



AXION

950 940 930 920







The AXION 900.

Ten successful years on the market speak for themselves: in a very short time, CLAAS has become established throughout Europe as one of the leading tractor manufacturers. In 2011 CLAAS added the AXION 900 to its family of large tractors delivering over 400 hp. With its enormous pulling power, ease of operation and wealth of intelligent systems, the AXION 900 opens up great potential in many highly demanding applications and has quickly become a standard feature of the range.

Note: This brochure uses QR codes, which you can use to access additional animated content online using your smartphone. If you are unable to use QR codes, simply enter the corresponding URL into your web browser.



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axion900video](http://go.claas.com/axion900video)

For real challenges.





When massive pulling power joins forces with maximum user-friendliness to deliver unrivalled versatility and performance – you are sitting in the AXION 900.

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CLAAS POWER SYSTEMS

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Efficient Agriculture Systems by CLAAS

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CPS – CLAAS POWER SYSTEMS.

Optimal drive for best results.

The CLAAS machinery development programme constantly strives to maximise efficiency, improve reliability and optimise cost-effectiveness. CLAAS POWER SYSTEMS (CPS) bring together top-quality components to create a drive system that sets new standards – and always delivers maximum power when it is needed. CPS is ideally matched to the working system, featuring fuel-saving technology that quickly pays for itself.





CPS | CLAAS
POWER
SYSTEMS

Performance packaged.

Strong at heart.

A 6-cylinder, 8.7 l FPT (Fiat Power Train) Cursor 9 engine gets to work under a one-piece bonnet. The engine meets the requirements of the Stage IIIB (Tier 4i) emissions standard by means of exhaust aftertreatment with urea, and uses the latest common rail 4-valve technology, charge-air cooling and a wastegate turbocharger.

Constant output.

The CLAAS-specific engine performance curve provides full torque in a wide engine speed range, guaranteeing constant output and power delivery when they are needed. This makes it easy to save fuel while working at a low engine speed and maximum torque with the ECO PTO, or to work at rated speed with a full reserve.

Visctronic – economical fan control.

With Visctronic electronic fan control the fan speed can be precisely aligned with engine temperature and load, directly linked to the engine ECU, ensuring that the engine always runs at the optimum temperature. The reduced fan speed lowers the noise level and saves valuable fuel with no unnecessary impact on output, which can then be converted into tractive power.

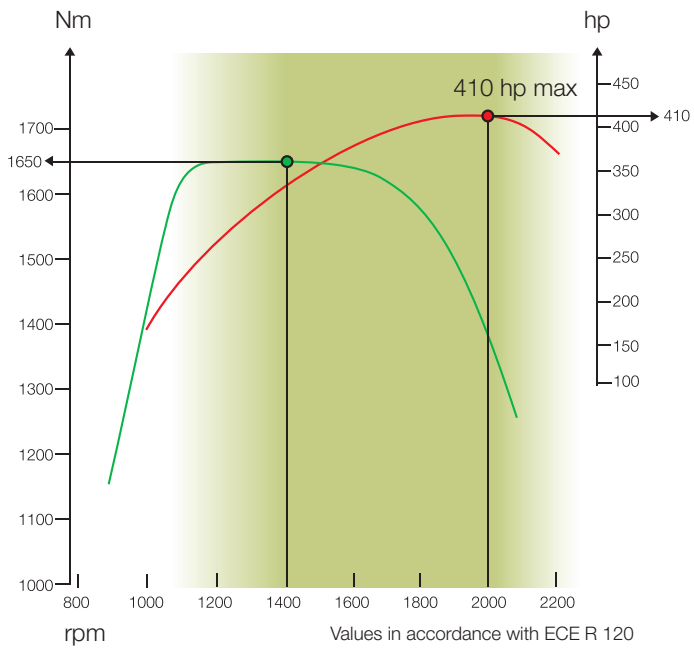


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POWER
SYSTEMS





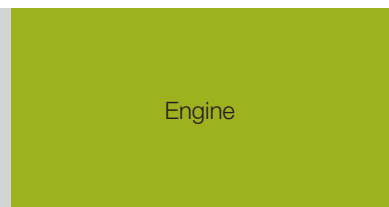
AXION 950



Full potential in any situation.

