

PRECISION FARMING



Autosteering Systems
ISOBUS / TIM Systems
Section Control / Variable Rate Control
Data Management Systems
Safety Systems





PRECISION FARMING. IT IS SO EASY TO INCREASE YOUR EFFICIENCY.

ADVANCED FARMING INTELLIGENCE SYSTEMS BY DEUTZ-FAHR.

Precision Farming is already well established on many farms and in many contracting firms. Professionals know that through the management of sub-areas and the synchronisation of all the operations, efficiency can be substantially increased. Customers are increasingly looking to conserve resource and work processes. Precision Farming systems also help to fulfill these requirements. DEUTZ-FAHR is a leader in equipping tractor and combine harvester fleets with advanced Precision Farming systems. The reliable high-precision automatic

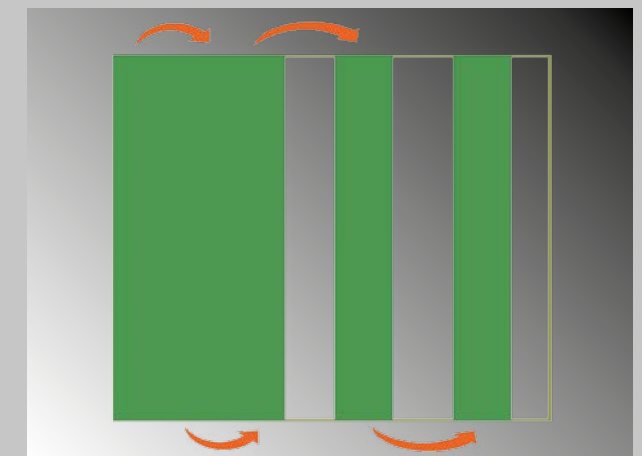
guidance systems with one of the highest ISOBUS and TIM (Tractor Implement Management) standards on the market, the partial section shutdown for sprayers, and the fully automatic DEUTZ-FAHR Precision Farming systems not only lead to increased fleet efficiency but also increased working comfort. All DEUTZ-FAHR Precision Farming systems are operated using a single monitor. This is unique.

SATELLITE AIDED WORKING UP TO 2 CM ACCURACY WORLDWIDE.

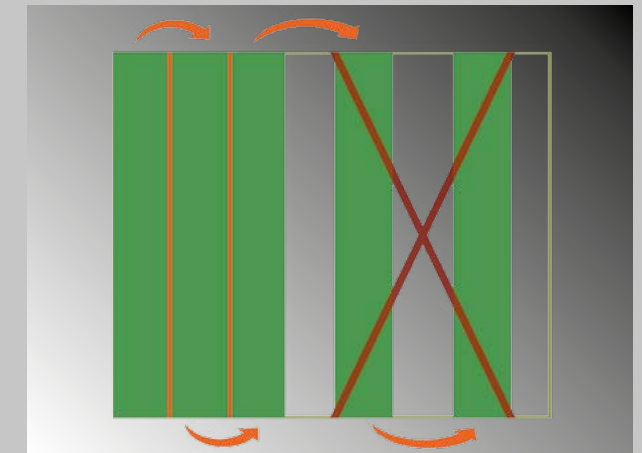
ALL SAT SYSTEMS. THREE ACCURACY-LEVELS. ONE RECEIVER.

Satellite positioning systems are the basis for most Precision Farming applications. The DEUTZ-FAHR AGROSKY antenna receives all current international GNSS (global navigation satellite system) signals such as GPS or GLONASS and is already equipped to handle future systems such as GALILEO.

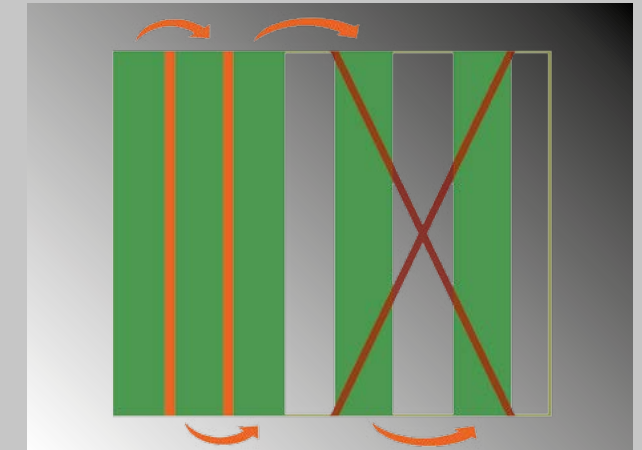
The special feature of the DEUTZ-FAHR AGROSKY system is that all of the reception and control technology is integrated into a single central unit (SRC 40). This allows for considerable flexibility. When changing vehicles, simply take the AGROSKY antenna with you. The DEUTZ-FAHR AGROSKY antenna is available in various configuration levels. From the free EGNOS correction signal (e.g. for fertiliser applications) to the OmniStar accuracy that is sufficient for drilling and the high-precision RTK correction signal via mobile or fixed base station – the DEUTZ-FAHR AGROSKY antenna adapts to your every need.



