

:: KYLO System

COMPUTER PFI
OPERATOR MANUAL










GENERAL WARNINGS

- Read this manual carefully before using the appliance
- Make sure the electrical power supply is compatible with that required by the system
- Do not press on the display panel as this could cause image persistence
- Do not rub or knock the display with hard objects which might scratch or damage it permanently
- Do not use pointed implements to operate the commands
- Do not use chemical solvents to clean the indicator
- Do not use direct high or low pressure water jets on the system or its constituent parts
- Use accessories approved by the manufacturer only
- All work on the system must be performed by qualified personnel
- Do not attempt to open or tamper with the appliance
- Do not use the system other than as specified in this manual
- Do not throw away the cardboard box or other packaging material. The packaging can be used to transport the device later. To transport the appliance, use the original packaging material
- Do not dispose of this product together with generic household waste
- This product must be disposed of in compliance with local authority regulations

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CONVENTIONS



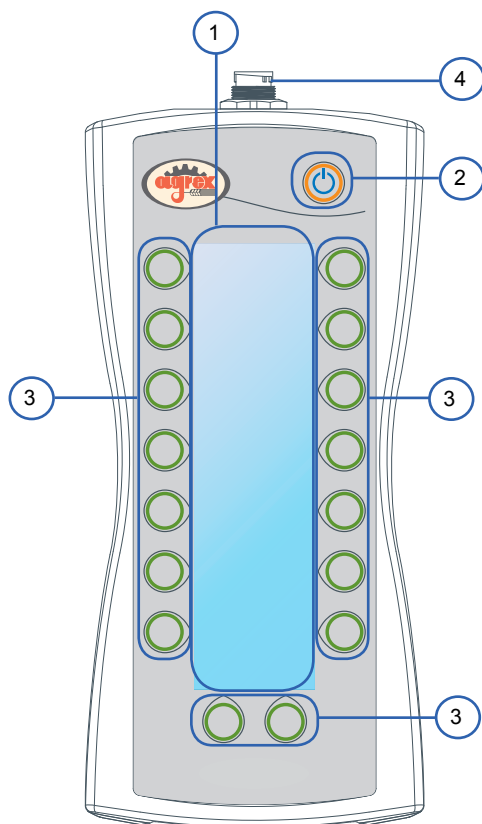
The notes contain important information emphasised outside the text to which they refer.



The notes contain important information, the whole or partial inobservance of which could lead the appliance to behave other than as desired and/or generate risk situations

DESCRIPTION OF SYSTEM

FRONT PANEL



1. DISPLAY
2. ON/OFF BUTTON
3. OPERATING BUTTONS
4. CONNECTOR


MAIN FUNCTIONS

Before starting

Make sure the indicator is connected to the power and communication cable.

Turning on and off

To turn the system on press the ON/OFF button  briefly. The indicator display lights up and the initialisation and presentation messages scroll across the screen.

To turn the system off, press the ON/OFF button  for about 3 seconds.

Using the side buttons


The side buttons perform the functions defined by the icons displayed alongside each button. According to the page, the buttons switch to other pages, perform commands, enter parameter values, etc.

DESCRIPTION OF FUNCTIONS

Operating pages

The information displayed on the page and active commands depend on the operating mode selected. The information and functions associated with the various operating modes are described below.



WARNING: When the system is turned on, the gates must be closed to take up the starting position. Before proceeding, make sure gate movement cannot cause injury to people or damage to things. Before closing the gates during the start-up phase, a message is displayed asking the operator to confirm start-up of the system by pressing the button corresponding to the  icon.

WARNING

WARNING
GATE
CLOSURE.
MAKE
SURE NO
OPERATOR
IS
INSPECTING
THE
MACHINE.



Once confirmation of start-up has been given, the pages described below will be displayed depending on the operating mode selected.

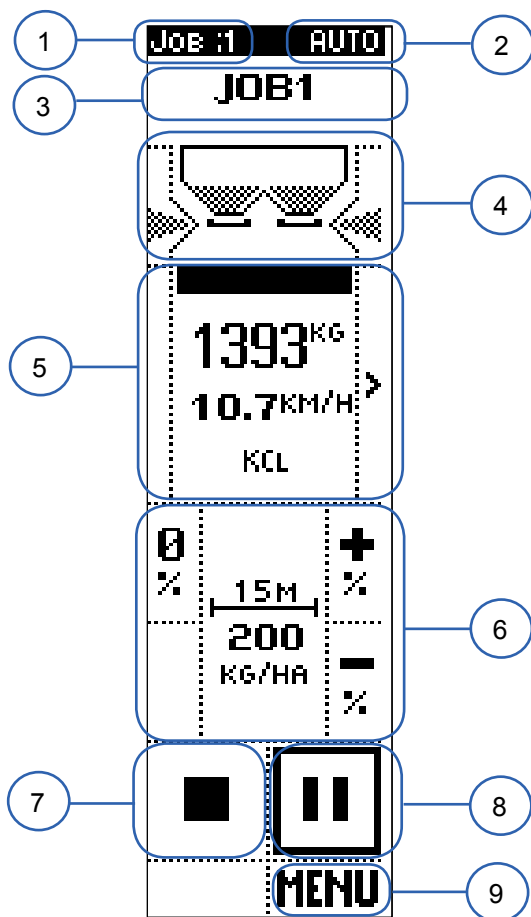
Operating page: AUTOMATIC mode

Available for models with on-board weighing system only.

In automatic mode, the machine distributes the set amount of fertilizer per hectare, adjusting gate opening to tractor speed.

The gate opening required to spread the set amount of fertilizer is determined not just by the standard calibration for that fertilizer, but also by automatic recalibration performed regularly by the system with the spreader in movement.

Given the delicacy of the calibration operation, AUTO mode is recommended only in the case of fields with flat even ground.



| | |
|---|----------------|
| 1 | JOB NUMBER |
| 2 | OPERATING MODE |
| 3 | JOB NAME |
| 4 | HOPPER STATUS |
| 5 | INFORMATION |
| 6 | SETTINGS |
| 7 | STOP |
| 8 | START/PAUSE |
| 9 | MENU |

The page is divided into sections displaying data and/or commands.

1. JOB NUMBER

DISPLAY

- Current job number

See the Job section in the Main Menu for further details on job configuration.

2. OPERATING MODE

DISPLAY

- The operating mode selected (in this case AUTO) from MANUAL, SPEED, SEMI-AUTOMATIC and AUTOMATIC.

See the Work Preferences section in Advanced Settings for further details on the operating mode.

3. JOB NAME

DISPLAY

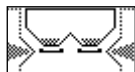
- Current job name

See the Job section in the Main Menu for further details on job configuration.

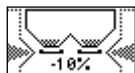
4. HOPPER STATUS

DISPLAY

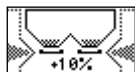
- Amount of fertilizer present in the hopper (graphic representation)
- Spreading value. If the setting is other than the NOMINAL AMOUNT PER HECTARE, an indication of the percentage above or below the nominal value is indicated under the icon representing the spreader. This value can be modified using the commands described in point 6 (SETTINGS) below.



THE SYSTEM IS SPREADING THE NOMINAL AMOUNT PER HECTARE

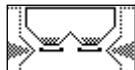


THE SYSTEM IS SPREADING 10% LESS THAN THE NOMINAL AMOUNT PER HECTARE

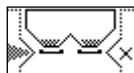


THE SYSTEM IS SPREADING 10% MORE THAN THE NOMINAL AMOUNT PER HECTARE

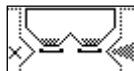
- Right and left gate opening status:



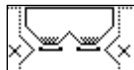
BOTH GATES OPEN



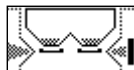
RIGHT GATE CLOSED



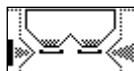
LEFT GATE CLOSED



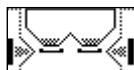
BOTH GATES CLOSED



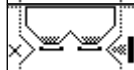
EDGE FUNCTION ACTIVATED ON THE RIGHT, LEFT GATE OPEN



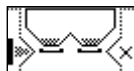
EDGE FUNCTION ACTIVATED ON THE LEFT, RIGHT GATE OPEN



EDGE FUNCTION ACTIVATED ON BOTH RIGHT AND LEFT



EDGE FUNCTION ACTIVATED ON THE RIGHT, LEFT GATE CLOSED



EDGE FUNCTION ACTIVATED ON THE LEFT, RIGHT GATE CLOSED

COMMANDS

- The buttons alongside modify the opening status of the right and left gates, by closing/ selecting the edge function/re-opening the gates.

5. INFORMATION

DISPLAY

- Measurements and counters referring to the current work session, organised in a number of sections:

| SECTION 1 | SECTION 2 | SECTION 3 |
|-----------|-----------|-----------|
| | | |

SECTION 1

- Weight of fertilizer in hopper



For models with weighing system, the weight actually measured by the system is displayed. For models without weighing system, the weight is determined according to the amount loaded (see

the Fertilizer Filling section in the Main Menu) and the gate settings.

- Tractor speed;

See the *Tractor* section in *Advanced Settings* for further details on measuring the speed according to the tractor

- Fertilizer in the hopper (defined in the job).

See the *Job* section in the *Main Menu* for further details on the fertilizer in job configuration.

SECTION 2 (REMAINING)

- Weight of fertilizer in hopper



For models with weighing system, the weight actually measured by the system is displayed. For models without weighing system, the weight is determined according to the amount loaded (see the Fertilizer Filling section in the Main Menu) and the gate settings.

- Remaining hectares: surface area of land which can be fertilized with the amount of fertilizer present in the hopper in current working conditions;
- Remaining metres: linear metres which can be covered, spreading the amount of fertilizer present in the hopper in current working conditions.

SECTION 3 (SPREAD)

- Weight of fertilizer spread during the current work session



For models with weighing system, the weight is calculated on the basis of the values measured by the system itself. For models without weighing system, the weight is determined according to the amount loaded (see the Fertilizer Filling section in the Main Menu) and the gate settings.

