

# AGROTRON TTV



EVOLVING AGRICULTURE.

# AGROTRON TTV: STEPLESS COMFORT AND ECONOMICAL OPERATION.

Tilting glass roof hatch with sunshade, ideal for working with a front loader.

Four integrated working lamps.

Sloping, streamlined cowling for excellent view of front-mounted implements and cultivation area. Safe working and manoeuvring, even in confined spaces.

State-of-the-art DEUTZ Common-Rail (DCR) turbo diesel engines with EMC (Electronic Motor Control) as a standard feature. For low fuel consumption, high torque and ample power reserves. The engines are fully bio-diesel compatible (B100) and the top speed of 50 kph is reached at a low 1,850 rpm.

The integrated front powerlift, with a lifting force of up to 4,500 kg and the electro-hydraulically operated 1,000 rpm front PTO, make the Agrotron TTV a full-system tractor for combined applications. Mounting of front implements is simple.

Driving safety and comfort is considerably enhanced by the integrated suspension design using perfect coordination of hydropneumatic suspension on the front axle and pneumatic suspension on the cab.

One of the largest and most comfortable tractor cabs for relaxed, fatigue-free work. Air-conditioning as standard, together with ergonomic, intuitive controls with unparalleled features.

High-performance hydraulic system with lifting forces of up to 10,000 kg. Electronic Hitch Regulation (EHR) with integrated diagnostic system as standard. Separate hydraulic circuit for the steering. Four remote valves as standard and convenient operation with PowerComV and joystick control.

Four PTO speeds are standard. The economical ECO PTOs (540E and 1,000 E) give real fuel-saving benefits for all applications. In combination with the standard ASM drive control management, the PTOs, 4 wheel-drive and differential locks are controlled automatically.

Infinitely variable, performance-graded powershuttle transmission with four speed ratios and three driving strategies. Modern, practical transmission technology with outstanding efficiency.

Articulated front mudguards are a standard feature. A high degree of manoeuvrability and small turning circles are also guaranteed.



Exclusively at DEUTZ-FAHR: 24 months guarantee for all Agrotron from 132 hp.



Fuel-efficiency even at 50 km/h thanks to the reduced engine speed.



DEUTZ Common-Rail: The exclusive technology for minimal fuel consumption and the quickest possible response characteristics.



External exhaust gas recirculation reduces consumption.

Printed in Germany

Printed in Germany



Approval for 100% bio-diesel: Saves costs and protects the environment.



With 4 PTO speeds as standard: 540/540 E/1,000/1,000 E



Thanks to their innovative engine technology, DEUTZ-FAHR tractors save up to 15% on diesel fuel.

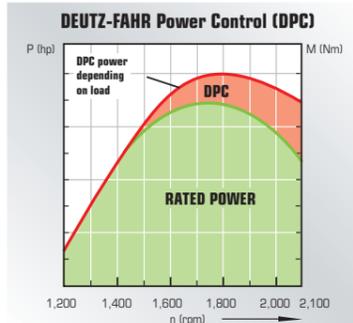
# DEUTZ ENGINES: POWERFUL AND ECONOMICAL.

## ADVANTAGES

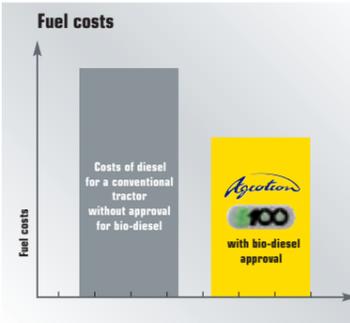
- ▶ Modern, high-torque and fuel-efficient DEUTZ 4-valve turbo diesel engines with electronic engine control (EMC) for low consumption and compliance with TIER III exhaust gas emissions regulations
- ▶ The innovative DPC system (DEUTZ-FAHR Power Control) provides powerful and economical engine power for every application
- ▶ DEUTZ Common-Rail (DCR) high-pressure injection, up to 1,600 bar using two injection pumps
- ▶ The exhaust gas recirculation reduces emissions of nitrogen oxide and particulates whilst also considerably reducing fuel consumption
- ▶ Air filter with ejector dust separation and long maintenance intervals
- ▶ DEUTZ-FAHR is the first manufacturer granting approval for the use of bio-diesel fuel (B100) ex-works including a 24-month warranty. Expensive after sales solutions or additional assurances are not necessary. Savings from the first moment on.



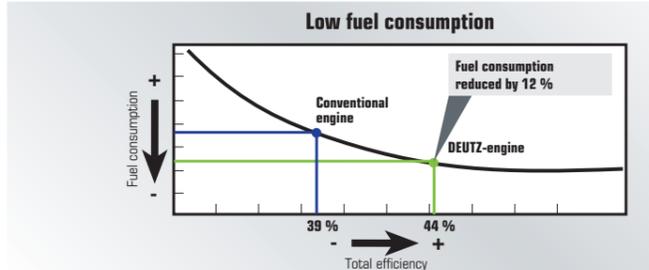
Optimum fuel combustion thanks to four valves and 7-hole injection nozzles.



The innovative DPC technology delivers the highest and most economically efficient power at all times depending on the load situation. Strong torque, quick response characteristics and sufficient traction are therefore guaranteed even under the most difficult operating conditions.



Every litre of bio-diesel saves hard cash. At a fuel consumption rate of 30,000 l/year and an average price saving of 15 ct/l, the overall saving over five years would be 22,000 Euro.



### Powerful, economic and environmentally friendly

Many can construct engines. But the real task is to build strong and efficient engines which comply with the effective emission standards and still set their own trend. The DEUTZ engine philosophy comes down to power, economy and environmentally friendliness.

### We develop for agriculture

DEUTZ-FAHR focuses on technologies which contribute to increase power and lower fuel consumption and minimise harmful emissions. Our bio diesel initiative is only one of several forward-looking projects.

The ever changing applications in agriculture require extraordinary know-how and longtime experience in engine construction. But there is one thing all those applications have in common: power must

be available when it's needed. And the fuel consumption has to be reduced at the same time.

What sounds paradoxical has been achieved by the DEUTZ-FAHR engineers with the innovative DPC (DEUTZ-FAHR Power Control). By combining the electronic engine control (EMC) and the DEUTZ Common-Rail-Technology, a complex but very efficient engine control system has been developed.

### Powerful, strong, efficient

The 6 cylinder high-tech DEUTZ turbo diesel engines in the Agrotron TTV come with innovative DEUTZ Common-Rail-Technology (DCR) as standard. And thanks to the DPC the engines deliver constant power, high overpower and maximum torque. The driver can therefore relax while working because the engine offers sufficient reserves of

power, excellent flexibility and reduced fuel consumption at all times. A special feature for transport work at 50 km/h: thanks to the reduced engine speed of 1,850rpm the Agrotron TTV works very economically in this sector.

### Quiet for both the driver and the environment

Possible noise sources were already excluded at the engine design stage, as noises that do not occur do not require insulation. Noise generation is already prevented at the source by a rigid, ribbed crankcase, soft combustion, exhaust turbocharger, liquid cooling and double-shell silencing below the engine cowling and a flexible intake and exhaust pipe mounting.



