

Innovation through passion – the technology of the 800 Vario in detail

The new 800 Vario unites cutting-edge technology in one unique vehicle. A maximum power output of 280 hp, a top speed of 60 km/h and the completely new on-board electronics, Variotronic, and the SCR engine technology are only a few of the highlights of the 800 Vario.

On the following pages you will find detailed information on a number of innovations that make the 800 Vario the tractor it is. Inform yourself, for example, about the benefits of the SCR technology or learn more about operating the Vario.

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Fendt 819 Vario	200 hp	147 kW
Fendt 822 Vario	220 hp	162 kW
Fendt 824 Vario	240 hp	176 kW
Fendt 826 Vario	260 hp	191 kW
Fendt 828 Vario	280 hp	206 kW

Maximum output to ECE R24



Cab – technology that is comfortable

A workplace that is a pleasure to be in allows you to achieve the best results in the long-term. You simply feel good in your 800 Vario. Operating the Variotronic with the new touch screen Varioterminal will delight you with each and every touch, because it truly makes demanding work easier. After a long day you will still be fit and alert enough to do all the other things you like to do.



Cab
The large, spacious x5 cab offers high-level features, which you can adapt to your needs.



Super Comfort Seat Fendt Evolution active, Super Comfort Seat Fendt Evolution



Super Comfort Seat, air sprung



Comfort passenger seat



Passenger seat



Air-conditioned cool box



Storage box



Floor mat



Toxic filter



Roller shade front

Cab – technology that is comfortable

The multi-function armrest



The multi-function armrest integrates all of the most important operating elements ergonomically and clearly.



Membrane keypad
Membrane keypad for activating TMS, Variotronic^{TI}, speed range selection, 4WD and differential lock engagement, front axle suspension and PTO speed selection.



Power lift control module



Hand throttle



Controls for auxiliary hydraulic control units



Crossgate lever



10.4" Varioterminal



Pedal range



Operating buttons for 3rd and 4th auxiliary hydraulic control units



Engine speed memory keys



Cruise control buttons

Cab – technology that is comfortable



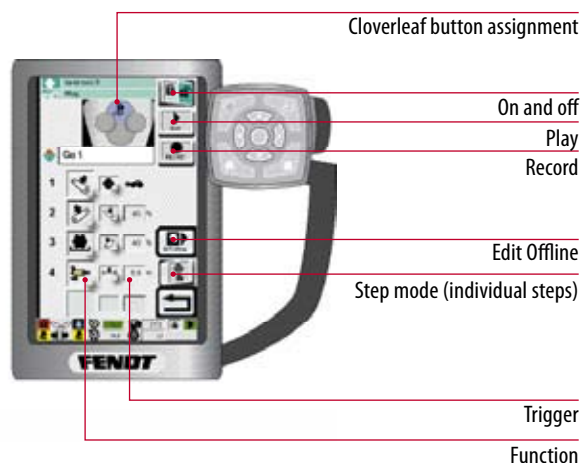
The Varioterminal 10.4" – a terminal for all cases

Despite the higher number of functions that are now completely integrated in the Varioterminal 10.4", operation remains easy and intuitive. The large screen with a 10.4 inch (26.4 cm) screen diagonal, guarantees easy recognition of up to four viewable application areas. A full screen mode is also available for map view, camera images and the ISOBUS implement control.



The Varioterminal 7" – the convenient solution for tractor and implement control

The Varioterminal 7" permits easy tractor and implement operation. The display, which has a seven-inch (17.8 centimetre) screen diagonal, guarantees an excellent overview over all the settings to be made. The Varioterminal 7" can be operated per touchscreen or using the navigation keys.



Variotronic^{TI} headland management

The new Variotronic^{TI} headland management allows operators to create turning manoeuvres easily, while the tractor is standing or driving, and then saves them for the specific implement. The entire operating sequence is shown along with the corresponding triggers and values, such as the seconds or the distance to the next step, which makes it easy for operators to understand the procedure. Individual steps in the operating sequence can be edited at a later time.

