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CLAAS news
Product news
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CLAAS



“The AXION 960TT is more versatile than anything we’ve run before.”



“We’ve now got a high speed, high-horsepower tractor with a great power-to-weight ratio that’s good on the road and in the field.”

Tom Hawthorne, AXION 960 TERRA TRAC, Nottinghamshire, September 2021



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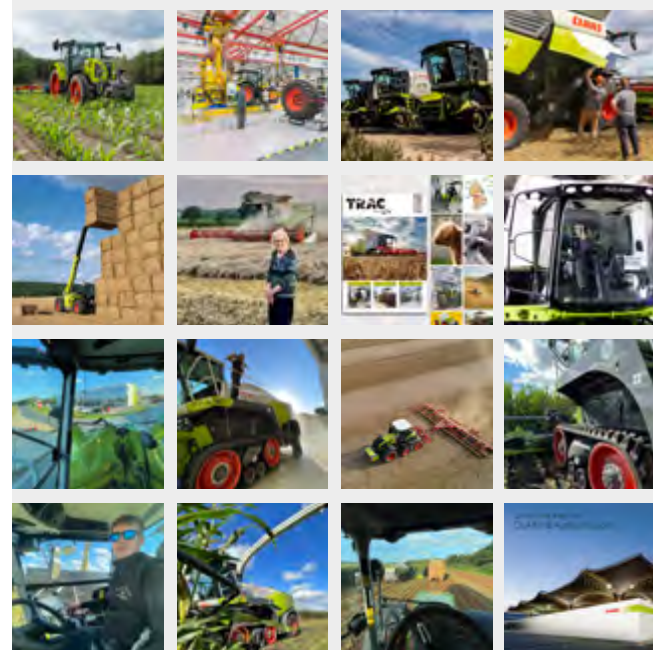
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Cover photo: Anson MacAuslan,
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September 2021

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50 years of DOMINATOR



Virtually no other combine harvester has made its mark on the world of grain harvesting like the DOMINATOR. 2021 sees the 50th anniversary of its launch meaning the DOMINATOR has been on sale for longer than any other harvesting machine in the world.

First to be launched in 1971 was the 5-walker DOMINATOR 80 joined a year later by the 6-walker DOMINATOR 100. The subsequent expansion of the range saw the introduction of the 5-series of 1975 followed by the 6- and 8-series in 1979 and 1982 respectively, of which many models went on to be best-sellers in Europe.

INDIA AND CHINA

After 50 years, the DOMINATOR may not now be manufactured at Harsewinkel, but it lives on with the DOMINATOR 40 TERRA TRAC, which is manufactured in India and the hybrid DOMINATOR 370 manufactured at the CLAAS plant in Gaomi, China.



100 years of CLAAS knotters

It's 100 years since CLAAS filed its first patent (No. 372140) for a knotting device for the CLAAS straw binder, which was the first product made by the family company founded in 1913. This device laid the foundations for an unparalleled success story in baling technology. Today with the latest technology the knotter is capable of handling the strongest twines and using the Automatic Pressure Control (APC) system to monitor the twine tension and automatically control compaction.

The patent for the knotter as we know it today was filed in 1923 for a 'knotter billhook with floating upper jaw' (Patent No. 414212) for its first straw baler, which defines baling technology to this day and served as the CLAAS company logo for many decades.



Georg Szyszka conducting a check of a knotter in 1962.

Come and see us!

We are delighted to confirm that with the redevelopment of our headquarters at Saxham completed and, with the lowering of Covid restrictions, we are now in a position to open our doors to welcome visitors to our fantastic premises at Saxham.

At the heart of the CLAAS UK headquarters are the 2 flagship TECHNOPARC showrooms, one for harvesting machinery and one for tractors and green harvest kit.

The showrooms have the very latest machines in the CLAAS product range on display together with the SMART FARMING area which highlights how our electronic and precision farming products can help improve efficiency and profitability. Our Seasons Restaurant with outdoor terrace can offer a wide variety of menu options including breakfast, light snacks, sandwiches, salads, hot and cold lunches. 70% of the produce is sourced from local suppliers, with daily deliveries ensuring freshness and quality of the food served - supporting both local farmers and their produce.

The new Customer Experience Centre is also now open to visitors, giving the opportunity for some hands on driving on the dedicated test track.



To arrange a visit to the new CLAAS headquarters, please speak in the first instance to your local CLAAS dealer.

We look forward to welcoming you soon.

A tree for the Queen's Green Canopy

In recognition of Her Majesty the Queen's forthcoming Platinum Jubilee, Cathrina Claas-Mühlhäuser, Chairwoman of Supervisory Board and Chairwoman of Shareholders' Committee CLAAS KGaA mbH, has planted a Crimson King Maple tree as part of the Queen's Green Canopy initiative. This is the first of a number of trees that are to be planted as part of the landscaping plan for the new CLAAS UK headquarters at Saxham.

The Queen's Green Canopy (QGC) is a unique tree planting initiative created to mark Her Majesty's Platinum Jubilee in 2022 (her 70th year), which invites people from across the United Kingdom to 'Plant a Tree for the Jubilee'.

The Queen's Green Canopy initiative fits perfectly with CLAAS UK's commitment to provide a healthy, thriving working environment for its staff whilst incorporating alternative sustainable energy solutions to minimise environmental impact, while also enhancing environmental awareness.



Cathrina Claas-Mühlhäuser was joined at the tree planting ceremony by David Crick, who with 47 year's experience, is the longest serving staff member at CLAAS UK, Trevor Tyrrell (Senior Vice-President (Western Europe & Oceania)) and CLAAS UK CEO, John Robinson, a long term MANNS employee who after 47 years is now a CLAAS UK pensioner, Emily Baylis who is a young graduate employee and James Gosling, a first year Apprentice from the CLAAS dealer MANNS.



The Crimson King Maple planted by Cathrina Claas-Mühlhäuser as part of the Queen's Green Canopy initiative, is the first of a number of trees that will be planted at the new CLAAS UK headquarters.

CLAAS on the move at Agritechnica 2022



CLAAS has confirmed that it will be attending Agritechnica which has been postponed from November 2021 to 27 February – 5 March 2022.

However, instead of its traditional stand in Hall 13 opposite one of the main entrances, CLAAS is on the move to the EXPO pavilions P32 to P35 right in the centre of the exhibition grounds.

“Agritechnica is a vital platform for us to communicate with customers and dealers”, summarises Jan-Hendrik Mohr from the CLAAS Group Executive Board. “Besides that, the world’s leading fair for agricultural machinery is absolutely vital as a gathering place for industry representatives and a focal point to showcase the latest international trends. Make no mistake, the current political situation necessitates investments in new technology and prudent business decisions in many areas.”

“The position in the EXPO Pavilions with the surrounding outdoor areas gives us the opportunity to reshape our stand concept, to present the CLAAS brand as well as our machinery and digital products in a new way and, due to the airier, split and larger stand area, to improve our compliance with the COVID-19 hygiene concept, while still introducing fresh ideas and approaches for product and topical presentations. Our stand will therefore enable an entirely new trade fair experience,” explains David Schiefer, who is responsible for Agritechnica at CLAAS Corporate Marketing

Emblazoned with the slogan “Hard work. Smartly done.”, CLAAS will use the four pavilions and adjacent grounds to showcase a variety of topical focuses at Agritechnica, among them the TRION combine harvester model series that was launched in August and its latest smart system and digital solutions.

CLAAS appoint new CFO

Henner Böttcher will take over responsibility for Finance, Controlling and Business Administration at CLAAS from 1st January 2022 and will join the Group Executive Board. He succeeds Hans Lampert, who will be retiring at the end of the year.

Henner Böttcher trained as a banker at Deutsche Bank and then studied business administration at the Frankfurt School of Finance and Management specialising in banking management. While studying, he worked simultaneously at Deutsche Bank in corporate banking and then in the Global Markets division. He left the banking environment in 2003 and joined HeidelbergCement, where he initially worked as Assistant Group Treasurer and later as Assistant to the Chief Financial Officer. He took on the role of Group Treasurer in 2006 before moving to Texas in 2015 as Chief Financial Officer of Lehigh Hanson Inc, HeidelbergCement’s North American subsidiary.





Robotic investment

CLAAS has acquired a minority shareholding in the Dutch autonomous vehicle start-up AgXeed B.V., creators of the AgBot which had one of its first public displays at this year's Cereals event.

Due to be launched in 2022, the AgBot is an autonomous field robot with diesel-electric drive, wheels or crawler tracks and currently is powered by a 156 hp Deutz engine developing 610Nm of torque. It's fitted with a standard front and rear three-point linkage with optional load sensing, a 136hp electric PTO and a 180 bar hydraulic system that can serve up to four double acting spool valves. The only thing missing is a driver!

Having set the AgBot up with information such as working depth or application rate, hitched on the required implement and uploaded the field map complete with field boundaries, A/B line and start and finish point, using RTK, ISOBUS and a host of electronics and sensors the AgBot can be sent on its way, either working to a prescribed path or working out the most efficient route for itself.

"Our involvement provides CLAAS with access to innovative technologies in a familiar market segment and complements our own expertise in autonomy and robotics", explains Thomas Böck, CEO of the CLAAS Group. "In turn, AgXeed benefits from our extensive expertise and networks in many areas such as data transfer, interfaces and drivetrain solutions. It's a win-win situation in our view, and one reason why we decided to invest in this start-up company, as well as the fact that the targeted AgXeed technologies are in an advanced state of development. This solution offers farmers and contractors concrete economic added value, and what's more, it will soon be available."

IAgrE Team Award winners

CLAAS UK has been awarded the prestigious Institute of Agricultural Engineers (IAgrE) 2021 Team Achievement Award in recognition of the company's contribution to agriculture both in terms of the products offered and its engagement in agricultural engineering.

Charlie Nicklin, CEO of IAgrE commented: "CLAAS UK has fully engaged with agricultural engineering education in the UK, both with colleges and other organisations for teaching and demonstration purposes. They have supported graduate training for students at Harper Adams University with student placements in the UK and at the CLAAS headquarters in Germany. Their staff have also been committed to service technician education through contribution to the Landbased Engineering Education and Training Committee LE-TEC and led by Trevor Tyrrell are a very worthy recipient of the IAgrE 2021 Award."

Receiving the award on behalf of CLAAS, Trevor Tyrrell, Senior Vice President (Western Europe & Oceania) and CEO CLAAS UK said, "When Helmut Claas was asked about CLAAS' secret of success, his answer was clear and unpretentious: 'There's no secret, just good ideas and motivated people'.

"Those good ideas and motivated people have created a team in CLAAS UK who are striving to bring talented young people into our industry, and train them to the highest standards across a wide spectrum of disciplines. I am very proud to accept the IAgrE Team Award on behalf of the CLAAS UK team, who fully deserve it in recognition of the benefits that their work has brought to the agricultural engineering industry as a whole in the UK and Ireland."



