

DEUTZ-FAHR 7210 - 7230 - 7250 TTV Agrotron





TO SEE INTO THE FUTURE YOU NEED MORE THAN ONE PAIR OF EYES.







TRACTOR OF THE YEAR.

DEUTZ-FAHR presents 7 Series; the new family of high-power TTV Agrotrons with cutting edge style, efficiency, productivity and comfort. The new 7 Series TTV Agrotrons are designed to achieve high performance and maximise production efficiency output. DEUTZ-FAHR has fine tuned the most advanced technology to produce this new series, which boasts excellent performance, low fuel consumption and outstanding operator comfort. Giugiaro's Design has put its distinctive style stamp on the new 7 Series, characterising the series with an exclusive bonnet, futuristic mudguard shape with LED light units and a cab layout that is the only one of its kind on the market.

Together, these characteristics have led 7 Series to obtain the "Tractor of the year 2013" and "Golden tractor for the design" titles. These are two significant recognitions, awarded by an international panel of journalists from the sector, and are the result of DEUTZ-FAHR's continual investment in cutting edge technology and research into design and unparalleled comfort. These awards confirm that those who choose 7 Series are gaining tractor that looks towards the future, is reliable and innovative and maintains a high economic value over time.



TO ACHIEVE THE BEST RESULTS YOU MUST PLAY TO YOUR OWN STRENGTHS.



DEUTZ'S INNOVATIVE ENGINES
ARE EQUIPPED WITH SCR
TECHNOLOGY AND ARE
EXTREMELY POWERFUL, EFFICIENT
AND ENVIRONMENTALLY FRIENDLY.
THEY ARE ALSO PERFECTLY
COMBINED WITH THE PROVEN TTV
VARIABLE TRANSMISSIONS THAT
CHARACTERISE THIS RANGE.

POWER BOOST

ENGINES WITH "EXTRA" POWER (POWER BOOST).

The new Deutz engines provide a good 27HP of extra power. This additional power is available with powered equipment for PTO or road transportation.

PTO.

100% of the extra power is available when the speed exceeds 3 km/h.

TRANSPORT.

100% of the extra power is available when the speed exceeds 30 km/h.

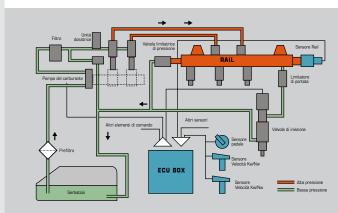
DCR

One of the main differences between the Deutz Common Rail (DCR) system and other Common Rail systems is that there are two high-pressure pumps supplying fuel to the rail and these are lubricated by the engine oil and not by the fuel. This system offers the following advantages compared to other Common Rail systems:

- improved reliability as lubrication is no longer dependent on the quality of the fuel used;
- two pumps ensure that there is no temporary pressure reduction in the common rail element;
- reduced mechanical stress and possibility of overload with two pumps.

EFFICIENT EVEN IN ENVIRONMENTAL TERMS.

The beating heart of this innovative series is the Deutz TCD 6.1 L06 4V, 6 cylinder engine, with maximum power levels (ECE R-120 with Power Boost), 222 HP (163 kW) in the TTV 7210, 245 HP (180 kW) in the TTV 7230 and up to 263 HP (194 kW) in the engine that runs the TTV 7250. The engines have four valves per cylinder with a centrally-positioned injector, turbocharger with intercooler and wastegate valve, integrated electronic control of DCR (Deutz Common Rail) high-pressure fuel injection and emission gas treated by an SCR catalytic converter. These features allow the engine to reach peak performance and excellent fuel consumption levels, as well minimising pollutant emissions.



200

180

160

120

100

700

900

LOW CONSUMPTION IN ALL CONDITIONS.

