Combine harvesters

LEXION

780 770 760 750 740

CLAAS

Gold for CEMOS AUTO THRESHING.

The automatic threshing unit control system for LEXION 700 combine harvesters.

CEMOS AUTO THRESHING is another module which contributes to the automation of the combine harvesting process. This new operator assistance system provides fully automatic adjustment of the threshing concave clearance and the threshing drum speed. All operator assistance systems are controlled via the new touch-sensitive CEBIS MOBILE terminal.

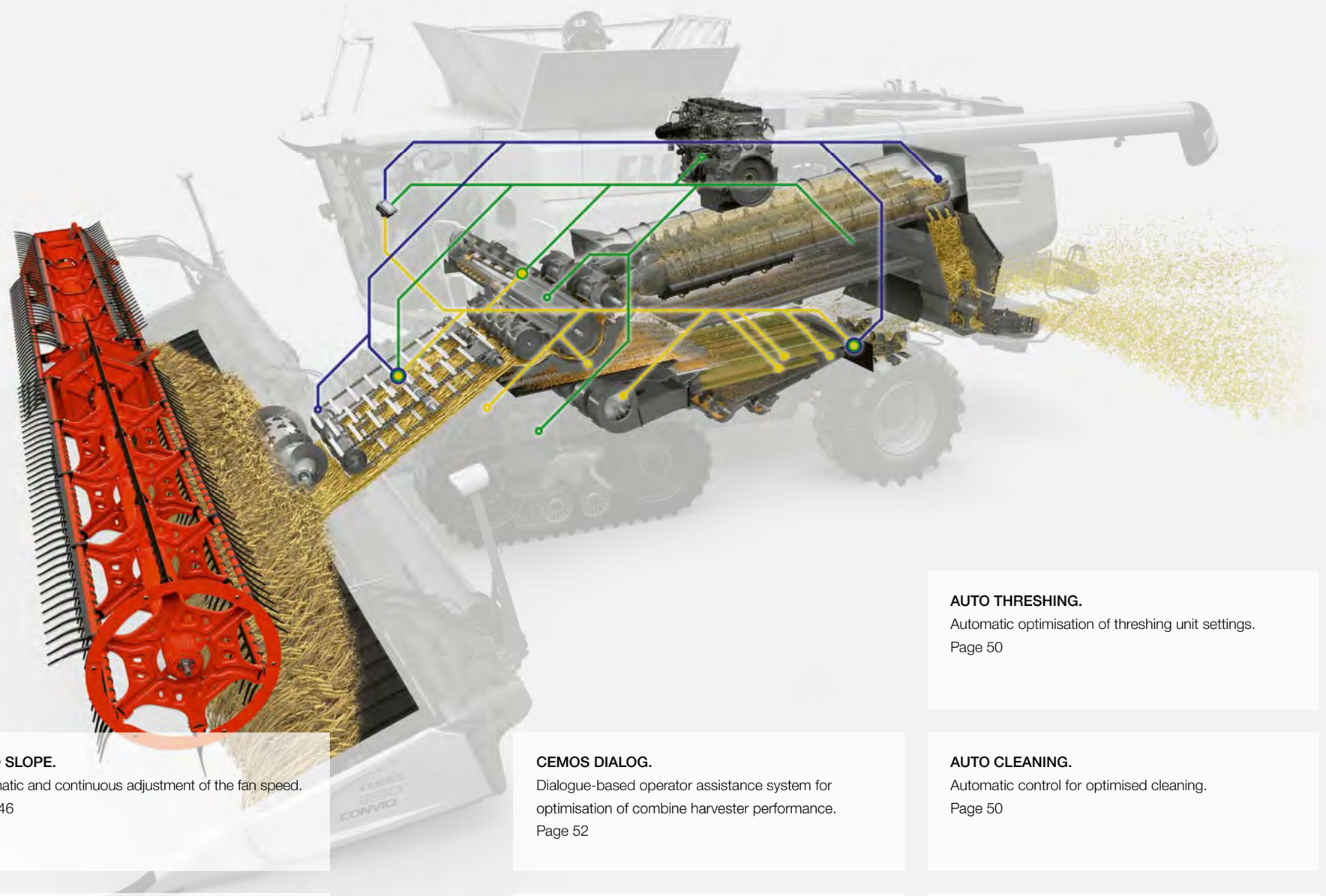
lexion700.claas.com

LEXION 780-740.

