The vital statistics of a new tractor generation – Favorit 700 VARIO

FENDT 700 VARIO
711 • 712 • 714 • 716
FAVORIT 700 VARIO – A CLASS OF ITS OWN!

Fendt now presents the second generation of its successful tractor range, the 700 Vario. The first Vario 700 was introduced in 1998. With over 18,000* vehicles sold, the 700 Vario has become the most best-selling tractor range with stepless drive worldwide. Not only the number of units that have been manufactured, but also comparison tests carried out by renowned trade journals, confirm the 700 Vario’s strengths.

With an output ranging from 126 to 175 HP, the 700 Vario is the first choice for professional farmers and agricultural contractors. In the 700 Vario lies the experience of almost 50,000* Vario transmissions that are in use around the world today.

For you that means absolute reliability and best profitability.

With its state of the art operating concept Variotronic, the Vario 700 already offers more power and more comfort in the basic version. The successful 700 Vario leaves no wishes open. Optionally, it can even be updated with the technology found on the high horsepower tractors.

* As at: Autumn 2005
Simple, thoroughly economical: The current Fendt tractor program can be fuelled with 100% biodiesel, without limitations as standard specification. That gives you long-term reliability and significant short-term cost benefits from 10,000 litres onwards.
Well thought out ergonomics and functionality are essential in the cab of a tractor. The Vario 700 workplace was designed with this in mind. Important details that make life easier for the driver are adapted to the challenges of hard daily operation, and offer comfort for a long working day. The intelligent technology of the Vario operating and shifting controls help to maintain what is most necessary for Fendt drivers – condition and fitness.

A PREMIUM CLASS WORKPLACE

The original Fendt comfort seat: standard specification for more relaxation and enhanced well being.
The original Fendt seat has been completely redesigned. An integrated backrest extension along with legroom and tilt adjustment, allows adaptation to virtually all height requirements. This seat attains a new height of comfort through air suspension, automatic weight adjustment and shock absorbers that have 4 different settings, from soft to hard. Other health-benefiting features include a lumbar support and an integrated natural air conditioning featuring an activated carbon filter. Your health is important to us.
Welcome to the Variotronic World. You work many hours on a Vario 700 – that is why operating and driving comfort have the highest priority. With its three elements – a joystick, monitor and control console – the Variotronic not only ensures extraordinary working comfort, but also unparalleled productivity.

The Variotronic has received many international awards. For you this means: ingeniously simple handling, not just during the test drive. Moreover, you will receive full benefits in profitability and productivity during practical operation.

Joystick: everything under control with one hand

Variotronic Terminal: information and command centre

Vario Console: well organized control units
Vario Joystick – everything under control with one hand

DRIVING VARIO – AS EASY AS EVER

Driving a tractor is certainly more than just sitting in it and driving away. You know that most of all. There are different conditions to consider for every operation you carry out with your tractor. That is the reason why you should evaluate an operating concept based on specific operations.

The Vario control concept allows you to have everything under control with one hand.

NEW: The switch on the steering column adjustment lever has three functions:
1. Changing directions while driving,
2. Setting travel direction in the driving pedal mode,
3. Stop and go function with active parking function:
   If the switch is pressed while moving, the tractor decelerates to a standstill. The tractor only starts to drive again when the switch has been released. This function provides even more comfort for all work which requires frequent short stops.

Driving forward
Push the joystick forward; the Vario accelerates forward from standstill.

Accelerate forward
Not fast enough? Then push the joystick forward a bit longer, until you have reached the desired speed.

Decelerate
If you are going too fast, pull the joystick back and the Vario 700 brakes the engine and transmission.

Reverse
Pull the joystick back and the Vario reverses from standstill. Faster or slower reverse speeds function in the same way as for forward travel.

Rapid or slow acceleration
How rapidly or slowly you accelerate or decelerate is determined by which of the four pre-set acceleration rates you select with the thumb control.

Automatic forward/reverse
Giving the joystick a quick tap to the left is all that is necessary to change driving direction from forward to reverse or vice versa. The Vario decelerates to a standstill by itself and then accelerates, without jerking, in the opposite direction.

Tempomat cruise control
The Tempomat holds the tractor at a constant pre-set speed. All that is required to activate it, is to give the joystick a quick tap to the right.
**OPTIONAL: THE TECHNOLOGY OF HIGH HORSEPOWER TRACTORS**

Compared to operating concepts on other tractors with stepless transmission, the Tractor Management System Vario™ Vario TMS from Fendt provides very convincing concrete benefits. It allows you to carry out your work more comfortably and easily. Beginners find their way around quickly and easily, and the Vario™ concept offers great potential for professionals.

Whether you are a beginner or pro – Vario™ allows you to do your work more profitably. Vario™ – typical Fendt

**Driving with the joystick**
The ingenious control which allows you can carry out all functions using only your right hand, without having to change grips. You can accelerate, decelerate and reverse as well as activate the Tempomat with only a small movement of the joystick. You can operate all other functions, from the easy-to-use PTO automatic mode to the headland management system, with the ergonomically friendly multi-function buttons.

**Driving pedal mode**
Set the direction you would like to drive with your left hand, then all that is needed to start the tractor is to press the driving pedal. In the driving pedal mode, only the right foot is required to drive the tractor – similar to a car with an automatic transmission. The further the pedal is pressed down, the faster the tractor goes.