These new tractors boast high power but with a fuel consumption that can be reduced by up to 10% in relation to previous engines. This saving greatly offsets the consumption of AdBlue (a high-purity urea-based solution at 32.5% concentration in demineralised water, used for Selective Catalytic Reduction (SCR)). This provides an excellent overall reduction in running costs and helps to safeguard the environment at the same time. In practice, with SCR, exhaust gases undergo post-treatment with a high-purity, urea-based spray that breaks down harmful nitrogen oxide (NOx) into atmospheric nitrogen and water vapour; two elements that are harmless to the environment. The AdBlue® reservoir has been integrated into the fuel tank area without reducing the capacity or increasing the outer dimensions of the tractor B100 engines are used for 7 Series. This means that the engines are able to operate with biodiesel, either mixed with ordinary fuel or in a 100% pure form. DEUTZ-FAHR's care of the environment is also underlined by its use of environmentally-friendly materials in the production cycle of these new tractors. The commitment to agriculture in Deutz's engines is well highlighted by the maximum power values of 1,900rpm and maximum torque of 1,600rpm. This torque level remains almost constant at between 950 and 1,650rpm - the entire operating range for many operations. There's no need to worry about refueling either; long working days are no longer a problem due to the spacious, 435-litre fuel tanks, combined with 50-litre AdBlue reservoirs.

ECE R-120 power

950-1650 (rpm)

1300

7250 TTV

1100

Power Boost +27 Hp

7250 TTV Boost

1500

Engine speed (rpm)

1850-2100 (rpm)

1900

1500 1400 1300 1200 1100 1000

900

800

700

600

2100

ELECTRONICALLY-CONTROLLED WASTEGATE TURBO.

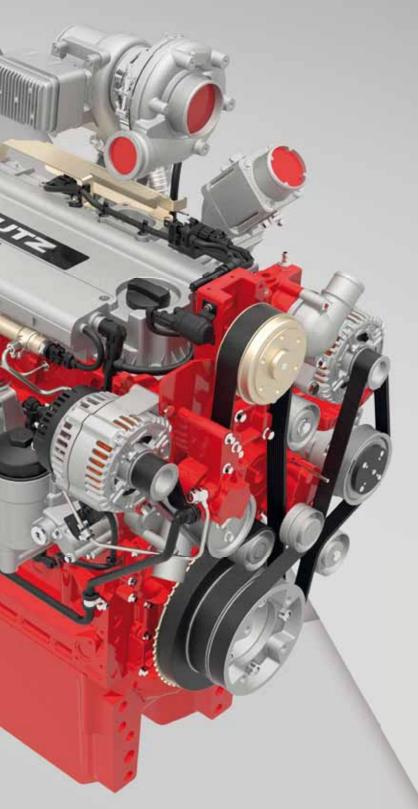
The electronic control ensures maximum operating pressure according to load.

DEUTZ COMMON RAIL SYSTEM.

Two pumps ensure high constant pressure and greater reliability.

SCR TECHNOLOGY.

Drastic reduction in consumption, greater power in line with current emissions regulations.





Innovative engine technology and Eco PTOs grant DEUTZ-FAHR tractors a fuel saving of up to 15%.

SER

Due to SCR (Selective Catalytic Reduction) technology, the new Deutz Tier 4i engines offer a unique combination of increased performance, reduced consumption and respect for the environment.



Deutz Common Rail technology.



Engine compatible with Biodiesel fuel at blend ratios up to 100% (Biodiesel responding to EN 14214:2003).





4 VALVES PER CYLINDER.

Improved combustion performance. Greater air, greater pressure and fast discharge of exhaust gas.

ENGINES WITH "EXTRA" POWER (BOOSTED POWER).

Additional power is available with powered equipment for PTO or road transportation.



TO ACHIEVE TOP
PERFORMANCE YOU
DON'T HAVE TO
COMPROMISE ON STYLE.



LET YOURSELF BE TRANSPORTED BY BEAUTY, COMFORT, TECHNOLOGY AND INCOMPARABLE DESIGN WITHOUT COMPROMISE.







SIMPLICITY IN CONTROL.

The new Maxi Vision Cab offers a very high level of technology and comfort. Computerised analysis of airflows, the use of high-quality materials and the spaciousness of the cab create an inviting and comfortable working environment.

Controls have been designed ergonomically, all of the controls have been laid out in a logical and practical way and all of the on-board information has been clearly indicated, making the tractor easy to drive and putting the operator at ease right from the start.

The exclusive multifunction lever allows the operator to easily control the main functions of 7 Series using one hand. The multifunction armrest, integrated into the driver seat, includes all of the main controls for managing the implements. Levers and buttons are grouped in a practical way and arranged according to the frequency of their use.