Cab – technology that is comfortable

Connections and mirrors



Bracket for additional devices



Connector 3-pin



Cable lead-through



Wide-angle mirror



Interior mirror



Reversing driver station

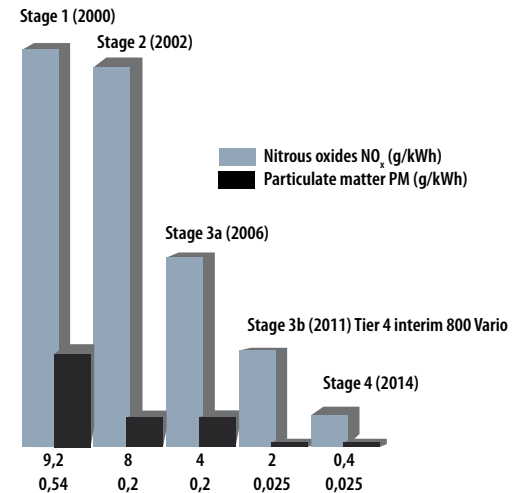
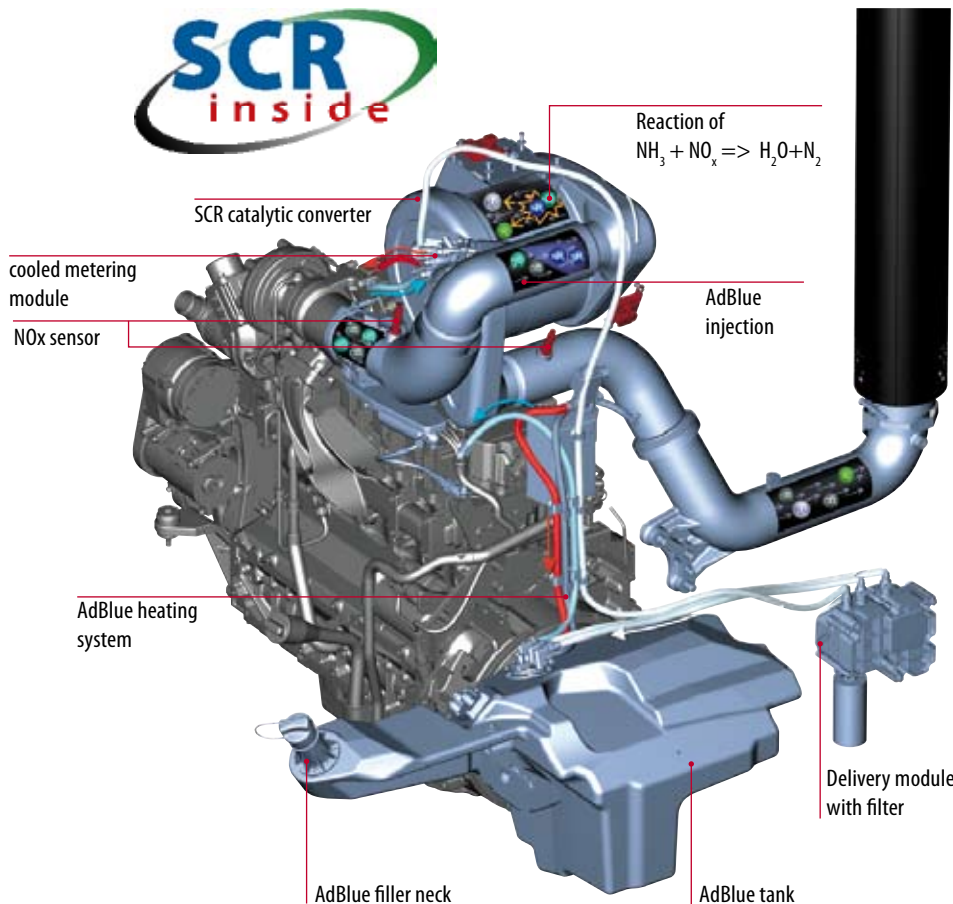
In only a few steps, the driver seat, including the steering wheel, multi-function armrest and all control elements, can be turned around 180 degrees. Within a short time, the 800 Vario then offers the same ride and operating comfort in reverse mode as in forward mode.



- Spacious x5 cab with integral automatic AC, optimised visibility and space, noise-reduced (70 db (A))
- Pneumatic three-point cab suspension with integral level control
- Unique suspension concept with cab suspension and actively sprung driver seat
- Ergonomically designed Variocentre on the right-hand armrest
- New Varioterminal – operated either per touch or operating element
- New Variotronic implement control for ISOBUS implements
- All functions clearly integrated in just one terminal for the first time
- Headland management Variotronic^{TI} with optimum setting options
- Precise and reliable Fendt VarioGuide automatic steering
- Fast documentation and wireless data transfer with VarioDoc

Engine – less consumption, more dynamics

The six-cylinder Deutz engine, with common rail high-pressure injection system and a maximum output of up to 280 hp, guarantees high fuel efficiency. The optimised injectors enable very precise injection with 2000 bar. Another reason behind the exceptional dynamics of the Fendt 800 Vario is the turbocharger, which features an electronically controlled wastegate.



