

ELECTRONICAL CONTROLLER

NEUMASEM

NEUMASEM PLUS



ARTING

M



NEUMASEM MDCF





SOLÀ seed drills and fertilizer spreaders are manufactured in a highly specialized environment and our factory has a vast customer-endorsed experience.

SOLÀ machines use highly advanced technology and are guaranteed to work without malfunction in a great variety of conditions. They are provided with easy-to-use and efficient devices. **SOLÀ** machines perform excellently with only minimum operator maintenance.

This manual will help you use your **SOLÀ** product with the utmost efficiency.



Certified quality system

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It is forbidden to copy any part of this manual. Specifications are subject to change or modification without notice. The pictures included do not necessary show the standard version.

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1. FRONT PANEL NEUMASEM



The monitor provided comes programmed especially for your model of seed drill. The user will only need to observe the displayed values and no extra programming is required.

The monitor shows 6 different channels or readings, as well as 3 different arrows showing the states.

C1 shows forward speed in m/sec. **C2** shows two different hectares (for example on partial and one total hectare). **C3** not in use.

C4 shows the fan's rpm.

C5 shows the turning speed of the distributor's axle's in rpm.

C6 shows if the hopper's seed level is too low.

By default the forward movement speed is displayed on the monitor. When some abnormal readings are shown, the screen will display "**Alarm**" intermitently, the alarm will sound and the corresponding malfunction channel will be activated. The alarm will not stop until the malfunction is fixed.

To display a desired reading, press the central button and scroll to the required channel. After 10 seconds, the reading will change back to C1 again.

1.1 FORWARD SPEED – C1

Select a channel by using the central button. The alarm is activated when the speed is under 2.6 km/h and can be turned off using programming mode 2.

Calibrating the speed sensor

Theoretical calibration is achieved by entering a calibration factor in programming mode 2, as indicated in the following table.

HODEL	WILFEI	WORKING WIDTH (CM)											
MODEL	WHEEL	250	300	350	400	450	500	600	680	700	770	800	
SM-1909	340/55-16	-	-	-	1,815	1,573	1,452	1,259	-	1,111	-	-	
NEUMASEM 699-799	340/55-16	-	-	-	1,815	1,573	1,452	1,259	-		-	-	
NS PLUS-2311	340/55-16	-	-	-	1,815	1,573	1,452	1,259	-	1,111	-	-	
ARES-2713	340/55-16	-	-	-	1,815	1,573	1,452	1,259	-	1,111	-	-	
	10.0/75-15,3	-	-	-	1,752	1,518	1,402	1,215	-	1,072	-	-	
NEU-1706	-	2,178	2,178	1,834	1,584	-	-	-	-	-	-	-	
NEU-2512	-	1,340	1,340	1,340	1,340	-	-	-	-	-	-	-	
NEUMASEM-901	4.80-8 / 4.00-8	-	-	-	-	-	-	3,288	-	-	-	3,288	
A-6000 SM	4.80-8 / 4.00-8	-	-	-	-	-	-	1,336	-	1,336	-	-	
A-6000 NS PLUS	4.80-8 / 4.00-8	-	-	-	-	-	-	1,336	-	1,336	-	-	
CT-2412	3.50-8	-	-	-	-	-	-	0,909	-	0,909	-	-	