- Hectares spread: surface area of land fertilized during the current work session;
- Metres covered: linear metres covered during the current work session.

COMMANDS

- The buttons alongside switch from one section to another

6. SETTINGS

DISPLAY

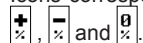
- Spreading width.

See the *Job* section in the *Main Menu* for further details on this setting in job configuration

- Nominal amount of fertilizer to be spread per hectare.

See the *Job* section in the *Main Menu* for further details on this setting in job configuration

- Icons corresponding to the increase, decrease and reset nominal gate position buttons:



When the amount to be spread per hectare is increased or decreased, as well as indicating the percentage increase or decrease in the *HOPPER STATUS* section (see point 4 above), the icon corresponding to the increase or decrease is displayed on a dark background (



COMMANDS

- The buttons alongside the and icons increase or decrease respectively the amount of fertilizer to be spread per hectare with respect to the nominal value set in the job.
- The button alongside the icon resets gate opening to the nominal value as set in the job.

7. STOP

DISPLAY

- The STOP icon () appears when spreading has begun (see point 8 below).

COMMANDS

- The button alongside the icon stops spreading and ends the work session, closing the gates and updating the statistics and estimates for the current job.

8. START/PAUSE

DISPLAY

- The START icon () appears when the spreading command has not yet been given.
- The PAUSE icon () appears when spreading has begun, replacing the "START" icon.

COMMANDS

- The button alongside the icon starts or pauses the work session, according to the icon present. When spreading starts, the gates are opened according to the setting (see point 6 above). The pause command closes the gates, but does not update the statistics and estimates for the current job

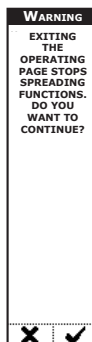
9. MENU

COMMANDS

- The button under the icon displays the main menu



WARNING: exiting operating mode to view the main menu interrupts the work session. When the button corresponding to the **MENU** icon is pressed while a work session is underway, a message is displayed asking the operator to confirm access to the main menu by pressing the button corresponding to the icon, or to cancel by pressing the button corresponding to the icon.

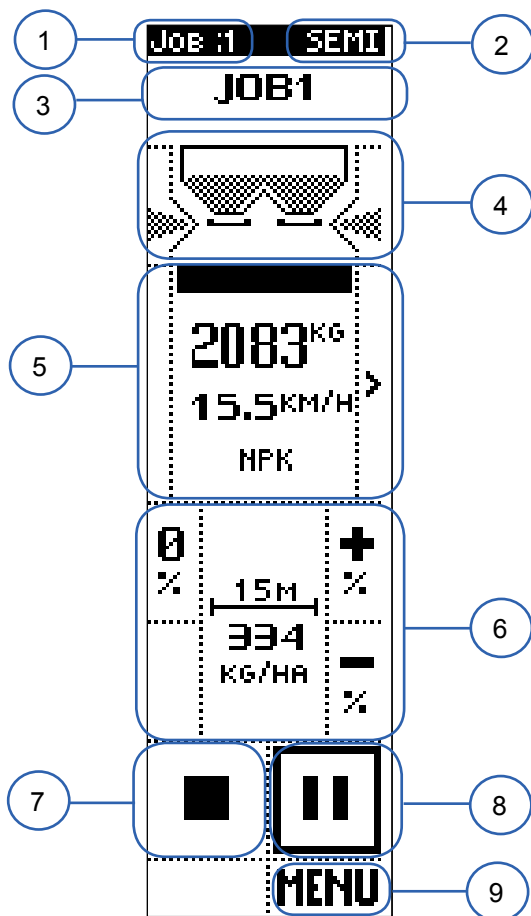


Operating page: SEMI-AUTOMATIC mode

Available for models with on-board weighing system only.

In semi-automatic mode, the machine distributes the set amount of fertilizer per hectare, adjusting gate opening to tractor speed.

In order to spread the set amount of fertilizer, gate opening is determined not just by the standard calibration for the type of fertilizer, but also by automatic recalibration performed regularly by the system with the machine stationary. At programmable weight intervals, a message is displayed asking for recalibration to be performed. The operator stops the machine and presses the corresponding button to enable calibration.



- | | |
|---|----------------|
| 1 | JOB NUMBER |
| 2 | OPERATING MODE |
| 3 | JOB NAME |
| 4 | HOPPER STATUS |
| 5 | INFORMATION |
| 6 | SETTINGS |
| 7 | STOP |
| 8 | START/PAUSE |
| 9 | MENU |

The page is divided into sections displaying data and/or commands.

1. JOB NUMBER

DISPLAY

- Current job number

See the Job section in the Main Menu for further details on job configuration

2. OPERATING MODE

DISPLAY

- The operating mode selected (in this case SEMI) from MANUAL, SPEED, SEMI-AUTOMATIC and AUTOMATIC.

See the Work Preferences section in Advanced Settings for further details on the operating mode.

3. JOB NAME

DISPLAY

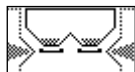
- Current job name

See the Job section in the Main Menu for further details on job configuration

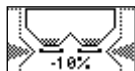
4. HOPPER STATUS

DISPLAY

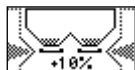
- Amount of fertilizer present in the hopper (graphic representation)
- Spreading value. If the setting is other than the NOMINAL AMOUNT PER HECTARE, an indication of the percentage above or below the nominal value is indicated under the icon representing the spreader. This value can be modified using the commands described in point 6 (SETTINGS) below.



THE SYSTEM IS SPREADING THE NOMINAL AMOUNT PER HECTARE

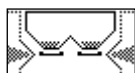


THE SYSTEM IS SPREADING 10% LESS THAN THE NOMINAL AMOUNT PER HECTARE

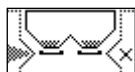


THE SYSTEM IS SPREADING 10% MORE THAN THE NOMINAL AMOUNT PER HECTARE

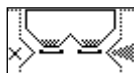
- Right and left gate opening status:



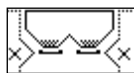
BOTH GATES OPEN



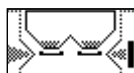
RIGHT GATE CLOSED



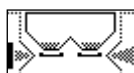
LEFT GATE CLOSED



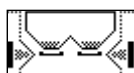
BOTH GATES CLOSED



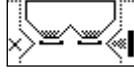
EDGE FUNCTION ACTIVATED ON THE RIGHT, LEFT GATE OPEN



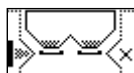
EDGE FUNCTION ACTIVATED ON THE LEFT, RIGHT GATE OPEN



EDGE FUNCTION ACTIVATED ON BOTH RIGHT AND LEFT



EDGE FUNCTION ACTIVATED ON THE RIGHT, LEFT GATE CLOSED



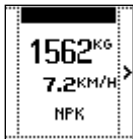
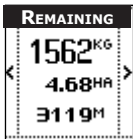
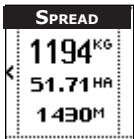
EDGE FUNCTION ACTIVATED ON THE LEFT, RIGHT GATE CLOSED

COMMANDS

- The buttons alongside modify the opening status of the right and left gates, by closing/ selecting the edge function/re-opening the gates.

5. INFORMATION**DISPLAY**

- Measurements and counters referring to the current work session, organised in a number of sections:

| SECTION 1 | SECTION 2 | SECTION 3 |
|---|---|---|
|  |  |  |

SECTION 1

- Weight of fertilizer in hopper



For models with weighing system, the weight actually measured by the system is displayed. For models without weighing system, the weight is determined according to the amount loaded (see the Fertilizer Filling section in the Main Menu) and the gate settings.

- Tractor speed;
See the Tractor section in Advanced Settings for further details on measuring the speed according to the tractor
- Fertilizer in the hopper (defined in the job).
See the Job section in the Main Menu for further details on the fertilizer in job configuration

SECTION 2 (REMAINING)

- Weight of fertilizer in hopper



For models with weighing system, the weight actually measured by the system is displayed. For models without weighing system, the weight is determined according to the amount loaded (see the Fertilizer Filling section in the Main Menu) and the gate settings.

- Remaining hectares: surface area of land which can be fertilized with the amount of fertilizer present in the hopper in current working conditions;
- Remaining metres: linear metres which can be covered, spreading the amount of fertilizer present in the hopper in current working conditions.

SECTION 3 (SPREAD)

- Weight of fertilizer spread during the current work session



For models with weighing system, the weight is calculated on the basis of the values measured by the system itself. For models without weighing system, the weight is determined according to the amount loaded (see the Fertilizer Filling section in the Main Menu) and the gate settings.

- Hectares spread: surface area of land fertilized during the current work session;
- Metres covered: linear metres covered during the current work session.

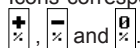
COMMANDS

- The buttons alongside switch from one section to another

6. SETTINGS

DISPLAY




- Spreading width.
See the Job section in the Main Menu for further details on this setting in job configuration.
- Nominal amount of fertilizer to be spread per hectare.
See the Job section in the Main Menu for further details on this setting in job configuration.
- Icons corresponding to the increase, decrease and reset nominal gate position buttons:



When the amount to be spread per hectare is increased or decreased, as well as indicating the percentage increase or decrease in the HOPPER STATUS section (see point 4 above), the icon corresponding to the increase or decrease is displayed on a dark background (






COMMANDS

- The buttons alongside the  and  icons increase or decrease respectively the amount of fertilizer to be spread per hectare with respect to the nominal value set in the job.
- The button alongside the  icon resets gate opening to the nominal value as set in the job.






7. STOP/CALIBRATION

DISPLAY

- The STOP icon () appears when spreading has begun (see point 8 below).
- After distributing a set amount of fertilizer, a message appears asking for calibration to be performed. The () icon alternates with the  icon to indicate that the flow can be calibrated.

See the section on Work Preferences in Advanced Settings for further details on setting the amount of fertilizer to be spread before a message appears asking for flow calibration to be performed.