**Tractor Management System**
When the TMS (Tractor Management System) is activated, the tractor electronics control the engine and transmission. This significantly increases operating comfort for the driver. The driver only needs to set the desired speed; the TMS controls the rest. In the graphic above, one can recognize that the tractor drives on level ground at a reduced engine speed. On the slope, the load increases, so the TMS increases the engine speed. As soon as the load decreases (on level ground or downhill) the quantity of fuel injected is reduced. This maintains an economical driving style since TMS drives the tractor at the lowest engine speed possible.

*diz 8/2003: “Without a doubt, with the introduction of the TMS technology, Fendt has placed itself at the top of the upper medium size class again.”*
THE VARIOTERMINAL – 6 KEYS, 3 CONTROLS, IT COULDN’T BE EASIER

With the Varioterminal, Fendt has redefined operating and control comfort for agricultural machinery. Combining setting and control elements into one functional unit not only makes simple applications even easier, but also aids the experienced driver during complex tasks. Its high degree of customization is a benefit to every driver. Just ask any Vario driver.

<table>
<thead>
<tr>
<th>Function</th>
<th>Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1 Front power lift (*)</td>
<td>lift height, lift speed lowering speed</td>
</tr>
<tr>
<td>F2 Rear power lift</td>
<td>lift height, lowering speed position/draft mixed control</td>
</tr>
<tr>
<td>F3 Auxiliary control units</td>
<td>flow rates, time functions</td>
</tr>
<tr>
<td>F4 Transmission</td>
<td>Tempomat pre-set, optimization of transmission</td>
</tr>
<tr>
<td>F5 Change menus</td>
<td>change to Main Menu II</td>
</tr>
</tbody>
</table>

* optional

NEW: last function status – with a single touch of a key
All the functions which were used last are reactivated with the touch of a key. That guarantees full operational readiness.

Function             Settings

<table>
<thead>
<tr>
<th>Function</th>
<th>Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1 On-board computer</td>
<td>field-specific recording for 4 fields</td>
</tr>
<tr>
<td>F2 Implement memory</td>
<td>storage of 4 implement-specific tractor settings</td>
</tr>
<tr>
<td>F3 Implement-control</td>
<td>controls for implements with BUS capability</td>
</tr>
<tr>
<td>F5 Change menus</td>
<td>change to Main Menu I</td>
</tr>
</tbody>
</table>
On-board computer  

On-board computer
Your performance recorded in black and white.

Everybody is talking about documentation. The on-board computer in the Varioterminal records all of the most important parameters – such as distance travelled, area coverage, time and external impulses – easily and exactly.

Variotronic Implement Control  

Variotronic Implement Control
For the best tractor, implements from the right manufacturer.

Whether manure spreader, baler, plough or loading wagon, with the Variotronic implement control you can control all implements which have ISO-BUS or LBS+ capability with the Variotronic and the joystick.

Advantages of the Fendt Implement Control:
- optimized ergonomics
- one terminal for all implements
- always the same simple control logic
- simple implement changes
- can be updated at any time

Variotronic camera  

Variotronic camera
Control, safety and a great overview – the Variotronic camera, which can be positioned freely, is the right solution for all applications. Its wide-angle picture is super sharp and always gives you a perfect overview.
To compare different tractors, it is essential to investigate the use or the consumption of production factors (e.g. working time, fuel, ...) per hectare area coverage. Thanks to Variotronic Implement Memory you can work at full performance during every operation, starting from the very first second. All tractor settings are stored to memory and recalled with a simple touch of a key. That allows you to achieve more. Give it a try!

1. All tractor settings (power lift, auxiliary valves, transmission, engine) are optimized once and stored.

2. NEW: tractor settings combined with the Headland Management System. Yes or no.
While others are still at the headland, busy with countless hand movements, you are already back at work in the furrow with your 700 Vario.

After optimizing and storing the settings once, the Variotronic Ti allows you to profit every time you are at the headlands.

You can trigger up to 13 functions with the switches on the joystick without having to change hand grips. You will be impressed, especially on long working days.

Benefits:
1. Time saved at the headlands
2. Reduced idle time / increased area coverage
3. Long-lasting driver relief on long working days
4. High degree of customization possible
5. Simple, logical set-up
6. 16 sequences with up to 13 functions can be stored for 4 implements
7. Unparalleled ergonomics

The new Variotronic Ti – for a measurable increase in productivity
CONTROL CONSOLE
FOR ALL FUNCTIONS

The electrohydraulic power lift control combines maximum work quality with superb operating comfort, which reduces stress on the driver. Front and rear-mounted implements can be controlled conveniently with the buttons on the joystick. Automatic functions are integrated. The newest EPC generation is incorporated in the tractor diagnostics.

EPC via the Vario terminal
The fine settings are accessed by pressing the EPC sub-menu function key on the Vario terminal. Lift height, lowering speed and position-draft mixed control are controlled steplessly and accurately with the finely adjustable rotary buttons. The selected values can be read off the indicator bars. In this way, the front and rear power lift can be controlled simply and logically.

