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## **More performance in every respect: XERION 12.590 and 12.650 from CLAAS in TERRA TRAC and TRAC versions**

**Strength is more than power: target markets in Europe and overseas**

The XERION has been establishing new fields of application and expanding into new market regions for more than 25 years. The two new more powerful 12.590 and 12.650 models are designed as highly efficient specialists for the toughest of draught work, such as pulling wide cultivators and seed drills as well as chaser bins. In addition to North America, central Western Europe and South America, the core target markets include countries such as Australia.

Four key development goals for the XERION 12 Series were identified during numerous discussions with customers:

- **Stronger profitability** through low fuel consumption, low maintenance and wear costs and high resale value
- **Stronger tractive power** through high torque, large ground contact area, optimal 50:50 weight distribution under all operating conditions and enormous hydraulic power
- **Stronger comfort** thanks to spacious cab with four-point suspension and excellent all-round view, damped crawler tracks for TERRA TRAC and comfortable steering behaviour
- **Stronger assistance** via CEBIS, CMOTION, CEMOS and GPS PILOT CEMIS 1200.

The successful basic concept with a bolted, highly resilient central frame and two steering axles was adopted from the XERION 4200, 4500 and 5000 models and adapted to reflect the increased output, higher weight and larger track width. New TERRA TRAC triangular crawler track units or dual tyres up to 800/70 R42 transfer the power gently and efficiently to the ground, while the driver enjoys an excellent all-round view in the large, four-point-suspended cab. The low-speed concept 2.0 marks a perfect synthesis between the efficient, high-cubic-capacity Mercedes-Benz engine and the optimally coordinated continuously variable transmission – capped by the high-performance, low-engine speed hydraulics featuring the highest hydraulic output on the market. With a maximum power output up to 653 hp and up to 3100 Nm of torque, the XERION 12 Series is currently the most powerful four-wheel-drive tractor with continuously variable transmission technology on the market and features the familiar CEMOS operator assistance and process optimisation system from CLAAS standard tractors with CMATIC continuously variable transmission.

The new XERION 12 Series with up to 653 hp, 3100 Nm, new TERRA TRAC crawler tracks, four-point-suspended cab with perfect all-round view and hydraulic output of up to 537 l/min: strength is more than power!

**High on torque, fuel-efficient and maintenance-friendly: Mercedes-Benz six-cylinder engine with 15.6 l cubic capacity and low-speed concept 2.0**

When it came to engine technology, Mercedes-Benz was again the obvious choice. The 15.6 l OM473 LA six-cylinder in-line engine is familiar from the

JAGUAR and LEXION and combines enormous torque with fuel efficiency and low maintenance costs. In the XERION 12.590 this power unit delivers 585 hp from 1600 rpm and up to 653 hp in the XERION 12.650. Turbo compound technology with wastegate turbocharger ensures enormous power development, even at low engine speeds, and maximum efficiency under full and partial load at the same time. As a result, the maximum torque – an impressive 3100 Nm in the XERION 12.650 – is available even at 1300 rpm. The idling speed is set at a low 650 rpm.

The coolers for engine, transmission, hydraulics and axles are generously sized for maximum efficiency and positioned for easy access. The cooling area can be cleaned at the press of a button with the aid of the hydraulic reversible fan. The fuel tank in the XERION 12 Series has a capacity of 1400 l, while the AdBlue tanks can hold 90 l. The central position of the fuel tank means that the tractor's weight distribution does not change during the working day as the fill level falls.

The engines certainly don't disappoint when it comes to maintenance, with an oil change interval of 1000 operating hours and a maintenance-free Stage V exhaust gas aftertreatment system.

### **Continuously variable four-wheel drive now available up to 650 hp**

Like all CLAAS tractors, the new XERION 12 Series is equipped with the latest generation CMATIC continuously variable transmission – maintenance-friendly, durable and perfectly matched to the engine's optimal torque and consumption characteristics. Since 2003, the transmissions in the XERION have proved themselves to be exceptionally robust, reliable and durable even in the toughest situations. In addition, the gentle starting and deceleration torque of the continuously variable, split-power drives protect cultivators and seed drills by avoiding peak loads on the frame structures and hitching devices caused by abrupt shifting or engaging and disengaging with the implement in working position. Nevertheless, the XERION still delivers the full engine torque from the minimum speed of 0.05 km/h.

Thanks to four automatically selected drive modes, the transmission works with a high degree of efficiency, transferring power to both axles continuously. In combination with the multi-pass effect and the 50:50 weight distribution under traction, power is transferred to the ground without compromise while at the same time ensuring maximum soil protection –



regardless of the steering angle. This means that full traction is available even when working on hilly ground or negotiating obstacles.