The multiple uses of a tractor in this class demand full potential in every speed range. The AXION's power is always available, even from a standing start. And the ECO PTO is designed to work at full torque and maximum output.

AXION	Maximum torque ECE R 120	Maximum output ECE R 120
950	1650 Nm	410 hp
940	1550 Nm	380 hp
930	1450 Nm	350 hp
920	1350 Nm	320 hp



Engine



Greatest pollutant reduction of all time.

There is no doubt that the introduction of the Stage IIIB (Tier 4i) emission regulations is the most important step to date in the control of pollutant emissions. These regulations require a 90% reduction in particulate matter (PM) as well as a 50% cut in nitrogen oxide (NO_x) content. The implementation of Stage IV (Tier 4) by 2015 will bring a further reduction in PM and (NO_x) emissions to almost zero.

SCR – the urea-based solution.

SCR stands for selective catalytic reduction, a process in which nitrogen oxides are converted into water and pure nitrogen. This is achieved by using a synthetic aqueous solution of urea (AdBlue®¹), which is carried in an additional tank.

Fully integrated SCR system.

When designing the AXION 900, all the components required for exhaust aftertreatment were considered from the outset. This means that full visibility and accessibility are guaranteed. The SCR catalytic converter is safely housed under the bonnet where it receives a constant flow of cooling air.

Never lets you down.

For particularly cold conditions, a cold-start system is available to heat the engine cooling water, battery, fuel filter and SCR system. The urea tank is heated as standard and is also protected from the cold by the insulating effect of being integrated into the fuel tank. The SCR system lines are also emptied automatically when the engine is switched off to protect against freezing.

¹ AdBlue® is a registered trade mark of the VDA.



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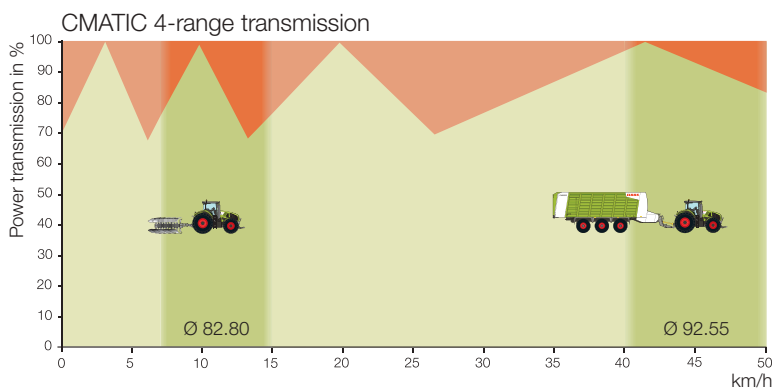
Cleaning up.



700 l fuel tank with integral 60 l urea tank

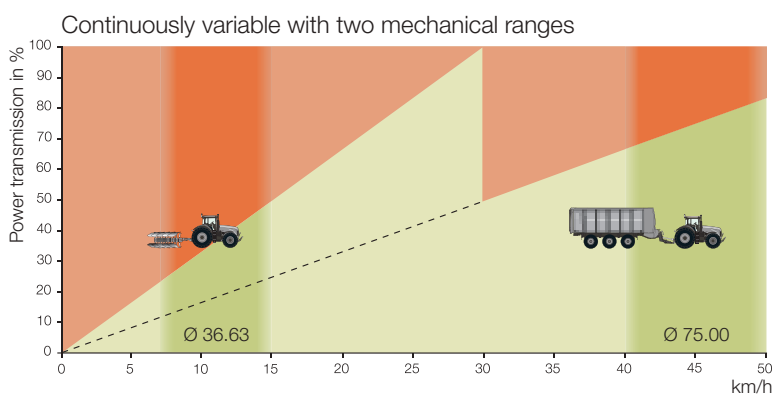
SCR

CMATIC. Continuously variable for real performance.



Efficient and easy to use.

