now automatically calculated. The display then returns to the main menu.

# Settings

**NOTE** The distribution test can be stopped at any time by pressing the button

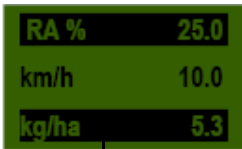


or

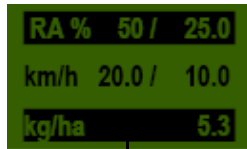


of the control module.

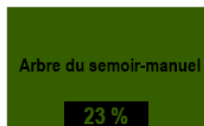
**NOTE** On 500 I seed drills where a hopper level sensor is installed, the "Container almost empty" may be displayed on the screen during the distribution test, the test continues nevertheless. If there are not enough seeds in the container, this can however distort the accuracy of the distribution test.



You then see the value in kg/ha set on the screen.



The two digit display appears if, for example, you use a speed sensor.



This menu point is used for the preliminary coarse speed setting of the seeding shaft. The speed (%) of the seed shaft must not be modified as the settings are transmitted directly from the distribution test.


## Settings

### Hectare counter (distributed area)



Displays the hectares that have been sowed.

**NOTE** The values are set automatically if the distribution test is carried out. See the menu item 2.6. Calculates the sowed area as soon as the seed shaft begins to rotate.

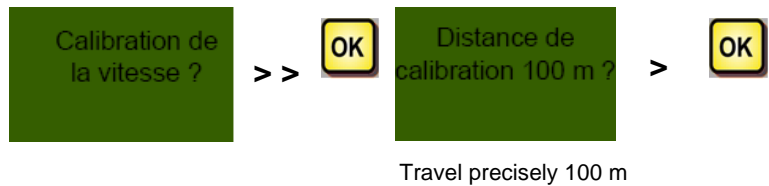
Keep the button  pressed for 5 seconds to reset the area value. The total area cannot be reset.

### Calibration of the travel speed

A calibration must be done considering that the control mode is based on this value for all calculations (display of the speed, dosing, area calculation).

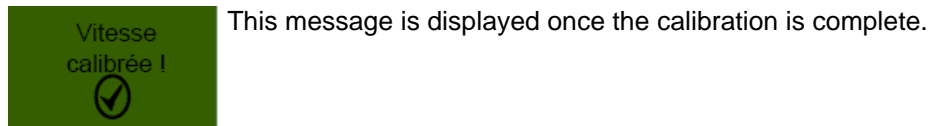
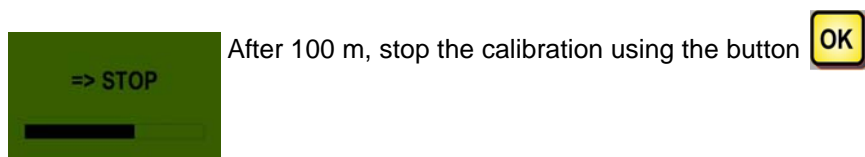
3 calibration possibilities are available.

## Test distance 100 m

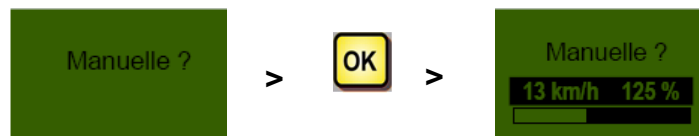


Rouler sur 100 m  
=> START

**NOTE** To keep it simple, measure beforehand a distance of precisely 100 m and mark the start and the end.



## Manual calibration

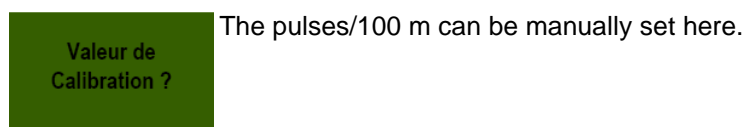


When driving, compare the speed displayed with that of the tractor's display.

Correct the value using the buttons   until the values correspond.

**NOTE** The calibration can be done manually without having to travel 100 m.



## Calibration value





**NOTE** If you have already calibrated your device, note down the value and define it here once again if necessary.

# Settings

## Reinitialising the calibration



Reinitialiser le calibrage ?  Confirm with the button .

Reinitialiser le calibrage ?  Reinitialise the value to its factory setting.

Reinitialiser le calibrage ?  This message is displayed once the calibration has been reinitialised

## Emptying

This menu item enables to easily empty the container (for example, at the end of work, in case of change of seeds, in case of change of the seeding shaft).

Vider  Vidange en cours 

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

**NOTE** The emptying can be stopped at any time by pressing the buttons

   or the button .