Stepwise reduction of exhaust gas emissions in Europe and North America

The exhaust emissions are reduced stepwise. The task, for manufacturers, is to reduce the emissions of particulate matter and nitrogen oxides by 95 percent.

SCR technology for exhaust after-treatment

With SCR technology, exhaust is after-treated with AdBlue, a 32.5 percent solution of urea, which converts nitrous oxides NO_x into non-toxic nitrogen and water. The consumption of AdBlue, the standard urea-water solution used for commercial vehicles, lies at an average of five percent of normal fuel consumption.

SCR or EGR with particle filter?

There are two technical solutions to achieve compliance with the next emissions Stage 3b – either SCR technology or the exhaust gas recirculation with diesel particulate filter. Fendt has chosen the solution that gives you the decisive benefits.

Fendt SCR-Technology (AdBlue®)

- + Diesel savings of up to seven percent compared to Stage 3a*
- + Already prepared for Stage 4
- + Optimised combustion through separation of engine settings and exhaust after-treatment
- + Operation even possible with sulphur-containing fuel
- + No low-ash oil required
- + High AdBlue® availability and range
- + Maintenance-free system

Exhaust gas recirculation (EGR) and DPf

- More fuel consumption* due to regeneration process, exhaust back pressure when filter is full and late point of injection
- Engine cannot be optimised for fuel-efficiency and performance
- EGR is a greater load on the engine
- Low-ash engine oil required
- Low-sulphur engine oil required
- Additional maintenance effort through ash removal and cleaning the filter

* In-house testing, comparison values based on engine

Engine – less consumption, more dynamics



Engine compartment with radiator



Pre-heater unit



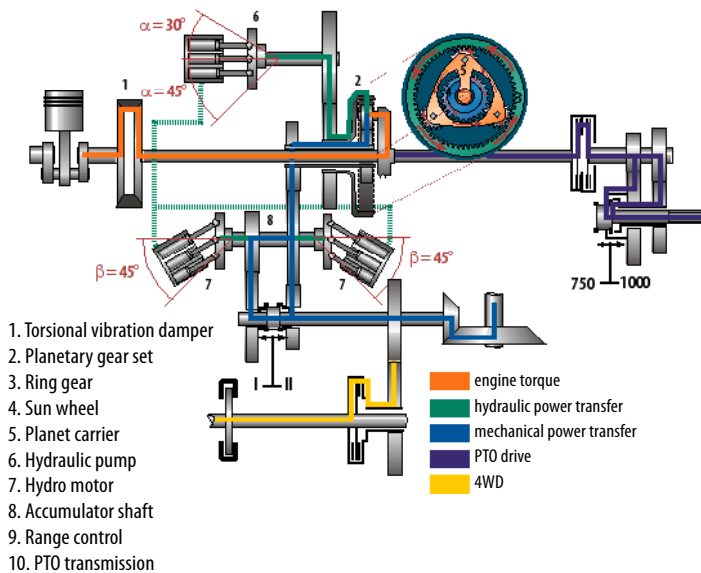
Exhaust brake



- **Six-cylinder engine with 6.06 l cubic capacity with 4 valves per cylinder: 280 hp maximum output at 1,850 rpm**
- **Intercooler and Visctronic fully electronic fan control**
- **SCR technology for compliance with emissions stage 3b (Tier IV interim)**
- **Common rail high-pressure injection system with injection pressures up to 2000 bar, oil-lubricated single pumps integrated in engine block, single-piece cylinder head, EDC-17 engine control**
- **Powerful: up to 37% torque rise**
- **Economical: Optimum consumption of only 195 g/kWh**
- **Long range: 505 l fuel tank capacity**
- **Quiet: Multiple injection (in lower speed range), free-standing exhaust pipe isolated from cab, reduced rated speed of only 2100 rpm**
- **Oil change interval every 500 operating hours**
- **Engine brake**
- **Pre-heater unit**

Vario transmission – simply save

Huge engine power alone is not enough – the Vario transmission is the intelligent technology, which converts horsepower into pulling power. In the 800 Vario, the continuously variable ML 200 transmission ensures maximum drive train efficiency. The top speed of 60 km/h is attained at a fuel-saving 1,750 rpm. So that the Vario is always automatically working at an economical optimum, the tractor management system TMS controls the engine and transmission in the ideal range – that is pure efficiency, fully automatically.