CMATIC is the name of the continuously variable transmission technology used in CLAAS tractors. In the AXION 900 series a ZF Eccom transmission provides efficient conversion of engine power. In this split-power, continuously variable transmission, the four mechanical ranges are automatically selected by multidisc clutches. There is no need to shift between ranges manually.



The high mechanical component of the CMATIC transmission provides outstanding efficiency and low fuel consumption in every speed range.

For instance, when working in the field at between 7 and 15 km/h in the main operating range, the CMATIC transmission averages over 80% mechanical power transmission, far superior to other continuously variable transmissions on the market.

And for transport operations on the road, the CMATIC transmission will be averaging a 90% mechanical situation, a clear advantage in terms of fuel consumption.

- Hydraulic power transmission
- Mechanical power transmission
- ⊘ Mechanical component of power transmission





Exploiting real potential.

At speeds of 0.05 km/h to 50 km/h, the full power of the transmission can be used in either direction because power is transmitted mechanically even in reverse. What's more, every gear ratio can be used at every engine speed. The AXION 900 therefore offers enormous potential for use all year round.

With engine speeds of 1,600 rpm at a top speed of 50 km/h and 1,500 rpm at 40 km/h, the AXION 900 also demonstrates its capabilities in transport operations.

If the accelerator is not depressed, the transmission is in powered zero mode and maintains its position without creeping or rolling. This means that the tractor can start up safely and easily at steep field entrances or road junctions, even with a full load.



CMATIC



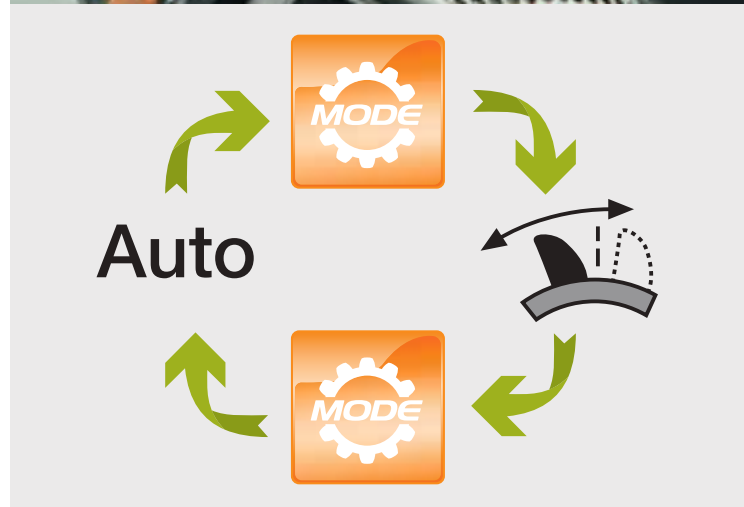
Simple, straightforward operation.

The CMATIC transmission has three operating modes: AUTO (foot pedal), CMOTION (hand control) and manual mode. Forward speed can be controlled by the accelerator pedal or CMOTION. In these two modes, engine speed and transmission ratio are adjusted automatically – for optimum efficiency and optimised fuel consumption.



Accelerator pedal or CMOTION.

A button in the armrest enables the driver to switch between modes while the tractor is moving. However, manual mode can only be activated in CEBIS. In manual mode, the driver chooses the engine speed and transmission ratio. Automatic engine and transmission control is not active. The active mode at any given time is displayed on the CEBIS.