# STEPLESS PERFECTION.

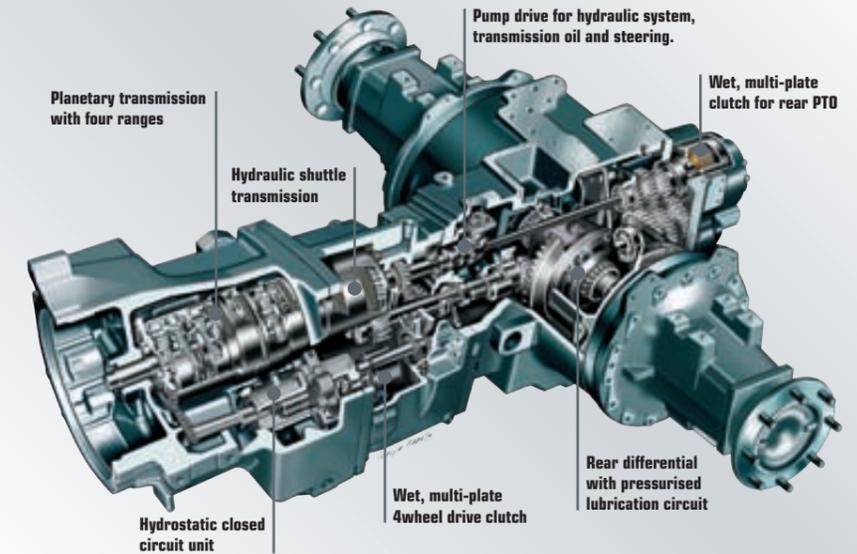
## ADVANTAGES

- ▶ Excellent economy due to maximum drive capacity
- ▶ Long service life with wet clutches with low transmission losses
- ▶ High efficiency in all four working ranges
- ▶ Simple operation and fast familiarisation
- ▶ Maximum efficiency due to high mechanical transmission element

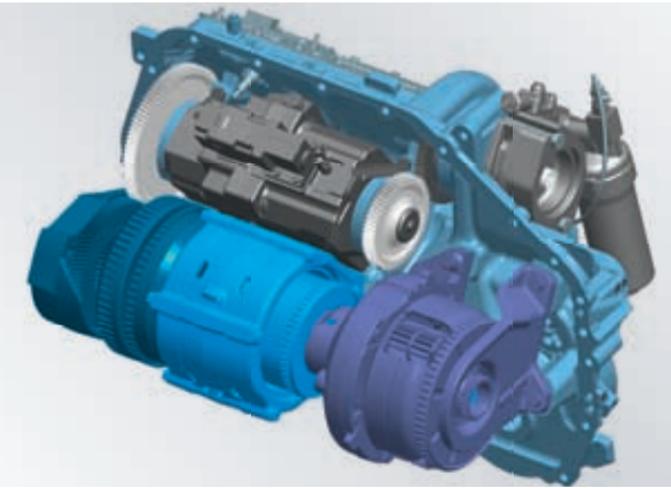
**FUEL-EFFICIENCY  
EVEN AT 50 KM / H  
THANKS TO THE  
REDUCED ENGINE  
SPEED.**



**50 km/h**  
with lowered  
engine speed



Agrotion TTV 620 drive train.



Mechanical-hydraulic drive unit in the Agrotion TTV 630.

The demands made of a modern, infinitely variable transmission are clear – high tractive force with a low hydrostatic involvement, maximum economy and, most importantly, user convenience. The transmission of the Agrotion TTV, which DEUTZ-FAHR developed in collaboration with ZF, has entered new dimensions in stepless transmission technology: Practical operating convenience, maximum

efficiency and exemplary economy are the main characteristics.

### High mechanical efficiency

The unsurpassed efficiency of a stepless transmission is possible due to the use of state-of-the-art technology. In each of the four working ranges the maximum driving power is mechanically transferred. The hydrostatic share is reduced

to a minimum, ensuring maximum efficiency, without hydraulic losses at low speeds during fieldwork.

### Intelligent transmission design

The stepless, performance-graded transmission of the Agrotion TTV comprises four main components – planetary transmission, the hydrostatic unit, the shuttle clutches and the electronic control unit.

The high degree of efficiency is ensured due to the direct power flow from engine to the, planetary transmission, shuttle transmission, PTO and axle.

### Infinitely variable from 0 to 50 km/h

The transmission comprises four planetary trains. The entire speed range is practically divided into the four working ranges by the planetary trains. The

speed is steplessly varied within each working range by a hydrostatic unit. This gives you the possibility of infinitely variable travel speeds from 0-50 km/h, using the combination of the planetary trains and the hydrostatic unit. The planetary trains are inter-connected by maintenance-free long life multi-plate clutches.

### Ideally coordinated

The hydrostatic variable displacement pump is driven directly, via the main shaft, from the engine. The variable displacement pump determines the oil flow rate and therefore, the speed of the fixed output motor. The less oil pumped, the lower the speed of the fixed output motor and therefore the lower the hydrostatic power share.

# AUTOMATIC OPERATION FOR ALL JOBS.

## ADVANTAGES

- ▶ High tractive force on roads and fields
- ▶ Stopping and pulling away by using only the drive pedal without brakes and clutch
- ▶ Any speed can be pre-selected from 0-50 km/h
- ▶ Maximum operating convenience
- ▶ Optimum fuel consumption during road travel
- ▶ Simple driving strategy selection with all necessary driver information
- ▶ You can select the driving strategy best suited to the work in hand
- ▶ You benefit from the highest standard of driver comfort
- ▶ The electric parking brake provides increased safety (TTV 630)



## THE RIGHT OPERATING MODE FOR EVERY JOB.

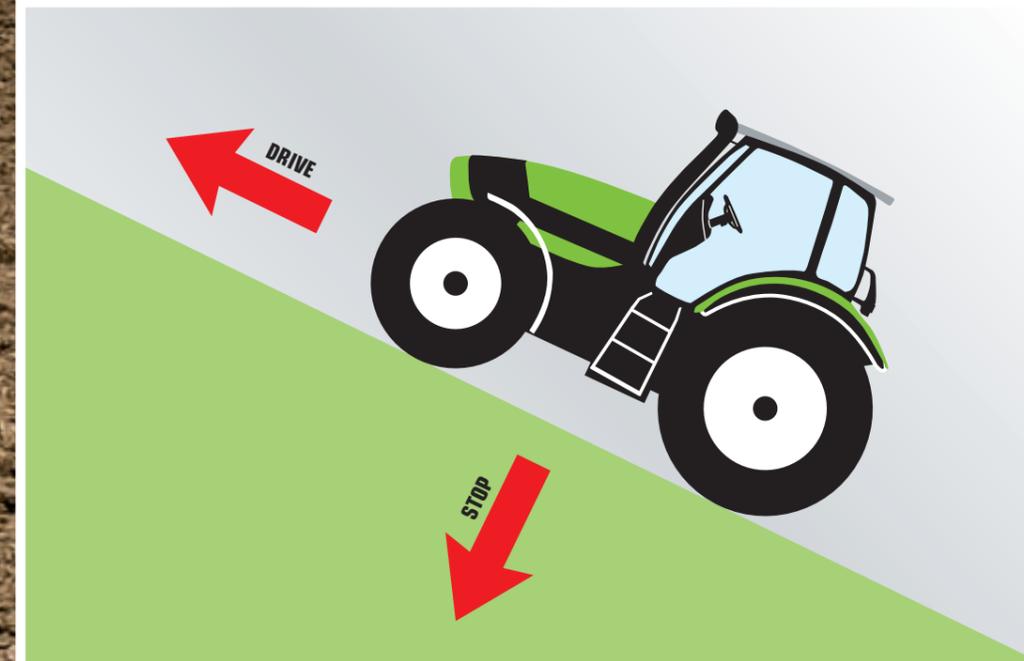


Fine-touch driving with the accelerator pedal in auto mode.

The controls for changing the driving strategy are in the armrest.

Electrical parking brake.