Automatic joystick control for PTO’s and lifting implements
After setting the EPC and PTO’s to automatic mode in the side console, implement lift and PTO’s can be controlled conveniently with the switches on the joystick. The automatic mode allows the PTO’s to be engaged and disengaged automatically when the implement is lifted and lowered.

EPC for added value and less stress for the driver
This new EPC generation is incorporated in the tractor diagnostic system. It automatically monitors itself through digital signal processing and ensures operational availability. The integrated shock-load stabilizing works like an electronically controlled shock absorber. Even with rear-mounted implements, the driver can drive over paved and unpaved roads quietly, quickly and with a high degree of driving safety.
### Practical PTO technology
The PTOs can be controlled easily with the push buttons on the control console and the rear PTO can also be controlled conveniently from outside.

### The three-speed PTO
The Vario 700, designed to be a system tractor, features three PTO speeds at the rear (540/750/1000 rpm). The 750 rpm economy PTO allows fuel-saving, stress-reduced operating at lower engine speeds.

#### 540 or 1000 rpm front PTO (optional)
The front PTO is driven directly from the engine with no loss of power.

#### Automatic PTO take-up control saves operating costs
The Vario 700 offers a load dependent PTO take-up. Take-up of the drive is sensitively controlled and monitored by the electronic system according to the power requirement of the implement. This benefits the life of all PTO components thereby reducing operating costs.

### Convenient PTO control with the joystick.
After activating the PTO automatic, the PTOs can be conveniently operated with the same hand via push buttons on the joystick.

### Intelligent AWD and differential locking technology
With the intelligent AWD and differential lock systems, Fendt introduces a milestone in the transfer of power to ground, which significantly reduces stress on the driver at the headland. Depending on the selected stage, AWD and differential locks are automatically reactivated or disengaged subject to either steering angle or speed. Result: optimum transfer of tractive power while retaining full manoeuvrability.

*optional

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### Table: Symbol Function In-field advantages

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Function</th>
<th>In-field advantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>![AWD]</td>
<td>AWD permanently engaged</td>
<td>• full transfer of power</td>
</tr>
</tbody>
</table>
| ![AWD automatic] | AWD turns off if:  
  - steering angle > 25°  
  - speed > 15 km/h |
| ![permanent 100% disc differential locking] |  
  differential lock automatic turns off if:  
  - speed > 15 km/h  
  - steering angle > 15°  
  - brakes are operated |
| ![3 PTO speeds] |  
  3 PTO speeds |
| ![AWD] |  
  AWD automatic  
  driver relief  
  soil protection  
  full manoeuvrability  
  less tyre wear  
  full transfer of power  
  even under severe conditions  
  driver relief  
  easy manoeuvring  
  greater transfer of tractive power |
| ![3 PTO speeds] |  
  simple and comfortable PTO operation |
With the Favorit 700 Vario models, Fendt introduces a completely new generation of tractors in the 126 to 175 power range. The 700 Vario is not only distinguished by its new design, but also has completely new technology under its bonnet. This is the result of “know-how” gathered from the revolutionary Vario 900 range combined with new technical solutions, such as 4-valve technology, half-frame chassis construction and Variotronic.

**A CLASS OF ITS OWN**

1. Front driving axle, 50° steering angle
2. Hydropneumatic front axle suspension with levelling control and 2 cylinders, can be locked
3. Front power lift
4. Front PTO
5. Planetary final drive
6. Intercooler
7. Modular compact cooling system
8. 5.7-litre water-cooled Deutz economy engine with 4-valve technology
9. Hydraulic pump
10. Hydraulic motor
11. Planetary gear set
12. Enclosed AWD
13. 300-litre fuel tank (340 litre for 714 and 716)
14. Nitrogen pressure accumulator
15. Gas strut shock absorber for cab cushioning
16. Rear wheel disc brake
17. Front wheel disc brake
18. Planetary axle
19. Tiltle comfort cab
20. Additional lights
21. Air-sprung comfort seat with mechanical lumbar supports, front-to-rear suspension and mechanical rotary adjustment
22. Joystick for stepless driving as well as to control the hydraulics and PTO
23. Varioterminal to control the driving functions, the hydraulics and the electric valves
24. Bus socket
The 700 Vario range features a completely new 4-valve six-cylinder engine. These engines build a perfect synthesis with the Vario transmission, since the stepless drive allows the high-tech engines constant operation in the optimum range. Featuring the latest in charging and injection technology, these 5.7-litre engines are a power unit of maximum output, superb fuel economy and extremely quiet running. Advantages:

- Superb pulling power created by 35% torque increase and constant power output
- up to 15 HP extra power
- Quick off the mark: from 0 to 50 kph in 10 sec.*
- Extremely economical. Optimum consumption only 203 g/kWh*
- Low running costs: oil changes required only every 500 operating hours
- Very low exhaust emissions
- Long life
- Quiet and smoothly running engine

A combination of power and intelligence
Fendt utilizes a combination of 4-valve technology, 6-hole injection nozzle and a highly efficient injection system (pump-line-nozzle) with an injection pressure of up to 1400 bar. The net result is more power combined with less fuel consumption and less noise. Two intake valves and two exhaust valves ensure optimum cylinder charging and a more rapid gas exchange, especially at high revs. Single injection pumps enclosed within the crankcase, flexible mounting of the engine and a low rated speed of only 2100 rpm culminate in a particularly quiet-running power unit.