Auto

Accelerator
pedal



CMOTION



Manual

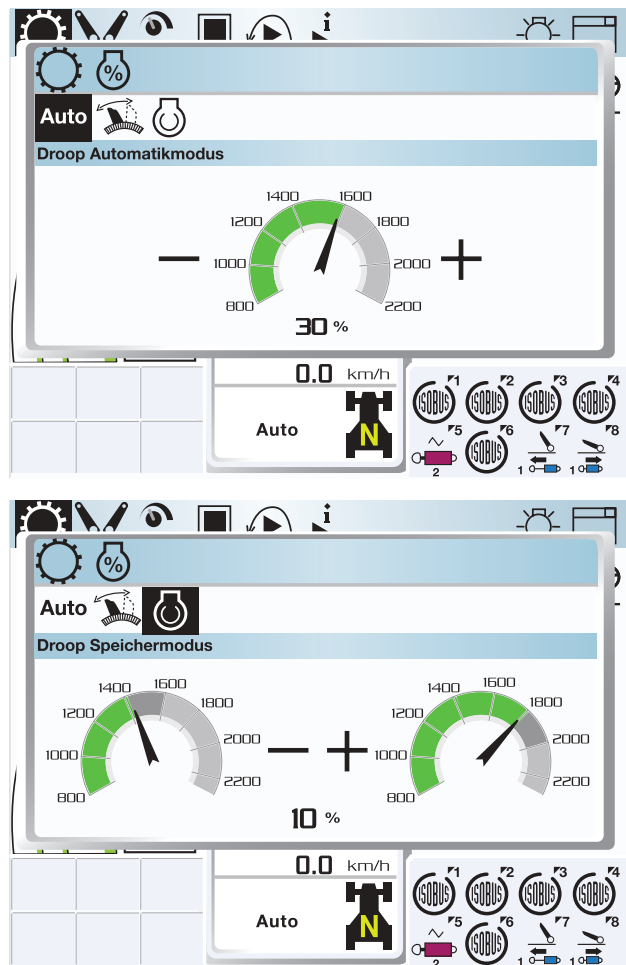
Optimised settings.



At the push of a button.

The engine speed at full load can be adjusted quickly and easily using the engine droop settings. The CEBIS clearly displays your set engine loading. When a constant engine speed is activated, i.e. during PTO work, the driver can specify a different droop setting, typically one that retains the engine speed to the required PTO shaft speed.

The engine droop can be specified separately for the individual drive modes and both engine speed memories. The engine droop can therefore be tailored to the application in hand at the push of a button, e.g. when moving from the road to the field when transporting slurry. The CMATIC transmission technology from CLAAS enables you to use all 400 hp economically and productively.



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CMATIC

No need to stop.

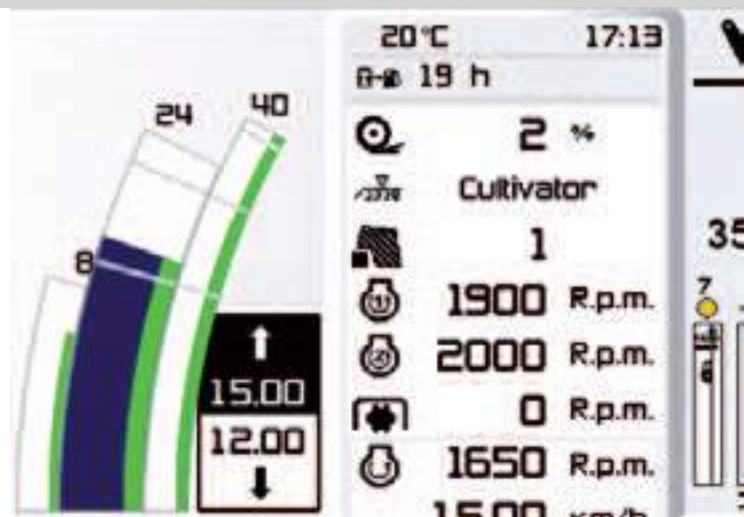


Tailor-made speed ranges.

With the CMATIC transmission, three speed ranges can be pre-selected in both directions of travel. The active range is displayed on the CEBIS and can be changed while the tractor is in motion using the two buttons on the CMOTION multifunction control lever.

The lower the maximum preset value for the range, the more accurately the forward speed can be controlled. Cruise control speeds can be saved in all three ranges while the tractor is moving, either in CEBIS or using the button on the CMOTION.

With CMATIC every driver can create his own profile according to the job in hand. Intelligent CMATIC transmission technology enables you to use all 400 hp economically and productively – with maximum operator comfort.





Stopping power.