The XERION 12 TERRA TRAC reaches a top speed of 40 km/h at an efficient 1400 rpm. The TRAC wheeled version has a top speed of 50 km/h, which is unique in this performance class.

### **CEMOS on board: Capitalise on performance potential and conserve resources**

Following its introduction in the ARION and AXION/AXION TERRA TRAC standard tractors with CMATIC transmission, the self-learning, dialogue-based operator assistance and process optimisation system CEMOS is now available for the XERION too. Double-digit percentage improvements in fuel consumption and area output can be achieved by optimising power transmission, drive management and ballasting (DLG Test Report 7096). Furthermore, CEMOS incorporates a plough settings assistant as well as the Terranimo<sup>®</sup> app. Once the operating conditions have been entered, the app calculates and displays the compaction risk in three soil layers to help the driver optimise the machine settings in favour of greater soil protection.

### **Low-engine speed hydraulics for the most demanding applications**

The low-engine speed concept 2.0 in the XERION encompasses the power hydraulics as well as the drive. Up to three load-sensing pumps supply external consumers with a maximum 537 l/min at 1900 rpm – no other tractor on the market currently beats that. This ample output means that even the widest air seeders with a continuously high oil demand can be operated even more efficiently at greatly reduced engine speed. Up to eight double-acting control circuits continuously supply sufficient oil to cultivation implements, drills and precision air seeders too, with prioritised control circuits able to deliver up to 140 l/min to the highest consumers.

The flow rate of each spool valve is shown in the CEBIS terminal in the form of a graphic display. When working with attached implements that have multiple consumers with a high demand for oil, this enables the operator to adjust and prioritise flow rates accordingly.

### **New TERRA TRAC 400 crawler tracks and dual tyres up to 800/70 R42**

CLAAS Industrietechnik in Paderborn developed new crawler track assemblies with positive drive for the XERION 12 Series to satisfy the most exacting customer requirements in terms of power transmission, soil protection and comfort. Sturdy steering axles with two auxiliary steering cylinders per axle and large drive wheels transfer power gently to the drive belts while simultaneously engaging eight lugs. The two-part frame construction of the crawler tracks enables the two pairs of mid-rollers which are mounted on bogies to adapt to ground contours independently of the main frame. Large rubber blocks between the undercarriage and the main frame of the crawler track assembly effectively buffer bumps and vibrations.

When equipped with dual tyres up to 800/70 R42, the TRAC version achieves a massive footprint unrivalled in wheeled tractors. In addition to the multi-pass effect, ideal 50:50 weight distribution regardless of tank level and combined with the efficient drivetrain with low-engine speed concept 2.0, this reduces fuel consumption by 8 to 10 per cent per hour compared with other tractor concepts in this performance class. Thanks to the large triangular crawler tracks assemblies, the TERRA TRAC version achieves the same level of efficiency with 30 or 36 inch-wide (762 or 914 mm) track belts.

With two steering axles, the TERRA TRAC and TRAC steer tightly and precisely with the cab and rear linkage remaining in mid-axle. The steering behaviour is similar to that of standard tractors: steering manoeuvres and turning operations are implement- and driver-friendly with minimal track formation. In addition to the standard steering programme with trailed rear-wheel steering, classic four-wheel steering with simultaneous steering of the front and rear axle is also available, and the TRAC can also be driven in gentle mode (reduced crab steering) for silage clamp work. The DYNAMIC STEERING function available in the standard steering programme halves the number of turns of the steering wheel needed during fieldwork and further reduces the steering torque.

The large ground contact area in the TERRA TRAC and TRAC ensures gentle and efficient transfer of tractive power and in combination with the efficient drivetrain, reduces fuel consumption by 8 to 10 percent compared with other tractor concepts in this hp class. The full frame with two steering axles enables precise and comfortable steering manoeuvres.

### **Large cab with four-point suspension concept**

When developing the XERION 12 Series, driver comfort was a key priority in addition to efficient, soil-friendly tractive power transmission. The cab has been extended by 27 cm at the front, making it currently the largest command centre in the premium tractor segment. Footrests can be factory-fitted behind the steering column and on the right-hand A-pillar. The driver's seat is available in three versions with standard upholstery or optional high-quality cotton or leather upholstery, and can be rotated by 40° to give the driver a perfect view of attached implements. Both the exhaust gas aftertreatment system and the exhaust system are fully integrated into the right-hand side of the chassis under the cab. Combined with the slender steering column, this ensures unrivalled all-round visibility. Key functions are operated and monitored via the ergonomic armrest with CMOTION multifunction control lever and the CEBIS touchscreen terminal. This means that a standardised control concept is now available for all CLAAS tractors between 125 and 653 hp from the ARION 500 upwards.