COMMANDS

- The button alongside the icon  stops spreading and ends the work session, closing the gates and updating the statistics and estimates for the current job.
- When the  icon alternates with the  icon, pressing the button alongside displays a message asking for confirmation of fertilizer flow calibration.
- After stopping the machine, press the button corresponding to the  icon to perform calibration or stop spreading by pressing the button corresponding to the  icon.





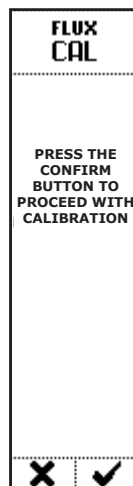
The machine must be stationary before performing calibration.

WARNING

DATA
OBTAINED
DURING
OPERATION
CAN BE USED
FOR FLOW
CALIBRATION.
DO YOU WANT
TO PROCEED?

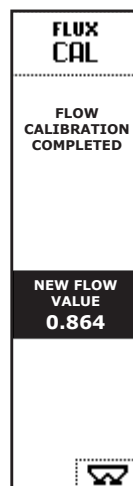



A message appears asking for confirmation before proceeding with calibration. Press the button corresponding to the  icon to perform calibration or cancel the operation by pressing the button corresponding to the  icon.

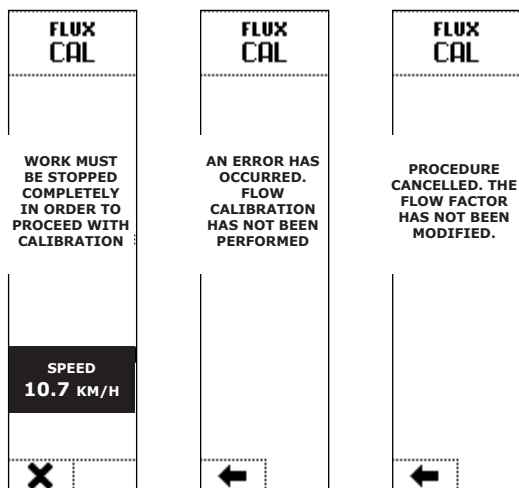


After confirming calibration, the new flow factor value obtained from calibration is displayed.

Press the button under the  icon to return to the operating page.



If calibration is not performed correctly, a number of diagnostic messages are displayed indicating that the machine should be stopped, the presence of an error which has invalidated calibration, or cancellation of the procedure by the operator.



8. START/PAUSE

DISPLAY

- The START icon (▶) appears when the spreading command has not yet been given.
- The PAUSE icon (||) appears when spreading has begun, replacing the “START” icon.

COMMANDS

- The button alongside the icon starts or pauses the work session, according to the icon present. When spreading starts, the gates are opened according to the setting (see point 6 above). The pause command closes the gates, but does not update the statistics and estimates for the current job.

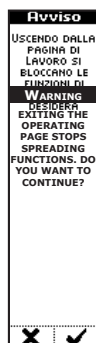
9. MENU

COMMANDS

- The button under the icon displays the main menu



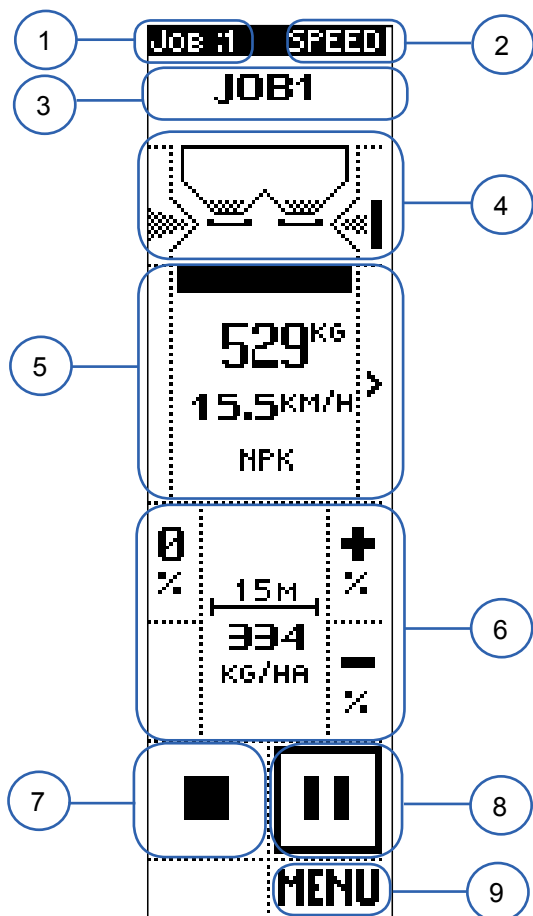
WARNING: Exiting operating mode to view the main menu interrupts the work session. When the button corresponding to the **MENU** icon is pressed while a work session is underway, a message is displayed asking the operator to confirm access to the main menu by pressing the button corresponding to the ✓ icon, or to cancel by pressing the button corresponding to the X icon.



Operating page: SPEED mode

In speed mode, the machine distributes the set amount of fertilizer per hectare, adjusting gate opening to tractor speed.

The gate opening required to spread the set amount is determined for each fertilizer by calibration.



- | | |
|---|----------------|
| 1 | JOB NUMBER |
| 2 | OPERATING MODE |
| 3 | JOB NAME |
| 4 | HOPPER STATUS |
| 5 | INFORMATION |
| 6 | SETTINGS |
| 7 | STOP |
| 8 | START/PAUSE |
| 9 | MENU |

The page is divided into sections displaying data and/or commands.

1. JOB NUMBER

DISPLAY

- Current job number

See the Job section in the Main Menu for further details on job configuration

2. OPERATING MODE

DISPLAY

- The operating mode selected (in this case SPEED) from MANUAL, SPEED, SEMI-AUTOMATIC and AUTOMATIC.

See the Work Preferences section in Advanced Settings for further details on the operating mode.

3. JOB NAME

DISPLAY

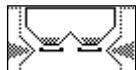
- Current job name

See the Job section in the Main Menu for further details on job configuration

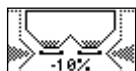
4. HOPPER STATUS

DISPLAY

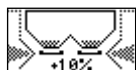
- Amount of fertilizer present in the hopper (graphic representation)
- Spreading value. If the setting is other than the NOMINAL AMOUNT PER HECTARE, an indication of the percentage above or below the nominal value is indicated under the icon representing the spreader. This value can be modified using the commands described in point 6 (SETTINGS) below



THE SYSTEM IS SPREADING THE NOMINAL AMOUNT PER HECTARE

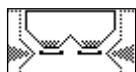


THE SYSTEM IS SPREADING 10% LESS THAN THE NOMINAL AMOUNT PER HECTARE

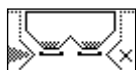


THE SYSTEM IS SPREADING 10% MORE THAN THE NOMINAL AMOUNT PER HECTARE

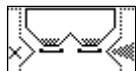
- Right and left gate opening status:



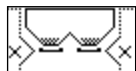
BOTH GATES OPEN



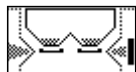
RIGHT GATE CLOSED



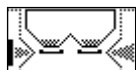
LEFT GATE CLOSED



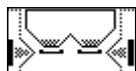
BOTH GATES CLOSED



EDGE FUNCTION ACTIVATED ON THE RIGHT, LEFT GATE OPEN



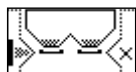
EDGE FUNCTION ACTIVATED ON THE LEFT, RIGHT GATE OPEN



EDGE FUNCTION ACTIVATED ON BOTH RIGHT AND LEFT



EDGE FUNCTION ACTIVATED ON THE RIGHT, LEFT GATE CLOSED



EDGE FUNCTION ACTIVATED ON THE LEFT, RIGHT GATE CLOSED

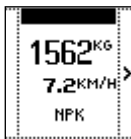
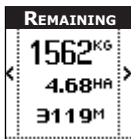
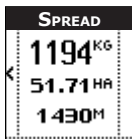
COMMANDS

- The buttons alongside modify the opening status of the right and left gates, by closing/ selecting the edge function/re-opening the gates.

5. INFORMATION

DISPLAY

- Measurements and counters referring to the current work session, organised in a number of sections:

| SECTION 1 | SECTION 2 | SECTION 3 |
|---|---|---|
|  |  |  |

SECTION 1

- Weight of fertilizer in hopper



For models with weighing system, the weight actually measured by the system is displayed. For models without weighing system, the weight is determined according to the amount loaded (see the Fertilizer Filling section in the Main Menu) and the gate settings.

- Tractor speed;

See the Tractor section in Advanced Settings for further details on measuring the speed according to the tractor

- Fertilizer in the hopper (defined in the job).

See the Job section in the Main Menu for further details on the fertilizer in job configuration

SECTION 2 (REMAINING)

- **Weight of fertilizer in hopper**



For models with weighing system, the weight actually measured by the system is displayed. For models without weighing system, the weight is determined according to the amount loaded (see the Fertilizer Filling section in the Main Menu) and the gate settings.

- Remaining hectares: surface area of land which can be fertilized with the amount of fertilizer present in the hopper in current working conditions;
- Remaining metres: linear metres which can be covered, spreading the amount of fertilizer present in the hopper in current working conditions.

SECTION 3 (SPREAD)

- **Weight of fertilizer spread during the current work session**



For models with weighing system, the weight is calculated on the basis of the values measured by the system itself. For models without weighing system, the weight is determined according to the amount loaded (see the Fertilizer Filling section in the Main Menu) and the gate settings.

- Hectares spread: surface area of land fertilized during the current work session;
- Metres covered: linear metres covered during the current work session.

COMMANDS

- The buttons alongside switch from one section to another

6. SETTINGS

DISPLAY

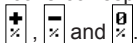
- Spreading width.

See the Job section in the Main Menu for further details on this setting in job configuration

- Nominal amount of fertilizer to be spread per hectare.