The perfect drive unit as demonstrated in an acceleration test: from 0 to 50 kph in just 9.5 seconds!
How is that possible?
Power splitting accelerates the 716 with 175 HP, while the engine runs with optimum engine speed and maximum efficiency.
Superior profitability through unlimited use of RME fuels
Fendt tractors, starting from the 1995 models, are approved for RME fuels without limitations. The standard Fendt warranty fully covers the use of rapeseed-methyl-ester according to DIN EN 14214 (formerly DIN 51606). You profit from the cost benefits — the tractor does not need to be converted, nor is additional insurance required.

Advantages:
- Guaranteed operational availability
- Manufacturer warranty without conversion or additional insurance
- Standard for all Fendt tractors starting 1995

State of the art cooling unit:
The cooling system was designed for optimum cooling performance and easy access:
- Optimized arrangement of radiators
- Cooling condenser pivot-mounted
- Gear-driven compressed air compressor
- Noise-reduced engine
- Flexible engine mounting
- Automatic belt tensioner
Compared to other “stepless” concepts, the Fendt Vario transmission stands out with its combination of exclusive steplessness and unsurpassed profitability. Independent tests have shown that Fendt Vario tractors use the least fuel and accelerate significantly faster. On long test tracks, they were the first to reach the finish line – far ahead of the others.

**Power splitting**
The engine output is split into a mechanical and a hydrostatic section by a planetary gear. Only the hydraulic branch controls the system. Both power trains are consolidated in the collecting shaft.

**Hydraulic transmission section**
The hydraulic drive unit consists of a hydraulic pump and a hydraulic motor with a unique displacement angle of 45 degrees. Depending on the position of the in-unison controlled hydrostatic units (pump and motor), the driving speed is regulated steplessly.

**Mechanical transmission section**
The mechanical branch also begins at the planetary gear and runs over the mechanical gear connections and the travel range selector to the collecting shaft.

**Starting with the Vario**
When starting, the major part of the engine output flows over the hydrostatic branch. The efficient interplay between the mechanical and hydrostatic sections can be recognized by the high acceleration values. The higher the speed of the vehicle, the more the tractive power shifts to the mechanical branch.

**Reverse travel**
Changing driving direction is extremely simple with the Fendt Vario concept: the hydraulic pump is just swung out in the opposite direction. No more power draining mechanical forward/reverse shifting.

**The secret of the Fendt Vario drive**
Since the Vario drive uses large hydrostatic units, the complete travel speed range from 0.02 to 50 kph can be covered by just 2 travel speeds. This, together with the exclusive 45 degree displacement angle, results in new dimensions in efficiency. At the
Quiet drive through flexible drive block bearing support.

Optimized oil supply for long life.
The entire Vario drive block is supported by rubber elements designed to neutralize noise. Severe acoustic parameters also apply to the housing. A 55 l oil supply is available for the front and rear axle. All supply lines lie fully protected inside the housing.

same time, this concept allows the controls to be simplified, making them failsafe.

Advantages:
• uncomplicated, robust design
• top efficiency
• only 2 travel ranges from 0.02 kph to 50 kph due to hydrostats with 45 degree angling
• reduced noise level due to flexible drive block bearing support
• optimized oil supply for long life and top efficiency
• easy servicing

profi 7/2000:
“The Fendt, with its simpler transmission design, drives more efficiently. (…) Fendt achieves this high degree of efficiency through the special arrangement of its hydrostats.”

North German Agricultural Chamber 2/2001:
“Fendt’s successful engine transmission combination transforms engine power into work power exceptionally well, keeping diesel consumption at a minimum.”
FORWARD-LOOKING CHASSIS TECHNOLOGY

Thanks to award-winning chassis technology, the 700 Vario offers driving comfort and safety on the level of commercial vehicles. The lockable front axle suspension permits payload-independent automatic levelling – uneven ground conditions are detected and cancelled out. At the same time, the active shock load stabilizing system prevents vehicle bounce when driving with rear-mounted implements. Together with a cast frame this results in an exceptionally rugged tractor concept, which is designed for high payloads. Fendt solutions bring you ahead.

Superior cast frame concept
The 700 Vario is supported by a new cast half frame, which is designed for a 4.5 tonne payload (11 tonne permissible all-up weight). That Vario 700 excels with excellent in-field efficiency and flexibility for cultivating, row crop and haulage operations. The new cast half frame, which is torsion-free, permits an increased payload and improved manoeuvrability.

Mounts which are integrated in the half-frame, allow for an easy mounting procedure. The front loader and front power lift are mounted directly onto the frame – no extra frame is necessary.

Driving comfort on commercial vehicle level:
The result of the intelligent interaction of three systems:
1. Front axle suspension with levelling control
2. Cab suspension
3. Shock load stabilizing

Shock loads and bounce caused by uneven surfaces in the field or on the road are reduced to a minimum. The suspension reduces vibrations and bounce by 60%. The automatic levelling control allows for a constant, high degree of driving comfort, even with high payloads.

The front axle suspension can also be locked to master particular work situations, like operating with front mounted cultivator or front loader.