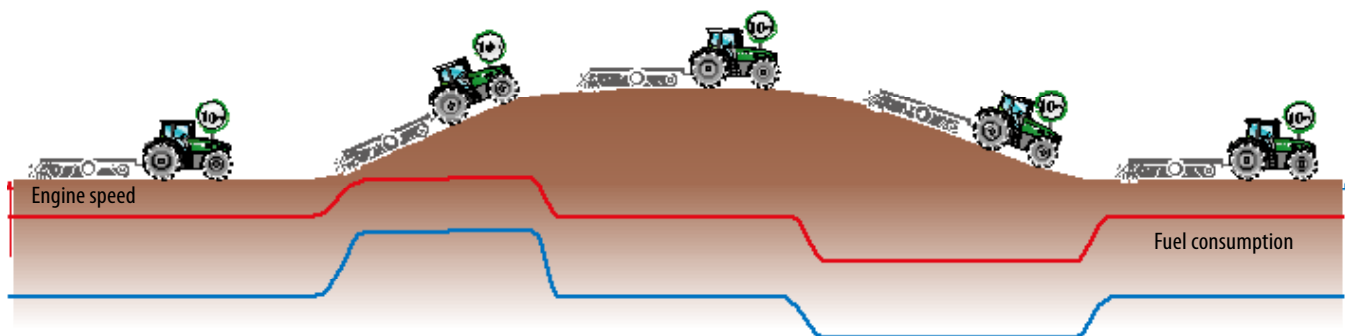


Calculate for yourself:

see how much you can save in fuel costs with an economical Vario with the diesel cost comparison:

Diesel cost comparison Tractor A and Guzzler B

Comparison	Tractor A	Guzzler B
Operating hours	10,000	10,000
Years of use	10	10
Average consumption l/h	20	24
Diesel price €	1,00	1,00
Diesel costs total €	200,000	240,000
Savings Tractor A	40,000	



Automatically drive economically with the standard-equipped TMS Tractor Management System.

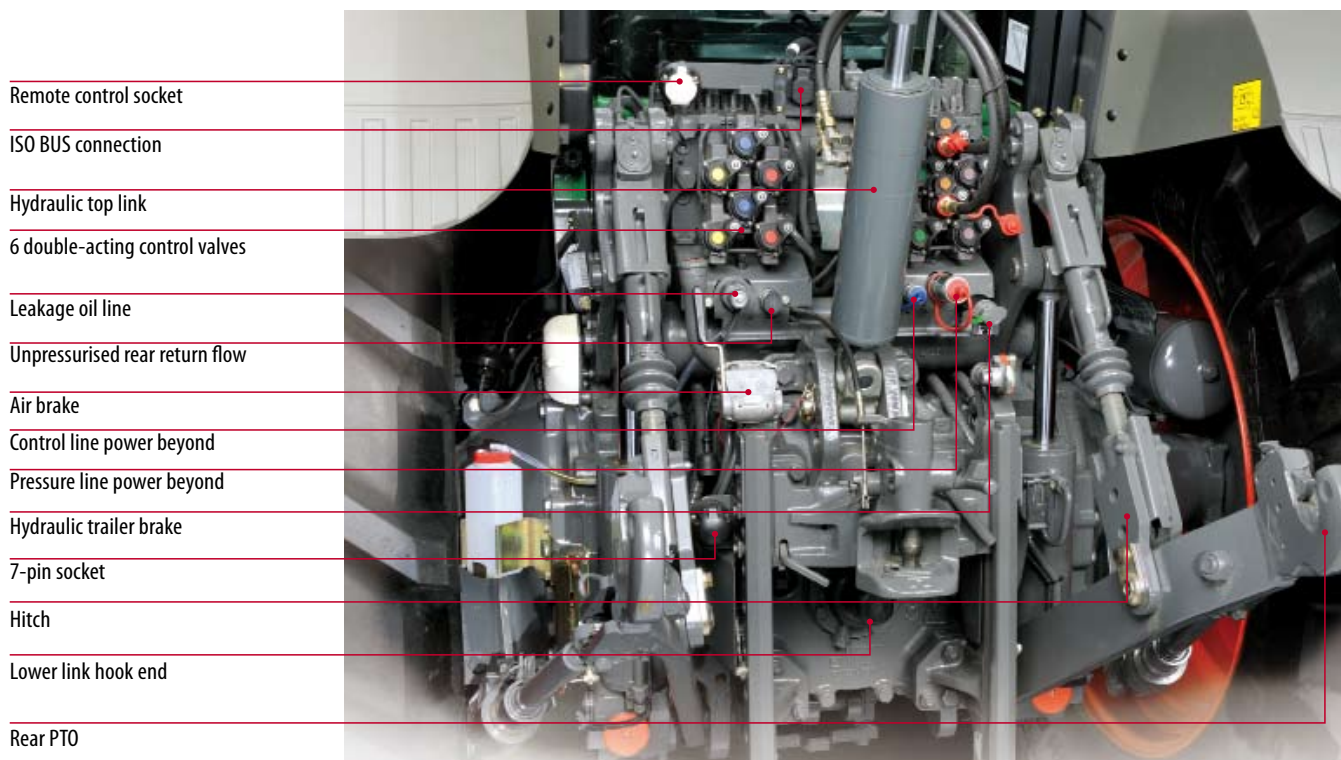
When TMS (Tractor Management System) is enabled, the tractor electronics control the engine and transmission. This significantly increases operating comfort for the operator. The operator only needs to set the desired speed, TMS controls the rest. In the graphic above, one can see that the tractor drives on level ground at a reduced engine speed. On the slope, the load increases, so 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.