The CMATIC transmission offers different ways of adapting braking to the job in hand:

- Increase the engine braking effect: when the accelerator pedal is released and the CMOTION is pulled back, the engine braking effect is intensified and break wear is reduced
- Driving down an extremely steep hillside with a heavy trailer: by pressing the CMOTION when the trailer brakes are on, you can tension the brakes on the tractor/trailer combination when starting from stationary on hills. This function can be used at speeds of up to 10 km/h.





Real stability.
The true sign of a 400 hp tractor.

CLAAS has drawn on experience gained in developing standard tractors and XERION high-horsepower tractors delivering up to more than 500 hp to create a completely new solution for the AXION 900 – for endurance work under extremely challenging conditions. The engine is housed in a strong frame section with an integrated engine oil sump which perfectly absorbs all the forces associated with the front linkage and front axle carrier. In practice, this means:

- Excellent steering lock angle for maximum manoeuvrability
- Optimum access to the entire engine compartment and all maintenance points
- High ground clearance with drive shaft integrated into the frame section with a bolted cover for protection
- All services securely routed within the frame section



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CLAAS tractor concept. 400 hp – for real.

Long wheelbase – compact design

To transfer 400 hp to the ground, the design must be just right. The AXION 900 ticks all the boxes. It has a wheelbase of 3.15 m, but its outstanding design makes it manoeuvrable in the field and easy to drive on the road. And naturally, its overall length with an implement attached remains within the legal limits.

Additional front ballast is not needed for many tasks – particularly transport operations – as the long wheelbase and optimum weight distribution transfer the tractor's tractive power to the ground. This saves fuel and reduces tyre wear on the road.



Immense tractive power.

Fully balanced.

With so many front and rear axle ballast options, the AXION 900 is easily adapted to every application. This is the only way of exploiting its full performance potential without unnecessary losses.

Wheel weights per rear axle wheel, in kg

38" rim	42" rim
100	400
367	667
634	856

Front weights

	600 kg		900 kg
+	600 kg	+	600 kg
=	1200 kg	=	1500 kg



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Power and endurance.

All AXION 900 models can be specified with massive 2.15 m diameter rear tyres. Tyres up to 1.70 m diameter are used on the front axle. The numerous tyre options make the AXION 900 capable of any type of work. Even with the biggest tyres (900/60 R 42) the tractor has an external width of less than 3.0 m, making it flexible on the road and gentle on the field.

A broad base.

The AXION 900 can be fitted with dual tyres at the factory. They can be permanently flange mounted or flexibly mounted using the clamp system.¹

AXION 900 footprint:

- Rear tyres up to 900 mm wide and 2.15 m in diameter
- Front tyres up to 1.7 m in diameter
- Dual tyres ex factory, with flange mounting or clamp system



¹ Dual tyres are not available in all countries. Please refer to your dealer's price list.



[go.claas.com/
axion900duals](https://go.claas.com/axion900duals)

Construction



Safe braking.

All AXION 900 models have a permitted total weight of 18 t in the 40 km/h and 50 km/h versions. In the 50 km/h version the front axle is fitted with disc brakes as standard. The front axle of the 40 km/h version can also be fitted with disc brakes as an option. The braking systems on the front and rear axles provide maximum safety and stability on braking.

Automatic adjustment.

During braking, the front axle suspension automatically adjusts to the change in load. The tractor therefore retains its normal stability and safety even during sharp braking manoeuvres.



Safe on the road.



REVERSHIFT with park-lock function.

In addition to the familiar, easy-to-use clutchless reverser, the REVERSHIFT lever also has an integral park-lock function which provides a very easy way of keeping the AXION 900 stationary. For even greater safety, the park-lock function is automatically activated in the following situations:

- When the engine is switched off
- When the engine is switched on
- If the accelerator or CMOTION have not been touched for a few seconds while the vehicle is stationary, regardless of the current REVERSHIFT lever position
- As soon as the driver's seat is vacated when the vehicle is stationary



Trailer brake system.

The AXION 900 can be fitted with a pneumatic and a hydraulic trailer brake system in order to meet country-specific requirements. Both systems can be operated simultaneously and the connections are easily accessible on both sides of the drawbar.