All of the controls are clearly distinguished and coloured to make the tractor easy for the operator to use. A general lighting control panel also groups together all of the controls for managing the lights used while working and those used on the road. Finally, the electronically-controlled, automatic climate control system and the anti-vibration function ensure that the cab is comfortable.

The suspension of the standard front axle, the mechanical or pneumatic suspension of the cab, as well as the brand new semi-active suspension are just a few of the features included.

The driving seats are also highly innovative. Cutting-edge seats with pneumatic suspension and an automatic level control system are available as standard. For more demanding requirements, 7 Series can be equipped with new active suspension seats. Lastly, a spacious passenger seat, equipped with comfortable padding, is also available.



A TECHNOLOGICAL SITTING ROOM.

The operating status of the tractor is constantly controlled by three different multimedia devices:

- the Work Display, located on the front, right pillar of the cab, allows the operator to monitor all of the tractor's operations;
- the Infocenter, located within the instrument panel, shows the status of the various systems and devices;
- iMonitor-2 an innovative (ISO-bus-compatible) multimedia interface allows the operator to fully configure all of the operating parameters.

The high technological content of 7 Series allows full command of the tractor and easy management of farming operations.





THE CONTROLS ARE EASY TO IDENTIFY DUE TO THEIR DIFFERENT COLOURS AND ARE ERGONOMICALLY DESIGNED, MAKING IT POSSIBLE TO MANAGE THE TRACTOR EFFORTLESSLY EVEN WHEN USED FOR SEVERAL HOURS OF WORK.

AN INTELLIGENT LIGHTING SYSTEM.

The modern lighting control panel installed on the cab pillar makes it possible to manage all of the tractor's lights; even those fitted on carts or equipment. The master switch, located in the centre of the panel, switches the last set configuration off and back on again.



AN INNOVATIVE CONTROL SYSTEM.

Designed to manage and configure the numerous on-board functions, the iMonitor-2 allows you to communicate with the machine by simply touching the screen or by using the practical control panel on the side console. The 12" screen is fitted on the side armrest, which is fully integrated into the driving seat. This allows the operator to control all of the tractor's functions in a way that is always practical. The following functions are integrated: "main menu" controlling all machine functions; (lift, PTO, spool valves, engine and transmission, ASM and cab suspension); performance monitor (fuel consumption, productivity and area-covered information); ISO-bus monitor allowing the use of ISO-bus compatible implements; mp3 player and Bluetooth handsfree speaker phone. Comfort and technology are at your fingertips. For even greater productivity, the iMonitor-2 can be enhanced with an Agrosky satellite control. The innovative GPS system is fully integrated into the tractor which, on its most advanced configuration setting, gives the operator the ability to activate automatic steering by using the electrohydraulic valves that control the steering to an accuracy level of within 2 cm.





PRODUCTIVITY IN YOUR HANDS.

THE PERFECT TRANSMISSION? TRANSMISSION THAT COMBINES IDEAL SPEED WITH THE HIGHEST PERFORMANCE, NOT FORGETTING COMFORT AND INNOVATION.





The TTV transmission of 7 Series combines the efficiency of mechanical components with the comfort and smoothness of a hydrostatic system. This efficient and reliable system is capable of varying speed continuously, optimising engine power without unnecessary loading or fuel wastage, for easier and more productive work These operating principles allow the TTV transmission to quickly provide the required driving speed, ensuring a smooth drive and advantages in terms of on-the-move comfort and safety, particularly when driving on roads. Designed for a maximum speed of 60 km/h, the new DEUTZ-FAHR Series 7 tractors can reach 40 - 50 km/h (depending on regulations) at 1,357 - 1,695 rpm. In the field as well, though, productivity is still at top level due to automatic engagement of double heading and locking of the differential gears already available as standard. Lastly, the superior comfort of the TTVs is enhanced by the transmission control system. To drive the tractor the operator no longer needs clutch, gears, accelerator and brakes. It is often possible to use only the joystick to make small adjustments to the working speeds.



JOYSTICK

- 1 Lift raise/ lower buttons and "STOP" button.
- **2 CRUISE CONTROL**: two different Cruise control speeds can be programmed.
- 3 Engagement/disengagement of the COMFORTIP (repetitive operations).
- 4 Shuttle buttons.
- 5 Proportional controls for hydraulic distributors.