- Power split Fendt transmission ML 200 Vario with cruise control
- Automatic engine-transmission management TMS
- Automatic maximum output control

Rear mounting area

A number of interfaces and connections are available at the rear of the tractor. You benefit from versatility and a wide range of implements that can be connected without a problem.



External rear PTO controls on the mudguard



Hydraulic lateral stabiliser



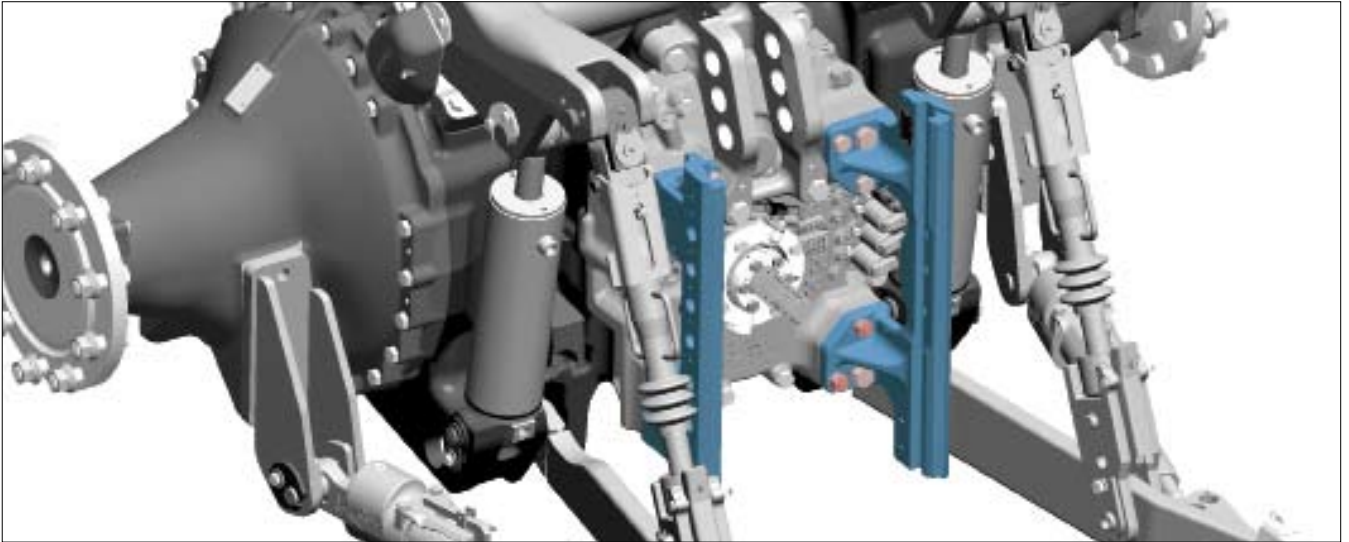
Automatic trailer steering axle lock



- Load-sensing system with 152-litre EPC axial piston displacement pump
- 4 electr. auxiliary control valves rear, control via crossgate lever and linear module
- 80 litres of available hydraulic oil