See the Job section in the Main Menu for further details on this setting in job configuration

- Icons corresponding to the increase, decrease and reset nominal gate position buttons:






-

When the amount to be spread per hectare is increased or decreased, as well as indicating the percentage increase or decrease in the HOPPER STATUS section (see point 4 above), the icon corresponding to the increase or decrease is displayed on a dark background



COMMANDS

- The buttons alongside the  and  icons increase or decrease respectively the amount of fertilizer to be spread per hectare with respect to the nominal value set in the job.

The button alongside the  icon resets gate opening to the nominal value as set in the job.

7. STOP

DISPLAY



- The STOP icon () appears when spreading has begun (see point 8 below).

COMMANDS

- The button alongside the icon stops spreading and ends the work session, closing the gates and updating the statistics and estimates for the current job.

8. START/PAUSE

DISPLAY

- The START icon () appears when the spreading command has not yet been given.
- The PAUSE icon () appears when spreading has begun, replacing the "START" icon.

COMMANDS



- The button alongside the icon starts or pauses the work session, according to the icon present. When spreading starts, the gates are opened according to the setting (see point 6 above). The pause command closes the gates, but does not update the statistics and estimates for the current job.

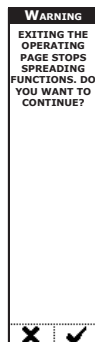
9. MENU

COMMANDS

- The button under the icon displays the main menu

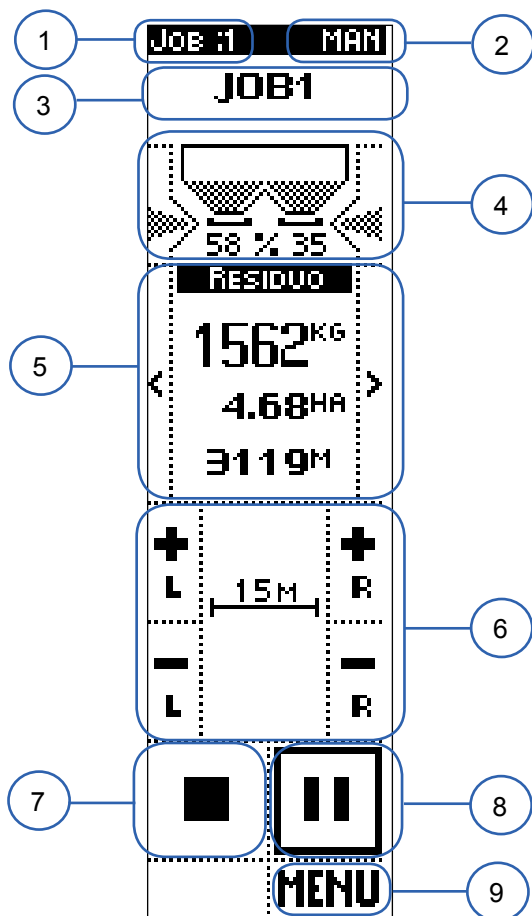


WARNING: exiting operating mode to view the main menu interrupts the work session. When the button corresponding to the **MENU** icon is pressed while a work session is underway, a message is displayed asking the operator to confirm access to the main menu by pressing the button corresponding to the  icon, or to cancel by pressing the button corresponding to the  icon.



Operating page: MANUAL mode

In manual mode, the operator uses the commands described below to define gate opening and thus the amount of fertilizer to be spread.



- | | |
|---|----------------|
| 1 | JOB NUMBER |
| 2 | OPERATING MODE |
| 3 | JOB NAME |
| 4 | HOPPER STATUS |
| 5 | INFORMATION |
| 6 | SETTINGS |
| 7 | STOP |
| 8 | START/PAUSE |
| 9 | MENU |

The page is divided into sections displaying data and/or commands.

1. JOB NUMBER

DISPLAY

- Current job number

See the Job section in the Main Menu for further details on job configuration

2. OPERATING MODE

DISPLAY

- The operating mode selected (in this case MANUAL) from MANUAL, SPEED, SEMI-AUTOMATIC and AUTOMATIC.

See the Work Preferences section in Advanced Settings for further details on the operating mode.

3. JOB NAME

DISPLAY

- Current job name

See the Job section in the Main Menu for further details on job configuration

4. HOPPER STATUS

DISPLAY

- Amount of fertilizer present in the hopper (graphic representation)
- Right and left gate opening value. These values can be modified using the commands described in point 6 (SETTINGS) below
- Right and left gate opening status:



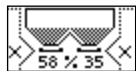
BOTH GATES OPEN



RIGHT GATE CLOSED



LEFT GATE CLOSED



BOTH GATES CLOSED

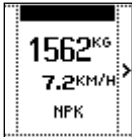
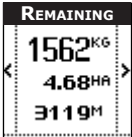

COMMANDS

- The buttons alongside modify the opening status of the right and left gates, by closing/ selecting the edge function/re-opening the gates.

5. INFORMATION

DISPLAY

- Measurements and counters referring to the current work session, organised in a number of sections:

| SECTION 1 | SECTION 2 | SECTION 3 |
|---|---|---|
|  |  |  |

SECTION 1

- Weight of fertilizer in hopper



For models with weighing system, the weight actually measured by the system is displayed. For models without weighing system, the weight is determined according to the amount loaded (see the Fertilizer Filling section in the Main Menu) and the gate settings.

- Tractor speed;

See the Tractor section in Advanced Settings for further details on measuring the speed according to the tractor

- Fertilizer in the hopper (defined in the job).

See the Job section in the Main Menu for further details on the fertilizer in job configuration

SECTION 2 (REMAINING)

- Weight of fertilizer in hopper



For models with weighing system, the weight actually measured by the system is displayed. For models without weighing system, the weight is determined according to the amount loaded (see the Fertilizer Filling section in the Main Menu) and the gate settings.

- Remaining hectares: surface area of land which can be fertilized with the amount of fertilizer present in the hopper in current working conditions;
- Remaining metres: linear metres which can be covered, spreading the amount of fertilizer present in the hopper in current working conditions.

SECTION 3 (SPREAD)

- Weight of fertilizer spread during the current work session



For models with weighing system, the weight is calculated on the basis of the values measured by the system itself. For models without weighing system, the weight is determined according to the amount loaded (see the Fertilizer Filling section in the Main Menu) and the gate settings.

- Hectares spread: surface area of land fertilized during the current work session;
- Metres covered: linear metres covered during the current work session.

COMMANDS

- The buttons alongside switch from one section to another.

6. SETTINGS

DISPLAY

- Spreading width.

See the Job section in the Main Menu for further details on this setting in job configuration


- The icons corresponding to the four buttons to adjust right and left gate opening/closing

COMMANDS

- The buttons alongside each icon modify the position of the right and left gates within a range of 0 (gate closed) to 100% (gate fully open). The display indicating opening of the two gates is described in the previous point 4 (HOPPER STATUS).

7. STOP

DISPLAY



- The STOP icon () appears when spreading has begun (see point 8 below).

COMMANDS

- The button alongside the icon stops spreading and ends the work session, closing the gates and updating the statistics and estimates for the current job.

8. START/PAUSE

DISPLAY

- The START icon () appears when the spreading command has not yet been given.
- The PAUSE icon () appears when spreading has begun, replacing the "START" icon.

COMMANDS



- The button alongside the icon starts or pauses the work session, according to the icon present. When spreading starts, the gates are opened according to the setting (see point 6 above). The pause command closes the gates, but does not update the statistics and estimates for the current job

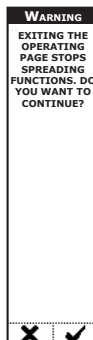
9. MENU

COMMANDS

- The button under the icon displays the main menu.

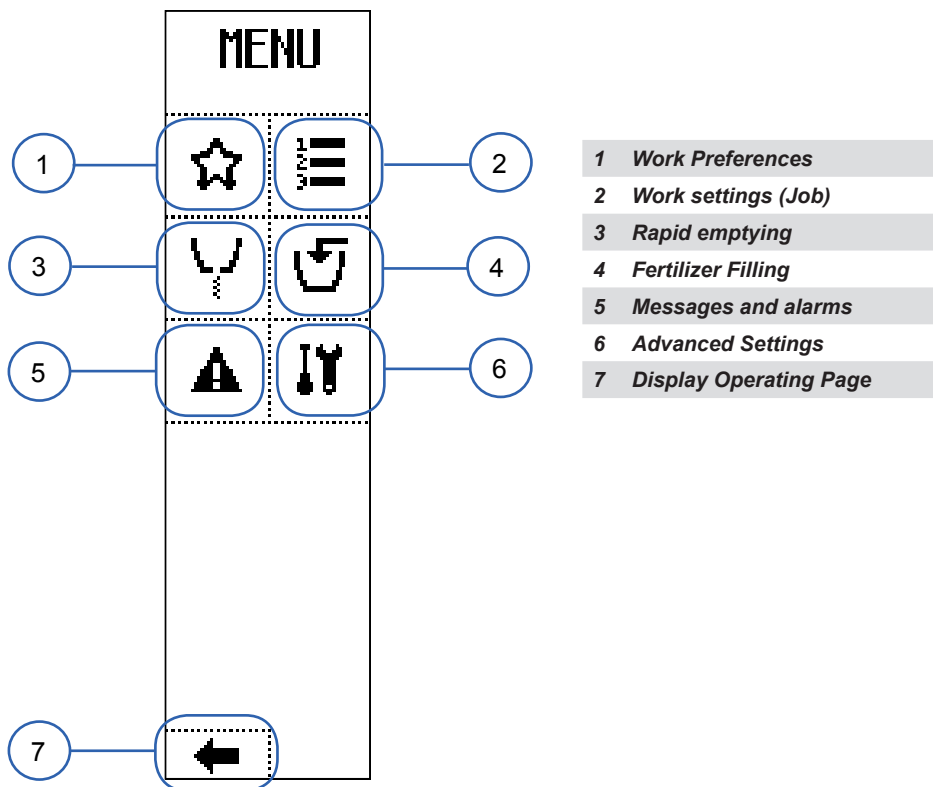


WARNING: exiting operating mode to view the main menu interrupts the work session. When the button corresponding to the **MENU** icon is pressed while a work session is underway, a message is displayed asking the operator to confirm access to the main menu by pressing the button corresponding to the  icon, or to cancel by pressing the button corresponding to the .