I-r: Trevor Tyrrell, Senior Vice President (Western Europe & Oceania) and CEO CLAAS UK, Kerry Peck, Apprenticeship and Placement Co-ordinator, Andrew Dunne, Academy Manager and Brian Wain Chief Operating Officer, with the award certificate outside the CLAAS Academy at Saxham.

CLAAS apprentices look to the future

Whilst education has undoubtedly been impacted by events of the past 18 months, CLAAS has received an exceptionally high level of interest for its Agricultural Apprenticeship scheme, as students look to their future and the opportunities a career in agriculture can offer them.

The apprentices of today are the skilled service engineers of tomorrow. To ensure that they are able to keep the wheels of agriculture turning and continue offering the high level of service support that their customers expect, CLAAS dealers from throughout the north of England, Scotland and Ireland have enrolled 16 new apprentices onto the CLAAS Agricultural Apprenticeship scheme run at SRUC Barony.

The new 2021 apprentice cohort is one of the largest intakes of students since CLAAS first introduced the opportunity to train at Barony near Dumfries in 2008. Ahead of starting their course, the new students attended an induction day at Barony where they learnt about the College and what they will be learning and doing over the next four years.

The completion of their apprenticeship will be just the start of their training with CLAAS. Having qualified and working at their CLAAS UK dealership they will then have access to ongoing training and development, and ultimately the opportunity to move into more specialised or management roles within their dealership or CLAAS UK.



SRUC Barony 2021 CLAAS Apprentice intake

From northern England and Scotland are: Steven Sorrie, Jack Johnston, Charlie Scurrah (RICKERBY); Ollie McLellan, Shaun McClune, Dylan Service, Stuart Armstrong (GORDONS); Aidan Brebner, Graeme Stewart, Kyle Ross, Lewis Stevens (SELLARS).

From Ireland are: Eoin Walsh (ALAN DOUGLAS); Christian Cullen (BREENS); Mark Byrne (KELLYS); Gavin McCarthy (McCARTHY); Luke McGovern (ARDAGH AGRI SERVICES).

GEDDES commit to CLAAS

Based at Wick and with branches at Thurso and Brora, GEDDES have shown their commitment to CLAAS by becoming exclusive CLAAS Tractor dealers for the north of Scotland.

Established in the 1850s, GEDDES supply an extensive range of agricultural machinery and supplies to farmers and crofters throughout the region. In addition to CLAAS Tractors, GEDDES sell and support the full range of CLAAS combine and forage harvesting machinery, balers and materials handlers.



New Ulceby Cross branch under development.

Ulceby redevelopment

Work has started on the complete redevelopment of the CLAAS EASTERN branch at Ulceby Cross in Lincolnshire.

The company has traded from the site near Alford since 1990 and the branch's ideal location on the junction of two major through routes in the Lincolnshire Wolds has been key to its continued growth in business over the years.

Having now outgrown the current ageing buildings, central to the new purpose built premises on land adjoining the current site, is a modern five bay workshop capable of accommodating the largest of combines. Supporting this will be a large parts storage area, so avoiding the need to store parts in containers as at present, offices and a considerably bigger retail area.

The new building will provide the team with a modern, spacious environment, extensive storage and display area and the space and facilities to accommodate the current and future needs of their growing customer base.

Happy retirement



Russell Shadrack (centre) with Hamblys MD Steve Barrett (left) and sales director Steve Perryman.

Russell Shadrack – HAMBLYS

Russell Shadrack, who is one of HAMBLYS best known Field Sales Managers, has retired after 49 years working with the company, during which time he has worked for three generations of the Barrett family who own HAMBLYS.

Russell joined HAMBLYS as a service fitter on 22nd May 1972. In 1979 he progressed to becoming the service foreman at the company's Whitstone branch and then depot manager there in 1991. Moving from service to sales, most recently Russell has been Field Sales Manager working from the Torrington branch.



David McEwen-Smith with his wife Alison (centre) with Brian Wain, Chief Operating Officer (left) and Trevor Tyrrell, Senior Vice President (Western Europe & Oceania) (right).

David McEwen-Smith – CLAAS UK

CLAAS UK recently said a very fond farewell to David 'Maccy' McEwen-Smith after 42 years' loyal service with CLAAS UK.

David began his career at MANNS in July 1979 as a fitter in the wholesale workshop, building Senators, Dominator 95, Jaguar 60's and 62's and the first 6-Range combines.

David went on to become a Training Instructor and Demonstrator in 1981. He then took on a role as Service Advisor in 1984 covering the area from Sussex/ Gloucestershire to Wakefield, finally returning to Saxham in 1999 as Service and Technical Manager.

From October 2015, David became Parts Manager at Saxham, which he continued until his retirement in October 2021.

David has made an enormous contribution to the company over his many years and everyone who knows David would say he always had a smile on his face and was always ready to roll his sleeves up and help everyone. We wish him and his family all the very best.

Worldwide production investment



The traditional production line has been replaced with automated guided vehicles (AGV) at the new Le Mans factory.

CLAAS has invested robustly in its production facilities across the globe in order to accommodate continued growth and capitalise on modern manufacturing practises.

Despite the Coronavirus pandemic, this development work has continued apace, culminating in the completion of the major three year redevelopment of the tractor factory at Le Mans. Meanwhile construction work has continued creating new production facilities most notably at Harsewinkel and the new production facility in Kazakhstan, while work is about to get under way further expanding the CLAAS plant at Krasnodar in Russia.

NEW LE MANS 'FUTURE FACTORY'

With over €40 million the 'Showcase for the Industry of the Future' the factory in Le Mans incorporates state of the art digital technologies to create a production facility that sets new standards in tractor manufacturing. In future, it is planned that daily production will increase to as many as 60 tractors a day with a total annual production capacity of more than 13,000 tractors compared to around 10,000 units previously.

"Besides efficiency, the work conditions were our main priority in designing the new manufacturing facility", explains Dr Martin von Hoyningen-Huene, Head of the CLAAS Tractor Unit and Member of the Group Executive Board. "We have achieved a substantial improvement in workflows and ergonomics, which will help to increase the concentration and motivation of our staff."

HARSEWINKEL TRANSFORMATION

Construction work has continued at Harsewinkel with a €44 million project to update the combine production line in order that the new TRION harvester range can be manufactured on the same line as the



The President of Kazakhstan, Kassym-Jomart Tokayev, signs a combine harvester template.

the LEXION. This will result in greater efficiencies as the two ranges share components and allow for more spacious works stations and benefitting the employees.

KAZAKH TUCANO

Combine production has also started at the new CLAAS assembly plant in Kazakhstan, a joint production facility with Horsch working alongside CT Agro, who are the CLAAS importers for both companies.

The new production plant at Petropavlovsk was recently officially opened by Kazakh President Kassym-Jomart Tokayev. Production of the TUCANO has already started at the plant where 90 machines will be fully assembled ahead of the next harvest. In the future, the plant will also be used to assemble the new TRION combine, XERION and combine headers, in addition to Horsch drills, sprayers and cultivators.

FURTHER EXPANSION AT KRASNODAR

The CLAAS plant at Krasnodar in Russia is now being further expanded to meet demand for CLAAS products, especially the TUCANO combine.

Since 2016, TUCANO combines manufactured at Krasnodar have been considered a 'Russian product', so are eligible for subsidies. The plant is considered not only one of the best employers in the region, but in the whole of Russia where in 2020 it was ranked 22nd in the top 100 companies with 251 – 1,000 employees.



The expanded plant at Krasnodar, Russia.

The new **CLAAS TRION** fits your farm.

**MODEL RANGE**

20 TRION models
HYBRID 750-720
STRAW WALKER 660-520

TERRA TRACS

Available on 750, 730, 720,
660, 650 and 530

MONTANA

Available on 750, 730, 720,
660, 650 and 530

SEPARATION SYSTEM

2 rotor on 750 HYBRID
1 rotor on 730/720
6 walker on 600
5 walker on 500

APS THRESHING SYSTEM

600mm threshing drum
on all models

CLEANING SYSTEM

JET STREAM on
all models

**NEW MULTICROP
CAPABILITY**

Change from one crop
to another quickly
and simply

ENGINES

Cummins up to
435hp

GRAIN TANKS

sizes up to
12,000L

NEW CAB

on all models



Scan me.

Learn more
about TRION.



Made for your unique challenges, your specific goals, your individual success – the new CLAAS TRION comes with choices, not compromises.

Call your CLAAS dealer today for a demonstration.



TRION – Fits your farm



The introduction of the new TRION combine is the final stage in the total replacement of the CLAAS combine range, which started with the introduction of the new generation LEXION 8000/7000 combines in 2019, followed by the 6000/5000 straw walker models last year.

As with the LEXION, at the heart of the new model range is a new, higher capacity threshing system. No two farms are the same and this is reflected in the extensive range of specification options available throughout the 20 model range, which includes not only conventional 5- and 6-straw walker machines, but also single and twin rotor hybrids, plus TERRA TRAC and MONTANA hillside versions. This ensures that TRION can be made to truly 'Fit your Farm', whether it be a small mixed farm wanting a simple straightforward machine, or a large arable unit looking to make the full use of technology to maximise output.

New features that set the TRION apart:

- The extensive range of 20 models available
- The range of threshing systems available: straw walker, single rotor HYBRID and twin-rotor HYBRID
- The massive separation area for high-capacity threshing
- JET STREAM standard across all models
- New British-built Cummins engines that provide optimum power for the size of combine
- Wide availability of wheeled, tracked TERRA TRAC and MONTANA hillside models
- A new design of CLAAS cab that brings higher cab comfort standards
- Tank capacities that set a new standard for this size of combine
- Extensive range of chopping options

Extensive model range

The 20 model TRION range comprises of two 500-range 5-straw walker models, three 600 range 6-straw walker models, including the TRION 640 which provides a new entry point into the 6-straw walker market, and three 700-range HYBRID models, of which two have a single rotor and one has twin rotors.

Common to all TRION models is the well-proven APS primary threshing system designed to thresh out up to 90% of grains, leaving just the harder to thresh grains for the secondary separation system. TRION 500 and 700 range machines are fitted with a 1,420mm wide threshing system, increasing to 1,700mm for TRION 600 models. These are wider than on previous TUCANO models, which were either 1,320mm or 1,580mm wide.

The APS system comprises of a 450mm diameter accelerator and a 600mm diameter closed threshing drum, which again is some 33% larger than the threshing drum on the TUCANO. As a result, the concave area is also greater, with the concave on TRION 600 models being 31% larger than on the TUCANO 450, and is 9% larger on TRION 700 models compared to the TUCANO 580. The

front concaves are interchangeable and the speed of all three drums is synchronised and adjusted using CEBIS, which is also used for adjusting the concaves, which are also synchronised.

The drive system has been completely redesigned, resulting in TRION HYBRID models having six fewer belts and straw walker machines three less compared to the previous TUCANO range. As on the LEXION, the drive system is based on that used in the JAGUAR which ensures a more positive, smooth engagement of the threshing and auger systems.