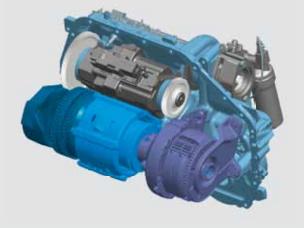
- **SPEED ADJUSTMENT**The ground speed is increased or decreased by simply rotating the wheel.
- SHUTTLE ENABLING BUTTON

 Must be pressed at the same time as the shuttle buttons located on the multifunction joystick.

 Maximum protection against accidental impacts.







SPEED IS CONTINUOUS.

TTVs are equipped with variable transmission, based on "split-power", in other words the breakdown (split) of power supplied from the crankshaft into two operating circuits: the highest proportion of power is mechanically transferred via planetary gearing and an oil-bath disc clutch while the remaining proportion is transferred hydrostatically using a Load Sensing pump and fixed displacement motor. The hydrostatic flow varies so that the tractor speed is able to increase (or decrease) in a continuous, smooth way without the classic "jolts" noticeable when changing gear using traditional transmissions. The two elements of the continuously variable transmission are connected to a geared control unit. The assembly is completed with an electrohydraulic shuttle and controlled by an advanced electronic control unit (ECU) that continuously "talks to" the engine control unit to seek maximum efficiency for each operating condition.





THOSE SEEKING AN ALTERANIVE ROUTE NOW HAVE THREE TO CHOOSE FROM.

We always have to choose the best strategy. This is why the control unit of the 7 Series includes three different operating modes.



MANUAL



PTO



AUTOMATIC

MANUAL

Depressing the accelerator pedal increases the engine rpm while operating the multifunction joystick varies the ground speed. In this instance, the TTVs are essentially comparable to a tractor with a mechanical gearbox but, due to their "infinite" ratios, have the great advantage of superb drive smoothness that is typical of CVT transmissions. Keeping the multifunction lever pushed forward or backward (for reverse or to decelerate) varies the speed continuously. On the other hand, short pulses on the lever allows you to vary the speed in intervals of 0.1 km/h from 0 to 15 km/h and intervals of 1 km/h for higher speeds.

AUTOMATIC

This is the optimum choice for pulling operations in the field and for transportation operations. When the accelerator pedal is pressed, the tractor accelerates to the preset travel speed. The electronic control unit then keeps the speed constant, adjusting the engine rpm according to the changing load conditions.

PTO

This mode automatically activates when the PTO is engaged, keeping the rpm constant regardless of the tractor's ground speed. In all cases, the operator can constantly vary the ground speed using the accelerator pedal. In this way, the TTV overcomes the main limitation of conventional mechanical transmissions that do not allow you to adjust the driving torque to a different speed from the engine unless you change gear. This method is therefore ideal for equipment that must operate at a constant PTO rpm, such as round balers.





PRODUCTIVITY IS THE STRATEGY FOR EFFICIENCY.

In parallel with the operating modes illustrated, the operator can also choose from three basic operating strategies: Eco, Power and Automatic-Mode.

The first strategy allows a further increase in efficiency, to achieve greater fuel-saving while the second strategy maximises the productivity of the tractor, allowing quicker operating times. The Automatic-Mode puts the tractor into an intermediate position in relation to the other two strategies. In this strategy, the control unit adjusts the engine and transmission at the same time until constantly operating at maximum economy, increasing the engine rpm to provide the extra power needed to keep the required ground speed with the increase in load.





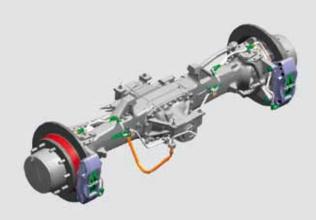
The parking brake acts directly on the rear brake discs to free any loading of the rear pinion shaft. This involves minimal absorption of power.



The "Power Brake" device allows the operator to operate the brake pedal with minimal effort. The brakes react quickly and gently, even when the engine switches off.

For maximum safety, 7 Series can be fitted with an innovative, integrated braking system that involves the disc brakes fitted externally on the front hubs. This system comes as standard in the 60 km/h versions (where this limit is permitted). The "Park Brake" parking brake can be directly activated from the armrest console and acts on the rear brake discs to free any loading of the rear pinion shaft. This involves minimal absorption of power.