Main Menu

The main menu is divided into sub-menus identified by the series of icons in the figure below.



Pressing the buttons alongside the icons displays the sub-menus..

Work Preferences [1]

DISPLAY (page 1)

- OPERATING MODE: the active operating mode, selectable from the options MANUAL, SPEED, SEMI-AUTOMATIC and AUTOMATIC;
- MAX. FLOW ERR.: in semi-automatic mode, the maximum % error permitted during periodic recalibration of fertilizer flow;
- FLOW CAL. AREA: in semi-automatic mode, the spread surface area after which a message is displayed requesting recalibration;
- EDGE KIT: edge kit installed or absent;
- FIELD NO.: number identifying the field being fertilized;
- PAGE NUMBER/TOTAL PAGES.

COMMANDS (page 1)

- The buttons alongside the and icons select the value of a parameter from a pre-set list. Here, the operating mode.
The set value is confirmed by pressing or waiting 3 seconds, after which time the system displays the previous page.
- The button alongside the icon displays a page where you can enter numbers using the icons alongside the numbers and decimal point:

| MAX. FLOW ERR. | |
|----------------|---|
| | |
| | |
| 1 | 2 |
| 3 | 4 |
| 5 | 6 |
| 7 | 8 |
| 9 | 0 |
| | |

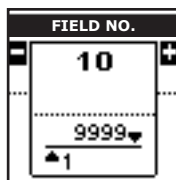
In the case of the MAX. FLOW ERR. parameter, by pressing the buttons alongside the icons containing numbers you can enter up to 5 characters to define the maximum % error permitted during periodic recalibration of fertilizer flow in semi-automatic mode.



In the case of the FLOW CAL. AREA parameter, by pressing the buttons alongside the icons containing numbers you can enter up to 5 characters to define the maximum % error permitted during periodic recalibration of fertilizer flow in semi-automatic mode.


The button alongside the icon cancels the last character entered. Holding it down cancels the entire value.

After entering the value, press the button alongside the icon to confirm and exit the menu or the button corresponding to the icon to exit the menu without confirming.


- The buttons alongside the and icons activate or deactivate a function. Here, the presence on the machine of an optional edge kit.
The set value is confirmed by pressing or waiting 3 seconds, after which time the system displays the previous page.
- The buttons alongside the and icons display a page where you can configure the values to be assigned to the parameter:
-




In the case of the FIELD NO. parameter, for example, the buttons alongside the  and  icons modify the value of the parameter from 1 to 9999.

Il valore impostato può essere confermato con The set value is confirmed by pressing  or waiting 3 seconds, after which time the system displays the previous page.

The button alongside the  icon displays the next page;



The button under the  icon goes back to the previous menu;

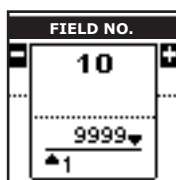
The button under the  icon directly displays the operating page.



DISPLAY (page 2)


- WORK SPEED: the speed used by the system for estimates.

COMMANDS (page 2)

- The buttons alongside the  and  icons display a page where you can configure the values to be assigned to the parameter:




For example, in the case of the WORK SPEED parameter, the buttons alongside the  and  icons modify the value of the parameter from 0 to 100 km/h.

Il valore impostato può essere confermato con The set value is confirmed by pressing  or waiting 3 seconds, after which time the system

displays the previous page.

The button alongside the  icon displays the next page;


The button under the  icon goes back to the previous menu;

The button under the  icon directly displays the operating page.



The button alongside the  icon displays the next page;

The button under the  icon goes back to the previous menu;

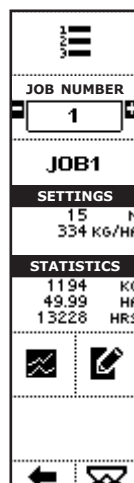
The button under the  icon directly displays the operating page.



Work settings (Job) [2]

DISPLAY

- JOB NUMBER;
- JOB NAME;
- SALIENT JOB SETTINGS;
- SPREADING WIDTH;
- KG PER HECTARE TO SPREAD;
- SALIENT JOB STATISTICS
- KG OF FERTILIZER SPREAD
- HECTARES SPREAD
- HOURS WORKED



COMMANDS

- The buttons alongside the and icons select a different job and the salient characteristics of the job are displayed below (name, settings, statistics);
- The button alongside the icon activates a page displaying the statistics associated with the selected job;
- The button alongside the icon activates a page where the operator can enter the settings for the selected job;
- The button under the icon goes back to the previous menu;
- The button under the icon directly displays the operating page.

Salient Job Statistics

DISPLAY

- JOB NUMBER;
- START: start date and time of the first work session of the selected job (since the last statistics reset);
- END: end date and time of the last work session of the selected job;
- SPREAD: total weight of fertilizer spread with the selected job (since the last statistics reset);
- WORK TIME: total duration of the work sessions with the selected job; this is the actual time worked, excluding pauses and interruptions in the work session (since the last statistics reset);
- AREA: total surface fertilized with the selected job (since the last statistics reset)

COMMANDS

- The button under the icon goes back to the previous menu;
- The button under the icon resets the statistics associated with the selected job.

| |
|----------------------|
| |
| Job :1 |
| START |
| 11.30.48 08-02-12 |
| END |
| 15.53.34 17-02-12 |
| SPREAD |
| 1636 KG |
| WORK TIME |
| 12:37 HRS |
| AREA |
| 9.72 HF |
| |

Job settings

DISPLAY

- NAME: name of the selected job;
- SPREADING WIDTH: total width (right + left) of the selected job;
- AMOUNT KG/HA: density of fertilizer to be spread for the selected job;
- FERTILIZER NAME: name of fertilizer used for the selected job;
- FLOW FACTOR: fertilizer flow modulation factor;


COMMANDS


- The buttons alongside the and icons display a page where you can enter strings of characters:

| |
|-----------------------|
| |
| NAME |
| JOB1 |
| SPREAD. WIDTH |
| 15 |
| AMOUNT KG / HA |
| 200 |
| FERTIL. NAME |
| 1 |
| FLOW FACTOR |
| 0.918 |
| |



| NAME | |
|---------|------|
| JOB1 | |
| abc... | C |
| ABC | DEF |
| GHI | JKL |
| MNO | PQRS |
| TUV | WXYZ |
| + - % . | |
| X | ✓ |


For example, in the case of the NAME parameter, by pressing the buttons alongside the icons containing letters, you can enter up to 13 characters.

The button alongside the  icon selects uppercase or lowercase letters or numbers.



The button alongside the  icon cancels the last character entered. When held down it cancels the entire string.


Press the button alongside the  icon to enter symbols (+ - %, .) in the string.


After entering the string of characters, press the button alongside the  icon to confirm and exit the menu or the button corresponding to the  icon to exit the menu without confirming.

The buttons alongside the  and  icons display a page where you can configure the values to be assigned to the parameter:

| SPREAD. WIDTH | |
|---------------|---|
| 15 | + |
| m | - |
| 50 | |
| 0 | |

For example, in the case of the SPREADING WIDTH parameter, the buttons alongside the  and  icons modify the value of the parameter in the range indicated from 0 to 50. In the case of FERTILIZER NUMBER, the range is from 1 to 40.


The set value is confirmed by pressing  or waiting 3 seconds, after which time the system displays the previous page.



The button alongside the  icon displays a page where you can enter numbers using the icons alongside the numbers and decimal point:

| AMOUNT KG/HA | |
|--------------|---|
| 0 | . |
| kg/ha | C |
| 1 | 2 |
| 3 | 4 |
| 5 | 6 |
| 7 | 8 |
| 9 | 0 |
| X | ✓ |

For example, in the case of the AMOUNT KG/HA parameter, by pressing the buttons alongside the icons containing numbers, you can enter up to 5 characters describing the density of the fertilizer to be spread for the selected job.

In the case of the FLOW FACTOR, if the value has already been obtained from experimental trials, it can be entered directly from the value input page.

The button alongside the  icon cancels the last character entered. Holding it down cancels the entire value.

After entering the value, press the button alongside the  icon to confirm and exit the menu or the button corresponding to the  icon to exit the menu without confirming.

- The buttons alongside the and icons select the value of a parameter from a pre-set list. Here, the name of the fertilizer. The set value is confirmed by pressing or waiting 3 seconds, after which time the system displays the previous page.
- The button under the icon goes back to the previous menu.
- The button under the icon directly displays the operating page.



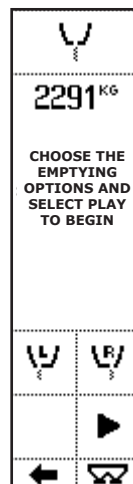
Rapid emptying [3]

DISPLAY

- WEIGHT IN HOPPER;
- The START icon () appears when the emptying command has not yet been given.
- The STOP icon () appears when emptying is underway, replacing the START icon.

COMMANDS

- The button alongside the icon selects the left gate and opens it completely. The border indicates the selection ();
- The button alongside the icon selects the right gate and opens it completely. The border indicates the selection ();
- The button alongside the icon opens the selected gates completely in order to empty the machine;
- The button alongside the icon closes the selected gates;
- The button under the icon goes back to the previous menu;
- The button under the icon directly displays the operating page.



Fertilizer Filling [4]

Machines without on-board weighing system

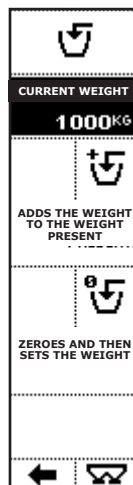
The page allows the weight loaded to be set


DISPLAY






- CURRENT WEIGHT: weight present in the hopper;

COMMANDS

- The button alongside the icon displays the ADD WEIGHT page where you can enter numbers using the icons alongside the numbers and decimal point. Enter the weight of the fertilizer to be added to that already present in the machine.