Everything in sight at all times: The transmission monitor.



Safe on slopes: Starting and stopping with active parking control.

### Automatic working

Nothing is simpler – start up, pull away and off to work! In automatic mode the Agrottron TTV offers maximum convenience for all jobs and applications without complex programming. Transport and field work are mastered with ease. The selection of the required speed is performed precisely with the PowerComV or fast adjustment feature. The engine speed is adapted by the engine electronics which ensures the right speed for all load conditions. The driver

therefore always works in the economical range.

Advantages of automatic mode: Simple manoeuvring and convenience during driving and working with the same standard of comfort as a car. The Tempomat cruise control function is an effective supplement for many jobs and relieves the strain on the driver.

Auto, ECO or Power: The driver decides! The driver can programme the basic set-

tings of automatic mode and determine the range within which the engine speed is varied depending on the job.

### PTO mode

This mode is automatically activated when the PTO is switched on, and permits economical operation of the Agrottron TTV at constant engine speeds. The required engine speed can be set or adjusted with the EMC button or the electronic manual throttle. The Tempomat cruise control function is also available. Advantage: The

Agrottron TTV adjusts directly and conveniently to working and operating conditions at every engine speed.

### Manual mode

The driving pedal is solely an accelerator pedal controlling the engine speed. The speed can be infinitely varied from 0-50 km/h with the PowerComV. The lowest speed is a super-slow 47 m/h.

### Active parking control

This function allows you to reliably keep

the transmission and tractor stationary irrespective of the slope, hill or respective load simply by removing your foot off the drive pedal, without actuating the service or trailer brake. You are therefore able to safely and conveniently stop, hold and drive off again in any condition and direction.

### Automatic parking brake

For additional safety over and above the handbrake, the Agrottron TTV 630 also has a parking brake as standard which

is operated either manually or by timer. This activates automatically whenever the driver leaves the driver's seat or the tractor is at a standstill for more than 30 seconds.

# COMFORTIP: INDIVIDUALITY A STANDARD FEATURE

**COMFORTIP: WORKING AND PROGRAMMING IS VIRTUALLY AUTOMATIC. NOTHING COULD BE SIMPLER.**



## ADVANTAGES

- ▶ Maximum operative safety – no complex handling and searching for function switches
- ▶ Enhancement of driver productivity, relaxed working conditions
- ▶ Simple and logical programming of the individual functions and parameters and their selection by the driver, and also customisation for specific jobs
- ▶ Individual selection by the driver
- ▶ Prevention of operating errors
- ▶ Manual intervention possible at all times

### Operation made easy

Standardised programmes really cannot do justice to all the varying applications found in agricultural enterprises. Wouldn't you prefer it if you could automate the repetitive functions required for each job?

This is exactly the concept of DEUTZ-FAHR with the PowerComV joystick and the Comfortip function. Individual operating sequences can be programmed by the driver and reactivated simply by pushing the operating lever. The operat-

ing sequences are centrally and consecutively displayed in the Infocenter. The next programmed function is highlighted on the display, so that the driver can see at all times which function he will activate next.

### Programming during work

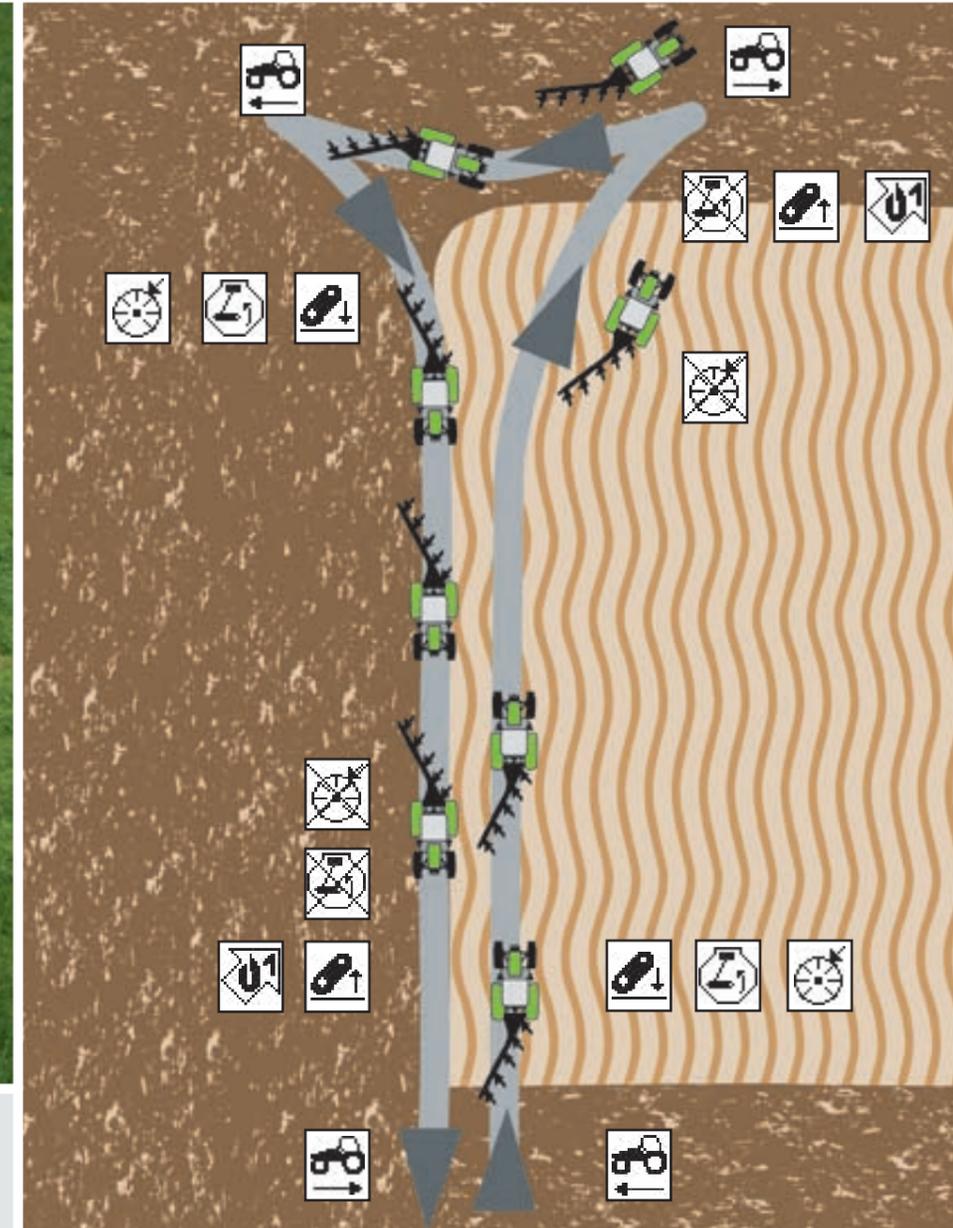
To set up the system for programming operating sequences – this is possible when the tractor is stationary or moving – the PowerComV joystick only has to be moved to the left whilst simultaneously pressing the enable button. An acoustic

signal is then sounded and the digital display on the instrument panel is activated to accept the command function.

To programme your preferred sequence it is only necessary to press the respective buttons on the PowerComV joystick or on the multi-function armrest. The programmed functions are then stored in the memory even when the tractor is switched off. This is the ultimate in hassle-free headland management.

### Increased productivity included

Increases in productivity and a reduction in fatigue are ensured. In this manner different operating sequences with up to 16 functions can be saved and recalled. You can simply "individualise" the Agrottron TTV for each job and considerably increases productivity with stress-free, one-hand operation. Operating sequences also enhance your operating safety. Manual operating faults are not possible and you don't have to reach for different switches on the multi-function armrest.