HODEL	WILFEL	WORKING WIDTH (CM)											
MODEL	WHEEL	250	300	350	400	450	500	600	680	700	770	800	
VESTA-2813 - 1 metering unit	2 50 9	-	-	-	-	-	-	1,995	1,995	1,995	1,995	-	
	5.50-0	-	-	-	-	-	-	3,989	3,989	3,989	3,989	-	
SD-1504	4.80-8 / 4.00-8	-	-	-	1,943	1,644	1,425	1,257	-	-	-	-	
SD-1605	4.80-8 / 4.00-8	-	-	-	1,943	1,644	1,425	1,257	-	-	-	-	
KIBLI-2010	-	-		-	1,319	1,319	1,319	1,319	-	-	-	-	
SM-1909/L	340/55-16	-	-	-	1,815	1,573	1,452	1,259	-	1,111	-	-	
NEUMATICA-A	340/55-16	-	-	-	1,815	1,573	1,452	1,259	-	-	-	-	
NEUMATICA PLUS	340/55-16	-	-	-	1,815	1,573	1,452	1,259	-	1,111	-	-	
NEUMASEM-901/L	4.80-8 / 4.00-8	-	-	-	-	-	-	3,288	-	-	-	3,288	
NEUMATICA A-6000 SM	4.80-8 / 4.00-8	-	-	-	-	-	-	1,336	-	1,336	-	-	
NEUMATICA A-6000 PLUS	4.80-8 / 4.00-8	-	-	-	-	-	-	1,336	-	1,336	-	-	
SD-5000	4.80-8 / 4.00-8	-	-	-	-	-	1,425	1,257	-	-	-	-	

Selecting speed channel (C1)

- **1-** Press to switch to mode 1. While holding the button, press the central button to modify the digit.
- **2-** Hold the central button for some seconds to modify the flickering digit.
- **3-** When the buttons are released, the monitor will return to its normal state.



PLEASE NOTE: THE IMPULSE NUMBER AUTO-CALIBRATION MODE IS MORE ACCURATE AND A FIELD TEST PERFORMANCE IS REQUIRED.

Working in micro mode

When working with the distributor in the micro-dosing mode

(for small hoppers and minimal doses), press and hold 💮 but-

ton for more than 3 seconds until the arrow indicating the micro mode is displayed. In this situation, the monitor will keep the speed and actual real working area.

Press and hold for more than 5 seconds until the indicating arrow disappears to resume normal position.

Auto-calibrating the speed sensor

- 1- Mark 100 metres.
- 2- Select channel 1 (speed).



4- Cover the 100 marked metres. The monitor will count the sensor's impulses.

5- After finishing, press of again. By doing this, the monitor retains the impulse number in the memory.

1.2 TOTAL AREA / SEED DRILL WIDTH – C2

Two independent total areas can be marked.

Displaying the total area

- 1- Select channel 2.
- **2-** Press to display total areas 1 and 2 on the screen. First, "tot. 1" will be displayed and immediately afterwards the value in Ha will be shown.

Setting to zero the total areas

- 1- Select channel 2.
- 2- Press to display.
- **3-** Press and hold of for more than 5 seconds.

Programming the working width

- 1- Select channel 2 of the area.
- 2- Press and hold for more than 5 seconds until the width value is displayed and, without releasing it, press the central button to modify the flickering digit.
- **3-** Press and hold the flickering digit for more than 5 seconds to modify its value.
- 4- Release all buttons to return to the normal state.

1.3 FAN RPM / FAN ALARMS - C4

To display the fan's speed in rpm

Select channel 4 using the central button

Fan alarms

The fan's minimum turning speed can be programmed. Under 2 Km/h these alarms will deactivate.

Fan's minimum speed

- Select channel 4.
- **2-** Press and hold 💮 button for more than 5 seconds.
- **3-** Hold it and press the to change value and digits as explained in former cases. Default speed is 3800 rpm.
- **4-** Release all buttons to resume the normal position.

Selecting the fan's number of impulses per revolution (de-fault value is set to 2).

PLEASE NOTE

FAN'S NUMBER OF IMPULSES PER REVOLUTION SHOULD AL-WAYS BE 2. ONLY USE THIS PROGRAMMING MODE IN CASE OF MALFUNCTION.

Programming number of pulses

1-To select programming mode 2, press and hold down

the button for 15 seconds, while switching on the screen using rear switch.

- **2-** Press to change the channel and select channel 4 (fan).
- **3-** Press and hold the to modify the flickering digit (it should always be 2).
- 4- Release the button to change back to normal position.

1.4 SEED SHAFT RPM – C5

Select channel 5 using the central button

40 seconds after the seed shaft stops turning, an alarm beeps 5 times consecutively. If it remains still, this alarm will repeat every 30 seconds.

To turn off the beeping, switch off the screen and switch it on again. This alarm will deactivate under 2 Km/h.