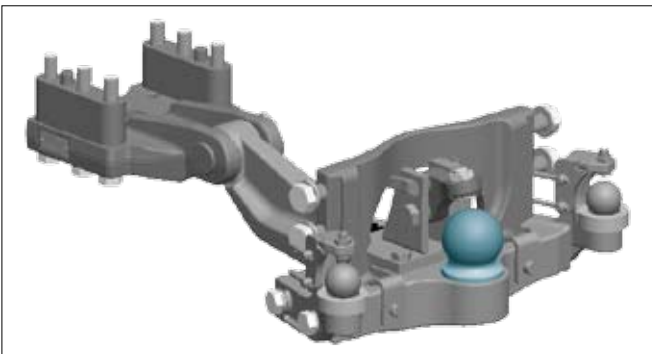
Hitch systems

The different hitch systems also offer a high degree of flexibility. Depending on your requirements, Fendt offers the hitch system to match your needs.

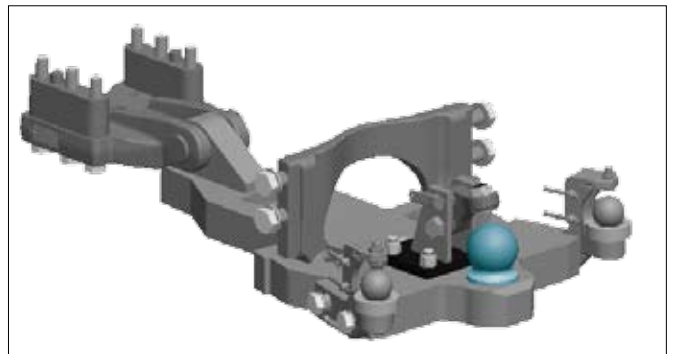


Wider rail

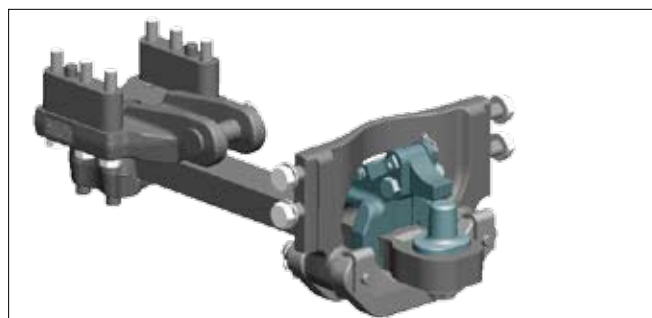
- Distance between rails widened to 390 mm. For compliance with latest standard values and improved working safety
- Bolted design solution, low-cost replacement of parts
- Vertical load of all hitch systems in the adjustable rail is 2,000 kg



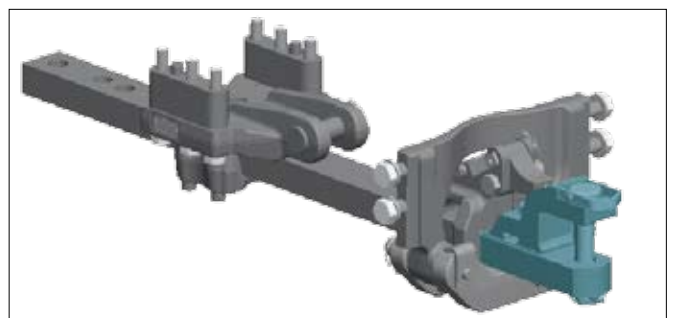
In view of the rapidly increasing number of forced steered trailers, Fendt now offers factory-installed connection points for forced steering compliant with ISO/DIS 26402. These can be mounted on the left side, or both sides, and are fitted with standardised ball heads.



The extended ball-type coupling offers an improved angle of lock and therefore greater safety, especially in tight curves.