- |                         |   |                                   |
|-------------------------|---|-----------------------------------|
| Forward speed           | Deactivate Cruise control                 | Lift the plough                   |
| Lower plough            | Recall the memorized engine working speed | Turn the plough (Control valve 1) |
| Activate cruise control | Recall the manoeuvring speed              | Engage reverse gear               |



Every function of the Comfortip in sight.

# MAXIMUM HYDRAULIC CAPACITY. FOR EVERY APPLICATION.

## ADVANTAGES

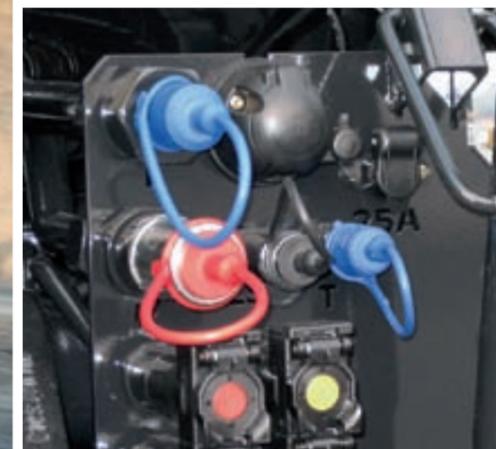
- ▶ Load-Sensing hydraulic system as standard
- ▶ Very high operating efficiency
- ▶ Very high capacity oil delivery
- ▶ On demand oil supply
- ▶ Easy and efficient connection and control of external implements
- ▶ Lower system heat and lower power demand



Up to seven remote valves can be operated (Agrotion TTV 630).



The powerlift can also be operated with the buttons on the mudguard.



The "power beyond" connections for the Agrotion TTV.



Logically numbered: The hydraulic connections at the rear.

### Load-Sensing as standard

With the Agrotion TTV you get a pressure and volume-controlled hydraulic system (Load-Sensing) with a pump flow capacity of up to 160 l/min and a system pressure of 200 bar. The closed centre system uses an axial piston, variable displacement pump controlled by hydraulic demand. The system pressure drops as oil flow is called for; only then does the variable displacement pump automatically provide more oil so that the pressure demanded is maintained. The consumer with the highest pressure requirements determines the current system pressure.

### Excellent damping

During fast road travel vibrations can occur in the hydraulic system caused by the implement bouncing. These can have a considerable detrimental effect on driving safety and comfort. When vibration damping is activated (automatically from 8 km/h onwards), vibration is detected by the electronic Load-Sensing pins and compensated with selective and fast counteraction by the powerlift.

### High lifting force

Large-dimension lifting cylinders give a tremendous lifting force of 10,000 kg/h. Fast and safe implement coupling and un-

coupling using external lift buttons on the rear mudguard.

### Electronic powerlift control

The TTV is equipped with an electronic hitch regulation (EHR). Its functions and sensors are continuously monitored by an integrated diagnosis system (ECU). Each time the powerlift is activated, the system automatically runs a self-diagnostic check. Initial setting of the EHR is done using the colour-coded knobs on the easy to reach panel this then automatically monitors the following functions: draft/position intermix, depth and float combined control, draft sensitivity, slip control (with fitted

radar sensor), vibration damping, transport locking, external control activation, lifting height limitation, lowering speed control. Lifting and lowering is integrated into the PowerComV joystick.

### External control

Special implements that have to work at specific depths or heights can be monitored by an external electronic connection.

### Remote valves

The Agrotion TTV can be equipped with four double-acting remote valves, each with four functions. All remote valves can be locked in either the lifting or floating

position and also used as single or double acting. Each valve has a separate oil flow control. As a result each consumer receives the exact oil volume it requires. The control levers are colour-coded and specifically assigned to the hydraulic connections. Confusion is not possible. All remote connections at the rear are coupled under pressure and are equipped with rapid break-away couplings and an oil collecting pan. With the easy-reach cross-gate lever you have total command of two remote valves. You can, for example, raise the front loader and operate the push-off fork at the same time.

### Power beyond

With the power beyond connection the required oil flow can be prioritised from the axial piston pump directly to constant flow demand. Implements can be connected that have a third, pressure sensing line. As a result units such as a potato harvester elevator, self-loading forage box, or air-seeder, can be directly supplied with an uninterrupted oil flow from the axial piston pump.

# FIVE VIEWS OF POWER TRANSMISSION.

## ADVANTAGES

- 4 PTO speeds as standard
- Economy PTO with lowered engine speed for low fuel consumption and noise
- Available as an option for the TTV 630: 1.000 economy front PTO
- Simple change over to different spline shaft profiles
- Modulated start-up, reduces drive-line problems
- Automatic control when rear powerlift is actuated



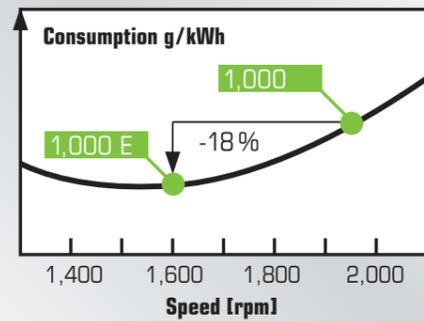
The transmission's PTO mode activates automatically when the PTO is switched on.



The PTO speeds can be conveniently pre-selected.



The integrated front hydraulic system and front PTO, available options.



Characteristics of the rear PTO	TTV 610/620	TTV 630
Clutch	oil-immersed multi-plate clutch	
Actuation	electrohydraulic	
Speed pre-selection	from the driver's seat in the cab	
Output shaft	6 or 21-spline profile 1 <sup>3</sup> / <sub>8</sub> "	
<b>PTOs</b>	<b>engine speed (rpm)</b>	
540	1,946	1,880
540 E	1,645	1,600
1,000	1,964	1,880
1,000 E	1,645	1,600

### Powerful and modulated operations

The versatile rear PTO with four standard speeds (540/540E; 1,000/1,000E rpm) increases the versatility of the tractor. The bolted PTO stub can be fitted with a number of different profiles. The PTO can be operated both from the cab and also with pushbuttons on the left-hand rear mudguard. The electrohydraulic control ensures modulated, low-wear PTO start-up. In auto-mode the PTO automatically switches off during lifting and is reactivated when the powerlift is lowered. Operating errors are prevented and mounted implements protected against damage.

### Standard-feature economy PTO

With the economy PTO, fuel consumption, engine load, noise, driver stress and the environmental burden are all reduced considerably as the result of low engine speeds. The speed of the economy PTO is within the lowest fuel consumption range and – due to the engine power curve – still at a very high performance and torque level. You still get a lot of power, even in economy PTO.

### Powerful front PTO

The optional front PTO runs at 1,000 rpm (for Agrottron TTV 630, 1000E as an option) and is driven directly by the

engine. It runs independently of the rear PTO and is electrohydraulically actuated at the touch of a button. Due to the modulation of the wet, multi-plate clutch, implement start-up is always smooth and independent of the load.