The seed shaft's alarm can be deactivated by pressing the

button for more than 5 seconds on the selected channel. The screen will display "Off". In this situation the alarm will not be activated even if the screen is switched off and on again.

1.5 HOPPER LOW LEVEL ALARM – C6

When the seed level is below the sensor, an alarm is activated and beeps 5 times consecutively. In this case the screen will display **«ALA**».

Activate and deactivate hopper level alarm

- 1- Select channel 6 using the central button 📩.
- **2-** Press and hold button for more than 5 seconds.
- **3-** Press the central button to select "**0**" (alarm is off) or "**1**" (alarm is on).
- 4- Release the buttons to change back to the normal position

1.6 TOTAL SOWING SHUT-OFF (OPTIONAL)

Press of lock the seed's exit. The screen will display the flickering text «**CORT**».

Press again to **unlock** the seed's exit and return to a normal working position. The screen will display the flickering text **«OPEN**».





1.7 SHUT-OFF SOWING FROM FOLDING PARTS (OPTIONAL)

Press $\overline{\mathbf{x}}$ to **lock** the seed's exit from the arms on the folding parts (exits on the left and right sides of the folding parts will lock). The screen will display the indicating arrow.

Press $\overline{\mathbf{x}}$ again to **unlock** the seed's exit.





INDEPENDENT FOLDING PARTS

To lock the seed's exit from the arms on the folding parts, press $\frac{1}{2}$ (to lock the left side in the driving direction) or $\frac{1}{2}$ (to lock the right side in the driving direction). The screen will display the indicating arrow.

Press \mathbf{x} or \mathbf{x} again to **unlock** the seed's exit and change back to normal position.









2. FRONT PANEL NEUMASEM PLUS



By default the forward movement speed is displayed on the monitor. When some abnormal readings are shown, the screen will display "**Alarm**" intermitently, the alarm will sound and the corresponding malfunction channel will be activated. The alarm will not stop until the malfunction is fixed.

To display a desired reading, press the central button and scroll to the required channel. After 10 seconds, the reading will change back to C1 again.

2.1 FORWARD SPEED - C1

Select a channel by using the central button. The alarm is activated when the speed is under 2.6 km/h and can be turned off using programming mode 2.

Calibrating the speed sensor

Theoretical calibration is achieved by entering a calibration factor in programming mode 2, as indicated in the following table.

HODEL	WILFEI	WORKING WIDTH (CM)											
MODEL	WHEEL	250	300	350	400	450	500	600	680	700	770	800	
SM-1909	340/55-16	-	-	-	1,815	1,573	1,452	1,259	-	1,111	-	-	
NEUMASEM 699-799	340/55-16	-	-	-	1,815	1,573	1,452	1,259	-		-	-	
NS PLUS-2311	340/55-16	-	-	-	1,815	1,573	1,452	1,259	-	1,111	-	-	
ADEC 2742	340/55-16	-	-	-	1,815	1,573	1,452	1,259	-	1,111	-	-	
ARES-2713	10.0/75-15,3	-	-	-	1,752	1,518	1,402	1,215	-	1,072	-	-	
NEU-1706	-	2,178	2,178	1,834	1,584	-	-	-	-	-	-	-	
NEU-2512	-	1,340	1,340	1,340	1,340	-	-	-	-	-	-	-	
NEUMASEM-901	4.80-8 / 4.00-8	-	-	-	-	-	-	3,288	-	-	-	3,288	
A-6000 SM	4.80-8 / 4.00-8	-	-	-	-	-	-	1,336	-	1,336	-	-	
A-6000 NS PLUS	4.80-8 / 4.00-8	-	-	-	-	-	-	1,336	-	1,336	-	-	
CT-2412	3.50-8	-	-	-	-	-	-	0,909	-	0,909	-	-	