Largest separation area on the market

The well proven CLAAS Multifinger Separation System (MSS) is standard on all straw walker models to evenly fluff the straw for greater separation efficiency, especially in difficult conditions. The straw walkers use an open walker design and are 4.4m long with four steps. The total separation area for TRION 500 models is 6.25m² rising to 7.48m² for the TRION 600, which is a considerable increase on the TUCANO and the largest of any combines of this size on the market.



TRION 730/720 HYBRID models come with a single 4.2m long and 570mm diameter rotor with 6 grates, while the larger TRION 750 has twin 4.2m long and 445mm diameter rotors with 5 grates. A new feature for combines this size is the hydraulic adjustment of four rotor flap 'bomb doors' and rotor speed is infinitely adjusted independently of the APS system using CEBIS.

Another new feature on CLAAS combines of this size is the extremely efficient JET STREAM cleaning system using six or eight turbine fans, meaning this is now used across the complete CLAAS range.

TRION 600/500 models have the option of 3D sieves with 4D sieves also available on TRION 700 models. Other options also include AUTO SLOPE fan speed adjustment, CRUISE PILOT, AUTO CROP FLOW and either CEMOS DIALOG or full CEMOS AUTOMATIC.



Cummins engine power

Power comes from British built 8.9 or 6.7 litre Cummins 6-cylinder Stage V standard engines fitted with DYNAMIC POWER to help reduce fuel consumption by up to 10%. These were chosen for their optimum power range, but also due to their ideal weight, the level of engine technology they provide, the fact that they are an ideal size for the combine and their layout means that they are easy to access and maintain. Rated engine speed is just 1,900rpm dropping to 1,650 for road travel, so further helping to save fuel.

Extended TERRA TRAC and MONTANA models

An unprecedented six TRION models are available with either TERRA TRAC crawler tracks with a road speed of 30kph or MONTANA hillside compensation. To meet customer demand for tracks on smaller combines, TERRA TRAC is now available on the 5-straw walker TRION 530, making this the first CLAAS combine this size to have this option.

The TRION 530 is also the start point for versions with MONTANA hillside slope compensation, which again has been extended to more models than previously. Buyers can opt for having just lateral slope compensation of up to 18%, or for both lateral and longitudinal compensation of up to 6% when the optional MULTI CONTOUR is ordered. POWER TRAC all-wheel drive is also an option on all MONTANA models.

All new cab

The operator benefits from a completely new spacious cab design with greater leg and head room. A larger windscreen and narrower A-pillars ensure excellent visibility over the cutterbar. Features include new seats that can swivel 30 degrees each way and footrests to

ensure a comfortable seating position.

The 12-inch CEBIS touchscreen colour monitor is easily adjusted independently of the armrest and all the main combine functions can also be activated using buttons on the armrest. The CEBIS terminal also now accommodates the controls for CEMOS DIALOG and CEMOS AUTOMATIC when fitted.

Four automatic steering systems are available for the TRION: LASER PILOT, the cab mounted FIELD SCANNER, AUTO PILOT on maize headers or the satellite-based GPS PILOT.

High-capacity tanks

High capacity combines need high capacity tanks, and here again the TRION sets a new standard. Tank sizes range from 8,000 litres up to a class-leading 12,000 litres on the TRION 750. The unloading auger swings through 105 degrees and unloading rates range from 90 to 130 litres/second. A pivoting spout is also now available so that the throw of grain can be adjusted when working on side-hills or with deeper trailers.

Widespread chopping options

At the back there is a wide selection of straw-chopper options to meet every need, from a standard mechanically controlled chopper through to the advanced electronically controlled radial power spreader chopping system with deflectors for wind compensation. In addition to the STANDARD CUT chopping unit there is the option of the SPECIAL CUT chopper.

Cutterbar options

The TRION can be used with the full range of CERIO or the new VARIO range of auger type cutterbars, plus the CONVIO and CONVIO FLEX draper type cutterbars, in widths up to 12 metres. Automatic cutterbar detection is standard, so the combine will always know what cutterbar is fitted and the settings previously used.





TRION	Primary Separation	Secondary Separation	Max. engine output (ECE R120)	Grain tank	TRION
750 TERRA TRAC	APS <ul style="list-style-type: none">• 1,420 mm channel width• 450 mm pre-accelerator• 600 mm threshing drum	ROTO PLUS twin rotor	435 hp	12,000 l	750 TT
750 MONTANA				11,000 l	750 M
750				12,000 l	750
730 TERRA TRAC	APS <ul style="list-style-type: none">• 1,420 mm channel width• 450 mm pre-accelerator• 600 mm threshing drum	ROTO PLUS single rotor	408 hp	11,000 l / 12,000 l*	730 TT
730 MONTANA				11,000 l	730 M
730			367 hp	11,000 l / 12,000 l*	730
720 TERRA TRAC				10,500 l / 12,000 l*	720 TT
720 MONTANA				10,500 l	720 M
720				10,500 l / 12,000 l*	720
660 TERRA TRAC	APS <ul style="list-style-type: none">• 1,700 mm channel width• 450 mm pre-accelerator• 600 mm threshing drum	6 straw walkers	408 hp	10,500 l	660 TT
660 MONTANA				11,000 l	660 M
660			354 hp	10,500 l	660
650 TERRA TRAC					650TT
650 MONTANA				650 M	
650				650	
640	306 hp	9,000 l	640		
530 TERRA TRAC	APS <ul style="list-style-type: none">• 1,420 mm channel width• 450 mm pre-accelerator• 600 mm threshing drum	5 straw walkers	306 hp	9,000 l / 10,500 l *	530 TT
530 MONTANA					530 M
530			258 hp	8,000 l	530
520					520

*optional

Reliability and performance without breaking the bank



With over 800ha of combinable crops to clear on five farms over a 50 mile area, Sentry's pre-series TRION 750TT has had its work cut out, particularly in a tricky season like the summer of 2021.

TRION EFFICIENCY

"With a relatively short working window, we're very focused on making the most out of our combine," explains manager Ed King. "Having just one machine to get everything cut can really put the pressure on. We need a guarantee of reliability and a machine that will comfortably clear our acreage without having to cut crops wet but that wasn't going to break the bank.

"We looked at various different options and were given the opportunity to sign up for one of CLAAS' pre-production TRION

750s. It ticked the box in a number of ways. The guts of the machine are pretty much the same as the LEXION 750 – the APS threshing unit up front followed by a pair of rotors, all squeezed into a narrow-bodied chassis.

"It also has the benefit of all the latest CEMOS Automatic technology to push output. But what really clinched the deal for us was that it could be fitted with a draper-type CONVIO FLEX header."

"The TRION will comfortably clear 40ha a day whereas before that would have been quite a stretch. Ultimately it's got the same threshing gear as the LEXION 750 so I'm convinced that the extra capacity is all down to two factors – the CONVIO header and CEMOS Automatic.

"The way the crop is fed lump-free and always head-first into the throat of combine means it runs smoothly and more efficiently during the day. And when things start to get damp in the evenings it just keeps going – we never have to slow up.

“That’s all made possible by the CEMOS computer constantly adjusting the combine settings to keep things running flat-out without any detriment to the sample.”

“What ends up in the tank of the TRION is absolutely awesome – I have never seen a combine produce a sample like it,” says Ed. “We like to home-save seed but have no cleaning facilities of our own. I’m pretty confident that this year we’ll be able to dig grain straight out of the heap and tip it straight into the drill – it really is that good.”

CAB AND CONTROLS

“Someone at CLAAS HQ has put a lot of thought into the new cab. There’s more room all around you and heaps of storage. Visibility is so much better – you can sit right back in the seat and see the whole of the header,” says TRION operator Anthony Mottram.

“The CEBIS touchscreen is easy to navigate and I like the way you’ve got a number of ways to access the different menus. I generally use the armrest switches – one click and you’re straight into the right page. That said, with CEMOS Automatic I’m rarely having to make many settings changes. Having run the TRION 750 in full auto all season I’m totally blown away by what it can do.

“CEMOS Automatic is without doubt the single biggest advantage that these latest CLAAS combines have over what’s gone before. The way it constantly tweaks settings to maintain the right balance between sample, losses and output means even the best operators wouldn’t be able to achieve the outputs that it can.

“The combination of CEMOS and GPS steering means we’re getting full capacity out of the combine all of the time. And at the end of the day I’m definitely not getting off the machine as tired as I would have been.

“It’s a good job too now that we’re generally cutting for an extra couple of hours each evening thanks to the improved crop feed from the CONVIO header.”



“Someone at CLAAS HQ has put a lot of thought into the new cab. There’s more room all around you and heaps of storage.”

Anthony Mottram.



We've come a long, long



25 years ago two big developments hit the agricultural world – CLAAS' ground-breaking LEXION HYBRID combines went into full scale production and dedicated machinery magazine Profi International was launched.

This harvest CLAAS teamed up with Profi to mark that anniversary by putting a brand new TRION packed with the latest cutting edge technology alongside a LEXION 480 in the field.

The location: Garton Field Farm in East Yorkshire where farmer Simon Ulliyott has run his LEXION 480 Evolution for the last 15 years.

The 480 Evo came to him as a three-year old machine replacing two ageing straw walker combines.

"Farming 720 hectares at the time we were pushed to reliably get everything cut in good time," explains Mr Ulliyott.

"At that point there was no one machine that could be guaranteed to clear that acreage other than the LEXION. CLAAS HYBRID combines

had been out in the field for nearly ten years by that point and they were proven machines that had plenty of capacity."

WHY CLAAS?

"I looked around at the alternatives but there was nothing that could provide the balance between output and not smashing the straw to bits like a single rotor machine would.

"Ultimately the decision came down to build quality. I've always tended to run my combines for ten years or more and to do that with any degree of reliability you've got to be confident that the machine is built to stand the test of time. When I looked at the 480 I was totally convinced."

HAS IT BEEN RELIABLE?

"After 15 harvests our machine has now got over 3100 engine hours on the clock and has never had a major breakdown.

"Each year we get our dealer – CLAAS EASTERN – to go through the machine and give it a thorough service which has proved a good investment. The lads there know these LEXION inside out. They know what wears out over time and only replace what needs to be changed."

way together.

“Although the TRION is a narrow-body machine and its engine is similar power to the LEXION 480 Evolution, the machine clearly has the potential for much greater output – it’s really impressive.”

Simon Ulliyott.



Mr Ulliyott’s own knowledge of the LEXION HYBRID concept made him the ideal candidate to host a trial of a new TRION 750 alongside his own 2003 LEXION 480 Evolution.

SO HOW DOES THE NEW MACHINE COMPARE?

“First impressions of the new TRION are simply that it’s much more user-friendly machine. At the time the LEXION set new standards for operator comfort but this new generation is a big step on.

“The cab has a real feeling of spaciousness. There’s room all around the seat, even with a passenger alongside and there are heaps of cubby-holes and shelves to accommodate all the bits you need for long working days.

“It’s super quiet and the visibility is superb. With the header set well out in front, you’re not hunched over the steering column. The whole seating position is much more relaxed.”

