

Orientation Aid for the Start of the Season ZG-TS 01

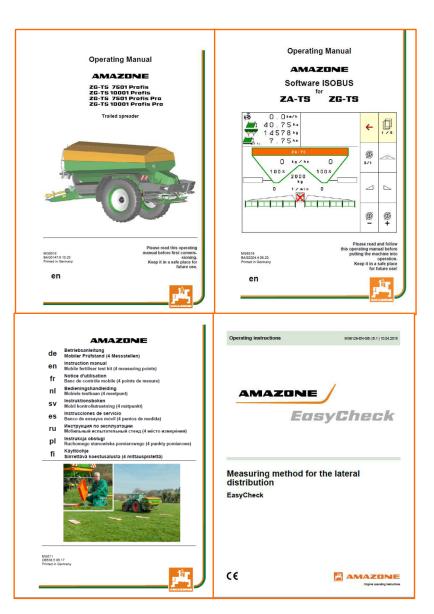


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1. General instructions

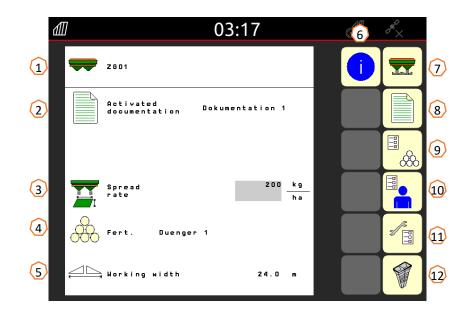
- Use of this document requires that the operating manuals for the implement and the software have been read and understood. The corresponding documents are shown on the right side.
- For this reason, it is necessary to take additional information from the operating manual. The operating manual must always be available when performing the orientation aid for the start of the season with the ZG-TS 01.
- The Orientation Aid for the Start of the Season ZG-TS 01 document serves as a guideline for the user
 to check the implement for the new season and to put
 it back into operation. This document is based on
 software version NW188-E and is also only valid for
 this version.



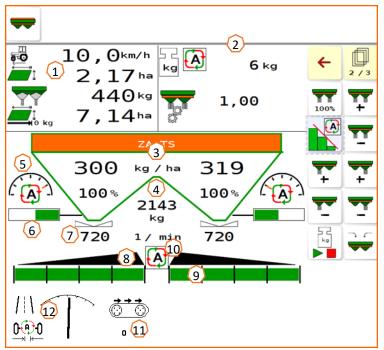
2. Start screen of the implement software

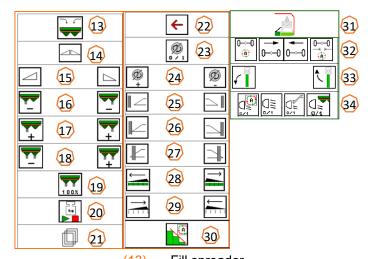
The user can reach the other screens directly from the start screen.

- (1) Machine type
- (2) Activated job from the internal job management. This field is empty if data exchange with a Task Controller is configured.
- (3) Spread rate. This value can also be automatically changed by the Task Controller or by other setpoint generators, moreover, this value is the 100 % basis for rate control in the Work menu
- (4) Activated fertiliser from the fertiliser database
- (5) Working width of the activated fertiliser from the fertiliser database
- (6) Info screen
- (7) work menu
- (8) Internal job management
- (9) Fertiliser database
- (10) User menu
- (11) MACHINE SETTINGS
- (12) Mobile test rig



3. Work menu of the implement software





- (13)Fill spreader
- Open/close shutter on both sides (14)
- (15)Open/close shutter left / right
- (16)Reduce the spread rate on the left / right
- (17)Increase the spread rate on the left / right
- (18)Increase / reduce the spread rate on both sides
- (19)Set the spread rate to the target quantity (100 %) on both sides
- (20)Calibration run in offline mode of the scale
- (21)Turn to the next page
- (22)Back the the Start screen
- (23)Switch on the spreading disc (only with hydraulic drive, press and hold until the acoustic signal is muted)
- (24)Increase / reduce the boundary spreading speed
- (25)Switch ditch spreading on / off on the left / right
- (26)Switch boundary spreading on/off on the left / right
- (27)Switch border spreading on/off on the left / right
- (28)Switch on part-width sections on the left / right
- (29)Switch off part-width sections on the left / right
- (30)Switch Section Control on/off
- (31)InsideControl on the headlands
- (32) AutoTrail steering axle automatic/manual, slope counter-steering, centre position
- (33)Lift / lower WindControl sensor
- (34)Work lights