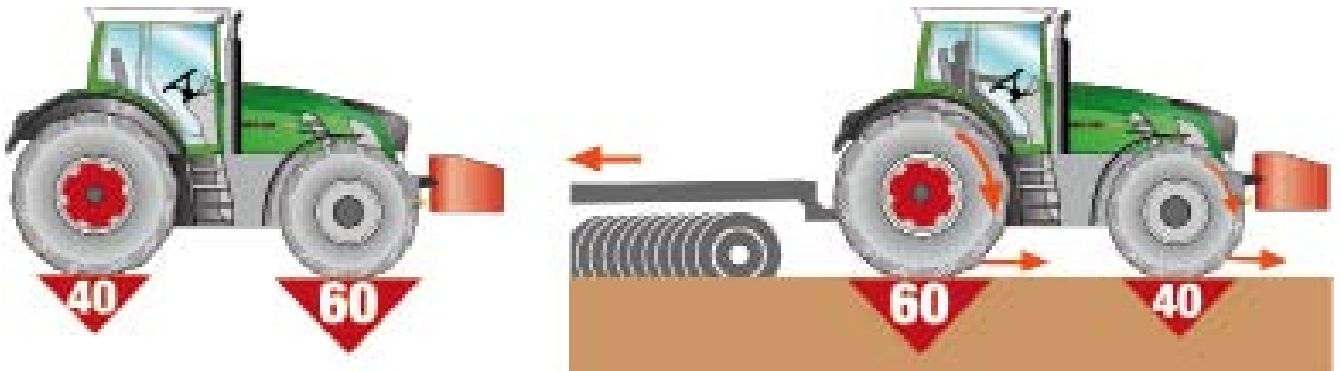
The Piton fix (heavy duty) is designed for a vertical hitch load of up to four tonnes in Germany (EU three tonnes).



The pull-out position of the swinging drawbar can be varied according to need.

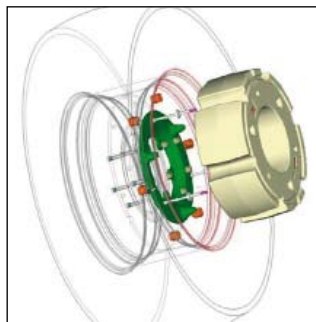
Ballasting concept

Whether you use your 800 Vario for field work, haulage or special operations – you will profit from its low unladen weight in any case. On the one hand, you have higher payload reserves and, on the other hand, you don't need to transport unnecessary weight. A tailor-made ballast concept is ideal for heavy draft work.



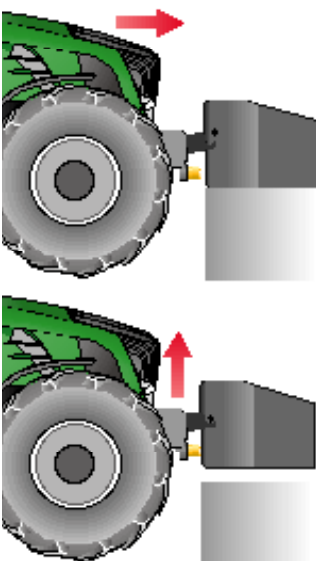
Weight when and where you need it

The 800 Vario, with its relatively low unladen weight of less than 9.5 tons and a clever ballast concept, allows you to adapt weight distribution to your requirements. In this way, for example for trailed implements, you can add weights at the front to attain a 60:40 weight distribution (front axle : rear axle). When the tractor is then used for draft work, and subject to the corresponding torque and forces, the values are shifted and you have "dynamic ballasting" of 40:60 (front axle : rear axle) which is the optimal range for draft work.

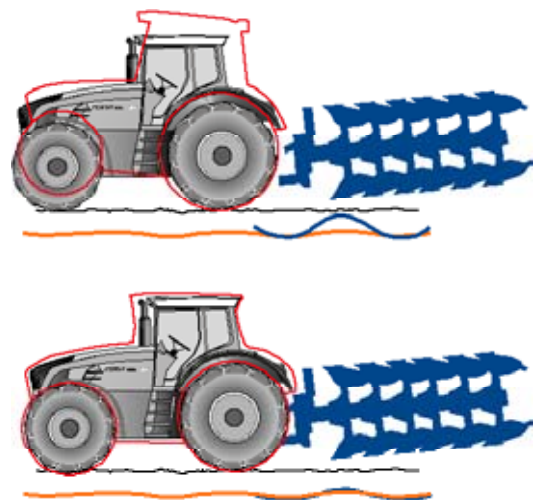


Ballasting options

The 800 Vario can be ballasted with weight modularly, while maintaining full roadworthiness – without speed restrictions or requiring wide vehicle markers. Up to 6 times 300 kg with 38" or 2 times 1000 kg with 42" rims are possible. Front weights up to 1800 kg are also available.



For tractors that are not equipped with front hydraulics, there is an elegant solution for mounting front weights quickly and easily on the 800 Vario, a so-called easy ballast pick-up, which uses the long suspension travel of the front axle suspension.



Shock load stabilising

Shock load stabilising prevents the tractor and implement from building up bounce by actively compensating for swinging using the hydraulics. It reduces pitching movements so you benefit from improved steering safety and ride comfort.

Front mounting area – PTO

There are also connections for mounting various implements at the front. They can be operated easily and conveniently from the cab or with the external controls.