CONTROLS

“I really like the new hand-grip. It fits your hand beautifully and everything’s at your fingertips. The controls themselves bring certain level of finesse – they’re really responsive to any changes you make.

“The new CEBIS touchscreen is clear and easy to fathom. After ten

minutes working through it even a dinosaur like myself can master the space-age technology on this latest generation.”

OUTPUT

“Although we were cutting standing wheat during the comparison, I can see that the draper-type CONVIO header could bring significant benefits in laid crops. The way the belts draw the crop in means you can keep motoring whatever the conditions.

“Although the TRION is a narrow-body machine and its engine is similar power to the LEXION 480 Evolution, the machine clearly has the potential for much greater output – it’s really impressive.

“For me though, now I’m farming a much smaller area, the old LEXION will do just fine. It still runs like a sewing machine and I’ve got peace of mind knowing it’ll do everything I ask of it.

“I’m confident it’ll do another 15 years or at least see me through to retirement, whichever comes first!”



Simon Ulliyott

VARIO cutterbar updates

A number of new features are now standard on the three widest CLAAS VARIO cutterbars. These include a new reel drive and improved access to the stripper bars for the intake auger to aid performance, ease of operation, setup times and maintenance.

Powerful rapeseed knives with tool-free fitting

For 2022, new rapeseed knives will be available for the VARIO 1080, VARIO 1230 and VARIO 1380 with a mechanical drive and integrated overload clutch to give a 50 percent greater cutting force. Weighing 33% less, a simple plug-in system with quick-release couplers allows the rapeseed knives to be fitted in a matter of seconds without using tools. Fitting and removing the dividers has also been simplified thanks to a new clamping system.

Intake auger height adjustment

A new hydraulic height adjustment system for the intake auger via the CEBIS terminal allows the operator to react to changing harvesting conditions immediately. Using this system, infinitely variable hydraulic adjustment (within a range of 25 mm upwards and 10 mm downwards) can be applied to the divided auger via the central bearing.

The control unit mounted on the cutterbar for height adjustment has also been updated. This also houses the controls to turn on the appropriate work lights on the combine to aid fitting and removal of the cutterbar at night, plus a rotary switch to easily move the auger

into a transport or cleaning position. Another rotary switch can be used for infinite variable adjustment of the auger height – any such adjustment being synchronised with the same function in CEBIS.

Access to the stripper bars has also been improved and can now be reached and adjusted easily from the rear of the cutterbar.

New reel drive

The VARIO 1080, 1230 and 1380 also benefit from a new driveline to the reel, which delivers the torque directly from the hydraulic motor. Because this is narrower than a chain drive, it's now possible to use the full 700 mm adjustment range of the VARIO table, even with rapeseed knives fitted. The maintenance interval for the drive is now 500 operating hours instead of 100.

Another new feature is the pressure-dependent reel height adjustment, which automatically adjusts the reel speed to the ground speed, using a sensor in the reel drive hydraulic system. If large crop volumes cause the pressure to increase to such an extent that the drive can no longer maintain the required reel speed, the reel is automatically raised to a certain extent until the required speed is attained once again. If there is a reduction in the pressure, the automatic system lowers the reel to the set height again. Both the level of drive torque necessary to trigger the control system and the response of the latter can be set separately in CEBIS. This function already exists for the CONVIO and CONVIO FLEX draper cutterbars from CLAAS.



Running smoothly

Having run VARIO cutterbars on LEXION combines for the last two decades the team at Essex arable outfit GA Stevenson know the potential these headers have to offer. No surprise then that the business was selected to evaluate a pre-series VARIO 1380 this season.



Paul Woodhouse

"Being able to raise and lower the table auger according to the density of the crop has proved a brilliant feature this season," says LEXION 8900 operator Paul Woodhouse. "By only raising the centre it better handles the mat of crop as it thickens as it is drawn to the middle of the table. Previously I'd be adjusting the stripper bars on

the old header to try and adapt to changing crop conditions but now I'm able to tweak it constantly on the move.

"The impact of that is that it irons out lumps and bumps to keep the whole machine running more smoothly. As the dew comes down in the evening and crop starts to wrap on the auger I just lower it gently to bring the stripper bars into play and to stop lumps forming at the intake.

"I've been surprised by the impact that this one feature has had – we're definitely getting more output as a result of being better able to manage the flow of material into the threshing gear."

KNIFE DRIVE

"Doing away with shear-bolts and using a clutch for overload protection on the knife drive means it's less inclined to kick out too early but critically it will trip out when it needs to. The drive itself seems smooth and less noisy than before."

SIDE-KNIVES

"Being so much lighter and without hoses or electrics to connect up, the new side-knives are so much easier and quicker to take on and off.

"The beauty of them is that you don't need to take them off as often because you can draw both the reel and VARIO table right back with them still attached. That's great for transport and in shorter crops.

"Being shorter themselves they have less of a tendency to make contact with the ground and the mechanical drive means they've less of a tendency to stall. All round they're a huge improvement."

REEL DRIVE AND HEIGHT CONTROL

"The new hydraulic reel drive seems better able to maintain an even speed whether the combine is altering its forward pace or when the reel comes under load when you're hooking crop up off the deck.

"It was only when we got into some really flat laid oats this season that we saw the auto reel height control working.

"By monitoring back-pressure in the hydraulic reel-drive – or tractive effort – it can raise the reel if it feels it's getting overloaded. While that's good in normal situations, being able to adjust the sensitivity of the system means that if you really need to bury the tines into a laid crop to scoop it off the deck, you can."



"We're definitely getting more output as a result of being better able to manage the flow of material into the threshing gear."

Paul Woodhouse.

“The LEXION 8700 has been faultless and the CONVIO FLEX header is key to being able to go in what at times have been very difficult conditions.”

Olly Harrison



Olly's NHS tribute visible from planes landing at Liverpool airport.



Olly Harrison's YouTube channel can be found under 'Olly Blogs Agricontract Farmer'.

The accidental 'YouTuber'

Describing himself as an 'accidental YouTuber', since the start of lockdown, Olly Harrison's 'Olly Blog' YouTube channel has rapidly grown to become one of the UK's most watched farming channels.

What started as a joke has developed into a 100-day daily Lockdown Diary of activity for Olly Harrison and his farming and contracting business based near Liverpool. After more than 550 days Olly now has over 25,000 subscribers to his channel and is predicted to reach at least 100,000.

Some of the highest viewing figures this summer have been for postings about his new LEXION 8700TT supplied by MORRIS CORFIELD. A posting about the arrival of its 12.3m CONVIO FLEX draper type cutterbar has been viewed 150,219 times, while his video of the first day of harvest had over 70,000 views.

"The whole thing started by accident," explains Olly, who is chairman of the NFU's North West Combinable Crops Board. "I was one of three local farmers regularly featured by the local BBC news, and on the first day of lockdown they were due to do a quarterly update. Having shot some general footage at a distance in the field, they asked if I could do some in-cab filming using my iPhone, and were very surprised by the resulting quality which was similar to what they would get with a £20,000 lens!

"The following day I was in the cab and bored, so jokingly did a 'cab isolation' video which I put up on Facebook and was amazed to find that it was viewed over 1000 times. So, for a joke I decided to carry on doing daily videos posted on Facebook."

It was after he was initially contacted by some local teachers asking to use his video's, that Olly started uploading them to YouTube and decided to continue his 'Lockdown Diary' for 100 days.

"As the 100 days approached, I extended it to a year. Around day 200 I was contacted by another YouTuber (scotlandfarmer) who explained that I needed to change the settings to make it easier to find and how to do it. As a result, after a few weeks the number of subscribers grew from around 500 to 1000 and by the end of January had reached 3000.

"Then in January I posted a video of us rescuing a car driver in deep floodwater. This went viral, and all of a sudden had been watched over 20,000 times (and today has 285,111 views)."

Having reached a level of traffic where he could monetise the channel and be paid to have adverts running in his videos, took the Olly Blog to a new level.

"For something that really came about by accident, the growth in the channel has been amazing. I don't like spending time in front of a computer, but doing a short daily blog when driving along is made much easier on my phone, as I have GPS.

"Having turned the monetising on and been given some help in setting it up, by the end of March the channel was earning £60 a day, which is paid into the farm and continues to grow."

This summer Olly has been blogging regularly from his new LEXION 8700, explaining how the combine and its CONVIO FLEX header work and the frustrations of combining in a typical British summer. By the end of harvest the LEXION had cleared 840ha of crops, leaving only the sunflowers from his 'Sunflower Maze' to go, which has raised over £50,000 for the NHS and other local charities.

Having installed a biomass fuelled drying system a few years ago, Olly is not afraid to combine in less than ideal conditions if it enables him to capitalise on early premium prices.

"The LEXION 8700 has been faultless and the CONVIO FLEX header is key to being able to go in what at times have been very difficult conditions. The CONVIO does have its limitations in some very wet conditions, but it has opened up a lot of opportunities for me to take advantage of market prices and in good conditions it really enables the LEXION to fly. Being able to change over from oilseed rape to wheat in only about six minutes makes it very easy to quickly change between crops as conditions change. Also in flat crops we can keep averaging over 40 ha a day rather than nearer 16ha with a conventional header.

"For me the three key reasons for the increased capacity of the LEXION 8700, compared to my previous LEXION 770, are:

- **the far larger threshing and concave area, which has added 10%**
- **going from a 10.5m to a 12.3m header adding a further 10%**
- **changing to the CONVIO FLEX.**

Also because the auger flights in the tank are far more open, so it can cope with wetter grain, this has certainly helped.

"Finally the service I get from Norman (Duppa) and the whole team at MORRIS CORFIELD is outstanding and by far the best I get from any dealership we deal with. In the past they have still been here at one in the morning servicing the combine, so we can go the following day and I know that whatever time I phone, they will sort me out, which is fantastic."



Unfortunately the DVLA would not allow Olly Harrison to have this numberplate on his new LEXION 8700.

Serious appetite



Jim Watt

Getting cereals cut in the often damp, difficult conditions in the west of Scotland presents its challenges and it's a task that requires machines that are up to the job.

While in the past Lanarkshire contractor Jim Watt has stuck with smaller 4-wheel drive combines, this season has seen a move to a LEXION 5500 complete with a 7.7m CONVIO header running on TERRA TRACS.

"Until last year there hadn't been the option of having tracks on five-walker combines so we'd stuck with decent tyres and four-wheel drive on our two machines," explains Mr Watt. "But when CLAAS announced TERRA TRACS would be on the options list for the revamped LEXION range my ears pricked up. Once we'd had a demo of a 5500 last autumn I could see it had the potential to offer a serious step up in our harvesting operation."

It wasn't just the addition of tracks and the LEXION uprated threshing system that appealed to Mr Watt. The demo machine was running a belt-fed 7.7m CONVIO header too.