- The button alongside the  icon displays the SET WEIGHT page where you can enter numbers using the icons alongside the numbers and decimal point. Enter the weight of the fertilizer to be loaded in the machine after the hopper has been emptied.



| AMOUNT KG/HA | |
|---|---|
| 0  | |
|  |  |
| 1 | 2 |
| 3 | 4 |
| 5 | 6 |
| 7 | 8 |
| 9 | 0 |
|  |  |

In the case of the ADD WEIGHT page, press the button alongside the icons containing numbers to enter the weight added to the machine.

In the case of the SET WEIGHT page, press the button alongside the icons containing numbers to set the weight present in the machine.

The button alongside the  icon cancels the last character entered. Holding it down cancels the entire value.

After entering the value, press the button alongside the  icon to confirm and exit the menu or the button corresponding to the  icon to exit the menu without confirming.

- The button under the  icon goes back to the previous menu.
- The button under the  icon directly displays the operating page.

Machines with on-board weighing system



The page displays the weight loaded.

DISPLAY

- AMOUNT OF FERTILIZER LOADED: partial weight, with reference to the fertilizer loaded in the machine since accessing the page;
- TOTAL FERTILIZER: total weight of fertilizer present in the machine.

COMMANDS

- The button alongside the  icon resets the weight present in the hopper;
- The button under the  icon goes back to the previous menu.

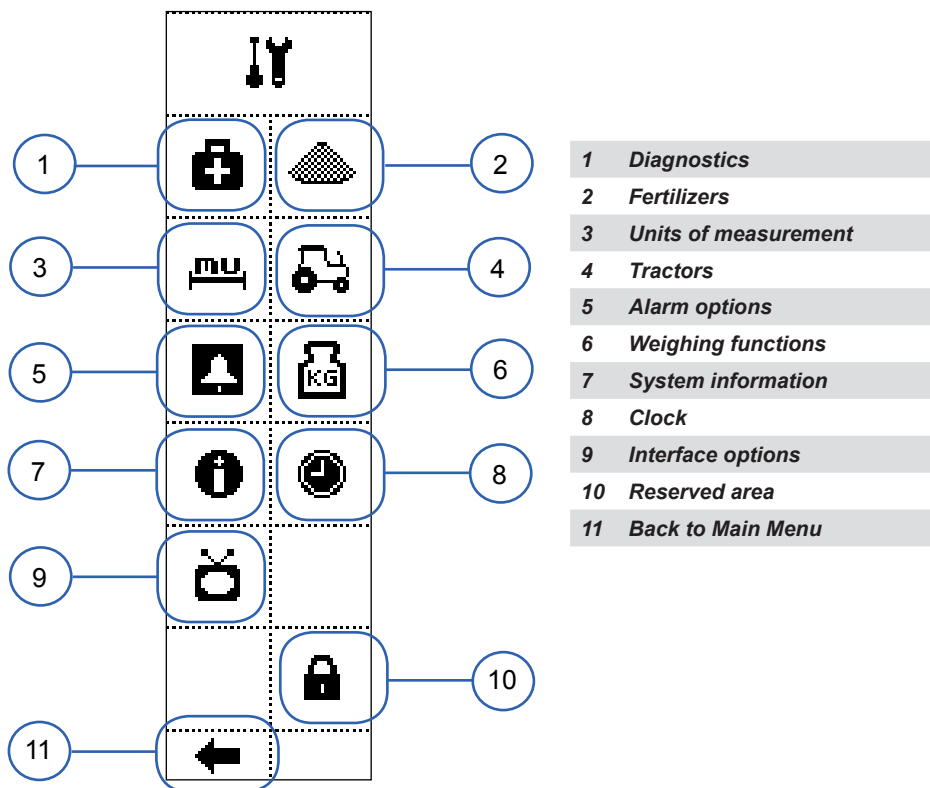
| |
|---|
|  |
| MOUNT OF FERTILIZER LOADED |
| 313 ^{KG} |
| TOTAL FERTILIZER |
| 1528 ^{KG} |
|  |
|  |

Messages and alarms [5]

This page displays message and alarms associated with operation of the machine.

Advanced Settings [6]

The Advanced Settings menu is divided into sub-menus identified by the series of icons in the figure below.












The buttons alongside the icons display the respective sub-menus.

Diagnostics [1]

DISPLAY (page 1)

- RIGHT AND LEFT HOPPER MOTOR ABSORPTION: current absorption expressed in A;
- RIGHT AND LEFT GATE OPENING POSITION (0-100%);
- POSITION VALUES DETECTED BY THE ENCODERS: numerical values of the pulses detected by the two sensors;
- PAGE NUMBER/TOTAL PAGES.

COMMANDS (page 1)



- The button alongside the  icon moves the gates more slowly than normal operating speed. The border around the icon indicates that the option is active (.
- The button alongside the  icon brings the gates into the starting position (closed);
- Holding the button alongside the  icon down closes the left gate;
- Hold the button alongside the  icon down closes the right gate;
- Holding the button alongside the  icon down opens the left gate;
- Holding the button alongside the  icon down opens the right gate;
- The button alongside the  icon displays the next page;
- The button under the  icon goes back to the previous menu.



|  | | | |
|---|--|------|--|
| MOTORS | | | |
| 0.00 | A | 0.00 | |
| 0.0 | % | 0.0 | |
| 0 | # | 0 | |
| <hr/> | | | |
|  |  | | |
|  |  | | |
|  |  | | |
| 1 | | > | |
| /2 | | | |
|  | | | |

DISPLAY (page 2)

- TRACTOR SPEED: rpm of the wheel which defines tractor speed;
- PULSES DETECTED: number of pulses counted by the rotation detection device;
- PROX.: Status of the proximity sensors detecting rotation;
- PAGE NUMBER/TOTAL PAGES.

COMMANDS (page 2)

- The button alongside the  icon displays the previous page;
- The button under the  icon goes back to the previous menu.

|  | | | |
|---|--|-----|--|
| SPEED | | | |
| 483 | | RPM | |
| 0527 | | # | |
| PROX. | | OFF | |
| <hr/> | | | |
| < | | 2 | |
| | | /2 | |
|  | | | |



Fertilizers [2]

DISPLAY

- FERTILIZER NO.: Number of fertilizer on the list;
- FERTILIZER NAME: name associated with the fertilizer;
- SALIENT FERTILIZER SETTINGS:
- SPECIFIC WEIGHT OF FERTILIZER;
- LAST CALIB.: Date and time of last calibration for the selected fertilizer.

COMMANDS

- The buttons alongside the and icons select a fertilizer and the salient characteristics of that fertilizer are displayed below (name, settings, last calibration);
- The button alongside the icon activates a page displaying the settings associated with the calibration procedure for each fertilizer;
- The button alongside the icon activates a page displaying the characteristics associated with the fertilizers;
- The button under the icon goes back to the previous menu.
- The button under the icon directly displays the operating page.

| | |
|----------------|--|
| | |
| FERTILIZER NO. | |
| 2 | |
| NPK | |
| SETTINGS | |
| 1.00 KG/L | |
| LAST CALIB. | |
| 01-01-10 16.00 | |
| | |
| | |



Fertilizer calibration

After access to the calibration procedure has been confirmed through the previous messages, the following page is displayed.



DISPLAY (page 1)

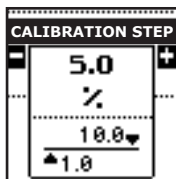
- CALIBRATION MODE: defines whether the following parameters are displayed, depending on whether the mode is SIMPLE or ADVANCED;
- CALIBRATION STEP: distance between one gate position and the next during the procedure, expressed as %;
- CALIBRATION STEP TIME: time during which the gates remain in position during the procedure (if the calibration step weight is not reached before);
- CALIBRATION STEP WEIGHT: weight of fertilizer measured during each step of calibration (if the calibration step time is not reached first);
- CONTAINER WEIGHT: weight of the container placed under the open gate(s) during calibration;
- PAGE NUMBER/TOTAL PAGES.



COMMANDS (page 1)



- The buttons alongside the and icons select whether the operator is able to see the parameters defining the above calibration modes. This function is useful if one operator is responsible for defining the calibration parameters and will therefore use the ADVANCED view and another operator will be performing calibration in SIMPLE mode only.



| | |
|--------------------|---|
| | |
| CALIBR. MODE | |
| ADVANCED | |
| CALIBR. STEP | |
| 5.0 | |
| CALIB. STEP TIME | |
| 20 | |
| CALIB. STEP WEIGHT | |
| 10 | |
| CONTAINER WEIGHT | |
| 50 | |
| 1 | 2 |
| | |



- The buttons alongside the  and  icons display a page where you can configure the calibration parameters:







In the case of the CALIBRATION STEP parameter, the buttons alongside the  and  icons modify the distance between one gate position and the next during the procedure, between 1% and 10%.

In the case of the CALIBRATION STEP TIME parameter, the buttons alongside the  and  icons modify the time during which the gates remain in position during the procedure, between 5 and 600 seconds.

In the case of the CALIBRATION STEP WEIGHT parameter, the buttons alongside the  and  icons modify the weight of the fertilizer delivered during each step of calibration, between 5 and 100 kg.

In the case of the CONTAINER WEIGHT parameter, the buttons alongside the  and  icons modify the capacity of the container placed under the open gate(s) during calibration, between 10 and 3000 kg.

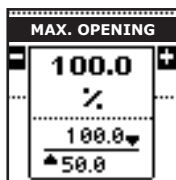
The set value is confirmed by pressing  or waiting 3 seconds, after which time the system displays the previous page.

- The button alongside the  icon displays the next page;
- The button under the  icon goes back to the previous menu without performing calibration.
- The button under the  icon launches a guided procedure enabling the calibration parameters for the selected fertilizer to be stored. The calibration procedure is described below (see Calibration Procedure).