The display then returns to the main menu.

**NOTE** Before starting the emptying, also check that you have removed the distribution cover and used it. Check that the distribution bag or a collection tank is placed precisely below.

## Hour meter

Heures totales: **23.46 h**  
heures: **0.38 h**

Hour meter = operating duration of the seed shaft. Displays the total hours and the daily hours.

Keep the button  pressed for 5 seconds to reset the daily hours. The total hours cannot be reset.

## Operating voltage / Current display

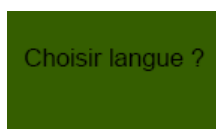
Tension d'emploi: **11.7 V**  
I-1: **12.6 A** I-2: **1.2 A**

Displays the current operating voltage. A fluctuation of this value during operation indicates problems with your on-board electronics. These can result in an unsatisfactory distribution result.

**I-1:** indicates the current consumption of the turbine motor in amperes.


**I-2:** indicates the current consumption of the electric seed shaft motor in amperes.

## Languages








Select the desired language and confirm with the button .

**NOTE** If a hydraulic turbine is installed on your seed drill and you wish to change the language, proceed as follows:





When "**Motor not connected**" is displayed, press the button . You then have 15 seconds to modify the language in the menu. You can then carry out the desired settings in the programming menu, in the selected language.

## Control messages

### Set points

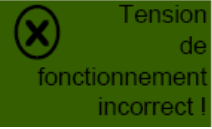
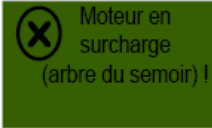
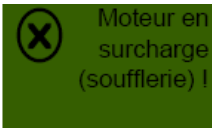

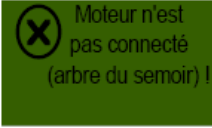
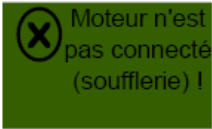
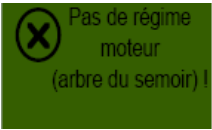
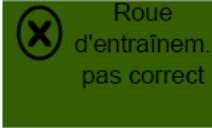
Display	Cause	Solution
 VCC (5V) interne n'est pas correct	Is displayed if the internal control voltage is below a minimum value.	Return to the factory.
 Tension de fonctionnement basse	Is displayed when the operating voltage is insufficient.	Reduce the connected devices. Check the battery. Check the wiring. Check the generator.
 Tension de fonctionnement élevée	Is displayed when the operating voltage is too high.	Check the generator.
 Tremie presque vide	This message is displayed as soon as the filling level sensor is no longer covered with seeds (more than 30 seconds).	Top up with seeds. With the PS 800 model, the sensor can be moved (continue to rotate downwards).
 Valeur de calibration trop grande	Is displayed if the number of pulses during calibration is too high.	Reduce the number of magnets on the wheel sensor. Please contact the customer service for all other sensors.

# Settings

Display	Cause	Solution
 <p>Valeur de calibration trop petite</p>	Is displayed if the number of pulses during calibration is too low.	Install several magnets on the wheel sensor. Please contact the customer service for all other sensors.
 <p>Vitesse d'avancement trop élevée</p>	Is displayed when the driving speed is too high.	Compare the settings with the actual speed and reduce.
 <p>Vitesse d'avancement trop lente</p>	Is displayed when the driving speed is too low.	Compare the settings with the actual speed and increase.
 <p>Boitier s'eteint automatiquement !</p>	Is displayed during the shut-down process. The message disappears after a few seconds.	