More comfort, more performance, reduced losses.

Our assistance systems make good operators even better.

There is no substitute for your experience. Only with it can you react quickly and, above all, appropriately to the challenges you face in your daily work. Whether these take the form of difficult terrain or changing crop moisture levels, many decisions have to be taken very quickly to get the job done to the right standard. That's why it's good to be able to count on a combine harvester that can reduce your workload. From automatically setting the machine up to helping guide it accurately down to the last centimetre, CLAAS operator assistance systems draw on the experience of thousands of customers and working hours which we incorporated into the development process. Because there are many factors which are impossible to calculate scientifically and which call for practical experience. The LEXION provides you with a wealth of operator assistance systems which make your work easier.



AUTO THRESHING.
Automatic optimisation of threshing unit settings.
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AUTO CROP FLOW.
Continuous monitoring of speed of APS threshing system, residual grain separation system and engine.
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AUTO SLOPE.
Automatic and continuous adjustment of the fan speed.
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CEMOS DIALOG.
Dialogue-based operator assistance system for optimisation of combine harvester performance.
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Automatic control for optimised cleaning.
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4D-cleaning system.
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CRUISE PILOT.
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GRAIN QUALITY CAMERA.
Visual determination and assessment of grain quality.
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AUTO SEPARATION.
Automatic control for optimised secondary grain separation.
Page 50

Committed to meeting diverse harvesting requirements.

The cutterbars.

Greater scope for matching your requirements. Whatever the harvesting task, your LEXION is ideally equipped.

CERIO

VARIO

VARIO / Rapeseed equipment

VARIO / Rice equipment

Folding cutterbar

MAXFLEX

SUNSPEED

CONVIO FLEX / CONVIO

SWATH UP

CORIO CONSPEED / CORIO

VARIO cutterbars.

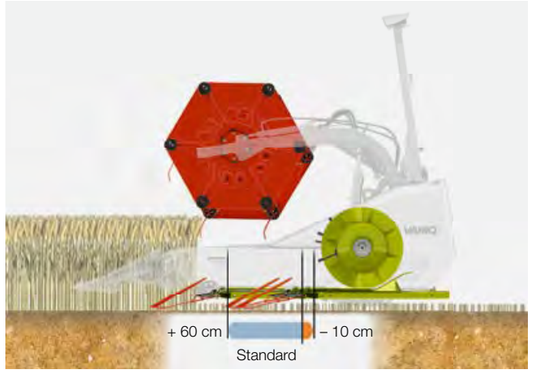
Use.

The new generation of VARIO cutterbars is the first choice for harvesting grain and rapeseed. It is ideally suited to deliver high performance and high area output, whether operating in low or high-yield regions. The ability to adjust the VARIO cutterbar table for grain harvesting (short or long straw varieties) and rapeseed ensures an optimal crop flow at all times and therefore results in an increase in total machine performance of up to 10%.

The wide range of models, from the VARIO 1230 to the VARIO 500, allows the LEXION, TUCANO and AVERO to use VARIO cutterbars.

Technology.

- Cutterbar table with integrated rapeseed plates
- Table position adjustable from – 100 mm to + 600 mm using the multifunction control lever
- Cutterbar table is unique in having an infinitely variable overall adjustment range of 700 mm
- Knife drive shaft with automatic, telescopic function
- Continuous knife bar and continuous reel (VARIO 930 to VARIO 500)
- Front attachment mechanical drive on one side (VARIO 930 to VARIO 500)
- Intake auger and knife bar mechanically driven via gearbox and drive shaft
- Reel with optimised reel tine carriers, wear-resistant tine tube bearings and a new design to reduce risk of wrapping and stalk take-up
- Angled cross-tube for a better view of the cutterbar table from the cab
- Intake auger height is infinitely adjustable
- Feeder housing and intake auger can be reversed
- Stripper bars adjustable from the outside
- LASER PILOT for automatic guidance system can be folded and adjusted without tools



Easy connection of the hydraulic hoses for the rapeseed knife drive

The dividers and rapeseed knives can be secured without tools thanks to the quick-release mounting system

Plug & Play for rapeseed.