RTK correction: precise terminal driving and time-saving plot in plot process.



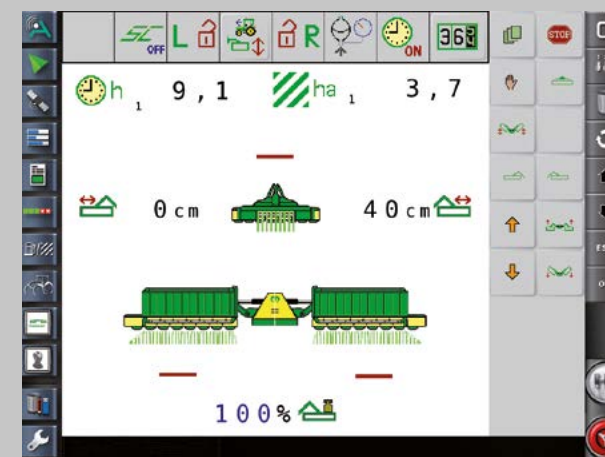
OmniStar: accuracy sufficient for grain drilling – also possible in plot work.



EGNOS: 30 cm connection accuracy – sufficient for many work operations, including fertiliser application and mowing.



SRC 40 receiver and control unit in one – easy set-up and switch with highly accurate tilt-angle compensation.



ISOBUS application in iMonitor2 – the flexible arrangement of the control panel increases comfort.



Data management: the ISOXML standard allows for compatibility with FMIS.



Overview of all important data - DEUTZ-FAHR Performance Monitor.



iMonitor2 - 2 wide and integrated terminals and a universal small one for visual guidance.



DEUTZ-FAHR remote maintenance – additional support for the driver!

EASY TO UNDERSTAND.
EASY TO SURVEY.
EASY TO OPERATE.

The DEUTZ-FAHR iMonitor2 is the central control element for all Precision Farming applications. From tractor operation, ISOBUS application via the automatic steering systems to data management, everything is available on a single clearly arranged user interface.

Modern touchscreen and external MMI operation – which is conveniently integrated into the armrest – make the iMonitor2 an extremely comfortable interface between the tractor, implement, driver and office. Integrated tools such as the quick reference guide or symbols and a clear menu layout guarantee ease of operation.

For any further support, iMonitor2 offers the possibility to support via Remote Access.

Depending on tractor type and specification, two monitor sizes are available: 12" (the largest tractor terminal on the market) and 8". For the simple guidance system (Visual Guidance) there is a smaller, more affordable monitor.

iMONITOR2 ONE INTERFACE FOR ALL APPLICATIONS.



Integrated camera provides a good overview and safety.



DIFFERENT OPTIONS FOR DIFFERENT DEMANDS.

DEUTZ-FAHR AGROSKY guidance systems are available in different versions. From the affordable entry-level system to the highest-precision automatic steering system – you will find the perfect solution for each operation.

Visual Guidance 25 is the simplest guidance system and features a small, mobile screen. It can be used independently of the vehicle. It can help with orientation in the field, the documentation of work or the control of partial sections in the case of fertiliser or pesticide implements. Together with the iMonitor2, a fully integrated system is created – Visual Guidance 50.

The automatic steering systems Assisted Steer and Performance Steer are fully integrated into the vehicle. Steering system functions can be accessed via Comfortip (headland management) in iMonitor2.

GUIDANCE SYSTEMS TRANS- FORM GOOD DRIVERS INTO PERFECT DRIVERS.



Visual Guidance 25 – a flexible complete system for manual guidance and documentation. The ideal first steps into Precision Farming.



Integrated into the vehicle and operating concept.



DEUTZ-FAHR AGROSKY – guaranteed to increase the efficiency of every job.



Clear menu structures and support for easy operation.



MORE FLEXIBILITY,
MORE PRECISION,
MORE COMFORT.