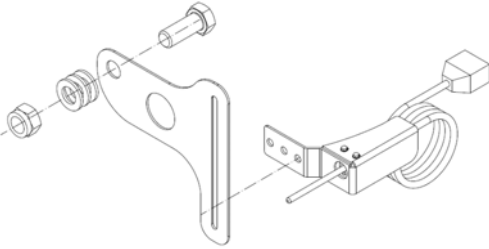
## Errors

Display	Cause	Solution
	Is displayed when the operating voltage goes below a minimum value or very large voltage fluctuations occur.	Check the wiring and the connectors. Check the battery Check the generator. Shut-down the other devices connected (the working light for example).
	Is displayed when the seed shaft cannot rotate or when the motor is subjected to a load within the limiting range for too long.	When this message is displayed, you must shut-down the device and check if solids or similar materials are preventing the seed shaft from rotating, restricting the mixer or interfering with the operation. For seeds that flow well, the agitator can also be disconnected.
	Is displayed if the motor is subjected to a load within the limiting range for too long.	When this message is displayed, you must shut-down the device and check whether objects are blocking the turbine or interfering with the operation.
	If you have not activated the hydraulic turbine, the pressure sensor is not turned on in the air flow and this status message is displayed.	Activate the hydraulic turbine and wait until the LED comes on. You can then activate it.
	This message is displayed when the wiring is not connected or is defective.	Check the cables and connectors.
	This message is displayed when the wiring is not connected or is defective.	Check the cables and connectors.
	The motor is connected, is not overloaded, but is not rotating.	Please contact the after sales service.
	Is displayed if the control module does not accept any signal from the speed sensor.	Check the cables and connectors. If no failure is detected on the ground wheel, for which we can conclude that there is a malfunction, contact the customer service.

# Settings

## Lifting sensor

### Mounted machines



The sensor support plate has an aperture enabling the height adjustment of the sensor. This enables to adapt to the top drawbar hole that you have selected.

The sensor detection rod must be positioned below the upper link, when the machine is placed on the ground.

In this manner, when the machine is coupled and lifted, the upper link presses on the sensor rod and a cut-off signal is sent.

If the operation is reversed: i.e. the seed drill sows when the sensor rod is pressed, it is then possible to reverse the level signal of the control unit (see unit settings).

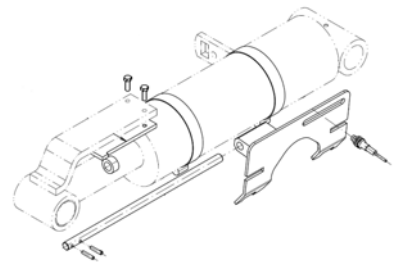
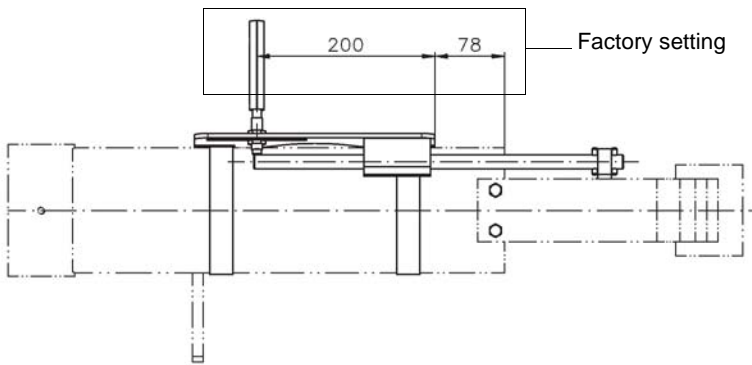
### Trailed machines

The lifting sensors of trailed machines are controlled by lift cylinders on transport trolleys. The setting therefore is done at this level.

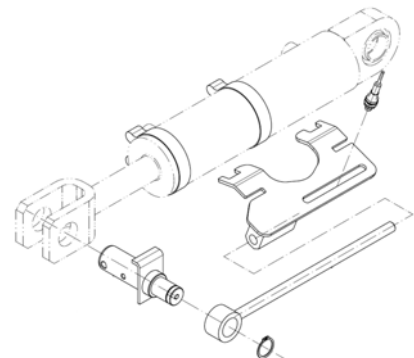
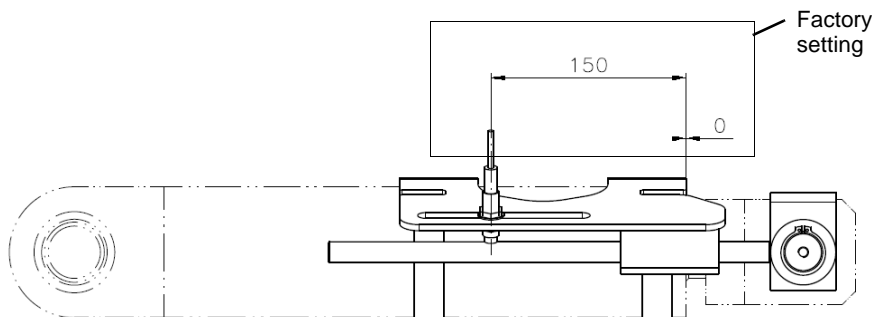
#### **CTC**

The operation of the sensor can be adjusted by moving the inductive sensor in the support aperture. In this manner, the starting time of the sowing can be selected precisely according to the height/depth of the machine.