For continuous and easy adjustment of the track widths, bolt-on bar axles can be fitted. This allows the operator to work with 650/65 R42 twin rear tyres and also fit the new rear ballast wheel weights with a 140 kg central plate per side and three further 255 kg discs on each wheel, making a total of 1,810 kg of rear ballast.









THE MECHANICS OF INTELLIGENCE.

THE HYDRAULIC SYSTEMS ARE TOP-OF-THE -RANGE AND INTELLIGENT EQUIPMENT MANAGEMENT RAISES PRODUCTIVITY IN THE FIELD TO THE MAXIMUM LEVEL.





PTO. COMPLETE PERFORMANCE.

Being able to choose from a few alternatives in terms of PTO helps to increase the versatility of the tractor, keeping it constantly operating at maximum efficiency, even when high power levels are not required. The 7 Series is equipped with three speeds (540E/1,000/1,000E) that can all be electro-hydraulically engaged and with proportional valve engagement control, this ensures gradual and progressive start-up of the connected equipment every time. Remote control of the PTO from both rear mudguards comes as standard. Together with the front lift, 1,000 rpm PTO is available. The ECO version of this is available upon request.

EFFICIENT HYDRAULICS.

The standard combination includes an independent 44 l/min steering pump and a 120 l/min Load Sensing pump (or optional 160 l/min pump). Four double action remote control valves are available as standard. These valves are proportionally-controlled and can be increased to seven on request. When specifying seven valves, two valves are dedicated for operations using the optional front hitch. All the remote control valves can be locked, also used in single action, when lifting and have a detented "float" position. The timing and flow of all valves can be adjusted. All the control levers are distinguished by colour and can be programmed for combination with various hydraulic attachments. The Power-Beyond facility allows you to directly connect the oil flow from the pump to attached equipment - a useful option when the machinery is equipped with an independent control unit that requires a high oil flow capacity. The Load Sensing pump continuously adjusts the hydraulic power requirement. When no hydraulic power is required, the pump goes into a "Standby" mode, minimising power dissipation (and fuel consumption) and guaranteeing the hydraulic components a long operating life.





All tractors in the new 7 Series are equipped with "push-pull" hydraulic couplers to connect the pressurised hydraulic pipes. A dedicated container collects small amounts of excess oil that can leak during the coupling phase and prevent it from spilling onto the floor.

The maximum rear lifting capacity is 10,000 kg. The EHR electronic management (fitted as standard) manages the control of the draft loadings and linkage position. Intermix of draft and position control allows the operator to fine tune settings for all conditions and also incorporates, the float mode, as well as reducing wheel slip. A rapid soil engagement setting, damping of oscillations (ride control) when transporting equipment, preset lock position, implement height limit and adjustment of the lowering speed are all integrated into the EHR The maximum front hitch lifting capacity (optional) is 4,500 kg.





DEPTH OR HEIGHT SETTING

The rear lift's depth (draught control), height (position control) and float can be set on a scale from 2 to 8.

RED LIGHT

ON: "Start up" transport or mode FLASHING: STOP mode OFF: operating mode



The main raising/ lowering controls of the lift are located on the Joystick.

A "STOP" switch prevents the plough stilts from moving.



Four potentiometers allow you to adjust the following variables:

- draught/mixed position;
- maximum lift height setting;
- lowering speed control;
- wheelslip.



SWIFT AND SIMPLE MAINTENANCE.

MAINTENANCE OPERATIONS ARE CARRIED OUT QUICKLY AND WITH EASE DUE TO A ONE-PIECE BONNET, HINGED AT THE REAR, WHICH CAN BE RAISED COMPLETELY CLEAR.









All the most important components and assemblies are easily accessible and routine maintenance operations do not require tools. The engine oil level can be checked without opening the bonnet and a sight glass positioned on the transmission housing indicates the transmission/hydraulic oil level.

LONG MAINTENANCE INTERVALS.