AGROSKY – A SYSTEM FOR EVERY DAY AND EVERY MACHINE.

Assisted Steer combines the highest precision and flexibility. It provides RTK-signal-precise steering work – even when cornering – and can be used in different vehicles, including current DEUTZ-FAHR tractors and combine harvesters as well as older tractors from other manufacturers.

Performance Steer is fully integrated into the tractor and operates via an electronically controllable steering orbitrol unit. This allows for maximum comfort and precision. Performance Steer is DLG-tested and achieved top marks for field work – even at very low speeds.

A Performance Steer component is the EasySteer System. The driver can select in 3 levels the number of steering wheel movements required to achieve the complete steering angle. EasySteer simplifies manoeuvring and turning on headlands.



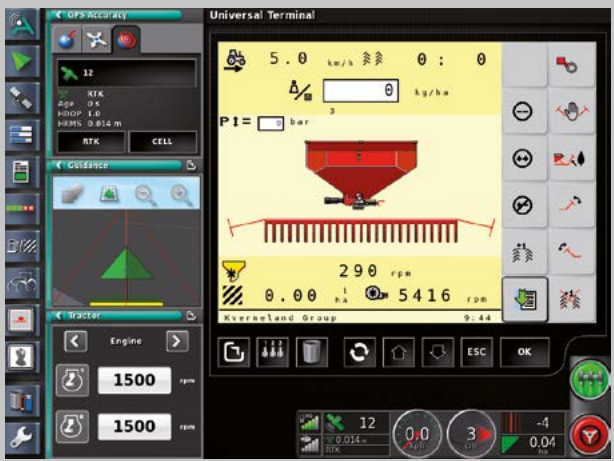
AGROSKY also increases efficiency in grassland (e.g. by applying plots).



AGROSKY offers different guidance modes and the right solution for every application.



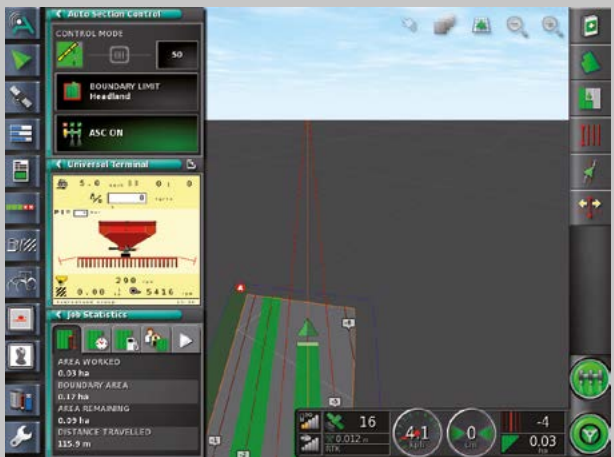
AGROSKY – ASSISTED STEER – flexibility with the highest precision and best performance.



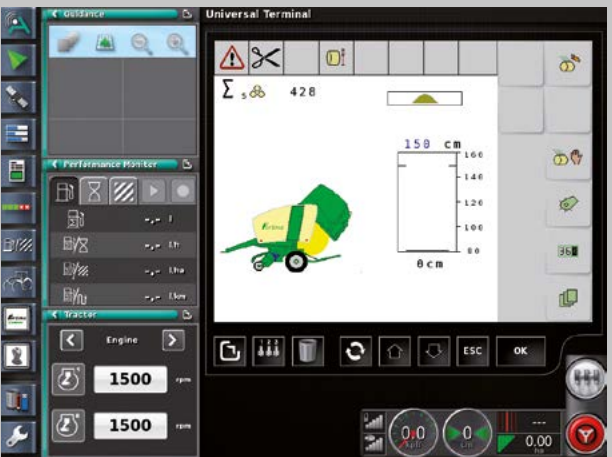
ISOBUS – operation in iMonitor2 exactly as on the implement display.



All adjustments can be made from a single terminal, thus providing a clear overview.



The combination of DEUTZ-FAHR ISOBUS and AGROSKY enables automatic partial section control for seed, fertiliser or pesticide.



Grassland, tillage or other implements – this is no problem for ISOBUS because all are operated the same way in iMonitor2.



Standardized interface between tractor and implement (ISO 11783).

LEADING IN CERTIFIED ISOBUS SYSTEMS FOR MAXIMUM COMPATIBILITY.

ISOBUS COMPATIBLE WITH ALL RELEVANT IMPLEMENT BRANDS.