"You can have all the horsepower and harvesting capacity you'll ever need but if you can't get crops in the front end of the machine, it's pointless. We're often cutting in less than ideal conditions and it's always the struggle to get material to feed that'll make us give up rather than simply grain moisture. In our demo last autumn I could

immediately see the CONVIO had the potential to change all that. The way the crop is actively drawn to the throat and everything falls head-first onto the table means it's drawn in evenly and the combine is able to handle it much more smoothly.

"Along with the bigger threshing drums and the extra APS cylinder, it all adds up to a smoother flow of crop, extra output and the ability to cut for longer each day. Although we weren't looking to change our existing 620 last year it was difficult to ignore these huge improvements."

"Silage work is our core business and it's important that cereal harvesting doesn't get in the way of that. The 5500 provides me with the capacity to get crops cut when needed— it's a five-walker machine with the capacity of a six-walker.

WALKING ON WATER

"2020 was a stinking wet year for us so when GORDONS' demo machine turned up at the end of harvest I was keen to see what difference tracks would make compared with our wheeled four-wheel drive machines. I was shocked – the extra footprint of the TERRA TRACS meant the 5500 was literally walking on water. I was convinced then that the extra investment was worth it and we were able to save a bit by not spec'ing our new machine with a driven rear axle, opting instead for big rolling-radius tyres."

"Our demo also immediately proved the CONVIO could stretch our working day and was clearly a huge contributor to the 5500's extra output thanks to the way it presents the crop to the threshing gear. CLAAS headers have always had the edge over the competition

when it comes to crop feed. The CONVIO is another huge step forward – it's proved it's worth every penny."

"The 5500 has exceeded our expectations beyond belief. We're covering 20-25% more ground in a day, doing less damage to the soil and critically doing a better job. The sample that this machine produces is like nothing else I've seen. The combination of the TM6 sieves and JET STREAM cleaning means what ends up in the tank is completely free of rubbish."

"Our customers love it and that's particularly important where we've got trailers running straight into distilleries. They've no need to clean it up any further – it can go straight onto the malting floors without being touched."

It's not all about grain quality either, the new LEXION is reckoned to be a baler's dream. "The swath that drops out the back of the 5500 is a thing of beauty. Flat-topped like a board, it's completely lump-free and even. Because it leaves the straw completely intact, when it falls it stays fluffed up so that the air can flow through it which means we can get in with the baler that much quicker."

"It's the changes to the front end of the combine that have made the difference to what drops out of the back. The bigger drums and concaves are gentler on the straw while the feed from the CONVIO header means the flow of crop right through the machine is more

even with less bunching and lumps dropping in the row – it leaves the straw in perfect condition."

TRAVEL SPEED

"We cover a relatively big geographical area with our customer base stretching to a 30-40 mile radius."

"In the past moving from site to site was a real chore. Having a machine that can travel at 40kph has massively reduced the hours clocked not harvesting. And the way that the engine throttles back once you've reached top speed means you're not burning fuel unnecessarily."

"The combination of the CONVIO header, the bigger threshing gear and the JET STREAM sieves have added up to create a machine with a seriously impressive appetite. It meets all of our requirements despite being packed into a relatively small-framed five-walker body. It's the right machine for us."

"My working relationship with GORDONS is just brilliant and I feel like a true part of the CLAAS family. I know what I have in them and they know what they have in me. Whether you're dealing with CLAAS UK or the guys at GORDONS, it feels like we're all working towards the same goal. There is no better back-up. The kit's good but the service is just phenomenal."

"We're often cutting in less than ideal conditions and it's always the struggle to get material to feed that'll make us give up, rather than simply grain moisture. [The LEXION and CONVIO have] changed all that." Jim Watt.



Anti jack-knife braking for ARION CMATIC



ARION 600 and 500 CMATIC tractors are now available with a new 'automatic trailer stretch brake' option which helps stabilise the tractor-trailer combination on slopes and slippery surfaces preventing the risk of jack-knifing, and includes a range of additional convenient features.

The new automatic stretch brake function for ARION 600/500 tractors with CMATIC transmission and air brakes helps relieve the burden on the driver when driving heavy trailers downhill or when working with square balers, round balers, baler-wrapper combinations and trailed crop sprayers on slopes.

Using sensors in the transmission to record engine torque and transmission loads going through the drive train, the system automatically activates the trailer's air brakes as soon as critical thrust forces are exerted on the tractor that potentially could result in the trailer jack-knifing.

Brakes engaged automatically on decelerating

The driver can actively increase the braking action of the combination when driving downhill by pulling back the drive lever in auto mode or the DRIVESTICK in DRIVESTICK mode. This increases deceleration by reducing the transmission ratio and increasing the engine speed to match the forward speed. For maximum deceleration the air brake

engages automatically to reduce the trailer's ground speed and stretch the tractor-trailer combination.

At low operating speeds the thrust when driving downhill is automatically detected and the combination is maintained at the speed predefined by the accelerator pedal. The automatic trailer-stretch function can also be used with active cruise control speeds up to a maximum 20 km/h. On gentle slopes and with light loads, the cruise control speed is automatically maintained by activating the pneumatic trailer brakes; on steep slopes and with heavy loads, exceeding of the set cruise control speed is reduced. This function can be used when working on slopes with square balers or trailed crop sprayers, providing an enormous safety boost in addition to significantly reducing the driver's workload.

For added convenience, automatic trailer stretch brakes also assist with reversing trailers, forage wagons and balers by triggering the braking action as soon as the driver initiates a change in direction using the reversing lever or the button on the CMOTION control lever. This feature also protects the grass sward, while the pulsing action of the brakes effectively prevents overheating with automatic braking assistance.

The automatic trailer stretch brake is immediately available and can be retrofitted to ARION 600/500 models built from 2021 onwards.



A good all round tractor.

“From a power point of view, it has plenty of grunt for the majority of our tasks that we need it to do, and will tackle most of our implements with relative ease.

As tractors evolve, you get to a point where you think there's nothing that could be improved, then CLAAS will come out with something else that is designed to help even more.”

Anson MacAuslan, Estate Manager, Welbeck Estates, Caithness, ARION 420 Stage V, September 2021



Learn more about
ARION 400 St V

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CLAAS

“XERION – A great addition to our team”



The last couple of years have been ones of considerable change for Kelloe Mains Farm in the Scottish Borders, as it moves from a conventional plough/minimal cultivations crop establishment system to a single pass strip till system.

Cropping on the 1,280ha farm near Duns extends to around 1,080ha. Aside from the oilseed rape, the vast majority of the wheat, barley, beans and forage and winter rye is retained for feed for an 800 cow dairy herd and 750 followers.

TRANSITION TO STRIP TILL

The transition from the McDonalds' conventional establishment system to a strip tillage system started in Spring 2019, using the first 6.0m Mzuri Pro-Till Select drill to be sold in Scotland. However, the conditions in which it was working quickly showed that the 420hp tractor they had paired it with was not going to be powerful enough, and it was changed in 2020 for a 530hp XERION 5000.

"Based on the experience of drill users in England I felt that 70hp per metre should be sufficient, but it struggled to cope with our ground conditions, soils and slopes," explains Robert McDonald. "I spoke to a couple of friends who run XERION and they couldn't speak highly enough of the tractor, it's capabilities and its pulling ability."

Even though it's early days, the changes in the farm's soils, where wheat averages 10t/ha and oilseed rape 4.3t/ha, are already apparent. Last autumn, to clear plough pans and start creating a new structure, the front legs were generally run at 8 inches. This year for oilseed rape they were run at 7 and 5-6 inches for cereals.

"The XERION's power gives us far more flexibility to run the initial legs deeper if necessary, but not be hampered by speed which you need for shatter. The XERION is an extremely good tractor and has proved very cost effective.

"Traction is paramount, so we paid attention to weighting it correctly. The ability of the XERION to pull the Mzuri and carry out the work that we require of it is second to none. It is amazing how the XERION will just sit there at about 1200rpm and will then just dig in and keep pulling when it hits a bit of tough ground or a slope. It does a very good job of just looking after itself and most of the time is using less than 20 litres a hectare, which is extremely good and far less than our previous tractor. When drilling, it will comfortably cover 36ha a day, but the large fuel tank means it can put in a long day and even on our further fields 8 miles away I know it won't need topping up.

KEEPING COMPACTION TO THE MINIMUM

"The reason for the change was to benefit our soils and reduce cost in a non-detrimental way to yield," explains Robert. "It's already noticeable how the soil structure has already started to change. The soil is far more receptive and friable and already building natural strength. Even after a couple of inches of rain we have been able to get back on the ground quicker, and drilling beans using the crab steer mode it hardly did any damage. It's also noticeable that in the Spring the sprayer is sinking less."

To keep compaction to a minimum, the XERION has been fitted with wide 900/60-R42 tyres and RICKERBY have also installed a variable tyre inflation system, so that in a matter of minutes the pressure can be reduced from 1.8 bar for road work to 0.8 in the field. The XERION is also fitted with RTK steering and Telematics, so that Robert can monitor engine loading for each field and use this as an indicator of the state of the soils and how tight they are.

"The XERION has been a great addition to our team. In addition to drilling, we also use it on the clamp and with a big buckrake on it just laughs at putting up an 18 tonne trailer load of grass.

"Overall, it will only do about 750 hours a year, but is saving a lot of hours on other tractors, as we have gone from at least two passes if ploughing to just a single pass with the XERION. Overall, our establishment costs have dropped from well over £100/ha to around £60/ha," states Robert.



"The XERION is an extremely good tractor and has proved very cost effective."

Robert McDonald

Spreading the workload



Declan Gilligan has had CLAAS machinery at the centre of his contracting operation for the past 10 years. Over that time he has used differing CLAAS machines from a UNIWRAP combination baler in 2012, to a TUCANO 440 combine, tractors and many different rakes and mowers.

Declan runs a sizeable contracting operation based in the midlands of Ireland. The mainstays of his business are baling silage and a large contract to bulk spread fertiliser for one of Ireland's retailers. The fertiliser spreading business means that Declan covers a huge geographical area surrounding his home yard in Eyrecourt, Country Galway.

He spreads fertiliser on farms that can be as much as 60 miles from his base. This means that his fleet of tractors need to be reliable, fast and comfortable. Currently his tractor fleet consists of an ARION 640, ARION 650, AXION 830 and an AXION 840.

The most recent addition to the fleet is the AXION 830 CMATIC, which arrived for the fertiliser spreading season of 2019. There were many reasons for the purchase, but the requirement for a massive oil flow to run the fully hydraulic bulk fertiliser spreader was a major factor. The AXION 830 comes with a class leading 140 litre per minute which comfortably met his needs. This and the fact that

“The perfect tractor to do long days and come home fresh.”

Declan Gilligan

Declan says that CLAAS tractors give “amazing comfort on the road” meant that the AXION 830 was the only option for his business.

Declan can spend more than 14 hours on the move, either spreading or on the road between jobs, so comfort and ease of use are very important. The 830 was specified with full CMATIC vario spec which, Declan says, gives him the full range of speeds required to get “the job done for his customers in a timely and precise way”. Declan has also added autosteer to the AXION 830 and says that this in combination with the CLAAS’ “outstanding “ comfort make this the perfect tractor to do long days and come home fresh.