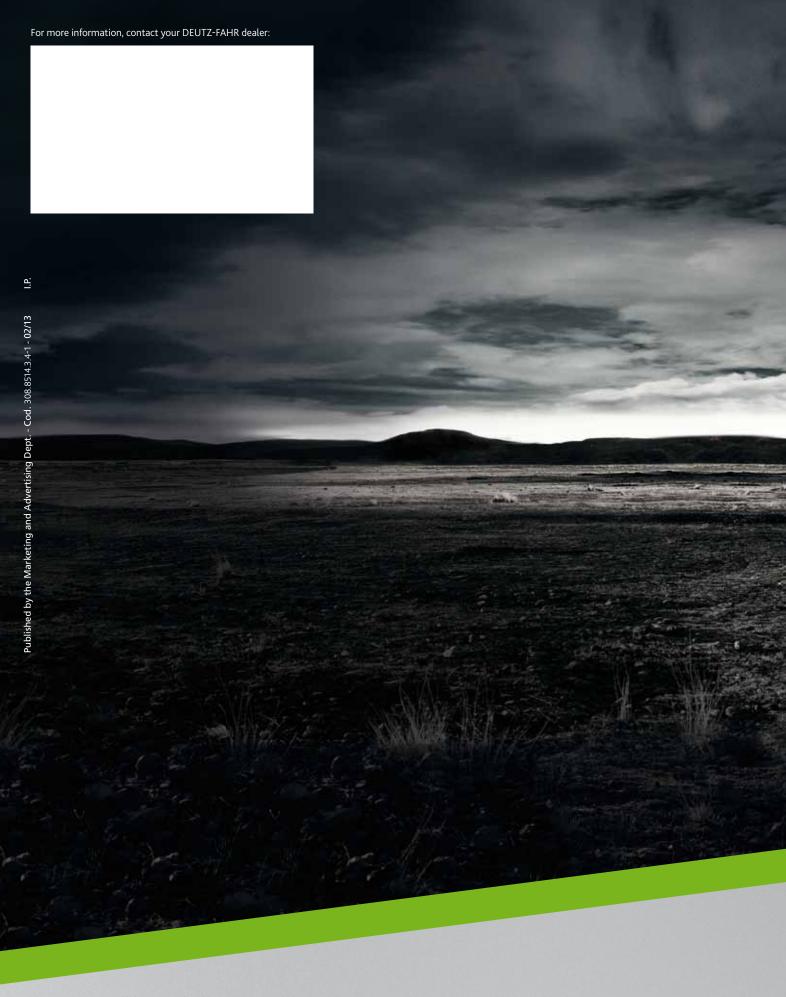
The engine oil need only be changed after every 500 hours of operation while the valves should be serviced every 1,500 hours.

- Maintenance of the cooling system is straightforward as all radiators are mounted on hinge pivots so as to swing open.
- The engine air filter is easy and quick to maintain.
- All fuses and relays are housed in a dedicated enclosure on the right fender, readily accessible and well protected.
- The cab air filters are incorporated into the side pillars for ease of access and servicing, with no tools required.
- The battery disconnection allows you to park the tractor safely for long periods of time. Minor risk of wheelslip and, consequently, minor overheating.
- The air compressor is coupled directly to the engine. No interconnecting drive belt, for greater reliability in operation.
- Checking and topping up the engine oil is swift and simple.
- The external oil indicator allows swift and accurate inspection of the oil level.