The DEUTZ-FAHR ISOBUS interfaces at the rear and front of the tractor to ensure compatibility with the implements of all renowned manufacturers (basis for this: ISO 11783 standard). No matter which combination of devices are used – the operating screens of the implements are displayed on iMonitor2. The driver can individually operate all devices via a single monitor. This ensures the highest work comfort and improves visibility.

The DEUTZ-FAHR ISOBUS interfaces are AEF-certified (TECU class 2 and VT). They allow for even more integrated functions, such as automatic Section Control and automatic Tractor Implement Management (TIM).



The combination of front and rear mounted implements controlled via ISOBUS makes the tractor even more efficient!



MAXIMUM WORKING PRECISION IS THE IMPLEMENT TAKING OVER COMMAND.

TIM BECOMES TRUE WITH SELECTED IMPLEMENT PARTNERS.

The maximum efficiency is achieved when the tractor and implement merge into one. TIM (Tractor Implement Management) creates a self-propelled work machine. As an ISOBUS expansion level, DEUTZ-FAHR has implemented TIM in various products together with selected implement partners. This is made clear using the example of the DEUTZ-FAHR tractor and the Krone round baler, which enables efficiency and increased comfort.

Once the desired bale diameter is reached, the tractor will automatically stop and start bending. When the bale is finished, the tailgate opens and automatically ejects the bale before closing again. The driver only

needs to continue driving and always operates in the optimum performance range. This system is also possible for a Grimme potato planter, in this case the height of three point hitch will be controlled by the implement.

ISOBUS – AUX CONTROL

The implement operation is ergonomically integrated in the armrest. The AUX function of the DEUTZ-FAHR ISOBUS makes it possible to define routine functions of the implement via the control lever on the armrest. This considerably increases the ease of use.



Through symbols, functions can be easily assigned to the various control buttons.



The function assigned to each control button is clearly displayed.



The MaxCom driving lever is the operator interface for the ISOBUS implement.

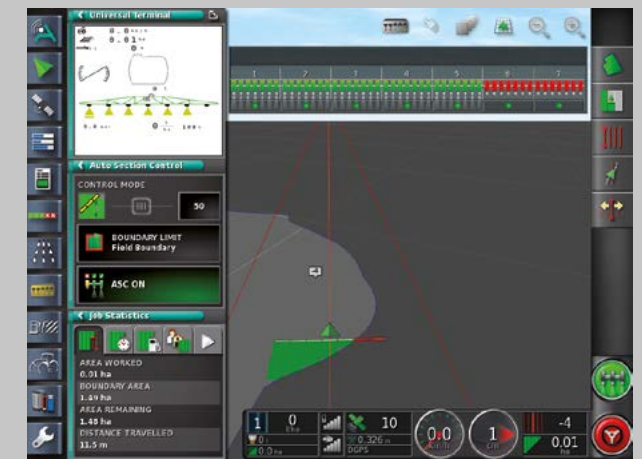


HIGHEST PRECISION FOR ECOLOGISTS AND ECONOMISTS.

SECTION CONTROL. AUTOMATICALLY SWITCH ON AND OFF UP TO 32 SECTIONS.

Section control, variable rate control, and recording of yield – when applying fertilisers and pesticides, section-specific work is the basis for efficiency. Overlaps and voids are prevented, thereby saving money and protecting the environment.

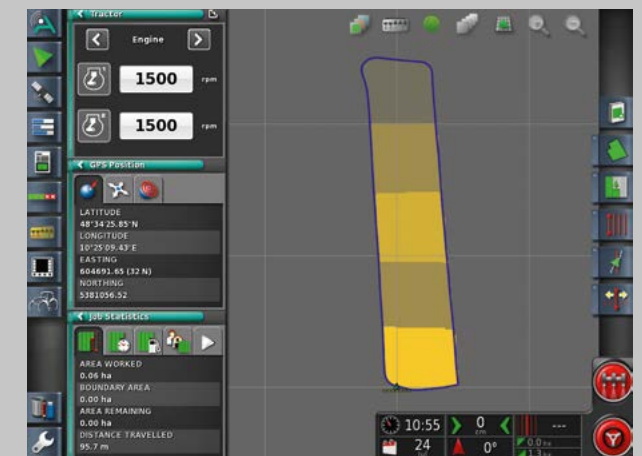
In conjunction with an ISOBUS-enabled application device, DEUTZ-FAHR Section Control can automatically control up to 32 individual partial sections based on the GPS location of the vehicle.