Top-efficiency lifetime braking system
The four-wheel braking system is virtually maintenance-free and ensures superb safety in road traffic at 50 kph. The basis is formed by two integrated multi-disc brakes for the rear wheels fitted with sinter linings having a high thermal load capacity, as well as a disc clutch on the cardan shaft for the front wheels. Like the front wheels, each rear wheel is retarded by braking discs. The brakes are automatically sprayed with fresh oil every time they are operated. This reduces thermal load to a minimum.

With this system there is no oil drag, as is the case with systems in which the brakes are fully immersed in oil. This means higher efficiency.
Frame and suspension concept
All suspension elements are mounted on the frame construction (1). Front axle suspension: swing arm (2), swing axle (3), hydraulic cylinder (4), nitrogen reservoir (5). Cab suspension: hydraulic supports (6) at the front, helical springs (7) and shock absorbers (8) at the rear (sprung struts) control the movement of the cab in front-to-rear direction and eliminate vibrations and shock loads.

Front axle suspension
The swing axle centrally located in the swing arm detects uneven surfaces and transmits these findings to the swing arm. The plungers on the two cylinders displace oil, activating three nitrogen reservoirs which absorb all shocks.

Speed-dependent shock load stabilizing system
This system acts like a hydraulic shock absorber. Activation can be controlled via the Vario terminal. Even with a rear-mounted implement, the operator enjoys a comfortable and safe ride without a reduction in speed, and most importantly, without stressful bounce, on the road as well as the field track.

Cab suspension
The hydraulic suspension at the front, as well as sprung struts, control the movement of the cab in front-to-rear direction. The integrated transverse stabilizer and the absence of unwanted bounce greatly enhance the level of driving comfort.

Optional pneumatic cab suspension
The pneumatic cab suspension features air springs that support the load at the rear. They feature automatic levelling, which adapts the suspension to varying loads. Setting different suspension levels is no longer required.
The Variotronic opens a whole new dimension in control comfort. All the hydraulic functions are integrated into it, simply and logically, so that the driver can react quickly and safely. You will enjoy taking control with the joystick, crossgate lever and control terminal. The Variotronic terminal allows you to attain the utmost of comfort and profitability easily. The Variotronic’s load-sensing hydraulic system is among the most modern on the tractor market with respect to performance, efficiency and flexibility.

Electrical valves: Work and control comfort in the super class! The joystick and the newly designed crossgate lever control the electrical apportioning valves. On the 700 Vario these are all double-acting control units that can also be used in a single-acting capacity and feature a floating position. The first two apportioning valves are located on the convenient crossgate lever. For the other valves on the joystick, just a quick touch of the rocker switch is all it takes to guarantee that all hydraulic tasks are executed with the utmost accuracy. The control functions can easily be toggled from the joystick to the crossgate lever and vice versa.

Setting the valve functions with the Variotronic terminal is simple. You can control the flow rates and actuation times of all the electrical apportioning valves easily with the rotary controls and the function keys.

Advantages:
- Priorization of auxiliary control units allows rapid response and short lifting times even at low engine speeds
- Environmentally friendly through separate hydraulic oil supply
- Low servicing costs through long service intervals
- High max. flow rate through state of the art axial piston pump (max. 110 l at 200 bar)

Optional with double connect-under-pressure couplings
The new connection ensures simple and leak-free connections – whether the pressure is on the tractor and/or implement side.

NEW: Optional external hydraulic valve controls
Either the 3rd or 4th hydraulic control unit can be operated externally with the pushbuttons on the rear light bracket. When using a hydraulic top link you can couple and uncouple your implements ever faster. Or, for example, you can control the hydraulic slider on your slurry wagon without having to climb up.

Optional with double connect-under-pressure couplings
The new connection ensures simple and leak-free connections – whether the pressure is on the tractor and/or implement side.
Tailor-made front loader technology

The performance values of the integrated Fendt front loader and the ideal control comfort of the 700 Vario are a perfect pair for heavy-duty operations. Especially where a high lift capacity and loading height are essential, the perfectly adapted unit – Fendt front loader and 700 Vario – impresses with unparalleled performance. The settings for the electrical apportioning valves, the precise front loader controls on the crossgate lever combined with the stepless Vario drive technology let the 700 Vario act like a wheeled loader.

Mounting and removing: Easier and quicker
Single-phase mounting and removing the front loader via the cast base is completed in a matter of minutes. Because of the reinforced frame design, the front loader can be mounted by simply using the front axle suspension system – without requiring support at the front and without the use of tractor hydraulics. This also ensures a high degree of working safety.

A quick and tool-free mounting and dismounting system is necessary, if the front loader is really only to be mounted onto the tractor when required for loading operations. Further evidence of the excellent co-ordination between front loader and Vario is the superb visibility to the front, as well as easy access for servicing.

Advantages:
• Superior suspension system comprising front axle with autolevelling control and front loader suspension
• Electric apportioning valves for premium class operating comfort
• Hydraulic multi-coupler for an accurate and safe coupling process
• Max. service-friendliness – the 700 Vario and the Fendt front loader are perfectly adapted to each other
• Superior safety concept with load holding valve, shock load protection valve, pipe-fracture safety feature, lowering control valve, overload valve
• Fendt front loader tools for an optimum fit and max. performance

Front loading in control with the crossgate lever
That the Vario 700 has been consequently designed for front loader operation is evident in the ergonomically optimal crossgate lever. The front loader can be controlled easily and precisely with only one lever.