NODEL	WHEEL	WORKING WIDTH (CM)										
	WHEEL	250	300	350	400	450	500	600	680	700	770	800
R VESTA-2813 - 1 metering unit	3 50-8		-	-	- I	-	-	1,995	1,995	1,995	1,995	-
VESTA-2813 - 1 metering unit	5.50 0	-		-	-	-	-	3,989	3,989	3,989	3,989	_
SD-1504	4.80-8 / 4.00-8	<u> </u>	<u> </u>	<u> </u>	1,943	1,644	1,425	1,257	<u> </u>	-	<u> </u>	<u> </u>
SD-1605	4.80-8 / 4.00-8	-	-	-	1,943	1,644	1,425	1,257	-	-	-	-
EURO-888	7.50-16	1,234	1,234	1,234	1,234	-	-	-	-	-	-	-
ED-1003	7.50-16	1,234	1,234	1,234	1,234	-	-	-	-	-	-	-
	10.80-12	1,112	1,112	1,112	1,112	-	-	-	-	-	-	-
TRI 194-294 / ESP	6.00-16	1,168	1,168	1,168	1,168	-	-	-	-	-	-	-
TRISEM-2110	10.0/75-15,3	-	1,152	1,152	1,152	-	-	-	-	-	-	-
CERES TM-2612	3.50-8		-	_	0,963	-	-	-	-	-	-	
GARBÍ-2210	-	-	1,266	1,266	1,266	-	-	-		-	-	-
SD-3115 BOUDOUR	6.00-16	0,962	0,962	_	-	-	-	-	-	-	-	_
SD-1203	-	0,987	0,987	0,987	0,987	-	-	-	<u> </u>	-	-	-
SD-1303	11.5/80-15.3	1,132	1,132	1,132	1,132	-	-	-	<u> </u>	-	-	-
KIBLI-2010	-	-	-	-	1,319	1,319	1,319	1,319	-	-	-	-
SM-1909/L	340/55-16		_	-	1,815	1,573	1,452	1,259	-	1,111	-	-
NEUMATICA-A	340/55-16	-	-	-	1,815	1,573	1,452	1,259	-	-	-	-
NEUMATICA PLUS	340/55-16		_	-	1,815	1,573	1,452	1,259		1,111	-	-
NEUMASEM-901/L	4.80-8 ó 4.00-8	-	-	-	-	-	-	3,288	-	-	-	3,288
NEUMATICA A-6000 SM	4.80-8 ó 4.00-8	-	-	-	-	-	-	1,336	-	1,336	-	-
NEUMATICA A-6000 PLUS	4.80-8 ó 4.00-8		- I	-		-	-	1,336	-	1,336	-	-
SD-5000	4.80-8 ó 4.00-8			-		-	1,425	1,257		-	-	-
	6.00-16	-	0,584	0,584	0,584	-	-	-	-	-	-	-
EUROPA-2000	7.50-16	-	0,617	0,617	0,617	-	-	-	-	-	-	-
FERTISEM-2000	7.50-16		0,617	0,617	0,617		-	-	<u> </u>	<u> </u>	-	_
EUROPA-2110	10.0/75-15,3	-	1,152	1,152	1,152	-	-	-	-	-	-	-
EF-1103	7.50-16	1,234	1,234	1,234	1,234	-	-	-	-	-	-	-
SD-1806	7.50-16	-	1,168	1,168	-	-	-	-	-	-	-	-
SD-3000/R15	-	-	0,568	-	-	-	-	-	-	-	-	-

Selecting speed channel (C1)

1- Press to switch to mode 1. While holding the button,

press the central button 🔘 to modify the digit.

- **2-** Hold the central button for some seconds to modify the flickering digit.
- **3-** When the buttons are released, the monitor will return to its normal state.



PLEASE NOTE: THE IMPULSE NUMBER AUTO-CALIBRATION MODE IS MORE ACCURATE AND A FIELD TEST PERFORMANCE IS REQUIRED.

Auto-calibrating the speed sensor

1- Mark 100 metres.

- **2-** Select channel 1 (speed).
- **3-** Press and hold it while pressing . The screen will display "Auto". Release it.
- **4-** Cover the 100 marked metres. The monitor will count the sensor's impulses.