- Multi-function display (freely configurable, see operating manual for more information)
- Display for the scale / selection window (scale, steering system, WindControl)
- Current absolute and percent spread rate (always 100% of the values on the Start screen), highlighted in yellow if the spread rate deviates by more than 10% or if a percent change has been made
- Weighed hopper content, is highlighted in yellow when the alarm limit has been undercut (can be configured in the Implement menu, see operating manual)
- Position of the delivery system (when using ArgusTwin)
- Opening of the metering shutter (6)
- Spreading disc speed, is highlighted in yellow if the deviation is > 50 rpm from the nominal speed (fertiliser database)
- Main part-width section switch (black is open, white is closed)
- Part-width section status (green is open, white is closed)
- Section Control status (10)
- Belt speed
- AutoTrail status

4. Preparation for operation

Required tractor equipment

Tractor engine power: above 90 kW

Tractor pump capacity: drive with load sensing system, constant flow system is also possible without steering system.

Oil supply from the tractor and auxiliary pump for with and without steering system: Requirement **85** I/min > hybrid drive

Oil supply only from the tractor and with steering system:

Requirement **130 l/min** > Hydro drive with steering system

Oil supply only from the tractor and without steering system:

Requirement **105** I/min > Hydro drive without steering system

Connections: depending on the implement equipment, the following connections are required:

2x DA: cover tarpaulin, jack

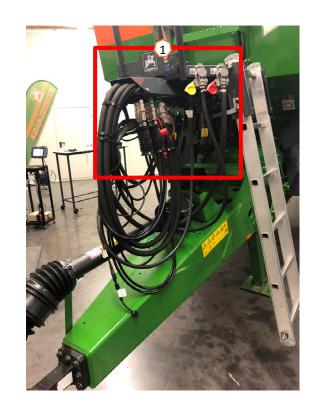
1x pressure-free return flow T (max. 5 bar)

1x pressure line P (max. 210 bar)

1x load sensing control line

Coupling the implement:

Couple the implement with the towing device of the tractor. Take the hydraulic connections, universal joint shaft, lighting system, brake lines as well as the ISOBUS plug from the respective parking positions (1) and couple to the tractor. If a yaw rate sensor is used on the implement side, it is mandatory that it is connected to the tractor.



5. Implement settings

Layout and function of the spreading disc

- (1) Coloured marking of the spreading vane unit
- (2) Markings on the spreading vanes
- (3) Marking on the telescopic boundary spreading vane

Selection of the spreader units:

TS 1, TS 2, TS 3

Selection of the telescopic boundary spreading vane:

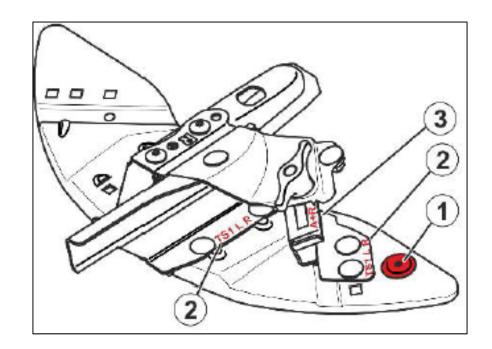
A, A+, B, C, D

Adjustment range according to the setting chart:

- 1, 2, 3
- x no telescope

The lateral distribution system is adjusted through the delivery system via an electric actuator.

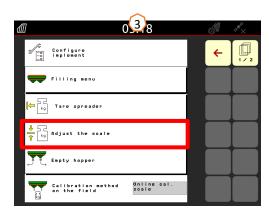
- Actuator automatically moves to the desired position.
- Desired position is entered on the terminal according to the setting chart.