Automatic control of the partial sections when entering or leaving the field or working on wedge-shaped sections.



Partial sections are switched automatically but can also be switched manually via the virtual display.



In iMonitor2, application maps can be used for the variable application of fertiliser.

The Section View, Section Control and Variable Rate Control functions are standard on tractors equipped with DEUTZ-FAHR Precision Farming systems. Even in the case of non-ISOBUS devices, it is possible to virtually represent the partial sections and so the driver can switch them on/off at precisely the right moment.

Based on yield maps, provided by the yield-recording system of the DEUTZ-FAHR combine harvester, section-specific application maps can be created.



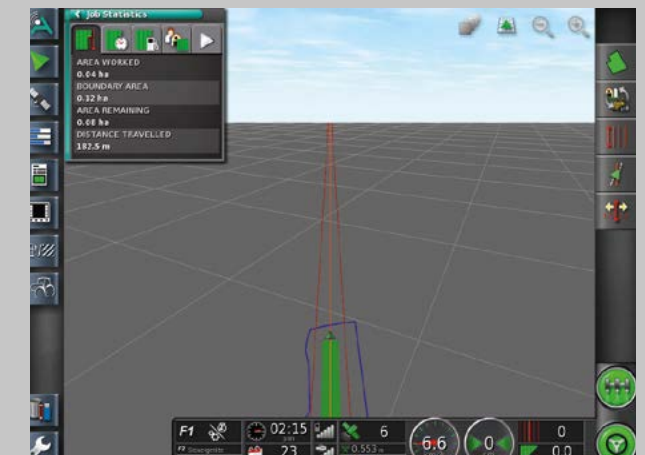
DATA MANAGEMENT. LEADING ALSO YOUR BIZ TO MAXIMUM EFFICIENCY.

FULLY AUTOMATED FROM ORDER PROCESSING TO INVOICING.

Fully automated data management from order to invoice – DEUTZ-FAHR offers a simple and versatile system for order management on farms. Whether it is the documentation of orders or the importing of field boundaries from the acreage index to the tractor, the system delivers the desired functions, including the documentation of field work and the simple creation of PDF documents with all relevant information and graphics as well as the use of open standards for data exchange (ISOXML).



Thanks to the ISOXML standard, orders can be planned, documented and evaluated with numerous agricultural field records.



All current order-related data (e.g. client, field size and fuel consumption) is always on hand.

DEUTZ-FAHR also uses these functions to ensure compatibility with numerous agricultural field records. You can thus plan the implementation of your machines and use the data collected for preparing invoices.

For transport use without AGROSKY, you can use the built-in Performance Monitor. You will always have all relevant data (e.g. working hours, fuel consumption and job status) at a glance.



The larger the tractor, the greater the non-visible area in front of the tractor.



Active detection and warning when a person is in front of the tractor.



At dangerous junctions, the system extends the driver's angle of view and displays traffic that the driver could not see without pulling out further.

AWARD-WINNING DRIVER EXTENDED EYES SYSTEM.



DRIVER EXTENDED EYES SYSTEM.



Awarded: Driver Extended Eyes. Modern high-horsepower tractors are getting larger – and the visibility is getting worse. Every year, countless accidents are caused because of blind spots around the tractor.

DEUTZ-FAHR is the first tractor manufacturer to introduce an active system for detecting people in the blind spot of a vehicle, thereby preventing collisions. If a person moves into the blind spot of the tractor, this is detected and the driver is warned via iMonitor. The tractor is unable to advance as long as the person is in the danger zone.

DEUTZ-FAHR is actively leading the way in preventing personal injury caused by agricultural machinery. In addition to the active detection of individual persons, the system extends the driver's angle of view to the left and right. This increases safety when approaching dangerous junctions where there is poor visibility. The system also provides the driver with a 360° panoramic view. This increases the safety of even the largest agricultural machines.

How to find the right system.

DEUTZ-FAHR offers you a large number of advanced precision farming systems, with which you can critically improve the efficiency of your operations. The following table gives you an overview of the standard equipment on the individual precision farming systems. The first part of the table gives you information about which system is the right one for you. In the second part of the table and in the technical data, you will find detailed information about the equipment features in the entire product range.