Use 400 hp. For real.



The right speed at the touch of a button.

Three different PTO options are available for the AXION 900:

- 1,000 rpm as standard
- 540 ECO / 1,000 rpm
- 1,000 / 1,000 ECO rpm

The PTO speed is easily pre-selected at the touch of a button. Another button on the armrest activates the PTO.

The integral freewheel on the rear PTO makes implement hitching simple.



External controls for front and rear PTO





Standing start.

The AXION 900 transfers its full power from a standing start and at low forward speeds.

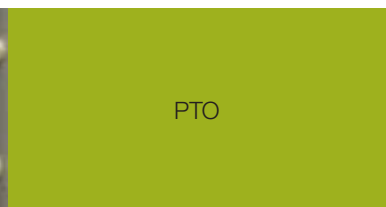
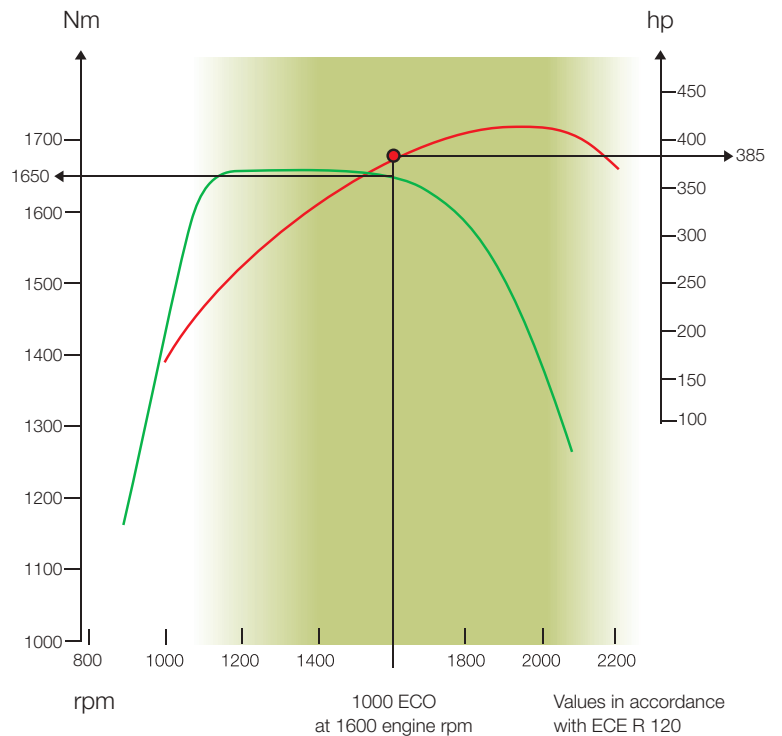
In ECO mode over 90% of maximum engine power (e.g. 385 hp in the AXION 950) can be transmitted via the PTO shaft, enabling even heavy implements to be operated at a reduced engine speed.

Rotational speeds:

- 1,000 rpm ECO at 1,600 engine rpm
- 540 rpm ECO at 1,450 engine rpm

In 1,000 ECO mode the engine can operate at the optimum engine speed. Four bolt-on PTO stubs ensure that the AXION 900 can be adapted to any implement.

AXION 950





Excellent hydraulics.

The AXION 900 has a load sensing hydraulic system with flow volumes of 150 l/min or 220 l/min. It has up to six electronic spool valves at the rear and a maximum of two for front mounting. All spool valves have time and volume control and are suitable for continuous flow volumes during non-stop operation.

The hydraulics are controlled by proportional rocker switches in the armrest, the ELECTROPILOT or the CMOTION. One spool valve can be assigned to the function buttons on the CMOTION.

External controls at the rear and on the front linkage can also be assigned to any spool valve.



It's easy to set up spool valve functions in CEBIS



Rapid pressure build-up.



Pressure-free connections and no mess.

All the hydraulic couplings at the rear of the AXION 900 have release levers, so they can be connected and disconnected even under pressure. The coloured + / - markings on the inlet and outlet sides make it easier to attach implements correctly. Oil leakage lines keep the area around the spool valves free of oil.