**ECONOMY PTOS AT THE FRONT AND REAR SAVE UP TO 12% IN FUEL.**

# PREMIUM CHASSIS AND DRIVE MANAGEMENT.

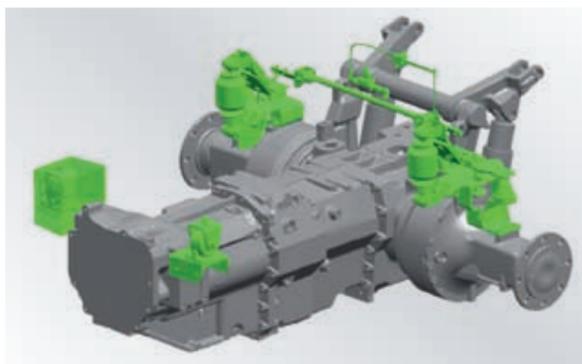
## ADVANTAGES

- ▶ Sturdy front axle with very high load capacity and ground clearance
- ▶ Reliable activation and deactivation of 4 wheel drive and differential locks in all situations
- ▶ Improvement of driving safety and enhancement of driving comfort
- ▶ ASM prevents operating errors, relieves driver stress and ensures constant traction
- ▶ Suspension reduces harmful vibration
- ▶ Automatic adaptation of the suspension to the load
- ▶ Closed centre, low-maintenance suspension system
- ▶ High reaction speed
- ▶ Non-wearing damping system
- ▶ Pneumatic or semi-active cab suspension systems are available as options

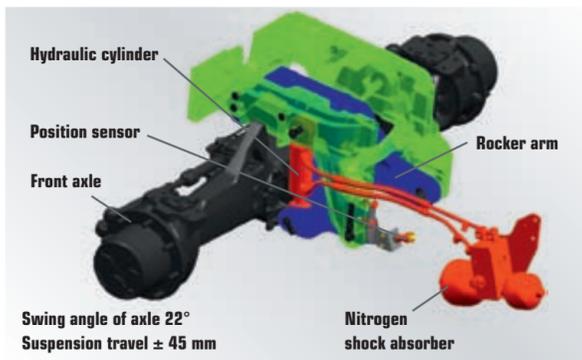
# YOU WILL LOVE THIS CAB.



**EVEN AT 50 KM/H THE AGROTRON TTV OFFERS MAXIMUM DRIVING COMFORT THANKS TO ITS INTEGRATED SUSPENSION SYSTEM.**



The finest travelling comfort – superb pneumatic cab suspension.



Swing angle of axle 22°  
Suspension travel ± 45 mm

Comfortable and safe: The Agrotion TTV has hydro-pneumatic front axle suspension.



Sturdy front axles, robust front wheel drive and large steering angle for maximum maneuverability and smooth steering; these are important prerequisites for a tractor which has to meet practical needs. The Agrotion TTV offers front wheel drive, with 100% locking differentials on both axles, which are easily and safely engaged/disengaged at a touch of an illuminated button. The respective operating conditions are additionally displayed in the Infocenter.

All non-wearing clutches and locks are oil-immersed, electrohydraulically operated and can be activated and deacti-

vated both under load as required. The four-wheel drive is activated automatically when braking. All four wheels are therefore safely braked with the reliable wet multi-disc brakes.

### Smooth steering

A steering system as it should be: precise, smooth and reliable. Large front tyres can be used at any time. Get outstanding maneuverability with a steering angle of just 52° and swiveling front mudguards.

### Comfortable suspension

To considerably enhance your driving

safety and comfort, the Agrotion TTV is equipped, as standard, with hydro-pneumatic front axle suspension. In addition, the front axle suspension also offers advantages for the tractor's center of gravity and traction. Irrespective of the cab load, the suspension travel is always ± 40 mm and the vibration is considerably reduced even at low speeds. The suspension is progressive, i.e. its effect is heightened with an increase in speed.

### Enhance your cab comfort

The optional pneumatic cab suspension with load-dependent level control is supplied from either the tractor's compressed air system or a separate compressed air source. Irrespective of the cab load, the suspension travel is always ± 40 mm and the vibration is considerably reduced even at low speeds. The suspension is progressive, i.e. its effect is heightened with an increase in speed.

In addition to the pneumatic cab suspension, a semi-active hydraulic cab suspension system is also available as an option, which allows the hardness to be adjusted

to individual requirements. A cab with suspension provides exceptional driving comfort comparable to that of a modern truck. With the perfect suspension coordination of front axle, cab and pneumatic driver's seat, the Agrotion TTV provides unprecedented total suspension and driving comfort.

### Drive train management

The automatic drive train management system (ASM) controls the front wheel drive and both differential locks fully automatically. ASM automatically engages and disengages the front and rear differential lock (100% lock value) and the

front wheel drive under load as required, in dependency on the steering angle and ground speed.

If the radar sensor is fitted, wheel slip is also taken into account. ASM guarantees high traction and maximum driving comfort and operator safety even under the toughest conditions.

### Safe entry

Entry and exit from the spacious Agrotion TTV cab is easy and practical. Galvanised, anti-slip steps, two full-length handrails on each side, wide-angle door opening and easy-reach door handles ensure safe mounting and dismounting.

### Well illuminated

The cab and entrance area are illuminated automatically when the doors are opened so that you can enter and exit safely in the dark. The superb Agrotion TTV lighting enhances your safety and confidence and increases productivity with improved

illumination for night work. An area of up to 500 square metres can be illuminated by a total of 10 powerful working lights. This gives greater clarity for safe, accurate night work.

### Perfect noise insulation

The Agrotion TTV is number one for quietness. With a cab noise level down to only 72 dB (A) the Agrotion TTV is one of the quietest tractors in its class. This extraordinarily good value is reached with basic design features such as the mono block cab, engines with low noise emission and consistent exclusion of noise-

emitting and noise-transferring components in the cab. An additional insulating wall behind the engine further improves noise insulation.

### Safe and spacious

The standard, folding co-driver seat is perfectly integrated into the cab. With handle for the highest safety requirements. An integrated compartment in its backrest provides room for documents.

#### ADVANTAGES

- ▶ Large-area cab glazing with 6.5 m<sup>2</sup>; for a panoramic view of 320°
- ▶ Optimum location of air intake and exhaust pipes on the front cab pillars
- ▶ Integrated working lights for optimally illuminated field work
- ▶ Extended cab roof for improved shade, effective drip protection when doors and windows are opened and less screen soiling
- ▶ The glass roof hatch offers an excellent view when working with front loaders
- ▶ Pressurised cab with two filters for dust and contaminants
- ▶ Switch-over from fresh air to re-circulating air
- ▶ Low noise levels due to consistent noise silencing on the drive train and cab
- ▶ Cable lead-in when rear windscreen is closed

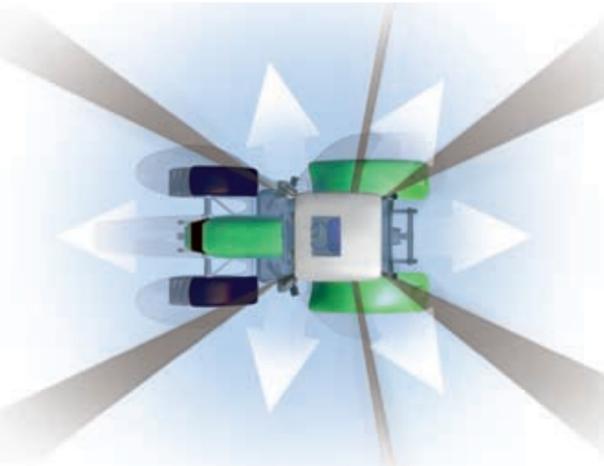
# AND EVERYTHING RUNS ALMOST UNAIDED.

#### ADVANTAGES

- ▶ Perfect, ergonomically designed workplace
- ▶ High degree of work safety due to logical and colour-coded operating controls
- ▶ Fast custom adjustment of the seat and steering wheel
- ▶ Clear view of the digital and analog indicators on the dashboard
- ▶ Easily readable panels make it easy to keep an eye on all operating conditions



The front and rear windshields can be tilted fully (on the Agrottron TTV 630, just the rear windshield). And a large, tilting transparent roof is also included as standard.