System Applications / requirements		Visual guidance		Assisted Steering	Performance Steering	Accuracy			
		VG 25	VG 50			EGNOS	Autonom	OmniStar	RTK
STEERING									
Visual track guidance		X	X			X	X		
Automatic steering				X	X	X	X	X	X
Highest accuracy				X	X				X
Best directional stability / handling				X	X			X	X
Fertilising / plant protection (not into the row)				X	X	X	X	X	X
Pastureland				X	X	X	X	X	X
Soil tillage				X	X	X	X	X	X
Sowing				X	X			X	X
Row crops				X	X				X
Flexibility (Converting the system to other vehicles)				X	X*	X	X	X	X
Integration				X*	X	X	X	X	X
						Monitor			
APPLIANCE CONTROL						5"	8"	12"	
Section View		X	X	X	X	X	X	X	
ISOBUS APPLIANCE CONTROL (PREREQUISITE FOR FOLLOWING FUNCTIONS)									
Attachment control using iMonitor2			X	X	X		X	X	
Section-control			X	X	X		X	X	
Variable control of the spread rate			X	X	X		X	X	
ISOXML data interface			X	X	X			X	
TIM for TTV tractors (6 - 9 Series)			Option	Option	Option			Option	
						Monitor			
DOCUMENTATION						5"	8"	12"	
Order documentation		X	X	X	X	X	X	X	
Order planning			X	X	X		X	X	
Data exchange			X	X	X		X	X	
ISOXML-Datenschnittstelle			X	X	X		X	X	
						Monitor			
OPERATION AND CONVENIENCE						5"	8"	12"	
Internal help function			X	X	X		X	X	
Multimedia interface (MMI)			X	X	X			X	
Comfortip (headland management)			X	X	X		X	X	

TIM (Tractor Implement Management) is a new, highly innovative system, which is being continually developed by DEUTZ-FAHR. In close cooperation with attachment manufacturers, new functions and applications will be made available to you at short time intervals.

Technical data

iMonitor2	8"	12"
Tractor operation	X ¹	X ¹
Camera	bis 2	bis 2
Virtual terminal (ISOBUS)	X ²	X ²
Touch operation	X	X
Additional MMI operation		X ¹
Languages	28	28
STEERING / GPS	Visual guidance	Assisted steer / Performance steer
Speed range	—	0.2 to 25 km/h
Slope compensation	—	up to 0.2 degrees (with IMU)
Accuracy (track to track)	30 cm	up to 2 cm (with RTK)
Accuracy (repeatable)	—	2 cm (only with RTK)
Correction signals	EGNOS/AUTONOM	EGNOS/AUTONOM / OmniStar / RTK
RTK correction ³	—	Radio / NTRIP (integrated mobile modem)
RTK correction data format3		RTCM2 / RTCM3 / CMR
Track line types	AB straight / curve / circle / guide	
Master data memory	X	X
Appliance control / documentation	8"	12"
Virtual terminal (ISOBUS)	X ²	X ²
Section view – sections	> 12	> 12
Section control – sections	32	32
AUX – function 4 digital/4 analogue	X ¹	X ¹
OPERATION/CONVENIENCE	8"	12"
Functions that can be programmed into Comfortip (headland management)	Direction of travel / 2 cruise controls / 2 speed memories / lift/lower the power lift / PTO on/off / differential lock and all-wheel drive on/off / lift/lower/float all control units / easy steer and automatic steering on/off	
Possible trigger mechanisms	by pressing a button / path-dependent / time-dependent	

¹with MaxiVision cabin
²if ISOBUS option selected
³with corresponding RTK modem

The following application examples show TIM functions, which will be made available by DEUTZ-FAHR in future:

Attention: TIM is not currently supported by every manufacturer and must be ordered separately through the manufacturer.



Speed: stop / hydraulic control units



Power lift – lift height adjustment



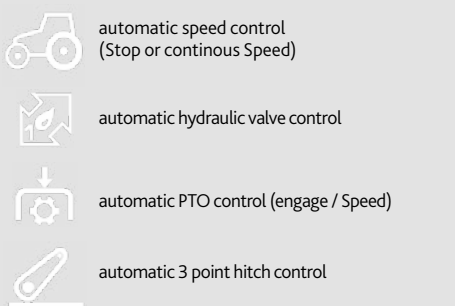
Driving speed control



Speed: stop / hydraulic control units



PTO control



- automatic speed control (Stop or continous Speed)
- automatic hydraulic valve control
- automatic PTO control (engage / Speed)
- automatic 3 point hitch control


Dealer

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The use of original lubricants and spare parts is recommended.



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