Since getting the AXION 830 Declan has clocked up over 1500 hours per year, spreading 5,500 tonnes for material, either fertiliser or lime, and making 12 to 15 thousand bales of silage, hay and straw per year.



Declan Gilligan

SUPER SERVICE

With this kind of workload Declan needs the backup of a quality dealer. BREENS FARM MACHINERY has been a “great dealer that give great service” according to Declan. He said that they have been helpful from the day he bought the first machine many years ago up to now, when no issue is ever a problem. He said there is always a “way to solve any problem, quickly”. This is very important

for Declan’s business with the unpredictable and changeable Irish weather.

All of Declan’s fleet of CLAAS tractors have given many years of “super service” and he can’t see himself moving away from the brand in the future as they give him everything he needs for his growing business.

Efficiency gains from technology

The ARION 660 CMATIC's combination of plentiful power for arable work, compact size for manoeuvrability and speed and comfort for road work, make it the ideal all-round tractor for the Hocken family.

Bought last May, the ARION 660 CMATIC is the third ARION to have been run by the Hocken's, who run a mixed 560ha farm at Woolstone near Cheltenham supporting dairy, beef and sheep and 120ha of arable. The Hocken's also supply 150 customers within a 25 mile radius with straw, haylage and horse hay, including Tokyo Olympic Gold medal winner Laura Collett.

"We have run a number of different makes of tractor over the years," explains Alan Hocken. "The first CLAAS was an ARION 640 which we took to 4,500 hours. We then upgraded to an ARION 650 which was replaced at 5,500 hours with the new ARION 660, which has a maximum boosted power output of 205hp.

"We have got on really well with the ARION and there is no doubt about how comfortable they are and how much cab space there is. If anything the 660 seems even better."

A MAJOR CHANGE IN TECHNOLOGY

The arrival of the ARION 660 marks a fairly major change in technological direction for the Hocken's. This is the first tractor on the farm to have a CVT transmission and GPS steering. Alan admits that in the past he would also never have thought about having a loader on a 200hp tractor. Roads speed and comfort, however, makes the ARION ideal for delivering hay, and it made sense to fit it with a FL150 loader, which can lift 3.0 tonnes and reach to 4.6m, so that it can be completely self-contained.

"As a very mixed farm, I would never have thought these were things we really needed or could justify," states Alan, who admits he is a bit of a technophobe. "But we would never go back now that I can see what a benefit they are, and you do wonder why we didn't do it before. The previous ARION 650 was very much an arable tractor, whereas the 660 is far more versatile and this is reflected in the fact that it's already done over 900 hours."

The ARION is mainly driven by head tractor driver Luke Hillyer and because of this, Alan gave him a free hand in assessing what specification they should go for, with the help of Ed Parker from CLAAS Western at Evesham who supplied the tractor and the two SCORPION telehandlers on the farm.

"The CMATIC transmission gives you far more flexibility and is excellent for road work," says Luke. "There are always times with a

mechanical transmission where you never quite have the right gear, especially for jobs like mowing. With CVT this is never a problem and by being that little bit more efficient, over an hour or a day you do notice that you have done that little bit more.

"The different operating modes are very good. While Alan prefers the foot throttle mode, I prefer to use it in 'hand throttle' mode, especially on hills, but it's also useful when mowing to be able to switch between the two making turning at the row ends nice and smooth.

THE ARION IS NEVER STRUGGLING

"The combination of the higher power and torque of the engine along with the CVT transmission means the ARION is never struggling. I always just leave the tractor in ECO mode and it will quite happily sit at about 1600rpm. In tough going it will just dig its teeth in and keep pulling, but you rarely have to increase the revs. Using the front and rear mowers on the hills used to kill the 650, but the 660 is totally different and rather than stall the tractor, it will be the mowers that give up, so you do have to be careful.

"The new touchscreen CEBIS display is so much easier to use, and I like that you can see the power rating for whatever you are doing. For mowing I find that between 85-87 percent is ideal and now whatever I am doing I will just check the power rating to see if I can just reduce it slightly to improve efficiency."

"It's all about time and efficiency, and diesel isn't cheap," adds Alan.

"By making use of technology such as the higher, more efficient engine power, CVT transmission and GPS steering, even for small jobs like harrowing, if we can keep achieving small gains in efficiency, over time these small gains combine to become noticeable gains and savings."

"Whatever I am doing I will just check the power rating to see if I can just reduce it slightly to improve efficiency."

Alan Hocken



Alan Hocken (centre) with his children Emmiline and Peter and head tractor driver Luke Hillyer

Thoroughbred horsepower

Two pedigree ARION tractors provide the mechanical horsepower for the 280ha Wood Hall Stud in Hertfordshire.

The two tractors – a 185hp ARION 650 CIS+ and a 145hp ARION 610 CIS – were both new in the last year and are the latest Stage V models. Between them they handle a wide range of arable and grassland work at the stud near Radlett in Hertfordshire. The stud is the home base for a string of around 50 flat and national hunt racehorses when not in training, in addition to brood mares and youngstock that are either taken on for pre-training or for sale.

The first of the tractors, the ARION 610 CIS, arrived at the end of last year after farm manager Josh Ord had looked at a number of different makes. Impressed with how the tractor performed and the support received from OLIVERS, the decision was then made this year to replace their other larger tractor for the ARION 650, even though it was not due to be replaced.

“Of the four dealers I initially approached, it only really came down to OLIVERS and one other as they were the ones who were obviously keen to work with us and make a sale,” says Josh. “Paul Green at OLIVERS couldn’t have been more accommodating and helpful, and was always quick to come back to me. Even though we had

previously not dealt much with OLIVERS, I did know of them, and they have always had a good reputation in the area and been highly spoken of.

AN ENJOYABLE PLACE TO BE

“I had the two tractors on demo and even though both were similar horsepower, the ARION just felt more substantial and much more able to handle our plough and other heavy kit. We hardly need any weights on it and have never felt unstable. Also the specification on the ARION was that much better. It’s even small things like the sound system, the seat, lighting, mirrors and the suspension which together make the ARION a very enjoyable place to be, especially over a 10-hour day. With the other tractor we would have had to work our way through the options list to get it anywhere near. With the ARION you feel you are getting a good tractor right from the start. They are just so well designed – even the small simple things are done well. They have obviously looked at it from a user’s point of view.

“Even though we did not intend changing the second tractor, OLIVERS put forward a good price for the ARION 650 and had availability. Having electric spools as part of the CIS+ specification is great and being able to adjust the flow rate makes it ideal for use with our Arcusin bale packer.





Josh Ord

"The ARION 650 may be the same power as our old tractor, but it feels totally different. The engine is very responsive. One of the toughest jobs it does is pulling a 3-leg Sumo at full depth in our heavy clay soils, which made our old tractor struggle. But the ARION feels like a 200hp tractor and just doesn't know it's there."

HORSES FOR COURSES

Apart from 100ha of arable and 20ha of game cover, the rest of the farm is down to grassland, most of which is in various environmental schemes. Aside from paddocks for the horses, one of the main jobs for Josh is to make up to 5,000 conventional bales of hay for the horses, of which in a normal year around 3,000 will be retained and the rest sold.

"During the Spring, it's mainly the ARION 610 which is predominantly used for jobs like harrowing, rolling, fertiliser spreading and spraying.

"The ARION just felt more substantial and much more able to handle our plough and other heavy kit."

Josh Ord

The 650 only really comes out later for hay making, establishing the cover crops and for arable work. They are also the first tractors we have had with GPS steering, but it just means that we can be that bit more accurate, with no over or under application. The guns have even commented on how straight the cover crops are having used it when drilling.

"With the ARION, I feel I have two tractors I can rely on and with the support from OLIVERS they will help me get the best from the tractors. The whole team are great, and they know they have an excellent product, that they are proud of and they know that it will do what I want from it.



JAGUAR 900 upgrades



For 2022 the JAGUAR 900 range will benefit from a raft of new features relating to the feeder unit, corncracker and the silage additive dosing system. Further new developments are also available for the ORBIS and PICK UP front attachments.

Consistent crop flow and higher throughput with new front attachment drives

The most significant new development for the JAGUAR 900 is the expansion of the options for the front attachment drive. In addition to the all-mechanical drive and the variable drive for the PICK UP grass and ORBIS maize headers, it is now possible to specify a twin hydraulic drive which offers particular benefits when working with the PICK UP.

With this option, the intake auger continues to be driven via the quick-release coupler, and can adjust its speed in accordance with the length of cut; the pick-up reel, however, is provided with an all-new hydraulic drive which allows it to be driven with variable speed adjustment independently of the intake auger. The principal objective of enabling the pick-up reel speed to be varied is to allow it to be adjusted automatically relative to the forager's ground speed, so the faster the forward speed the faster the pick up reel speed.

This increases raking efficiency at all ground speeds while reducing wear; if the ground speed or the set length of cut is changed, the rotational speeds of the auger and reel are adjusted automatically to

the prevailing conditions. If necessary, both speeds can be adjusted to the requirements of the harvesting situation manually by the operator. It is therefore possible to respond to changing harvesting conditions either automatically or manually from the cab. The result, especially in changing conditions, is even more accurate crop feeding and a more consistent crop flow overall.





Studies of large swaths of whole crop silage harvested conducted in California, using the PICK UP with a JAGUAR 990 have shown increased throughput levels of up to 13.7% in extreme conditions compared with an all-mechanical constant drive.

Wear-resistant BusaCLAD coating for MCC MAX

A new, wear-resistant BusaCLAD coating is now available for the MULTI CROP CRACKER MAX with units in field testing now entering their fourth season, having harvested over 3,100 hectares of maize. The outstanding resistance to wear not only reduces the actual wear costs significantly, but also the set-up times.

New silage additive app for precision dosing and water injection at up to 800 l/h

CLAAS has developed an app to help the operator find the appropriate silage additive application rate and the correct set-up on the basis of the crop, the yield, and the information provided by the silage additive manufacturer.

This is calculated having entered the following data:

- Expected yield per hectare
- Size of area to be harvested
- Working width
- Expected working speed
- Recommended dosage specified by silage additive manufacturer
- Size of silage additive container

Having calculated the appropriate rate, this is then entered into the CEBIS terminal along with whether the additive is being applied from the ACTISILER 37 tank or the large 375 l water tank and if the application rate is in l/t or in l/h.

A second optional dosing pump is also now available that enables silage additive to be dosed at rates of up to 800 l/h, so enabling additive to be applied at rates in excess of 2 l/tonne if required.



PREMIUM LINE for ORBIS extended

All ORBIS maize front attachments are now equipped as standard with wear-resistant steel guide strips which until now were only available as an option. Effective immediately, the ex-factory PREMIUM LINE range for ORBIS maize front attachments is enhanced with extended wear coatings on existing wear parts. In addition, other machine parts are protected against wear by new, replaceable wear parts.