3rd control circuit (upon request)
**THE REASON WHY YOU EARN MORE**  
**WITH A FENDT VARIO**

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**Fendt-Vario – better than powershift**
With stepless variable speed, you can utilize power reserves that aren’t even available to modern powershift transmissions. With conventional transmissions you are always one gear too high or too low because of the steps. Vario allows you to mobilize the power reserves that are hidden in between the steps. You get even more power with Fendt Vario.

The Fendt Vario is a genuine stepless drive. Fendt engineers have exhausted the potential of powersplitting persistently, using special efficiency-enhanced large-sized hydrostats. Smooth and jerk-free acceleration is possible over the entire travel speed range. The 50 kph top speed can be attained and maintained at a reduced engine speed of 1700 rpm. That provides maximum efficiency over the entire travel speed range.

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**Vario from Fendt – you benefit from our experience**
The number of Varios, which has been manufactured and sold, speaks for itself, and shows the Vario’s popularity with professional farmers and agricultural contractors. Comparison tests carried out by renowned trade journals also confirm the strengths of the Fendt technology again and again. Only Fendt offers Vario technology ranging all the way from 95 to 310 HP.

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**Vario from Fendt – not only comfortable but profitable too**
Don’t let yourself be misled. Vario isn’t just about making operation easier (that’s only impressive in the dealer’s yard) – the Fendt Vario also returns your investment every day during hard-working real-life operation. Independent tests have determined an estimated increase in value through Fendt Vario of approximately 15,000 €. Vario from Fendt pays for itself.

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**Efficiency of various stepless transmissions (according to DLG)**

- Nürtingen University, DLG testing station
- Farmers Weekly March 2001
- Boerderij 21/2001
- Top Agrar 12/2002
The Fendt Auto-Guide system gives you pass-to-pass accuracy the easy way – without having to use conventional marking systems. It allows you to achieve a higher degree of utilization for your tractor and implements. That is a significant increase in productivity, which also means an increase in profit for you.

Increase your productivity
Lower your costs through savings in fuel, working time and operating materials (seeds, fertilizer, pesticides). The constant use of the full working width reduces implement wear.

You remain fit longer since you can concentrate fully on the implement while the system takes care of the precise steering for you. That allows you to drive faster and working quality remains consistent over the whole day. Even at night or in poor visibility conditions such as fog or dust, you can drive with guaranteed pass-to-pass accuracy.

At the headland always select the row which you can reach in one turning manoeuvre; that shortens turning manoeuvres considerably. Thanks to Auto-Guide, at the end of the day you have a perfectly worked field without overlaps or skips.

Advantages at a glance:
• Prevents overlaps and skips
• Savings in fuel and working time
• Lower costs for operating materials
• Driver stress relief, fatigue-free driving
• Working quality remains consistent around the clock
• Perfect pass-to-pass accuracy even at night and under poor visibility conditions
• Faster turning manoeuvres
• NEW: Parallel driving of curves with the Prokontur feature

Simple operation
All settings are made fast and conveniently in the colour control terminal. Once the working width is set, all of the next tracks will be driven exactly parallel\(^1\) to each other, whether they are in straight lines, curves or circles.

\(^1\) Auto-Guide performance data is dependent on the data from the GPS provider and the chosen correction signal.

For further information see the special Fendt Auto-Guide brochure
SUPERIOR PRODUCTIVITY AND LOW OPERATING COST PER HOUR THANKS TO VARIO

Those who like to compare the actual costs involved in investing in a new tractor, consider the overall costs and the operating costs per hour or hectare. These comprise four factors: utilization and write-off, fuel consumption and servicing costs as well as the resale value. All four criteria result in the overall profitability of the investment.

Vario reduces fuel consumption, increases performance
Over 40% of the total costs in the lifetime of a tractor are for fuel alone. That makes the economical use of expensive fuel essential. In-field comparison tests at the Nürtingen University clearly show that the Var- ios with their best consumption of just 196 g/kWh per hectare or hour, consume significantly less fuel than other tractors and accelerate faster too. That pays off in the long run because you offset the initial purchase price with every hour of operation.

Excellent resale value
A further advantage: many operating hours later when you decide to sell your Fendt tractor, you will be delighted to see how it has kept its value. That adds another plus in the overall profitability calculation.

Reduced maintenance costs through long service intervals and integrated diagnostic system
The 700 Vario is designed for long service intervals and reduced oil quantities that need to be changed in the key areas engine, transmission and hydraulics even including the lubricating points. The engine oil only needs to be changed every 500 hours, the transmission oil every 2000 hours.

Superior productivity:
2240 handgrips** saved thanks to the joystick
The Variotronic significantly increases productivity as the neutral profi magazine comparison test 12/99* shows. At the headland, thanks to the ingenious joystick, you save the otherwise necessary constant changing of handgrips between the transmission, hydraulics and PTO’s. During cultivation work that makes 2240 handgrips less than the competitors every day.

Fendt brand quality pays off
Overall profitability is the key benefit of your Fendt 700 Vario. The higher price you pay at the start is offset by high performance and low fuel costs during every hour of operation.