DISPLAY (page 2)



- MAX. OPENING: percentage gate opening in the maximum opening position, used for the calibration procedure.
- MIN. OPENING: percentage gate opening in the minimum opening position, used for the calibration procedure.
- CALIBRATION DIRECTION: The calibration procedure begins with minimum gate opening status and ends with the maximum gate opening status (Min>Max) or vice versa (Max>Min);
- EMPTYING: the opening used during the calibration procedure (hopper to which the emptying hose is attached, the right hopper in the page alongside);
- PAGE NUMBER/TOTAL PAGES.












COMMANDS (page 2)

The buttons alongside the  and  icons display a page where you can configure the calibration parameters:

In the case of the MAX. OPENING parameter, the buttons alongside the  and  icons modify the gate opening percentage in the maximum opening position for use in the calibration procedure, between 50% and 100%.

In the case of the MIN. OPENING parameter, the buttons alongside the  and  icons modify the gate opening percentage in the minimum opening position for use in the calibration procedure, between 0 and 50%.

- In the case of CALIBRATION DIRECTION, the buttons alongside the  and  icons select whether the procedure will proceed from the minimum opening position to the maximum opening position or vice versa. In the case of the EMPTYING parameter, the list includes the possibility of emptying from the right, from the left, or from both sides.
- The button alongside the  icon displays the previous page;
- The button under the  icon goes back to the previous menu without performing calibration.
- The button under the  icon launches a guided procedure enabling the calibration parameters for the selected fertilizer to be stored.



In the case of calibration in SIMPLE mode, the above parameters are not displayed.

Calibration procedure

During the fertilizer calibration procedure, depending on the values of the parameters described above, the system automatically performs a number of gate positionings and weight acquisitions in order to determine the calibration curve for the selected fertilizer.

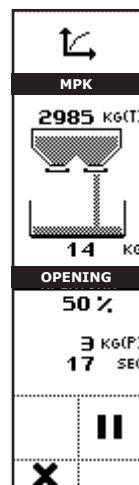
The procedure involves opening the gates in a number of set positions and leaving them in that position for a set period of time, measuring the decrease in the weight in the hopper.

To perform calibration, the operator must remove the spreading disks (or spreading disk if only one hopper is being calibrated), install the calibration kit and use a container to collect the emptied fertilizer.

When the hopper has been filled and the procedure launched by pressing the button alongside the ► icon in the message, the operator must simply wait for the various steps to be completed. When the container is full (depending on the capacity defined in the relevant parameter), the procedure pauses for the operator to empty the container and resume the procedure, until all steps have been completed. At the end of the procedure, a message informs the operator that calibration has been completed correctly.

DISPLAY

- FERTILIZER NAME;
- WEIGHT AND GRAPHIC REPRESENTATION OF THE FERTILIZER IN THE HOPPER;
- GRAPHIC REPRESENTATION OF THE CURRENT OPENING (the right in the page alongside);
- WEIGHT PRESENT IN THE CONTAINER;
- GATE POSITION (PERCENTAGE OPENING);
- KG (P): partial weight emptied during the current calibration step;
- DURATION CURRENT STEP: for each new step, after the gate settling period, a count of the duration of the current step begins;
- The START icon ► is displayed when no command has been given to start the procedure or when the procedure is in pause because the collection container is full;
- The PAUSE icon || appears when the procedure has begun, replacing the "START" icon.



COMMANDS

- The button alongside the ► icon runs the calibration procedure or resumes it after an automatic pause to allow the collection container to be emptied.
- The button alongside the || icon pauses the calibration procedure. The operator can pause the procedure to empty the collection container (as indicated by the diagnostic message following execution of the pause command). After a pause, the button alongside the || icon resumes the procedure.
- The button under the X icon exits the procedure without saving the data (as confirmed by the diagnostic message following cancellation of the procedure).

Fertilizer Settings

DISPLAY

- NAME: name of selected fertilizer;
- SPECIFIC WEIGHT: specific weight of the selected fertilizer.

COMMANDS

- The button alongside the icon displays a page where you can enter strings of characters:

| NAME | |
|---------|------|
| JOB1 | |
| abc... | C |
| ABC | DEF |
| GHI | JKL |
| MNO | PQRS |
| TUV | WXYZ |
| + - % . | |
| X | ✓ |

For example, in the case of the NAME parameter, by pressing the buttons alongside the icons containing letters, you can enter up to 9 characters.

The button alongside the icon selects uppercase or lowercase letters or numbers.

The button alongside the icon cancels the last character entered.
When held down it cancels the entire string.

Press the button alongside the icon to enter symbols (+ - %, .) in the string.

After entering the string of characters, press the button alongside the icon to confirm and exit the menu or the button corresponding to the icon to exit the menu without confirming.

| | |
|-----------------|--|
| | |
| NAME | |
| NPK | |
| SPECIFIC WEIGHT | |
| 1.00 | |
| | |

The buttons alongside the and icons display a page where you can configure the values to be assigned to the parameter:

| SPECIFIC WEIGHT |
|-----------------|
| 0.26 |
| kg/l |
| 10.00 |
| 0.01 |

For example, in the case of the SPECIFIC WEIGHT parameter, the buttons alongside the and icons modify the value of the parameter from 0.01 to 10.00 kg/l.

The set value is confirmed by pressing or waiting 3 seconds, after which time the system displays the previous page.

- The button under the icon goes back to the previous menu.

Unit of Measurement [3]







Display and selection of the units of measurement used.






Tractors [4]

DISPLAY

- TRACTOR NO.: number of the tractor on the list;
- TRACTOR NAME: name associated with the tractor;
- SALIENT TRACTOR SETTINGS:
 - SPEED MEASUREMENT MODE: simulated, phonic wheel, GPS speed, ISO 11786;
 - PULSES/METRE (except in the case of simulated speed): the value can be entered using the keypad in the Tractor Settings page, or determined by the speed calibration procedure.



COMMANDS

- The buttons alongside the  and  icons select a different tractor and the salient characteristics of that tractor are displayed below (name, settings);
- The button alongside the  icon activates a guided procedure allowing the tractor to be defined in terms of pulses/metre measured by the speed definition sensor;
- The button alongside the  icon activates a page displaying the characteristics associated with the tractors;
- The button under the  icon goes back to the previous menu;
- The button under the  icon displays the operating page.

| | |
|--|--|
|  | |
| TRACTOR NO. | |
| 1 | |
| 200C ^V | |
| SETTING | |
| PHONIC WHEEL 1.260 1/M | |
|  |  |
|  |  |

Speed calibration procedure

During tractor speed calibration, the system automatically acquires the pulses detected by the speed sensor (proximity for phonic wheel, GPS sensor or tractor signal) over a distance of 100 metres.

The operator presses the button to launch the procedure (), follows the instructions described in the procedure itself, drives the tractor forwards for exactly 100 m, stops the tractor and presses  .

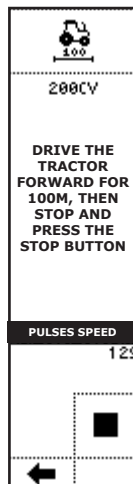
At the end of the procedure, a message informs the operator that calibration has been completed correctly.

DISPLAY

- TRACTOR NAME;
- PROCEDURE RUNNING MESSAGE;
- PULSES DETECTED;
- REMAINING STEPS: number of steps remaining to complete calibration;
- The START icon (▶) appears when no command to start the procedure has yet been given.
- The STOP icon (■) ends the calibration procedure;

COMMANDS

- The button alongside the ▶ icon pauses the calibration procedure:
- The button alongside the ■ icon ends the calibration procedure. If the procedure is ended prematurely, no calibration data deriving from the procedure will be stored by the system (a message informs the operator).
- The button under the ◀ icon goes back to the previous menu.



Tractor Settings

DISPLAY

- NAME: name of selected tractor;
- SPEED MODE: speed detection mode: simulated, phonic wheel, GPS speed, ISO 11786.

COMMANDS

- The button alongside the ■ icon displays a page where you can enter strings of characters:

| NAME | |
|---------|------|
| JOB1 | |
| abc... | C |
| ABC | DEF |
| GHI | JKL |
| MNO | PQRS |
| TUV | WXYZ |
| + - % , | |
| X | ✓ |

For example, in the case of the NAME parameter, by pressing the buttons alongside the icons containing letters, you can enter up to 9 characters.

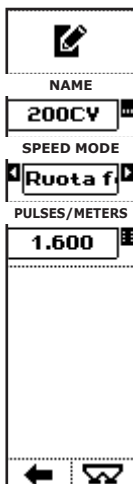
The button alongside the abc... icon selects uppercase or lowercase letters or numbers.





The button alongside the C icon cancels the last character entered.

When held down it cancels the entire string.

Press the button alongside the + - % , icon to enter symbols (+ - % ,) in the string.


After entering the string of characters, press the button alongside the ✓ icon to confirm and exit the menu or the button corresponding to the X icon to exit the menu without confirming.







- The buttons alongside the  and  icons select the value of a parameter from the following.
 - Simulated: the system bases estimates on the parameter value entered in the Work Preferences menu;
 - Phonic wheel: a proximity sensor is installed to detect the pulses associated with movement of the tractor wheel (e.g. detection of the wheel nuts);
 - GPS speed: the pulses used to determine tractor speed are provided by a GPS sensor;
 - ISO 11786: the pulses used to determine tractor speed are provided by the tractor itself on the ISO 11786 connector.
The set value is confirmed by pressing  or waiting 3 seconds, after which time the system displays the previous page.
- The button alongside the  icon displays a page where you can enter numbers using the icons alongside the numbers and decimal point:

| PULSES/METERS | |
|---------------|---|
| 1/m | |
| . | C |
| 1 | 2 |
| 3 | 4 |
| 5 | 6 |
| 7 | 8 |
| 9 | 0 |
| X | ✓ |

For example, in the case of the NO. PULSES/METRE parameter, by pressing the buttons alongside the icons containing numbers, you can enter up to 5 characters.

The button alongside the  icon cancels the last character entered. Holding it down cancels the entire value.