Unpressurised front return flow

2 double-acting control valves

7-pin socket

Front PTO

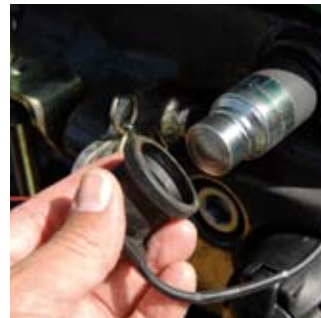
Lower link hook end



Valve equipment



External controls for front power lift



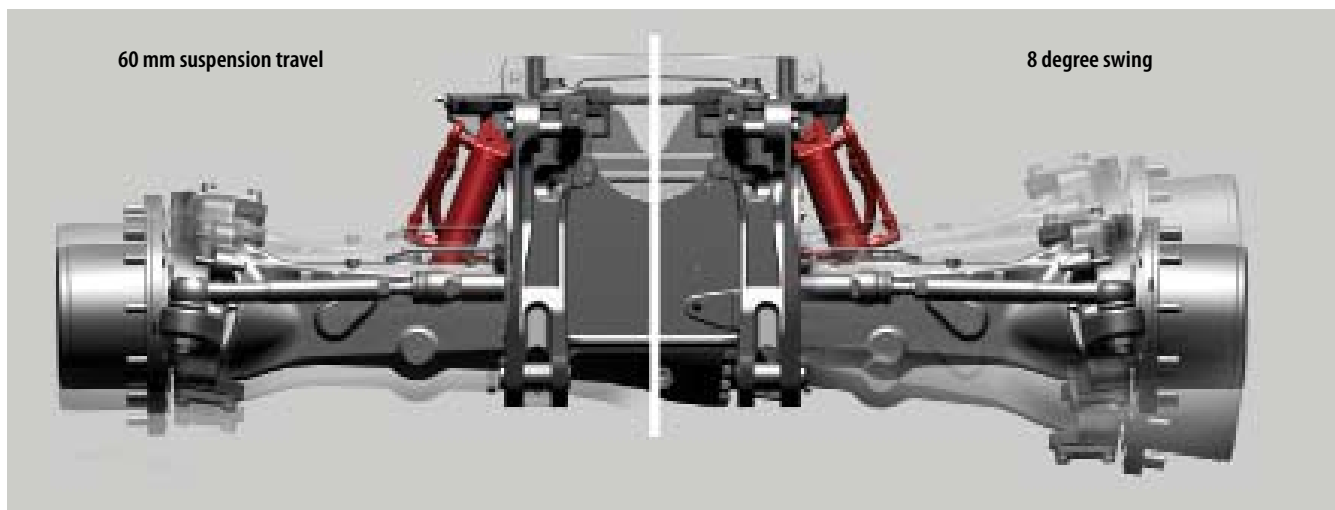
Unpressurised return flow



Front and rear power lift module

Transport – drive faster and safer

Speed and flexibility are a must for transport work – exactly the right thing for the new 800 Vario. With a top speed of 60 km/h you are in the passing lane with the 800 Vario when it comes to transport – thanks to the new front axle suspension.



Front axle suspension:

The hydropneumatic suspension system with automatic level control has two exterior spring cylinders directly between the axle and frame. A hydraulic cylinder on each side detects uneven ground. The displaced oil is pressed against the nitrogen reservoirs, where shock loads are damped. The integral level control via position sensors on each side offers constant suspension comfort independent of load or the mounted implement.

New four-wheel drive front axle

The new four-wheel drive axle with suspension and swing is marked by:

- Exceptional manoeuvrability with up to 50° steering angle and 5° caster angle
- A 44° steering angle with 540/65 R34 (turning radius: 5.60m)
- Larger swing angle (8°) for exceptional off-road capabilities
- High axle load of 6500 kg
- Pivoting front wheel mudguards are standard
- Suspension can be completely locked if swinging
- FSC (Fendt Stability Control) with anti-roll control

Locking the suspension:

The Fendt front axle suspension can be activated and locked from the driver stand. Whether or not the suspension is enabled or locked, the front axle can still swing, i.e. there are no disadvantages in adapting to the ground. At speeds above 20 km/h, the suspension is automatically reactivated.

Fendt Reactive steering system:

A special steering valve automatically sets the steering back to straight-ahead driving when the steering wheel is released, e.g. when negotiating a curve. This ensures better straight-ahead driving at fast speeds on the road.