The new four-point cab suspension provides a level of comfort previously unknown in this performance class. By cushioning impacts and countering rolling movements, it enables drivers to concentrate fully on the job in hand without tiring even during long working days. In addition, the cab has been further decoupled from the chassis to significantly reduce the impact of noise and vibrations from the drivetrain and chassis on the driver.

The new XERION 12 Series offers the largest cab in the premium XXL tractor class and a new four-point cab suspension. The driver's seat rotates by 40° to the right.

### **GPS PILOT CEMIS 1200: Automatic steering, online task management, precision farming applications and more**

The XERION 12 Series comes with a customisable package for ISOBUS and precision farming applications. Buyers can choose from automatic steering by GPS PILOT with different correction signals, both on- and off-line Task Management, and precision farming applications with Section Control and Variable Rates Application (VRA). All functions for modern, precise and site-specific work are available in conjunction with the 12-inch CEMIS 1200 terminal which uses the familiar CEBIS control concept. With CLAAS connect, new licences or activations can be transferred straight to the terminal online, as can tasks with predefined tracks and application maps from connected farm management information systems (CLAAS API).

The ability to automatically create multiple reference lines per field provides a further efficiency boost. Using recorded or imported field boundaries, A-B lines and contours for different areas and sections of the field can be calculated and saved before cultivating the field. This feature simplifies work in irregularly shaped fields, as several headland sequences and rounded field boundaries can be saved as references in addition to the main working direction.

The tramline management feature in CEMIS 1200 also reduces the workload significantly. Tramlines are marked in colour on the screen and a signal alerts the driver when to create one the same. This means tramlines can no longer be missed, leaving the driver to focus fully on the optimum performance of the tractor and attached implement.

### **The new XERION 12 Series: strength is more than power!**

**Stronger profitability Stronger on tractive power**

**Stronger on comfort Stronger on assistance**

#### **Key innovations of the XERION 12 Series at a glance:**

- *Proven concept with highly resilient, bolted frame and two steering axles for maximum stability and precise steering without lateral movement of the cab or impact on attached implements.*
- *TERRA TRAC with four triangular crawler tracks, TRAC with dual tyres*
- *Efficient, high-torque Mercedes-Benz six-cylinder engine with 15.6 l cubic capacity and 585 or 653 hp maximum power output*
- *Up to 3100 Nm torque*
- *Low-engine speed concept 2.0: maximum power output at 1600 rpm, maximum torque at 1300 rpm, idling speed 650 rpm*
- *8 to 10 percent reduction in fuel consumption per hour compared with other tractor concepts in this hp class*
- *1400 l diesel supply with central fuel tank: fill level has no impact on axle load distribution*
- *CMATIC continuously variable transmission for maximum operator comfort and uncompromising durability; TRAC with top speed of 50 km/h and TERRA TRAC with top speed of 40 km/h at 1400 rpm –*

*both unique in this hp class*

- *Hydraulics with up to three load-sensing pumps and total capacity of 537 l/min*
- *Up to 140 l/min hydraulic output for prioritised circuits*
- *TERRA TRAC: New TERRA TRAC 400 triangular crawler track assemblies from CLAAS Industrietechnik with bogie-mounted mid-roller pairs and damping blocks between the mainframe and undercarriage*
- *XERION 12 TRAC: dual tyres up to 800/70 R42 for largest footprint and interlocking for wheeled tractors*
- *Largest cab in the premium tractor segment*
- *Four-point cab suspension for new level of comfort in the premium XXL tractor class*
- *Unrivalled all-round visibility thanks to fully integrated exhaust system and exhaust gas aftertreatment system, slender A-pillar and slender steering column*
- *Driver's seat can be rotated 40° to the right and 10° to the left*
- *DYNAMIC STEERING: halves the number of turns of the steering wheel required to achieve full steering lock during fieldwork and reduces steering forces*
- *CEMOS for tractors integrated into CEBIS terminal*
- *Precision Farming ready: CEMIS 1200, GPS PILOT, ISOBUS, TASK CONTROLLER and more*

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## **About CLAAS**

CLAAS ([www.claas-group.com](http://www.claas-group.com)) is a family business founded in 1913 and is one of the world's leading manufacturers of agricultural machinery. The company, with Head Office in Harsewinkel, Westphalia, is the European market leader for forage harvesters. CLAAS dominates the European market in another core segment as well – combine harvesters. CLAAS also holds the top spots in global agricultural technology with its tractors as well as its agricultural balers and grassland harvesting machines. Cutting-edge agricultural information technology also forms part of its product range. CLAAS employs more than 12,100 staff worldwide and generated a turnover of 4.9 billion euros in 2022.



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