Tests and comparisons prove:***

** Profi- 12/99 – comparison, cultivation work with seed bed combination and front packer -
** 10 hr. work day, 500 m field length, 160 turning manoeuvres, Fendt driver 1 handgrip x 160 turning manoeuvres; competitor: 15x160 turning manoeuvres = 2400 handgrips
*** Nürtingen University, DLG Testing Station
Farmers Weekly March 2001
Boerderij 21/2001
Top Agrar 2/2001
Top Agrar 12/2002

Agricultural Chamber Comparison 3/2001
"With just 6.3 l, the Fendt required the least amount of fuel and was the fastest on the track...the successful engine-transmission combination transforms engine power into work power exceptionally well, keeping fuel consumption at a minimum."

"The Fendt clearly had the best fuel economy."
Agricultural Chamber Comparison 3/2001
The name Fendt has always been synonymous with trailblazing technology and top quality; today we are also at the forefront in providing first-class service and support for tractor and driver. We offer the customer maximum profitability and competitiveness in an active market place. True to our motto: “Move ahead with us”.

FENDIAS for first-class workshop and service quality.
The state of the art mobile diagnostic system FENDIAS, used by FENDT sales agents, helps to increase the number of operating hours by reducing down-times caused by time-consuming fault finding. All faults are automatically stored, and can be called in by the mobile Fendt sales agent on his laptop computer. This technology saves time and money.

Spare parts with Fendt Night Express Service
An essential part of the first-class service quality of every Fendt sales partner is the electronic parts catalogue FENDOS, which makes rapid, accurate ordering and no-delay delivery of Fendt-original spare parts and accessories possible. If ordered by evening, your Fendt sales partner will have the spare part by 7 a.m. the following morning thanks to the Fendt Night Express Service.

Consultation: the way to a tailor-made Fendt
Fendt sales agents are experienced specialists who will give extensive advice and information on technology, equipment and the overall profitability of a Fendt tractor.

A trial run in the field – experience the difference
You cannot pass judgement on a Fendt tractor without the experience of driving one in the field! Fendt tractors enjoy a first-class reputation for superb driving and working comfort. Not until you have driven a Fendt, do you realize how big the difference really is when compared with other tractors.
## TECHNICAL SPECIFICATIONS

### Tyres

<table>
<thead>
<tr>
<th></th>
<th>711</th>
<th>712</th>
<th>714</th>
<th>716</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>420/70R28</td>
<td>520/70R38</td>
<td>420/70R28</td>
<td>520/70R38</td>
</tr>
<tr>
<td>Optional</td>
<td>480/70R28</td>
<td>540/65R28</td>
<td>480/70R28</td>
<td>540/65R28</td>
</tr>
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<td>650/65R38</td>
<td>540/65R28</td>
<td>650/65R38</td>
</tr>
</tbody>
</table>

### Dimensions 711 / 712

- **Dimensions:** 714 / 716

### Transmission and PTO

- **Type:**
  - Travel ranges: Field (forward / reverse)
  - Road (forward / reverse)

- **Top speed (km/h):**
  - Front PTO
  - Rear PTO
  - 50\

### Hydraulics

- **Type:**
  - Hydraulic pump capacity (l/min)
  - Working pressure (bar)
  - Rear power lift control
  - Additional valves max. (standard) incl. front position control

- **Max. lift capacity, rear power lift on the drawbar (kN/kp):**
  - 71.3 / 7268

### Brakes

- **Rear brakes:**
  - Wet, integrated multi-disc brake

### Weights and dimensions

- **Unladen weight acc. to DIN 70020 (kg):**
  - 6170

### Electrical equipment

- **Starter (kW):**
  - 3.1

### Cab

- **Construction:**
  - Integrated, sound-proofed, sprung safety cell

- **Climate control:**
  - Ventilation system with blower in roof
  - Hot water system with 3-speed fan
  - Hinged front, side and rear windows

### Tyres

<table>
<thead>
<tr>
<th>Tyre Type</th>
<th>Front</th>
<th>Rear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>420/70R28</td>
<td>520/70R38</td>
</tr>
<tr>
<td>Optional</td>
<td>480/70R28</td>
<td>540/65R28</td>
</tr>
</tbody>
</table>

### Technical details

- **Engine:**
  - Rated power (kW/HP) (ECE R24)
  - Max. power (kW/HP) (ECE R24)
  - Rated power (kW/HP) (EG 97/88)
  - Max. power (kW/HP) (EG 97/88)

- **Bore / stroke (mm) / displacement (cm³):**
  - 91 / 124
  - 99 / 135

- **Rated engine speed (rpm):**
  - 2100

- **Transmission and PTO:**
  - Stepped Vario transmission
  - 0.02 to 28 km/h / 0.02 to 16 km/h
  - 0.02 to 50 km/h / 0.02 to 37 km/h

- **Weights and dimensions:**
  - Min. turning radius (m) / with steering brake (m)