With an all-round view of over 320°, he has everything in his sights.



The tilting transparent roof has a ventilated, sliding sun-screen.



- 1 Rev counter (tachometer)
- 2 Fuel level
- 3 Engine temperature
- 4 Warning and indicator lamps
- 5 Digital display
- 6 Warning and indicator lamps

- 7 Operating hours counter
- 8 Travelling speed
- 9 Speed of front PTO
- 10 Speed of rear PTO
- 11 Wheel Slip
- 12 Pre-selected speed



- 13 Direction of travel forwards/reverse
- 14 Progression of the transmission ratio
- 15 "Cruise control" indication
- 16 Driving mode
- 17 Travelling speed

#### Get in and get to work

Relaxed and productive work requires room for movement and a clear arrangement of all operating elements. The cab of the Agrottron TTV continues to set standards, and proves its worth with outstanding results in comparison tests. Operation is clear-cut and simple.

You will find your way around quickly without involved instruction. Each group of levers and switches vary in shape and colour; they are logically and clearly arranged and combined in functional groups according to frequency of use, all in an operating console to the right of the seat.

At a glance the driver can view the clear instrumentation. This results in a safer workplace and confusion-free, easy operation, enhancing productivity.

#### Well-informed

Simple logical design, comprehensive information – this is the TTV Info Centre. The indicators are divided into

analogue and digital instruments with a specially developed display that keeps you informed with text messages about necessary maintenance work, faults and programmed operating sequences. Function displays such as PTO and travelling speeds are digital; in addition maintenance and error messages are given in both digital and plain text form.

All instruments are protected by non-reflecting and antistatic glass so that optimum viewing is ensured at all times under all working conditions. The indicator lamps are linked with an acoustic warning signal. Transmission information is displayed legibly on a display on the right-hand A-strut.

#### Impressive air conditioning

Powerful 4-stage heating and ventilation fans in the TTV cab have a capacity of 580 m<sup>3</sup>/h and ensure in no time a constant and pleasant working atmosphere. Fresh air is drawn in through large filtered intake openings in the left and

right-hand B-struts. Insulated, short air ducts distribute the air selectively through 14 adjustable nozzles.

The Agrottron TTV is equipped with an environmentally friendly compact air conditioning system that guarantees fast temperature adjustment; you can instantly switchover from direct fresh air to recirculated and also de-mist the windows with de-humidified air. A slight pressurisation in the cab prevents the ingress of dust or contaminants. A separate beverage compartment uses the air-conditioning to cool its contents.

Tinted windows and roller blinds on the front and rear windshields protect the driver from excessive exposure to the sun's rays.

# EVERYTHING AT HAND.

## ADVANTAGES

- ▶ Fast and simple execution of operating sequences – all controls are grouped logically
- ▶ Simple recognition of the correct switches due to different colours
- ▶ Safe and speedy one-hand operation
- ▶ Safety functions prevent incorrect operation
- ▶ Relaxed and safe working conditions due to intuitive operation of functions with the PowerComV operating lever



There are many operating concepts on the market. However, few are simple, self-explanatory and easy to learn on the job. For this reason at DEUTZ-FAHR our development engineers paid special attention to the functionality and simplicity of operation.

Every driver of the Agrotion TTV should be able to use the tractor in practice reliably and productively without extra training and after a short period of familiarisation. All main tractor functions are combined in the ergonomically designed PowerComV control lever: acceleration, deceleration, the operation of the rear powerlift, the hydraulic control valves and also the shuttle transmission "cruise" control is also integrated. This means that all operating and control operations can be performed without the driver having to take his hand from the PowerComV. The advantages during work are obvious – time saving, safety and high-speed reaction – because after a short time operation is intuitive.

### The multi-function armrest

All the important operating items for actuating, for example, the time and volume controls of the electronic remote valves, drive train management (ASM), the electronic injection control (EMC) and the manual throttle are all integrated into the right-hand armrest.

The switches and controls are arranged according to their priority and can be easily recognised due to their individual shape and colour. The height and spacing of the armrest can be varied to suit any arm length and considerably improves operating convenience. The back-lit operating elements are pleasantly illuminated for night working.

- 1 PowerComV joy-stick with Comfortip
- 2 Tempomat
- 3 F-R shifting
- 4 Electronic remote valve 1
- 5 Electronic remote valve 2
- 6 Powerlift control lift/lower/activate EHR/fast retraction
- 7 EMC engine speed memory control
- 8 Manual throttle

- 9 Transmission neutral button
- 10 Differential locks control button
- 11 4wheel drive control button
- 12 Joystick control for 3rd & 4th hydraulic control valves
- 13 Drive train management ASM
- 14 Front axle suspension
- 15 Transmission operating mode selector, Auto/Man/PTO
- 16 Acceleration speed potentiometer

- 17 Speed setting for ECO/Power/Auto
- 18 Flow time control knob, remote valves 1 & 2
- 19 Oil flow volume control knobs, remote valves 1 & 2
- 20 Oil flow volume control knobs, remote valves 3 & 4 (Optional)
- 21 Operation of extra functions with menu control

- 22 Selection lever for PTO speeds
- 23 Automatic PTO functions
- 24 Rear PTO with locking switch
- 25 Front PTO with locking switch
- 26 Unlocking/locking of remote valves
- 27 Electronic parking brake
- 28 Locking button

- 29 Increase or lower travelling speed (Up to 15 km/h in steps of 0,1 km/h, higher than 15 km/h in steps of 1,0 km/h)
- 30 Activation of the Comfortip operating functions
- 31 iMonitor
- 32 Rotary switch button for operating the iMonitor
- 33 User-assignable function buttons
- 34 Electrical proportional remote valves 5-7

# EVERYTHING IN SIGHT.



## ADVANTAGES

- ▶ Clearly arranged and easy-to-operate display monitor
- ▶ Non-glare, easily readable graphics
- ▶ Clear symbols and indicators for tractor functions
- ▶ Easily updated software
- ▶ Operating system similar to a premium brand car
- ▶ Multitude of practical operating and display menus
- ▶ Almost all key settings and indicators are summarized in the main display
- ▶ MP3 player
- ▶ Integrated stereo radio
- ▶ Automatic reversing camera for extra overview and safety at the rear of the tractor



All important tractor functions are contained together in the main menu.



The individual Comfortip functions are quickly put together in a personal menu.



A novelty in the tractor world: An MP3 player and radio function are also integrated.



With the integrated Bluetooth hands-free kit the driver can comfortably make telephone calls while steering with both hands.

Clearly arranged, easy to operate and understood by intuition: The new iMonitor from DEUTZ-FAHR not only makes it easier to operate the tractor, it also offers an impressive range of new functions.

### Operation just like in a car

The iMonitor is operated from a multi-controller which enables driver to move the individual tractor menus into position for setting and operation by pressing and turning. This operating system is similar to that now used as standard by manu-

facturers of premium class cars for the operation of navigation systems and similar menu-prompted components.

Clearly arranged and easy to understand The attractive graphic displays in the black display screen are clear and logi-

cal in design, with the use of familiar symbols, to enable the driver to settle in quickly. For greater comfort the driver can operate the controls with his arm on the armrest.

### For the first time in a tractor

With an integrated Bluetooth hands-free kit, MP3 player, integrated radio and an automatic reversing camera, it brings operating systems to tractors for the first time which are familiar and service-proven in cars. The iMonitor can also be

used for ISOBUS-controlled devices as well, so that the driver would only have to keep an eye on a single terminal.