5- After finishing, press again. By doing this, the monitor retains the impulse number in the memory.

Working in micro mode

When working with the distributor in the micro-dosing mode (for small hoppers and minimal doses), press and hold

button for more than 3 seconds until the arrow indicating the micro mode is displayed. In this situation, the monitor will keep the speed and actual real working area.

Press and hold for more than 5 seconds until the indicating arrow disappears to resume normal position.

2.2 TOTAL AREA / SEED DRILL WIDTH – C2

Two independent total areas can be marked.

Displaying the total area

- 1- Select channel 2.
- **2-** Press to display total areas 1 and 2 on the screen. First, "tot. 1" will be displayed and immediately afterwards the value in Ha will be shown.

Setting to zero the total areas

- Select channel 2.
 Press to display.
- **3-** Press and hold \bigcirc for more than 5 seconds.

Programming the working width

- 1- Select channel 2 of the area.
- 2- Press and hold for more than 5 seconds until the width value is displayed and, without releasing it, press the central button to modify the flickering digit.
- **3-** Press and hold the flickering digit for more than 5 seconds to modify its value.
- 4- Release all buttons to return to the normal state.

2.3 FAN RPM / FAN ALARMS - C4

To display the fan's speed in rpm

Select channel 4 using the central button

Fan alarms

The fan's minimum turning speed can be programmed. Under 2 Km/h these alarms will deactivate.

Fan's minimum speed

- 1- Select channel 4.

2- Press and hold button for more than 5 seconds.

- **3-** Hold it and press the to change value and digits as explained in former cases. Default speed is 3800 rpm.
- 4- Release all buttons to resume the normal position.

Selecting the fan's number of impulses per revolution (default value is set to 2).

PLEASE NOTE

FAN'S NUMBER OF IMPULSES PER REVOLUTION SHOULD AL-WAYS BE 2. ONLY USE THIS PROGRAMMING MODE IN CASE OF MALFUNCTION.

Programming number of pulses

1-To select programming mode 2, press and hold down STOP Ha#0

the button of for 15 seconds, while switching on the screen using rear switch.

- 2- Press to change the channel and select channel 4 (fan).
- to modify the flickering digit (it **3-** Press and hold the should always be 2).
- 4- Release the button to change back to normal position.

2.4 SEED SHAFT RPM - C5

Select channel 5 using the central button



40 seconds after the seed shaft stops turning, an alarm beeps 5 times consecutively. If it remains still, this alarm will repeat every 30 seconds.

To turn off the beeping, switch off the screen and switch it on again. This alarm will deactivate under 2 Km/h.

The seed shaft's alarm can be deactivated by pressing the

) for more than 5 seconds on the selected chanbutton 1 nel. The screen will display "Off". In this situation the alarm will not be activated even if the screen is switched off and on again.

2.5 HOPPER LOW LEVEL ALARM - C6

When the seed level is below the sensor, an alarm is activated and beeps 5 times consecutively. In this case the screen will display **«ALA**».

Activate and deactivate hopper level alarm

- 1-Select channel 6 using the central button .
- 2- Press and hold 5 button for more than 5 seconds.
- **3-** Press the central button to select "**0**" (alarm is off) or "**1**" (alarm is on).
- 4- Release the buttons to change back to the normal position

2.6 TOTAL SOWING SHUT-OFF (OPTIONAL)

Press $\overline{x \times x}$, to **lock** the seed's exit. The screen will display the indicating arrow and the text "**CORT**" will be displayed every 2 seconds «**CORT**». Press $\overline{x \times x}$ again to **unlock** the seed's exit and return to a normal working position. The screen will display the flickering text «**OPEN**».





2.7 SHUT-OFF SOWING FROM FOLDING PARTS (OPTIONAL)

Press $\frac{1}{2}$ to **lock** the seed's exit from the arms on the folding parts. The screen will display an arrow indicating the selected mode.

Press \overline{x} again to **unlock** the seed's exit and change back to normal position.





2.8 TRAMLINING - C3

The displays defaults to the channels after 10 seconds (unless the Area Total was selected).