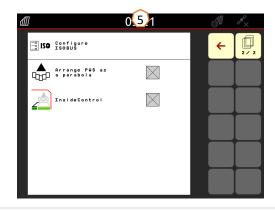


6. Software settings

- (1) Speed source / teach-in pulses per 100m: Implement settings > Speed > Teach-in pulses. Here, the source for the speed can be selected or the pulses per 100 m can be calibrated.
- (2) Tare spreader: Implement settings > Tare spreader
 Taring of the fertiliser spreader serves to determine the
 weight of the spreader with 0 kg hopper content, e.g.
 after installing special equipment.
- (3) Adjusting the scale: Implement settings > Adjust scale Adjusting the fertiliser spreader serves to correct the scale when the hopper is filled. Adjustment is necessary if the hopper content is incorrectly displayed after filling.
- **(4) Spreader maintenance:** Implement settings > Spreader Maintenance required for convenient changing of the spreading disc units TS1, TS2, TS3.
- (5) Parabolic switching: User menu > Arrange partwidth sections as a parable Due to the kidney shape of the spread pattern, the part-width sections are now shown in Section Control in a similar shape of a parable and are switched accordingly. Prerequisite: the terminal must support this function.











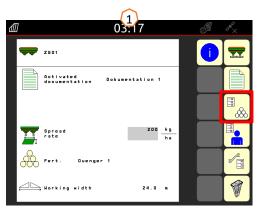
7. Creating a fertiliser

Entry of the data from the setting chart in the software

Open the fertiliser database (1) from the Start screen. Then the following data from the setting chart (3) are entered on pages 1 to 4 (2).

An "x" (4) means that the TS system is not used for border spreading, and that border spreading is achieved by reducing the speed.

<u>Note:</u> always enter all of the values from the table, also the throwing direction and throwing distance parameters, even if ArgusTwin is not installed.





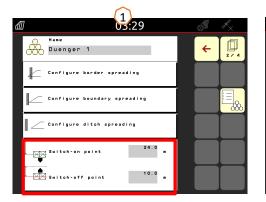
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ZA-TS /		®	Ø				3		A		B			₹	.
ZG-TS				[%基=管]		\mathcal{D}		-%	\mathscr{D}		-%	\mathscr{D}	¥ ##	Λ₩	=
က	32.0	16	800	С	3	900	3	15	800	3	25	720	34	-2	200
TS	33.0	16	800	С	3	900	3	14	800	3	24	720	34	-1	200
'	36.0	17	900	D	X	720	1	14	800	1	24	720	36	0	200
					4										

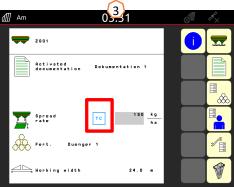
	Working width [m]					
	Setting value of the Delivery system					
\mathscr{D}	Spreading disc speed [rpm]					
	Telescopic blade choice					
Х	without TS system					
[½ 👼 🖷 🖔	Y Working width [m]					
	Distance to field border [m]					
Į.	Side spreading					
Ä	Boundary spreading					
8	Water course spreading					
	Telescopic blade setting					
-%	Spread rate reduction when boundary or water course spreading [%]					
→ <u></u>	Average granule diameter [d50]					
kg J	Bulk density [kg/l]					
T	Switch-on point [m]					
Ţ.	Switch-off point [m]					
	Throw-off direction					

8. Preparations on the implement for the Task Controller

Terminal: the functions of the Task Controller are controlled via the terminal. The terminal must be prepared accordingly. You can find more information in the operating manual for the respective terminal.

- (1) Switch-on/-off points: Fertiliser database > These times define the delay between the moment when the terminal issues the command to switch the part-width sections on or off and when the implement really executed this command. Incorrect settings can cause overlaps or gaps. These values can be found in the fertiliser table. Important: every fertiliser has different flight properties and therefore a different switch-on and -off point. These values must be checked on the field.
- (2) Task Controller: User menu > Configure ISOBUS > Under the Documentation point, there is the choice between "Implement internal" and "Task Controller".
- (3) Application maps / jobs: the "TC" icon in the Work menu and the Start menu indicates that the implement is receiving the target spread rates from the Task Controller (application map or job) or from an N-sensor.