TECHNICAL DATA		7 SERIES				
TECHNICAL DATA		7210 TTV	7230 TTV	7250 TTV		
ENGINE						
Туре			Deutz - TCD 6.1 L06 4V Tier 4i			
Injection type/ Pressure		Deutz Common Rail/1,600 bar	Deutz Common Rail/2,000 bar	Deutz Common Rail/2,000 bar		
Cylinders/ Displacement	n°/cc		6/6,057			
Approved fuel (i)			Diesel, B100			
Maximum power with boost (ECE R-120)	kW/hp	165/224	180/245	194/263		
Homologated power (2000/25/EC)	kW/hp	163/222	178/242	190/258		
Maximum power (ECE R-120)	kW/hp	151/205	162/220	175/238		
Rated speed power (ECE R-120)	kW/hp	137/186	150/204	174/236		
Rated engine speed	rpm		2,100			
Air intake		Under the bonnet				
Maximum torque (standard mode)	Nm	806	870	934		
Maximum torque (boost mode)	Nm	883	937	1,009		
Fuel tank capacity	l		435			
AdBlue reservoir capacity	l		50			
Oil change intervals	hours		500			
TRANSMISSION						
Туре			TTV continuously variable transmission			
Maximum speed 40 km/h		@ 1,357/@ 1,760 (HD)				
Driving strategies		Auto/Manual/PTO (with Eco/ Power management)				
PowerZero (active stop) function			std			
Front axle suspension		hydropneumatic std				
ASM (automatic 4WD and diff lock control)			std			
PTO						
Rear PTO speeds	rpm	540/540E/1,000/1,000E 540E/1,000/1,000E				
PTO control on mudguards		std				
Front PTO speed	rpm	1,000 (1,000E opt.)				
PTO activation		Proportional electrohydraulics				
HYDRAULIC LIFT						
Maximum lifting capacity (front/rear)	kg		4,500/10,000			
Lift control on mudguards			std			
Radar		opt				
HYDRAULIC SYSTEM						
Load-Sensing hydraulic circuit with variable capacity	y pump		std			
Hydraulic oil reservoir capacity (separate tank)	l	50				
Distributor control on mudguards			std			
Power Beyond		std				
Remote valves	n°	4 (7 opt)				
BRAKES AND STEERING			, 17			
Boost brake			std			
Power steering pump capacity	l/min		44			
Parking brake	type	EPB (Electronic Parking Brake)				
External disc brakes on the front axle		opt (std with 60 km/h transmission)				
Pneumatic/hydraulic braking of the trailer			std			
Steering angle	degrees	52°				
Steering radius	m	5.8				
TYRES						
		600/70R30/620/70R42	600/70 R30-	-650/65 R42		
Stands front/rear tyres						
Stands front/rear tyres Ballast for rear wheels (optional)	kg		2 x (140+255+255+255)			

TECHNICAL DATA		7 SERIES			
		7210 TTV	7230 TTV	7250 TTV	
CAB					
Maxi Vision cab			std		
Air Conditioning		std			
Maxi Control armrest		std			
Iso-bus interface (ISO 11786)		opt			
iMonitor-2 (display 12.8")		opt			
Coloured Work Display		std			
Padded passenger seat		std			
Automatic A/C			opt		
Max Comfort Dynamic + + seat (Dynamic Suspension, automatic pneumatic leveling)			std		
Max Comfort Dynamic + + seat (Dynamic Suspension, automatic pneumatic leveling, additional suspension)			opt		
Max Comfort Evolution Active seat (Active suspension, active heating and ventilation)			opt		
Cab suspension	type	mechanical or pneumatic			
Comfortip Professional			std		
ELECTRICAL SYSTEM					
Voltage	Т	12			
Standard battery	V/Ah/A	12/180/700			
Alternator	V/Ah	12/200			
Starter motor	V/kW	12/3.1			
Auxiliary power socket		std			
Higher amp. power socket		std			
DIMENSIONS and WEIGHTS (with front/ rear tyres)		600/70R30/620/70R42	600/70R30/650/70R42	600/70R30/650/70R42	
Wheelbase	mm		2,817		
Length (min-max)	mm	4,817-4,972			
Height (min-max)	mm		3,103-3,153		
Width (min-max)	mm	2,500-2,736			
Ground clearance (min-max)	mm		555-685		
UNLADEN MASS					
Unladen mass at front (min-max)	kg	3,000-3,795	3,100-3,915		
Unladen mass at rear (min-max)	kg	4,700-4,785	5,100-5,185		
Total unladen mass (min-max)	kg	7,700-8,580	8,200-9,100		
MAXIMUM PERMISSIBLE MASS AT 40 KM/H					
Maximum permissible mass - front	kg	4,860-5,200 (min-max)	5,200		
Maximum permissible mass - rear	kg	5,600-9,000 (min-max)	10,000		
Maximum permissible mass - front	kg	10,460-12,000 (min-max)	13,500		
MAXIMUM PERMISSIBLE MASS AT 50 KM/H					
Maximum permissible mass - front	kg	4,420-5,200 (min-max)	5,200		
Maximum permissible mass - rear	kg	5,600-9,000 (min-max)	10,000		
Maximum permissible mass - front	kg	10,460-12,000 (min-max)	13,500		

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The use of SDF original lubricants and coolants is recommended $\label{eq:coolange} % \begin{center} \begin{ce$