There are five systems of tramlining - symmetric, asymmetric left, asymmetric right, 10 bout and 18 bout. The tramline bout is programmable from 1 to 15 in symmetric, asymmetric left and asymmetric right sequences.

Selection of asymmetric tramlining is denoted by a decimal point on the display between the current bout number on the left and the tramline bout number on the right. Left or right asymmetric tramlininig is selected in the programming mode.

Manually advance the bout number

Press \bigcirc to advance the current bout number by 1.



Hold the bout number

Press to "hold" the current bout when the drill goes out of work.

The display will flash 'STOP'.

Press \bigwedge^{Here} againts to resume the normal bout sequence.



Symmetric Tramlining Sequence

2+2 seed spouts are closed during the tramline bout only. The instrument will beep once the beginning of the tramline bout, and the display will continue flashing for the duration of the bout.





Asymmetric Left Tramlining Sequence

Two seed spouts are closed on the left hand side of the drill on the tramline bouts. The instrument will beep once the beginning of each tramline bout, and the display will continue flashing for the duration of the bout.







Asymmetric Right Tramlining Sequence

Two seed spouts are closed on the right hand side of the drill on the tramline bouts. The instrument will beep once the beginning of each tramline bout, and the display will continue flashing for the duration of the bout.







10 Bout Tramlining Sequance

For use with 4 metre drill/10 metre sprayer, or 8 metre drill/20 metre sprayer combinations. $(2 \times 2 \text{ left} \text{ hand} \text{ seed spouts are closed on bouts 4 and 7, and 2 x 2 right hand seed spouts closed on bouts 2 and 9). Starting on bout 1 requieres turning RIGHT at the end of the first bout.$



NOTE TO TURN LEFT AT THE END OF THE FIRST BOUT, ADVANCE THE BOUT NUMBER TO 6 BEFORE COMMENCING DRILLING.



18 Bout Tramlining Sequance

For use with 4 metre drill and an 18 metre sprayer. $(2 \times 2 \text{ left})$ hand seed spouts are closed on bouts 3 and 16, and 2×2 right hand seed spouts closed on bouts 7 and 12). Starting on bout 1 requieres turning RIGHT at the end of the first bout.



NOTE: TO TURN LEFT AT THE END OF THE FIRST BOUT, ADVANCE THE BOUT NUMBER TO 10 BEFORE COMMENCING DRILLING.

The instrument will beep once the beginning of each tramline bout and the display will flash for the duration of the tramline bout.



Selecting the Tramline Sequence

- 1- Select the channel.
- **2-** Hold () to enter programme mode 1. After 5 seconds the first two digits flash, indicating the tramline sequence currently set:
- **'SY'** = Symmetric
- **'AL'** = Asymmetric Left
- **'Ar'** = Asymmetric Right
- **'AS'** = Special Asymmetric sequence e.g. 10 bout and 18 bout.
- **3-** Continue holding the button and press and HOLD the button to select the required sequance.



Setting the Tramline Bout

- PRESS and RELEASE the button to toggle between the tramline sequence and tramline bout number display. The 3rd and 4th digits flash indicating the tramline bout number currently set.
- 2- PRESS and RELEASE the button to cycle the tramline bout from 1 to 15.



3. FRONT PANEL NEUMASEM MDCF



By default the forward movement speed is displayed on the monitor. When some abnormal readings are shown, the screen will display "**Alarm**" intermitently, the alarm will sound and the corresponding malfunction channel will be activated. The alarm will not stop until the malfunction is fixed.

To display a desired reading, press the central button and scroll to the required channel. After 10 seconds, the reading will change back to C1 again.

3.1 FORWARD SPEED – C1

Select a channel by using the central button. The alarm is activated when the speed is under 2.6 km/h and can be turned off using programming mode 2.

Calibrating the speed sensor

Theoretical calibration is achieved by entering a calibration factor in programming mode 2, as indicated in the following table.