After entering the value, press the button corresponding to the  icon to confirm and exit the menu or the button corresponding to the  icon to exit the menu without confirming.

- The button under the  icon goes back to the previous menu;
- The button under the  icon displays the operating page.

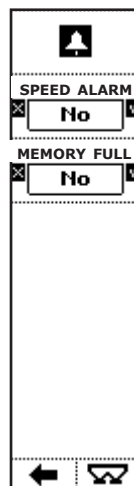
Alarm Options [5]

DISPLAY

- SPEED ALARM: if active, the system warns when the work speed is excessive;
- MEMORY FULL: if active, the system warns when the memory buffer is full and old data will be overwritten by new data.

COMMANDS

- The buttons alongside the and icons activate or deactivate a function. Here, a beep is emitted whenever a button is pressed.
- The set value is confirmed by pressing or waiting 3 seconds, after which time the system displays the previous page.
- The button under the icon goes back to the previous menu;
- The button under the icon displays the operating page.



Weighing Functions [6]

DISPLAY

- CURRENT WEIGHT: weight present in the hopper;
- PARTIAL WEIGHT (after the button has been pressed)

COMMANDS

- The button alongside the icon zeroes the weighing machine on board the fertilizer spreader.
- The button alongside the icon cancels the partial weight value after the splitting command.
- The button alongside the icon displays the weight calibration menu. After positioning a sample with a known weight in the hopper, the value is entered in the system to calibrate the weighing system.



WARNING: Weight calibration cannot be cancelled

When the intention to perform calibration is confirmed by pressing the button in the message, the number entry page is displayed. Enter the weight of the sample, then press to confirm or to cancel calibration.

- The button alongside the icon splits the weight to view the variation in weight since it was pressed. The partial weight is displayed below the total weight.
- The button under the icon goes back to the previous menu.
- The button under the icon displays the operating page.



i System Information [7]

DISPLAY (page 1): UI VERSION

Firmware version installed on the system:

- NAME, CODE AND DATE;
- CHECKSUM: unique code associated with the firmware installed;
- PAGE NUMBER/TOTAL PAGES.




COMMANDS (page 1): UI VERSION

- The button alongside the  icon displays the next page;
- The button under the  icon goes back to the previous menu.

DISPLAY (page 2): MODULE VERSION

- Firmware versions installed on the modules on the machine:
- W0: firmware on the weighing module;
- SP: firmware on the actuator control module;
- PAGE NUMBER/TOTAL PAGES.
-



COMMANDS (page 2): MODULE VERSION

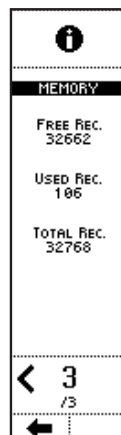
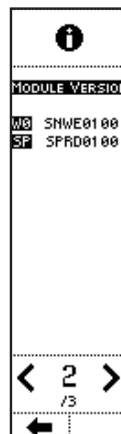
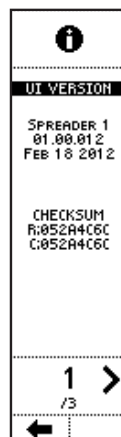
- The button alongside the  icon displays the previous page;
- The button alongside the  icon displays the next page;
- The button under the  icon goes back to the previous menu.

DISPLAY (page 3): MEMORY

- Memory use status:
- FREE REC.: record of memory available;
- USED REC: record of memory used;
- TOTAL REC: record of total memory;
- PAGE NUMBER/TOTAL PAGES.

COMMANDS (page 3): MEMORY

- The button alongside the  icon displays the previous page;
- The button under the  icon goes back to the previous menu.



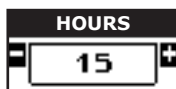
Clock [8]

DISPLAY (page 1)

- HOURS;
- MINUTES;
- AUTOMATIC TIME UPDATE: automatic updating of daylight saving time/standard time;
- PAGE NUMBER/TOTAL PAGES.

COMMANDS (page 1)

- The buttons alongside the icons display a page where you can configure the values to be assigned to the parameter:



For example, in the case of the HOURS parameter, the buttons alongside the and icons modify the value of the parameter.

The set value is confirmed by pressing or waiting 3 seconds, after which time the system displays the previous page.

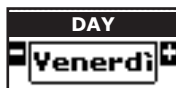
- The button alongside the icon displays the next page;
- The button under the icon goes back to the previous menu.

DISPLAY (page 2)

- DAY: day of the week;
- DATE: number;
- MONTH;
- YEAR;
- PAGE NUMBER/TOTAL PAGES.

COMMANDS (page 2)

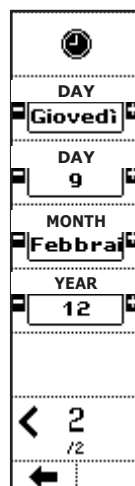
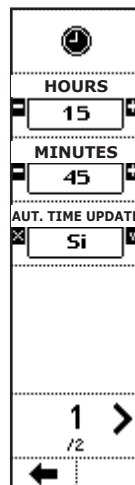
- The buttons alongside the icons display a page where you can configure the values to be assigned to the parameter:



For example, in the case of the DAY parameter, the buttons alongside the and icons modify the value of the parameter.

The set value is confirmed by pressing or waiting 3 seconds, after which time the system displays the previous page.

- The button alongside the icon displays the previous page;
- The button under the icon goes back to the previous menu.





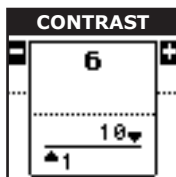
Interface Options [9]



DISPLAY


- CONTRAST: level of contrast of the display;
- BRIGHTNESS: level of luminosity of the backlit display;
- BUTTON TONES: activates or deactivates a beep when a button is pressed;
- LANGUAGE: interface language.

COMMANDS








- The buttons alongside the  and  icons display a page where you can configure the values to be assigned to the parameter:



For example, in the case of the CONTRAST parameter, the buttons alongside the  and  icons modify the value of the parameter from 1 to 10.

The set value is confirmed by pressing  or waiting 3 seconds, after which time the system displays the previous page.



- The buttons alongside the  and  icons activate or deactivate a function. Here, a beep is emitted whenever a button is pressed. The set value is confirmed by pressing  or waiting 3 seconds, after which time the system displays the previous page.
- The buttons alongside the  and  icons select the value of a parameter from a pre-set list. Here, the interface language. The set value is confirmed by pressing  or waiting 3 seconds, after which time the system displays the previous page.
- The button under the  icon goes back to the previous menu.

Reserved Area [10]

Menu containing diagnostic data useful to the manufacturer


Back to Main Menu [11]

The button under the  icon goes back to the Main Menu.

Display Operating Page [7]

The button under the  icon displays the operating page.


USING THE MACHINE

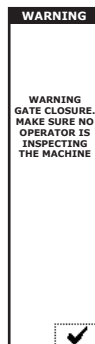
Go to the field to be fertilized, fill the fertilizer spreader and press the ON/OFF button  briefly to turn the system on. The indicator display lights up and the initialisation and presentation messages scroll across the screen.

After the initialisation phase, a message asks the operator to verify safety conditions and enable closing of the gates to begin the work phase:

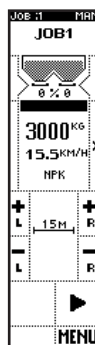



WARNING: Make sure gate movement cannot cause injury to people or damage to things before proceeding.

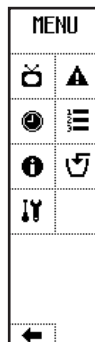
Confirm by pressing the button under the  icon in the message to display the operating page.




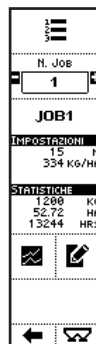
If the operating settings have not been defined, press the button under the **MENU** icon to display the main menu.




Here you can select the job to be performed by pressing the button alongside the  icon and selecting the job from the list of those set (see Job Settings).




From the job selection page, you can access the operating mode directly by pressing the button under the  icon.



Operating mode is now active. Just press the button alongside the  icon to begin working using the set configurations.




If you are working in manual mode, first define gate opening (see description of Manual Mode)

After beginning work, you can pause the work session by pressing the button alongside the (...) icon .



The pause command closes the gates, but does not update the statistics and estimates for the current job.

The button alongside the  icon stops spreading and ends the work session, closing the gates and updating the statistics and estimates for the current job.

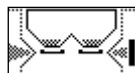
To spread fertilizer near the edges of the field or interrupt spreading from one side of the machine, press the relative right and left buttons alongside the graphic representation of the machine.



EXAMPLE: RIGHT GATE CLOSED



When the edge kit is installed, in SPEED, SEMI and AUTO modes, the buttons alongside the graphic representation of the machine close (and subsequently re-open) the gates and activate the "edge" function.



EXAMPLE: EDGE FUNCTION ACTIVATED ON THE RIGHT

[illegible]

| NUMBER | DESCRIPTION |
|--------|--|
| 1 | ICON SYSTEM CONTROL INTERFACE |
| 2 | ICON INTERFACE CONNECTION CABLE |
| 3 | CONNECTION CABLE FROM THE BATTERY POWER CONNECTOR (OPTIONAL), IF THE SYSTEM IS NOT POWERED FROM THE ISO 12369 CONNECTOR |
| 4 | WIRED PROXIMITY SENSOR FOR SPEED DETECTION WITH PHONIC WHEEL NOTE: SPEED CAN ALSO BE DETECTED BY: <ul style="list-style-type: none">• GPS DEVICE;• SIGNAL FROM ISO 11786 CONNECTOR |
| 5 | MAIN WIRING CONNECTING THE SYSTEMS |
| 6 | SENSOR AND ACTUATOR CONTROL MODULE |
| 7 | ACTUATORS |
| 8 | WEIGHING SYSTEM CONTROL MODULE WITH LOADING CELL (OPTIONAL) |



NOTE:

This image shows a full page of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page, providing a template for handwriting practice. There are no margins, text, or other markings on the page.



NOTE:

[illegible]



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