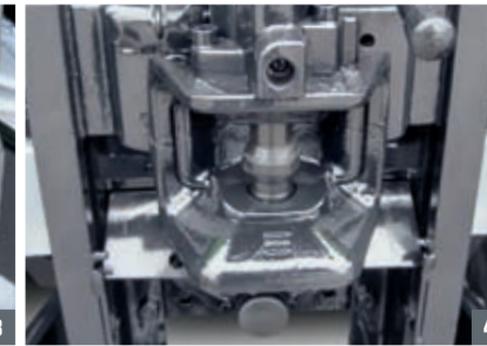
# MAY WE OFFER YOU ANYTHING ELSE?



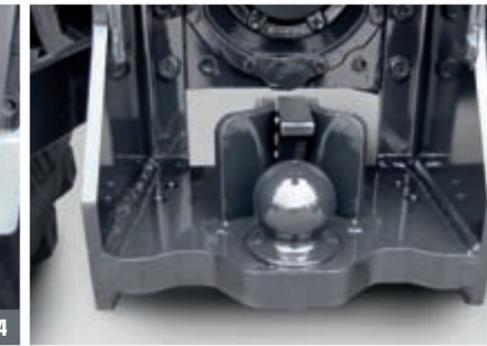
1



3



4



5



6



7



8



9



2

Even though the standard equipment of the Agrottron TTV is extremely comprehensive, you can still customise it to suit special requirements and tractor applications. At DEUTZ-FAHR we offer a coordinated range of additional special equipment and assemblies for you to consider. Contact your DEUTZ-FAHR dealer. They will be pleased to be of assistance.

**1 Choose the front loader** you require from the wide range of DEUTZ-FAHR front loaders and turn your Agrottron TTV into a genuine multipurpose tractor.

**2 The Agrosky satellite-aided track guidance system** keeps you on track with incredible accuracy. You save operating resources, fuel and valuable working time.

**3 Piton-Fix:** The Piton Fix has a bolt diameter of 45mm and a maximum carrying capacity of 3,000 kg.

**4 An automatic trailer hitch** is available as an option.

**5 Various versions of ball-type hitches** are available (height-adjustable or perma-

nently welded). Your DEUTZ-FAHR dealer will be pleased to advise you.

**6 Ballast carrier:** Optimum weight distribution is achieved using different ballast carriers and front weights which are adapted to suit various applications.

**7 The automatic reversing camera** provides additional safety.

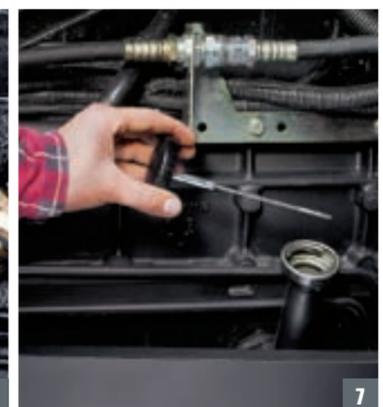
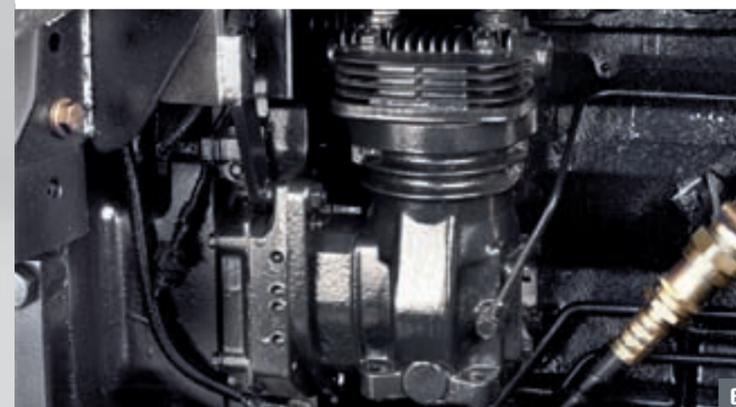
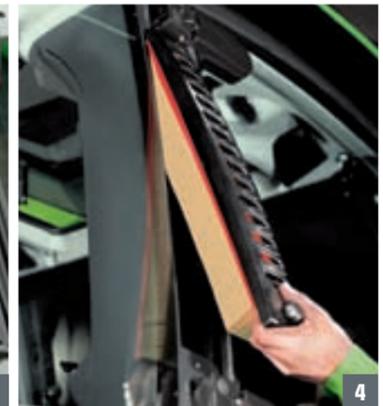
**8 Wide, solid mudguards.**

**9 The 130 l auxiliary tank and integrated toolbox.**

# QUICK AND SIMPLE SERVICING.

## ADVANTAGES

- Long maintenance intervals
- Tool-free access to all important maintenance points
- Compact cooling system for simple maintenance and support
- Very low maintenance and operating costs
- Engine oil change every 500 hours
- Valve adjustment check every 1,500 hours
- Simple cooler cleaning
- Standard diagnosis feature



### Fast, daily maintenance

Daily maintenance is simple and completed in next to no time thanks to the wide angle, front opening engine hood. Gas struts safely keep the hood in the open position. The engine oil level can be checked without opening the hood. All important components and assemblies are

easily accessible for simple maintenance work without tools. A large, easily visible sight glass indicates the transmission and hydraulic oil levels.

### Long maintenance intervals

The regular engine maintenance intervals are long – in fact uniquely long. The en-

gine oil only requires changing every 500 hours and the valve adjustment only needs checking every 1,500 hours of operation.

**1 The compact cooler system** is simply opened up in three steps for cleaning.

**2 The engine air filter** is easily accessible. The high air intake, in low-dust area, and the dust ejector separation feature, ensures that the maintenance intervals of the filter are very long.

**3 Fuses and relays** of the entire electrical system are accommodated in a separate protected box to the right of the driver.

**4 The large cab air filters** are easily accessible in the B-strut. The filters can be cleaned and replaced externally without tools. Active carbon filters are available upon request.