HODEL	WIEFI	WORKING WIDTH (CM)							
MUDEL	WNEEL	600	680	700	770				
VESTA-2813 - 2 metering units	3.50-8	1,330	1,330	1,330	1,330				

Selecting speed channel (C1)

1- Press to switch to mode 1. While holding the button,

press the central button \bigcirc to modify the digit.

- 2- Hold the central button for some seconds to modify the flickering digit.
- **3-** When the buttons are released, the monitor will return to its normal state.



PLEASE NOTE: THE IMPULSE NUMBER AUTO-CALIBRATION MODE IS MORE ACCURATE AND A FIELD TEST PERFORMANCE IS REQUIRED.

Auto-calibrating the speed sensor

1- Mark 100 metres.

2- Select channel 1 (speed).



- **3-** Press () and hold it while pressing (). The screen will display "Auto". Release it.
- **4-** Cover the 100 marked metres. The monitor will count the sensor's impulses.



5- After finishing, press O again. By doing this, the monitor retains the impulse number in the memory.

3.2 TOTAL AREA / SEED DRILL WIDTH - C2 3.3 FAN RPM / FAN ALARMS - C4

Two independent total areas can be marked.

Displaying the total area

- 1- Select channel 2.
- **2-** Press ' to display total areas 1 and 2 on the screen. First, "tot. 1" will be displayed and immediately afterwards the value in Ha will be shown.

Setting to zero the total areas

- 1- Select channel 2.
- 2- Press to display.
- 3- Press and hold for more than 5 seconds.

Programming the working width

- 1- Select channel 2 of the area.
- **2-** Press and hold \bigcirc^{11} for more than 5 seconds until the width value is displayed and, without releasing it, press the central button to modify the flickering digit.
- 3- Press and hold the flickering digit for more than 5 seconds to modify its value.
- 4- Release all buttons to return to the normal state.

To display the fan's speed in rpm

Select channel 4 using the central button

Fan alarms

The fan's minimum turning speed can be programmed. Under 2 Km/h these alarms will deactivate.

Fan's minimum speed

- 1- Select channel 4.
- 2- Press and hold button for more than 5 seconds.
- **3-** Hold it and press the to change value and digits as explained in former cases. Default speed is 3800 rpm.
- 4- Release all buttons to resume the normal position.

Selecting the fan's number of impulses per revolution (default value is set to 2).

PLEASE NOTE

FAN'S NUMBER OF IMPULSES PER REVOLUTION SHOULD AL-WAYS BE 2. ONLY USE THIS PROGRAMMING MODE IN CASE OF MALFUNCTION.

Programming number of pulses

1-To select programming mode 3, press and hold down STOP Ha=0

the button for 15 seconds, while switching on the screen using rear switch.

- 2- Press Ot change the channel and select channel 4 (fan).
- to modify the flickering digit (it 3- Press and hold the should always be 2).
- 4- Release the button to change back to normal position.

3.4 SEED SHAFT RPM – C5

Select channel 5 using the central button

Pressing the button we go from **«STF.1**» (distribution axis 1) to **«STF.2**» (distribution axis 2).

40 seconds after the seed shaft stops turning, an alarm beeps 5 times consecutively. If it remains still, this alarm will repeat every 30 seconds.

To turn off the beeping, switch off the screen and switch it on again. This alarm will deactivate under 2 Km/h.

The seed shaft's alarm can be deactivated by pressing the $\sqrt{\frac{500}{1000}}$

button for more than 5 seconds on the selected channel. The screen will display "Off". In this situation the alarm will not be activated even if the screen is switched off and on again.

Programming number of axes

- 1- Press the button for more than 15 seconds while connecting the monitor via the rear switch, to enter programming mode 3.
- 2- Press the button to change channel and go to channel of (distributor axis 2).
- **3-** Press to modify the blinking digit and hold to modify its value, (change **«0.000»** by **«1.000»**).
- 4- Stop pressing and return to normal position.

3.5 HOPPER LOW LEVEL ALARM - C6

When the seed level or fertiliser level is below the sensor, an alarm is activated and beeps 5 times consecutively. In this case the screen will display **«ALA**».