Power-beyond connections are provided at the rear for implements which have their own spool valves. The advantages of this are as follows:

- Hydraulic oil is supplied to the attached implement as required
- Large line cross-sections and non-pressurised return flow reduce power losses
- Fixed mounting plate with couplers for smooth connection between tractor and attached implement
- Large flat couplings minimise oil heating and prevent oil losses during coupling

Leaves nothing behind.

The rear linkage.

All AXION 900 models have a maximum lifting capacity of 11 t which enables them to carry the heaviest of implements. The configuration of the rear hydraulic system can be tailored to individual requirements:

- Cat. III or Cat. IV lower links
- Mechanical or hydraulic top link, Cat. III or Cat. IV
- Manual or automatic stabilisers available for both lower links
- Wheel slip control available
- External controls on both mudguards



External controls for the rear linkage, PTO and one freely selectable spool valve



Direct adjustment.

The main rear linkage functions are directly accessed via push buttons and dials in the right-hand B-pillar:

- Raise and lower
- Vibration damping on/off
- Lock linkage
- Activate slip control
- Lift height limit
- Lowering speed
- Draught and position control
- Adjustment of wheel slip control

The rear linkage can be moved to the pre-set working depth or transport position at the touch of a button on the CMOTION. The current position can be changed manually at any time via a two-stage incremental adjustment system. The linkage moves back to the pre-set position when the working position is activated again.



The working depth of the rear linkage is set using the dial on the armrest.



Rear linkage



Front linkage.

All AXION 900 models can be fitted with two different front linkages at the factory:

- 5.0 t for implements and ballasting
- 6.5 t for particularly heavy implements

The modular construction means that retrofitting can be carried out easily.

The AXION 900 series is the first to have a fully integrated front linkage, designed specifically for this power class. The front axle carrier and the special structural component for the engine are designed to absorb any forces generated, meaning no additional supports or rails are required.

Compact construction

- Short distance between front axle and coupling points
- Good implement handling and short overall length



Compact dimensions



Fully integrated.



Always connected.

Hydraulic and electrical interfaces for many applications are incorporated into the front linkage:

- Two double-acting spool valves
- Free flow return line
- 7-pin socket
- ISOBUS socket

Front linkage position control.

The optional front linkage position control system enables front-mounted implements to work extremely accurately. The working depth is adjusted via a rotary knob on the armrest, while the lifting height can be limited and the lifting and lowering speed set using CEBIS. The front linkage can be used in single- or double-acting mode.



External controls for the front linkage and one spool valve

Front linkage

Pleasant working environment.

The AXION 900 marks the debut of a completely new generation of cabs from CLAAS.

- 4-pillar design and convex rear window provide optimum visibility
- Completely redesigned armrest with integral CMOTION multifunction control lever

CLAAS

**950
AXION**



Newly designed.

Developed with farmers.

When developing the AXION 900, we involved customers from many countries at a very early stage. We showed them our initial designs for the new cab so that suggestions and criticisms from farmers could be taken into account from the outset. Position and layout of the controls, connections and brackets, visibility in the cab – these are just some of the topics that were important to our customers.

The design of many of the controls and the positioning of the CEBIS screen in the armrest are largely based on the design of CLAAS harvesters. The CMOTION multifunction control lever, in particular, has become an essential feature of CLAAS machines. In the ARION 600 / 500, XERION 5000 / 4500 and the LEXION the CMOTION is conquering the market. The same is true of CEBIS: its controls and menu structure are the same in all machines. Whether drilling or harvesting – you always have the upper hand.





4-pillar concept.

With the launch of the AXION 900 CLAAS introduces a completely new generation of cabs. The CLAAS 4-pillar cab offers some distinct advantages:

- Clear view of the full working width of attached implements
- Large-volume cab creates an extremely spacious working environment
- Continuous windscreen

The special positioning of the rear cab pillars gives the driver an excellent view of the implement and hitch area. The convex rear window also provides a clear view of the rear coupling points, allowing safe, accurate implement attachment.



The convex rear window has a wide opening angle.

Cab