New smooth raking LINER range



A new generation of 2- and 4-rotor LINER rakes has been introduced for 2022 that builds on the range's well known strengths.

WIDE WORKING 4-ROTOR LINER

Resigned from the ground up, the new 4-rotor range offers numerous innovative features and unique functions designed to make life easier for users and guarantee premium forage quality combined with high work rates. The distinctive features of this new range include a low transport height, excellent ground-contour following by the rotors and ease of handling.

The backbone of the new LINER models is the innovative main frame made from high-strength steel with a geometry resembling that of a telescopic crane. The enormous cross-section combined with the trapezoid profile absorbs forces evenly to guarantee exceptional stability. The control block, electronics module and hydraulic valves are all located on the inside of the chassis, well out of harm's way.

The telescopic arms extend and retract by means of a three stage patented system comprising of a C profile and slide rails, ensuring extremely rapid adjustment of the working width. On the BUSINESS models the swath width is hydraulically adjusted and arms retracted individually. The swath width on the 4700 TREND is adjusted in transport position without tools using a spring-loaded lever and hole matrix model and the arms retract in pairs.

All four rotors are driven mechanically directly by PTO, which increases the raking force by up to 50 percent compared with hydraulic drives. All rotors are fitted with individual friction overload

clutches that respond more smoothly than cam clutches and so allow work to continue non-stop even during load peaks. The shaft speed in the two Y-gearboxes on the main frame has been reduced from 540 to 350 rpm to protect the drivetrain. The freewheel of the drive shaft is positioned directly inside the Y-gearbox, enabling the rotors to rotate freely in transport position.

The rotor diameter, number of tines and rotor speed are identical on the front and rear rotors. This enables optimum interplay between the front, wide-raking rotors and the rear rotors, which handle a larger volume of forage, to ensure maximum throughput and uniform swathing.

The rotors on the LINER 4700 and 4800 are fitted with a 4-wheel chassis as standard while the 4900 has a 6-wheel system, which is an option for the two smaller versions.

Compact on the road

For transport, the rotors fold to below 4.0m without needing to remove any tine arms. On BUSINESS models the telescopic arms have an automatic hydraulic transport lock and even with the largest 800/35 R22.5 tyres the width remains below 3.0m.

Other new features include:

- Heavy duty tine arm bearings
- New 3D floating cardan suspension system
- Sequential control of front and rear rotors
- Programmable individual lowering on BUSINESS models
- Load-sensing hydraulics on LINER 4900/4800

4-ROTOR LINER	Working width	Swath width	Rotor diameter	Tine arms per rotor
LINER 4900 BUSINESS	10.10 - 15.00 m	1.30 – 2.20 m	3800 mm	14
LINER 4800 BUSINESS	9.30 - 13.60 m	1.40 – 2.40 m	3500 mm	12
LINER 4700 TREND	9.30 - 12.70 m	1.40 – 2.50 m	3300 mm	12

SEVEN MODEL 2-ROTOR LINER RANGE

The new 2022 range of 2-rotor rakes see's the introduction of seven new models with simplified controls and two BUSINESS models with ACTIVE FLOAT rotor suspension.

As on the 4-rotor rakes, all the 2-rotor rakes feature the GRASS CARE rotor guidance system with active suspension and 'Jet effect' lowering. The LINER 2600 and 2700 have a 4-wheel chassis, while the LINER 2800, 2900 and 3100 come with a 6-wheel chassis. The front two chassis wheels are steerable and on the 6-wheel system, the rear rotor wheels are replaced with pendulum axles.

On the LINER 3100, 2900 and 2800 the working width and swath width are adjusted hydraulically using the telescopic arms, while the LINER 2700 uses a single acting hydraulic ram with a mechanical system on the 2600.

For transport, the LINER 3100 to 2700 have a transport width of 2.97m, while with 260/75-15.3 tyres the LINER 2600 comes in at 2.55 m allowing better access through small gates and narrow roads. All LINER dual-rotor swathers except the LINER 3100 have a transport height of 4.0m with tine arms attached, but on the LINER 3100 it's necessary to remove three tine arms per rotor to achieve this height.

ACTIVE FLOAT for LINER 2900 and 2800

A new standard feature on the LINER 2900/2800

is ACTIVE FLOAT hydraulic rotor suspension. Similar to the system found on DISCO CONTOUR disc mowers, ACTIVE FLOAT is easily adjusted directly on the machine, with a gauge on the main frame indicating the pressure in the hydraulic circuits. The ground pressure of the rotor can be adapted precisely to the forage quantity and ground conditions by adjusting the suspension pressure. This ensures faster operating speeds and reduces crude ash contamination.

Other new features include:

- Programmable individual lowering and height adjustment on BUSINESS models
- Hydraulic height adjustment option

2-ROTOR LINER	Working width	Swath width	Rotor diameter	Tine arms per rotor
LINER 3100 TREND	8.70 – 10.00 m	1.5 - 2.6 m	4200 mm	14
LINER 2900 BUSINESS	8.00 – 9.00 m	1.2 – 2.4 m	3800 mm	14
LINER 2900 TREND	8.00 – 9.00 m	1.2 – 2.4 m	3800 mm	14
LINER 2800 BUSINESS	7.40 – 8.20 m	1.2 – 2.2 m	3500 mm	12
LINER 2800 TREND	6.80 – 7.40 m	1.2 – 2.2 m	3500 mm	12
LINER 2700 TREND	6.80 – 7.40 m	1.2 – 2.0 m	3200 mm	12
LINER 2600 TREND	6.20 – 6.80 m	1.1 – 1.8 m	2900 mm	11



“Flexible and easy to use”



Alyn and Gareth Pierce

Ease of operation, smoothness and its quietness are just some of the stand-out features of the new pre-series LINER 4800 BUSINESS rake for contractors AS & JA Pierce.

“The biggest difference between the LINER 4800 and the LINER 3600 it replaced or our other 3500 is the functionality and how easy it is to set-up the rake to the crop and the field,” explains Gareth Pierce who has mainly operated the LINER 4800. “The BUSINESS specification for me would be a ‘no-brainer’ because it makes it so easy to adjust the rotors or to even just alter the rotors individually. If you make it easy to do then it will be done, but with a handle an operator is not going to fine tune the rake maybe just for five acres.” “The thing that impresses me is the build quality,” adds Alyn Pierce. “The frame is massive compared to the LINER 3500 or 3600 and the new driveline layout and Y-gearboxes have made it noticeably quieter. I also really like the ‘Jet effect’ lowering where the rotors glide down into work with the rear rotors landing first. It’s so smooth compared to the LINER 3500. It’s a big transformation and not nearly as hard on the rake and the tine arms.”

Working in fields that at times are only a few acres in size, in good going Gareth reckons to typically cover about 8.0ha an hour and up to 80ha in a day. “The ability to quickly and easily alter the working height and width on LINER 4800 is important. I like the way that you can pre-programme up to four settings and that it automatically remembers the last setting. Where a crop has been cut with a mower conditioner it will sit up better, while many of our customers will mow with a straight mower which often will need to be raked harder. So it’s important to be able to easily fine tune the working height to the crop

conditions to achieve a clean rake without any soil contamination.”

“Overall I have been really impressed with the LINER 4800 and it’s the ideal size. The BUSINESS spec is really the way forward and I think will be a best seller for CLAAS because it is so flexible and easy to use,” concludes Alyn.



Notice the difference in transport height between the new LINER 4800 (left) and the 3500 beside it.

New 4.20m wide DISCO 4400 CONTOUR



A new 4.20m wide rear-mounted mower, the DISCO 4400 CONTOUR, has been added to the DISCO range. It features central pivoting and ACTIVE FLOAT, plus an innovative vector folding system.

Mower bed for single or double swaths

With its 4.2m working width, the new DISCO 4400 CONTOUR becomes the flagship model in the DISCO range. As with other mowers in the DISCO range it features the well proven MAX CUT mower bed for which there is a double-swath laying option. This is achieved by placing two swath drums on the 4th and 5th disc (from the inside) to create one narrower and one wider single swath. This is especially useful on wet or soft ground as it avoids driving on the forage.

The mower bed on the DISCO 4400 is pivot-mounted at its centre of gravity. An adjustable spiral spring ensures that the mower bed comes down evenly during lowering while two vibration dampers stabilise it as it is raised. Two pivot points on the arm at right angles to the direction of travel ensure optimum ground-contour following on uneven ground and when mowing banks.

ACTIVE FLOAT suspension, tried and tested over many years, allows the ground pressure of the mower bed to be adjusted from the cab by spool valve while on the move. A gauge on the headstock shows the currently set pressure. In parked position a mechanical latch

disables the suspension system so that pressure is maintained in the circuit. Alternatively, the pressure can be reduced so that the mechanical lock is not required.

The DISCO 4400 CONTOUR is equipped with the unique hydraulic non-stop collision protection as standard. In the event of a collision, the mower bar swings back and over the obstacle thanks to a rotating pin inclined at an angle of 15 degrees. Oil from the collision protection system is forced into the suspension ram to further depressurise the mower bed. This provides effective protection from serious damage. Once past the obstacle, the mower bed automatically swings back to its working position due to the oil pressure.

New 120° vector folding

A unique feature of the DISCO 4400 CONTOUR is its vector folding system which allows the mower to be folded vertically to 120 degrees for transport. The unique part is that the mower can then be folded backwards slightly using the hydraulic break back ram, which then allows the mower when folded for transport to lean backwards slightly to reduce the transport height. So, despite having a working width of 4.20m, the mower unit achieves a transport height of less

than 4.0m for road travel. At the same time, it is positioned diagonally behind the tractor and supported by the headstock, thereby shifting the centre of gravity to the tractor's longitudinal axle.

Compared with mowers that pivot to the rear, this solution reduces the load on the tractor front axle by around 50 percent, which has a positive impact on the steering behaviour. Furthermore, in transport position the DISCO 4400 CONTOUR hardly swings back at all and so does not endanger other road users when turning or negotiating tight bends and makes it easier to get into the field gate from a narrow road.





QUADRANT evolves for 2022

The QUADRANT 5000 and QUADRANT 4200 series have been given a comprehensive technical upgrade for 2022 to provide increased output and maximum durability, resulting in a 40% decrease in wear rates. In recognition of this they have also been rebranded as the QUADRANT EVOLUTION.

New pick-up

Up front, the QUADRANT EVOLUTION now comes with a new HD pick-up with two cam tracks for maximum torsional resistance and exceptional robustness. Wear costs have also been reduced by using highly resilient components from the JAGUAR pick-up and by reworking and strengthening bearings, intake panels and other parts. This has the added bonus of smoother running with reduced noise levels.