Activate and deactivate hopper level alarm

- **1-** Select channel 6 using the central button .
- **2-** Press and hold **button** for more than 5 seconds.
- **3-** Press the central button to select "**0**" (alarm is off) or "**1**" (alarm is on).
- 4- Release the buttons to change back to the normal position

3.6 MIDDLE CLOSURE MACHINE AND TOTAL SOWING CUT (OPTIONAL)

To close the seed or fertilizer outlet push the button 1 or 2, in the control box will illuminate the cut dispenser. To return to normal working position, press button 1 or 2 again.

Working position



Dispenser cut 1 TOTAL CUTTING OF SEED OR HALF MACHINE



Dosing cut 2 TOTAL FERTILIZER CUT OR HALF MACHINE



Total cutting



3.7 TRAMLINING - C3

The displays defaults to the channels after 10 seconds (unless the Area Total was selected).

There are five systems of tramlining - symmetric, asymmetric left, asymmetric right, 10 bout and 18 bout. The tramline bout is programmable from 1 to 15 in symmetric, asymmetric left and asymmetric right sequences.

Selection of asymmetric tramlining is denoted by a decimal point on the display between the current bout number on the left and the tramline bout number on the right. Left or right asymmetric tramlining is selected in the programming mode.

Manually advance the bout number

Press \bigcirc to advance the current bout number by 1.



Hold the bout number

Press to "hold" the current bout when the drill goes out of work.

The display will flash **'STOP'**.

Press $\overset{\bullet\bullet\bullet}{\bigcirc}$ againts to resume the normal bout sequence.



Symmetric Tramlining Sequence

2+2 seed spouts are closed during the tramline bout only. The instrument will beep once the beginning of the tramline bout, and the display will continue flashing for the duration of the bout.





Asymmetric Left Tramlining Sequence

Two seed spouts are closed on the left hand side of the drill on the tramline bouts. The instrument will beep once the beginning of each tramline bout, and the display will continue flashing for the duration of the bout.







Asymmetric Right Tramlining Sequence

Two seed spouts are closed on the right hand side of the drill on the tramline bouts. The instrument will beep once the beginning of each tramline bout, and the display will continue flashing for the duration of the bout.







10 Bout Tramlining Sequance

For use with 4 metre drill/10 metre sprayer, or 8 metre drill/20 metre sprayer combinations. $(2 \times 2 \text{ left} \text{ hand} \text{ seed spouts are closed on bouts 4 and 7, and 2 x 2 right hand seed spouts closed on bouts 2 and 9). Starting on bout 1 requieres turning RIGHT at the end of the first bout.$



NOTE TO TURN LEFT AT THE END OF THE FIRST BOUT, ADVANCE THE BOUT NUMBER TO 6 BEFORE COMMENCING DRILLING.



18 Bout Tramlining Sequance

For use with 4 metre drill and an 18 metre sprayer. $(2 \times 2 \text{ left})$ hand seed spouts are closed on bouts 3 and 16, and 2×2 right hand seed spouts closed on bouts 7 and 12). Starting on bout 1 requieres turning RIGHT at the end of the first bout.



NOTE: TO TURN LEFT AT THE END OF THE FIRST BOUT, ADVANCE THE BOUT NUMBER TO 10 BEFORE COMMENCING DRILLING.

The instrument will beep once the beginning of each tramline bout and the display will flash for the duration of the tramline bout.



Selecting the Tramline Sequence

- 1- Select the dia channel.
- **2-** Hold () to enter programme mode 1. After 5 seconds the first two digits flash, indicating the tramline sequence currently set:
- **'SY'** = Symmetric
- **'AL'** = Asymmetric Left
- **'Ar'** = Asymmetric Right
- **'AS'** = Special Asymmetric sequence e.g. 10 bout and 18 bout.
- **3-** Continue holding the button and press and HOLD the button to select the required sequance.



Setting the Tramline Bout

- PRESS and RELEASE the button to toggle between the tramline sequence and tramline bout number display. The 3rd and 4th digits flash indicating the tramline bout number currently set.
- 2- PRESS and RELEASE the button to cycle the tramline bout from 1 to 15.





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