**5 The toolbox** is integrated in the main fuel tank. This provides storage space for servicing tools.

**6 Air compressor driven directly from the engine.** No V-belt means reliable operation.

**7 The oil filler inlet and dipstick** are easily accessible. The maintenance intervals are uniquely long.

**8 A sight glass** makes it easy to check the level of the hydraulic/transmission oil.

# TECHNICAL DATA.

Type designation		610	620	630
<b>Engine</b>				
Liquid-cooled DEUTZ diesel engine	Type	TCD 2012 L6 4V		
Cylinders/cubic capacity	No./cm <sup>3</sup>	6/6,057		
Bore/stroke	mm	101/126		
Injection system		DCR (DEUTZ Common-Rail) with 1,600 bar injection pressure and 7-hole-injectors		
Rated power	kW/hp	115/157	121/165	149/203
Homologated power (2000/25 EC)*	kW/hp	121/165	124/169	163/222
Max. power with DPC	kW/hp	121/165	135/184 including 11 kW/15 hp boost function	164/224 including 13 kW/18 hp boost function
Speed rated power	rpm	2,100		
Maximum torque	Nm	606	693	851 at 1,600 rpm
Constant power range	rpm	1,400 - 1,900		1,300 - 1,600
Air intake		On top left A strut		Under the cowling
Tank capacity	l	305		305 + 130 on request
Engine oil change interval		500 h or annually		
<b>Cab</b>				
Construction		Integrated, sound-proofed safety cab		
Noise level	dB (A)	73-74		70
Air conditioning		standard		
PowerComV armrest		standard		
Control management		Comfortip as standard feature with up to 16 programmed operating sequences		
Cab suspension		Mechanical or pneumatic on request		Pneumatic or semi-active suspension on request
<b>Electrical system</b>				
Voltage	V	12		
Alternator	W/A	2,500/200		
Starter	V/kW	12/4,0		
Battery	V/Ah	12/180		
External socket		7 pole signal		7 pole ISO and DIN (option)
High-voltage socket		3-pin, 25 A		
AGROTRONic-hD connections		External signal transmitter, 4-pin		
<b>Chassis, brakes, steering</b>				
Front drive		Central drive		
Front axle suspension		hydro-pneumatic suspension on request		
Differential locks front/rear	ASM	Fully-automatic control through speed, steering angle, individual wheel brake and slip (100% locking value); can be deactivated		
Service brake	front/rear	Automatic engagement front drive/oil-immersed disk brake system		
Parking brake		Acts on disk brake in rear axle		
Steering angle		52°		
Turning radius	m	5.13		5.80
Steering		Open Centre with separate pump		
Pump flow rate/pressure	l/min (bar)	44 (185)		

Typenbezeichnung		610	620	630
<b>Hydraulic system</b>				
System		Load-Sensing		
Oil reservoir	l	Shared with transmission		Separate
Pump flow rate	l/min (bar)	30		
Available oil quantity	l	Load-Sensing 120 (200)		Load-Sensing 110 (200)/ 160 (200) on request
<b>Front PTO on request</b>				
Kupplung		Multi-plate clutch, oil-immersed		
Actuation		Electrohydraulic		
PTO speed	1/min	1,000		1,000 oder 1,000 E (o. r.)
PTO profile		6-spline shaft 1 3/8"		
Max. transmittable power	kW/hp	110/150		
Engine speed at PTO speed 1,000	1/min	1,960		1,930/1,600
<b>Rear PTO</b>				
Clutch		Oil-immersed, modulating start-up		
Actuation		Electrohydraulic circuit		
PTO stub		Bolted, can be exchanged		
Profiles		6-spline shaft 1 3/8" **		
Engine speed 540/1,000 and 540E/1,000E	1/min	1,946/1,645		1,880/1,600
Remote control		On left rear mudguard (and right on wide mudguards)		On both sides
<b>Transmission</b>				
Transmission type		Infinitely variable TTV transmission up to 50 km/h * (40 km/h on request)		
Reversing transmission		Hydraulic, oil-immersed multi-plate clutches		
Oil cooler		standard		
Transmission/hydraulics oil volume	l	104		67
Maximum speed		Set by means of engine speed regulator, max. speed 40 or 50 km/h – 50 km/h with lowered engine speed of only 1,830 rpm		
<b>Powerlift</b>				
AGROTRONic-hD		Draft/positional/mixed control/free floating/diagnosis/vibration damping/slip control		
Category of 3-point hitch, rear		II/III; fast action couplings		
Rear powerlift lifting force	kg	9,200		10,000
Rear powerlift remote control mudguards		on left mudguard as standard, left and right optional		
Front powerlift lifting force (on request)	kg	4,000		4,500
Category of 3-point hitch, front		II/III; fast action couplings		
<b>Additional hydraulic remote valves</b>				
Number electronic		4		4, on request max. 7
Parallel operation		standard		
Non-pressurized recirculation		standard		
Functions pressure		In neutral position or raise/lower		
Actuation		Double-acting with float position, can be coupled under pressure		
Flow rate adjustment		4 remote valves electrically adjustable		4 remote valves electrically adjustable, max. 7 on request
Flow time adjustment		2 remote valves electrically adjustable		2 remote valves electrically adjustable, max. 7 on request

\* If allowed by law

\*\* More PTO profiles on request

a Wheel base  
b Length  
c Axle center up to top edge of cab  
d Height above cab

Type designation	610	620	630
<b>Dimensions in mm</b>			
a	2,767		2,817
b	4,757		4,807
c	2,102		2,202
d	2,997		3,157
Width across tires (max.)	2,500		2,720
Turning radius for track 1,900	5,125		5,800
Ground clearance	570		605
<b>Weights in kg</b>			
Unladen weight	total	6,525	7,225
Permissible laden weight	front	4,700	5,200
Permissible laden weight	rear	8,000	9,000
With front axle suspension: +200 kg; cab suspension +25 kg; front powerlift: +300 kg; front PTO +80 kg; hydraulic brake system +50 kg; front ballast carrier +330 kg			

Type designation	610	620	630
<b>Tires, wheels, track widths</b>			
<b>Normal wheel (ex works)</b>		<b>AGROTRON TTV TRACK WIDTHS (MM)</b>	
16.9 R 28		1,900 f	
20.8 R 38		1,900 r	
480/70 R 28		1,900 f	
580/70 R 38		1,900 r	
480/65 R 28		1,900 f	
600/65 R 38		1,850 r	
540/65 R 28		1,900 f	
650/65 R 38		1,850 r	
480/70 R 30			1,900 f
580/70 R 42			1,900 r
600/70 R 30			1,959 f
710/70 R 38			1,980 r
600/70 R 30			1,835 f
620/70 R 42			1,835 r
540/65 R 34			1,855 f
650/65 R 42			1,865 r
600/70 R 30			1,835 f
650/65 R 42			1,865 r
<b>Permitted row crop tire combinations with disk wheels*</b>			
230/95 R 36		X	
270/95 R 48		X	
270/95 R 32		X	
300/95 R 46		X	
320/90 R 32		X	
340/85 R 48		X	
320/85 R 36			X
340/85 R 48			X
270/95 R 36		X	
300/90 R 50		X	
290/95 R 34		X	
420/80 R 46		X	
270/95 R 42			X
300/95 R 52			X
270/95 R 42			X
270/95 R 54			X
420/70 R 28		X	
18.4 R 38		X	
<b>Flange dimensions</b>			
Flange dimension at front	(mm)	1,710	1,898
Wheel connection at front	(mm)	275 x 8 x 20	335 x 10 x 22
Flange dimension at rear	(mm)	1,876	1,890
Wheel connection at rear	(mm)	275 x 8 x 22	
Transmission i	(rear/front)	1.3156	1.246
Lead calculation as %: [(rolling circumference at front ÷ rolling circumference at rear x i) - 1] x 100% = lead as %. The lead should be at least + 0.5% and no more than + 4.5%.			

\* Can be obtained from commercial outlets.  
Available standard tire combinations are given on the current valid price lists. Operation with twin wheels at front and rear is permitted; road traffic regulations and road traffic licensing regulations must be observed.

# SURE AND SAFE WITH ORIGINAL DEUTZ-FAHR SERVICE AND PARTS.



## **Original service is wise.**

Only your DEUTZ-FAHR specialist dealer knows your tractor inside and out. Only your dealer has regularly trained mechanics and experts on call. Only dealers have the special tools and diagnostic equipment required for competent diagnosis and inspection. All this gives you peace of mind – without doubt.

## **Original parts make good sense.**

As you placed your trust in the original tractor, we recommend you use original parts when required. Only these comply with the high quality and safety standards of DEUTZ-FAHR and ensure correct function and operation without problems – guaranteed.

## **DEUTZ-FAHR lubricants**

We recommend genuine DEUTZ-FAHR lubricants. The outstanding quality of this product range, which is made exclusively for DEUTZ-FAHR, ensures that your tractor always receives exactly what it needs.

**Your DEUTZ-FAHR dealer will be pleased to answer your questions:**



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**EVOLVING AGRICULTURE.**