- **Rear track with standard tyres (mm):**
  - 1860

- **Front track with standard tyres (mm):**
  - 1880

- **Wheel base (mm):**
  - 2700

- **Ground clearance (mm):**
  - 2859

- **Overall height (mm):**
  - 2964

- **Overall width (mm):**
  - 2570

- **Overall length (mm):**
  - 320

- **Max. load on hitch (kg):**
  - 340

- **Payload (kg) / max. payload (kg):**
  - 30

- **Power-weight ratio per HP (kg):**
  - 540/65R38

- **Perm. all-up weight (kg):**
  - 540/65R38

- **Unladen weight acc. to DIN 70020 (kg):**
  - 540/65R38

### Notes:

- * = upon request
- ° = can be operated as single-acting
- * = depending on country
- ** = applicable power rating for registration
## Standard and optional equipment

<table>
<thead>
<tr>
<th>Vario controls</th>
<th>711 Vario</th>
<th>712 Vario</th>
<th>714 Vario</th>
<th>716 Vario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Varioterminal Engine/Transmission Management System</td>
<td>❑</td>
<td>❑</td>
<td>❑</td>
<td>❑</td>
</tr>
<tr>
<td>Camera to the Varioterminal</td>
<td>❑</td>
<td>❑</td>
<td>❑</td>
<td>❑</td>
</tr>
<tr>
<td>Preparation for guidance system</td>
<td>❑</td>
<td>❑</td>
<td>❑</td>
<td>❑</td>
</tr>
<tr>
<td>Guidance system Auto-Guide with VBS or HP</td>
<td>❑</td>
<td>❑</td>
<td>❑</td>
<td>❑</td>
</tr>
</tbody>
</table>

### Cab

- Mechanical cab suspension
- Pneumatic cab suspension
- Fendt Comfort Seat, air suspension with back rest, extension, lumbar support, shock absorber
- Fendt Super Comfort Seat with pneum. lumbar support extension and low frequency suspension
- Radio mounting kit with two speakers
- Braupunkt radio, with either cassette or CD/MP3 player and coaxial speakers
- Roof hatch
- Hot water heater with 3-speed fan
- Ventilation with infinitely adj. fan in roof
- Air conditioning
- Rear window wash/wipe
- Heated rear window (incl. wash/wipe)
- External mirrors with mech. width adjustment
- Heated rear window (incl. wash/wipe)
- External mirrors with mech. width adjustment
- Working lamps, front A-pillar and rear mudguard
- Xenon working lamps front A-pillar
- Xenon working lamps rear mudguard

### Engine

- Electronic Engine Control
- Turbocharger and intercooler
- Engine preheater
- Exhaust brake
- Fuel pre-filter
- Zyklon pre-cleaner

### Transmission

- Stepless Vario transmission
- Tempomat, automatic maximum output control
- 50 km/h top speed

### Chassis / safety features

- Four-wheel braking system
- Compressed air system
- Front-axle suspension with levelling control
- Shock load stabilizing system
- Central all-wheel drive, maintenance free
- Comfort control for AWD / differential locks
- Rear / front differential with 100% disc locking
- Rear: 540/750/1000 rpm
- Front: 540 rpm or 1000 rpm
- Comfort controls PTO, electrohyd. preselection
- External controls for rear PTO

### Hydraulic system

- EPC (electronic power lift control)
- External controls for rear power lift
- Down-force power lift
- Radar-activated wheel slip control
- Upper link SK hydraulic
- Electrohydraulic remote control at rear
- External hydraulic connection (load-sensing)
- Double connect-under-pressure couplings at rear
- Crossgate lever / joystick
- External controls for hydraulic control unit at rear
- Front power lift
- Front power lift with position control and external control

### Additional equipment

- Automatic hitch at rear
- Ball coupling
- Pickup hitch
- Swinging drawbar
- Front weights 870/1800 kg
- Front weights without front power lift 1270 kg
- Twin tyres front and rear
- Wide load warning
- Warning beacon
- Swivelling front wheel mudguard

### Engine characteristics

#### 711 Vario

<table>
<thead>
<tr>
<th>Torque (Nm)</th>
<th>Power (kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>154</td>
<td>60</td>
</tr>
<tr>
<td>175</td>
<td>65</td>
</tr>
<tr>
<td>190</td>
<td>70</td>
</tr>
<tr>
<td>200</td>
<td>75</td>
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</tbody>
</table>

#### 712 Vario

<table>
<thead>
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<tbody>
<tr>
<td>154</td>
<td>60</td>
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<tr>
<td>175</td>
<td>65</td>
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<tr>
<td>190</td>
<td>70</td>
</tr>
<tr>
<td>200</td>
<td>75</td>
</tr>
</tbody>
</table>

#### 714 Vario

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<th>Torque (Nm)</th>
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<tr>
<td>154</td>
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</tr>
<tr>
<td>175</td>
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<tr>
<td>190</td>
<td>70</td>
</tr>
<tr>
<td>200</td>
<td>75</td>
</tr>
</tbody>
</table>

#### 716 Vario

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<thead>
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</thead>
<tbody>
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<td>190</td>
<td>70</td>
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<tr>
<td>200</td>
<td>75</td>
</tr>
</tbody>
</table>

**All data regarding delivery, appearance, performance, dimensions and weight, fuel consumption and running costs of the vehicles, correspond with the latest information available at the time of going to press. Changes may be made before the time of purchase. Your Fendt dealer will be pleased to supply you with up-to-date information.**