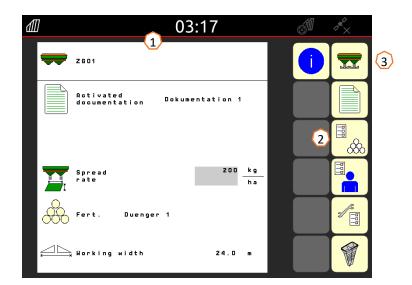


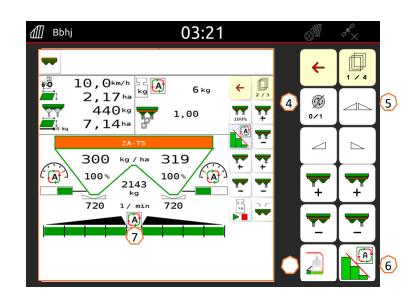




9. Procedure during operation

- From starting the tractor to activated Section Control (automatic partwidth section control).
- Prerequisite is that the implement is coupled. Details on the icons can be found on pages 4 and 5.
- 1. Switch on the tractor and terminal.
- 2. Change to the Start screen or start from here (1).
- 3. Create a fertiliser (2) and enter the data from the setting chart, simply skip this point if the fertiliser already exists, see page 9.
- 4. Change to the Work menu (3)
- Switch on the spreading discs (4)
- 6. Actuate the spreading disc button until the acoustic warning signal is muted.
- 7. Open the shutters (5), then the main part-width section switch will be highlighted in black. The shutters are opened at a forward speed of more than 1 km/h.
- 8. Activate automatic part-width section control (6). It is possible that prerequisites, such as starting a job, still need to be met in Section Control on the terminal. If the automatic icon flashes yellow (7), Section Control on the terminal is ready. As a result, automatic mode can be started directly from the spreader. The spreader is now prepared.
- 9. Boundary spreading can be activated in combination with InsideControl (8).
- 10. Check the lateral distribution with the mobile test rig or EasyCheck, see page 10.
- 11. Switch on boundary, trench or border spreading if necessary, see page 5.
- 12. To finish the work, close the shutters and switch off the spreading discs.





10. Checking the lateral distribution

The mobile test rig (1) / EasyCheck app (2) enable checking of the lateral distribution directly on the field. For a more detailed description, refer to operating manual MG511 Mobile Test Rig or MG6126 EasyCheck. With ArgusTwin, use of the mobile test rig is mandatory!

Assembly:

The test rig contains 16 test trays including a grid and 2 measuring cups or 16 mats.

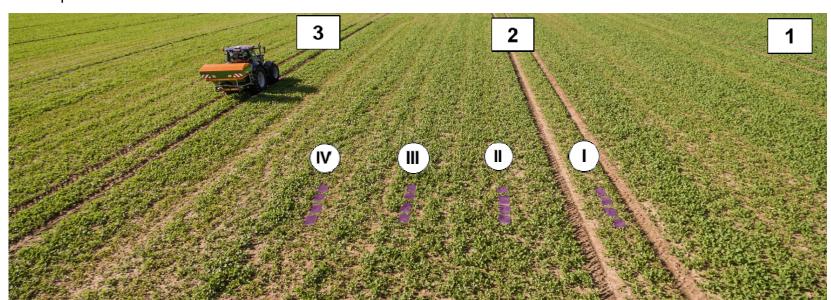
4 trays or mats are set up in line

The 4 rows (I ... IV) cover half of the working width.

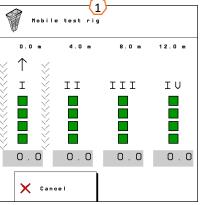
The rows are evenly distributed. The terminal or the EasyCheck app also provides the spacing of the rows as an aid.

The test rig must be driven over as follows:

- 1. Travel tramline 1.
- 2. Check whether fertiliser has been collected in tray/mat row I:
 - No: travel tramline 2.
 - Yes: travel tramlines 2 and 3.
- 3. Pour the contents of the tray rows into the measuring funnel and read off the quantity. With EasyCheck, take pictures of the mats.







SmartLearning app

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