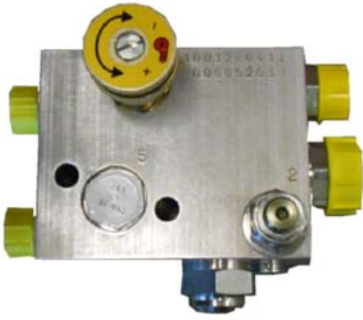
If the seed drill is operating when the machine is lifted and stops when the machine is on the ground, the processing of the signal must be modified via the unit.



#### **QUALIDISC T**



## Hydraulic blower



The hydraulic blower has an output setting on the hydraulic unit by an adjusting knob.

### Variant 1 (constant pump - oil output on tractor not adjustable)

- > Retract the regulating valve completely (- minus).
- > Start the blower (same tractor motor speed as in the field).
- > Adjust the rotation speed of the blower using the regulating valve of the control unit.
- > The control unit protects the motor against any overspeed.

**NOTE** The hydraulic pump of the tractor must carry sufficient oil so that the rotation speed of the blower does not drop even in case of lowering of the tractor's motor speed or operation of other hydraulic functions.

### Variant 2 (hydraulic pump with adjustable output control valve on the tractor)

- > Remove the regulating valve completely (+ plus).
- > Close the flow controller on the tractor (set the oil quantity to 0).
- > Start the blower and bring it to the desired rotation speed (gradually increase the quantity of oil).

**NOTE** The control unit is defined for 120 l/min. If the tractor pump produces a greater quantity of oil, there is a risk of the system overheating, particularly if the tractor does not have an oil cooling system.



The setting is thus valid only for the tractor used. You must once again adjust the turbine when using another tractor.



The setting must be precise in order to avoid sowing faults in case of underspeed and damage to the turbine in case of overspeed.

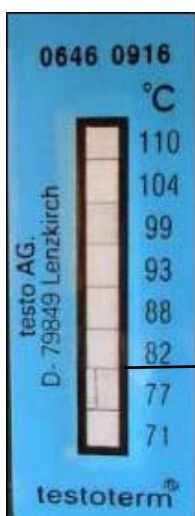
The hydraulic motor has a measuring band. If the temperature rises in a zone of the scale (from 71° to 110° C), a black colour appears.



**Any temperature greater than 80°C is prohibited**



**THE "FREE RETURN" OF THE TRACTOR MUST ALSO BE AT 5 BARS MAXIMUM. IF THE PRESSURE IS GREATER THERE IS A RISK OF THE HYDRAULIC MOTOR BREAKING.**



Any temperature greater than 80°C is prohibited

## For your safety

### Special safety instructions

**Conditions necessary for maintenance work**

Carry out maintenance work only if you have the necessary knowledge and if you have appropriate tooling. A lack of knowledge or inappropriate tools may lead to accidents.

**Use original spare parts**

Use only original spare parts for components related to safety. Dimensions, stability and material quality must be guaranteed. In case of assembly of parts other than the original parts, the guarantee will not apply.

### Accessory storage



The seed drill must be put away under cover.

The rotor and the pipes must be blown with compressed air after every use.

When the accessory is delivered, check the presence of all components and the absence of damage caused by transportation. Claims must be made in writing within 6 days.

The guarantee will be granted only if the conditions appearing on the delivery contract have been met by the buyer.

The guarantee may not be granted if the accessory:

- was repaired by the client without the dealer's agreement,
- was modified by assembling non-original elements.

# Disposal of the accessory

---

At the end of the service life of the accessory, this must be disposed of by respecting the environment. Respect the concerned requirements when disposing of the accessory.



Do not spread on the ground or pour into the sewers used grease or other substances such as motor oil, hydraulic oil, coolant fluid, brake fluid, fuel, etc.

## Metal parts

All metal machine components can be sent to scrap recycling.

## Hydraulic oil

Collect hydraulic oil in tight and clean containers, envisaged for this purpose. Avoid using containers for food and bottles for drink. Take hydraulic oil and hoses to a suitable recycling centre.

# EC conformity declaration

In accordance with  
EC directive 2006/42/  
EC

We

**Kverneland Group Les Landes Génusson SAS**  
**9, rue du Poitou**  
**FR-85130 Les Landes Génusson**

declare under our sole responsibility that the product



## Pneumatic seed drill a-drill

to which this declaration relates, conforms with the relevant safety and health requirements of EC Directive 2006/42/EC.

For the relevant implementation of the safety and health requirements mentioned in the EC Directive, the following standards have been taken into account:

- EN 292-1;2 (11/1991);
- EN 294 (06/1992)

Kverneland Group Les Landes Génusson  
Les Landes Génusson, 02-07-2012

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