To increase output and raking quality, the mechanically driven pick-up has five rows of tines and 18 double tines per row. The extra row of tines allows the pick-up to rotate more slowly, while the speed of the POWER FEEDING SYSTEM (PFS) roller has been increased. The feed roller has also been given extra paddles which can be removed when harvesting long-stalked crops. The overall objective of the innovations is to enhance raking performance and throughput while ensuring gentle, loss-free crop pick-up. To handle the higher throughput volumes, the diameter of the pick-up main drive shaft has been enlarged. Semiautomatic chain tensioning ensures reliable pick-up drive and automatic lubrication and a 6.3 l oil reservoir is fitted as standard.

40% reduction in wear

Moving through to the bale chamber, the top section incorporating the top plate and side panels has been redesigned and strengthened to produce an even better bale shape and slightly higher bale density. Factory-fitted sides knives and deflectors reduce material build-up in the ram guide area and knives also help to produce a smooth side

to the bale. The speed of response of the automatic baling pressure control (APC) has also been increased and it is more sensitive to twine tension or load in the intake area.

As a result of these upgrades the total cost of ownership of the QUADRANT EVOLUTION has been greatly reduced. In an internal test involving 40,000 bales per machine under extreme conditions in some cases, this showed that the new design combined with the more wear-resistant components was found to reduce wear by up to 40 percent.

Hitching and handling improved

The QUADRANT 5300 EVOLUTION has a completely new front frame and headstock, while the QUADRANT 5200 EVOLUTION and 4200 EVOLUTION only have a new hitch frame. This provides additional hitching positions for drawbar eyes or K80. The hydraulic stand of the new QUADRANT EVOLUTION is double-acting, longer than the previous generation and built into the hitch frame.

Other specification upgrades include:

- The twine guide swings out for simpler twine threading
- Toolless twine brake adjustment
- 10l hand washing tank
- Hydraulic final bale ejection
- Hydraulic bale ramp folding
- Simpler control with just two working and three settings menus
- On screen oil temperature and level monitoring
- Optional PROFI CAM 4 camera

New SCORPION drive motor



The VARIPOWER drive in the SCORPION 1033, 741, 736, 732 and 635 has now been replaced by the new VARIPOWER 2 twin motor, designed and manufactured exclusively for CLAAS. The compact drive unit from the JAGUAR forage harvester promises a long service life, improved drive efficiency and reduced noise levels.

The VARIPOWER 2 comprises two hydrostatic motors inside a compact housing which share a common shaft and swash plate. Both motors have a maximum swivel range of 23 degrees, with both traction units controlled by a common distribution unit.

As before, the operator can select three driving ranges – 0 to 15 km/h, 0 to 30 km/h and 0 to 40 km/h – with the simple press of a thumb. The top speed is reached at a reduced, fuel-saving engine speed.

VARIPOWER 2 transfers just as high torque to the wheels as the previous VARIPOWER drive. The simple, compact design, which dispenses with the need for transfer gears, ensures a high level of wear tolerance and long service life. The new feature is that the housing oil is continuously extracted from the drive housing by a powerful Venturi tube, which significantly reduces churning losses

when driving at speed. This ensures maximum efficiency and low fuel consumption even on fast road journeys.

The SCORPION 960, 756 and 746 will continue to work with the VARIPOWER (746) and the high-performance VARIPOWER PLUS drive (756, 960) with wide-angle hydrostatic pump and second displacement motor.

New cameras and other features for all models

New options for the SCORPION include the latest generation CLAAS cameras. These can be mounted at the rear and on the telescopic arm or hitch frame and are housed inside a new holder for optimum protection. The image is transferred to a separate display in the cab, which switches automatically to the rear camera when reversing. This greatly increases safety and convenience for the operator. Integrated heating inside the camera housing prevents the lens from misting up or freezing when the weather is cold or wet.

A new four-digit counter is also available within easy reach of the joystick for manually counting load cycles. Other new features include an LED flashing beacon, self-cancelling indicators and additional tyre options. The rear of the vehicle can now be accessed without tools.

TORION packs a bigger punch



A number of TORION models have been given a power upgrade. Two new flagship models have been introduced, while a new model has been added to the mid-range TORION offering.

Lift higher, load faster

The new flagship TORION 1913 and TORION 2014 models bring with them more engine power, higher lift capacity and an even greater loading height. On both models, the wheel base has been extended by 10 cm with the result that the loading height and reach has increased.

Thanks to the longer lift arm, the height of the bucket pivot point has now increased to 4.15 m – an extra 23.5 cm – both with agricultural kinematics and Z-kinematics. With the new Z-HL Highlift kinematics, a loading height of 4.70 m can now be achieved. Combined with even larger bucket volumes, this has increased the tearout force and tipping load to 165 kN and 12,500 kg (TORION 1913) and 175 kN and 13,750 kg (TORION 2014). In addition to the longer wheelbase, the higher operating weight of 18.5t (TORION 1913) and 19.6t (TORION 2014) make for optimum balance and greater stability. The maximum available hydraulic output has been increased to 290 l/min for faster load cycles.

In line with these physical increases, engine output has also been increased to 222 hp for the TORION 1913 and 249hp on the TORION 2014. Maximum power is achieved at a fuel-efficient 1,150 rpm with maximum torque at 1,100 rpm.

New addition to the mid-power range

Meanwhile, the mid-range TORION series has also been strengthened with the addition of a new power-packed model with an attractive power-to-weight ratio – the TORION 1511 P.

The new TORION 1511 P brings with it more power and torque. Power comes from a 6.8 l six-cylinder DPS Stage V 228hp engine. Maximum torque is 900 Nm at 1,600 rpm, making it ideal for clamp work, while DYNAMIC COOLING adjusts the fan speed from 100 to 1,050 rpm to suit the cooling requirement.

The oil pump capacity on the VARIPOWER drive has been increased to 145 ccm to provide additional dynamism, allowing the TORION 1511 P to reach a SMART ROADING top speed at a quiet, fuel-efficient 1800 rpm. The operating weight is 300 kg below that of the TORION 1511, producing a favourable power-to-weight ratio of just 62 kg/hp.

The VARIPOWER drive features three driving ranges to ensure that the optimum gear ratio is selected at all times. The second axial piston motor is automatically disconnected at speeds of over 16 km/h. VARIPOWER also offers the same driving performance in forward and reverse and hydraulic braking assistance to reduce wear on the brakes and tyres.

Large tyres up to 750/65 R26 and two drive axles with self-locking differentials with a 45 percent lock value provide outstanding traction even under difficult conditions. The mudguards on the front wheels



can be infinitely adjusted inwards by up to 10 cm to provide an optimum view of the outer edges of the front wheels when working up against the walls of the clamp and helps prevent damage to the mudguards. The height of the mudguards can also be adjusted by 36 cm for clamp operations.

Faster load cycles thanks to increased flow rate

The TORION 1511 P can be equipped either with P- or Z-kinematics, and optional vibration damping including four operating modes. The optional high-lift arm increases the bucket pivot point from 3.93 m to 4.51 m. Automatic functions such as the programmable SMART LOADING bucket return or the lift height and lowering limiter make for easier handling and increased handling capacity.

The maximum available flow rate of the load-sensing hydraulics in the TORION 1511 P is 228 l/min – 58 l/min more than the TORION 1511 – and the responsiveness of the individual hydraulic functions can be adjusted from the cab. Up to 126 l/min at 200 bar is available to the third and fourth control circuit.



New features for the mid-range series

A number of new features and functions are now available on the mid-range 1177, 1410 and 1511 models:

- Joystick steering option
- New right hand armrest control panel
- New integrated weighing system option
- Optional tyre pressure monitoring
- Optional stainless steel exhaust
- Up to 10 LED cab-mounted work lights

TORION	Operating weight (t)	Articulated tipping load (t)	Hydraulics (l/bar)	Max. power output (Hp) (ECE R 120)	Drive
2014	19,600	13,750	290/350	249	CMATIC
1913	18,550	12,500	234/350	222	CMATIC
1511 P	14,100	9,300	170/350	223	VARIPOWER
1511	14,200	10,500	170/350	184	VARIPOWER
1410	13,500	9,500	170/350	165	VARIPOWER
1177	11,770	7,750	136/330	137	VARIPOWER
639	5,600	3,850	77/230	68	Hydrostat
535	5,180	3,450	77/230	63	Hydrostat
956 SINUS	9,070	5,575	115/240	103	Hydrostat
644 SINUS	6,390	4,430	93/210	71	Hydrostat
537 SINUS	5,550	3,750	70/230	71	Hydrostat
738 T SINUS	7,000	3,800	93/230	71	Hydrostat

Tip Top TORION



David Cook

A little TORION 639 pivot steer wheel loader has proved the ideal materials handler for use around David Cook's traditional Yorkshire farm buildings.

With 250 cattle housed in a variety of buildings on his 60ha tenanted farm near Leyburn, size matters when it comes to David Cook's choice of materials handler. With telescopic handlers too big and not manoeuvrable enough the TORION 639, which is only 2460mm to the top of the cab, has proved ideal.

"Small buildings need a small handler," he says. "Width and height are my main considerations. The TORION is a brilliant little thing and perfect for what I want."

Bought through CLAAS EASTERN in the spring, the TORION replaced what David describes as a 'disaster' of a machine. "It looked ideal, but in reality was unbelievably bad and a big mistake. I put up with it for two years but then after Mike Carvey brought the TORION out on demo, I couldn't wait to get rid of it."

BUILT LIKE A LITTLE TANK

"The TORION is everything that machine wasn't. It's built like a little tank and if anything is over-engineered it's so strong. It may be small, but its weight (5.6 tonnes) means it's extremely stable, but still very nifty and extremely manoeuvrable. The visibility from the cab is excellent and you can see all the corners which is essential in tight spaces.

"The cab is simple but the heated seat, good air con and heating make it extremely comfortable and the controls are very easy to use."

The TORION 639 is powered by a 68hp Yanmar engine developing 237 Nm of torque at 1560rpm. The gear pump hydraulic system has a maximum capacity of 77 litres/min, giving a rated load lift cycle time of just 6.5 seconds. Maximum lift height is 3.2m and the fully articulated load capacity is 3.1 tonnes.

"The engine is a little powerhouse. There is loads of lifting power, it will quite happily handle two silage bales and there is more than enough pushing power when mucking out – it's very deceiving. It's on the go all the time and has already done about 500 hours and certainly does more hours than my ARION tractor."



In addition to running his own farm, David also works mornings for a neighbouring dairy farm. The herd there calves all year round. It is from them that he sources about 10 calves a month, which he then takes through to finishing at about 550 to 650kg. In addition to making around 500 silage bales, David grows 28ha of corn for feed and straw and he also buys in straw from his neighbour.

In addition to all the general feeding, handling and mucking out work that comes with having cattle, one daily job for the TORION is to power the hydraulic augers for his rolling mill, using the 3rd or 4th service on the headstock.

"I run the mill every day so it's important the TORION is reliable so that I can fill the hopper. But I know that even if I did have a problem, EASTERN would look after me very well."

"The cab is simple but the heated seat, good air con and heating make it extremely comfortable and the controls are very easy to use."

David Cook



LEXION – unparalleled.



LEXION 8900 with VARIO 1380 header.



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