Thanks to the rapeseed plates integrated in the cutterbar table and the ability to fit the rapeseed knives without the need for tools, conversion to rapeseed harvesting takes only a matter of minutes. Connecting the rapeseed knives to the hydraulic system automatically activates the hydraulic pump which drives the side knives. The connection is made easily with two flat-seal couplings.

- The hydraulic pump is switched on and off automatically
- Even with the rapeseed knives fitted, the table can still be extended or retracted by 150 mm
- A locking transport container on the attachment trailer allows the rapeseed knives to be carried securely and saves weight on the cutterbar

Use in rice.

The VARIO cutterbars are equipped ex factory – or can easily be converted with a coated feed roller and a rice harvesting system – for optimal performance in rice.

Rugged drive train.

Thanks to its planetary transmission, the knife bar drive runs extremely smoothly. When the cutterbar table position is changed, the drive shaft adjusts telescopically at the same time, thus allowing work to continue in any position without the need for operator intervention.

The feed roller and knife drive are protected by individual overload clutches. This system allows the VARIO cutterbar to withstand the most adverse conditions and ensures reliable operation.

Rapeseed knives fitted by means of quick-release mounting system

The large VARIO cutterbars: VARIO 1230 and VARIO 1080.

Optimal crop flow.

The VARIO cutterbars from CLAAS are designed for the most demanding field conditions. An optimal crop flow, clean cutting and a robust design are the defining characteristics of the two largest models, the VARIO 1230 and VARIO 1080. For these working widths, CLAAS uses the principle of the divided reel and intake auger as well as a divided knife bar.

Ever since its introduction in 2009, this system has proved to be the ideal solution under all conditions for the high throughput associated with the most powerful LEXION combine harvesters. The crop flows from both halves of the cutterbar are combined at the centre of the cutterbar. The outstanding strength and ruggedness required to handle such large quantities of harvested material have made the VARIO cutterbars the benchmark for the industry.

Precise adjustment produces the best results.

An optimal crop flow starts right at the cutterbar, with the correct height setting of the intake auger being a particularly important factor. This is why height scales are provided at the adjustment points on the left and right sides and in the centre. This makes for effortless adjustment of the auger to the perfect height for every requirement.

The drive train.

Thanks to the mechanical drive via drive shafts, gears and large chains, the drive train is extremely efficient and requires little maintenance. The synchronised knife drive makes for a very smooth-running cutterbar. An overload clutch protects the entire drive train in the event of the intake auger becoming jammed. The knives are driven by gears on the left and right sides and are also protected by overload clutches.

Overload protection is also provided for the hydraulic drive of the rapeseed knives. If one of these is jammed by a foreign body, a shut-off valve protects the hydraulic system from overpressure.

Following the ground.

In order to ensure that excellent cutterbar guidance is also maintained over large working widths, the VARIO 1230 and VARIO 1080 models have two additional sensors. These are located in the centre and provide the AUTO CONTOUR system with an additional signal to identify the position of the cutterbar table.

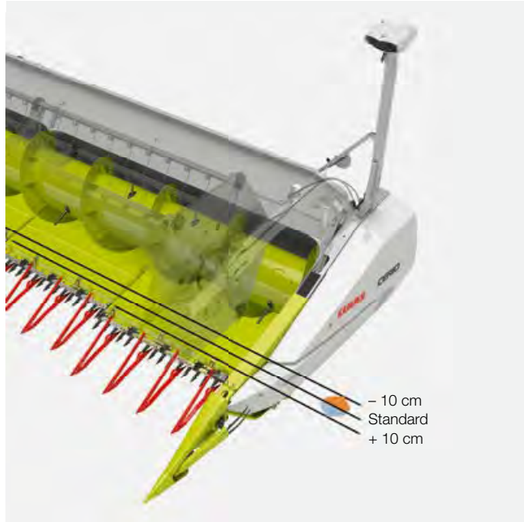
Practical bracket for additional crop lifters on cutterbar

CERIO cutterbars.

Use.

The CERIO model series is based on the VARIO 930 to 560 cutterbars and is an alternative for grain harvesting. It is ideally suited to deliver high performance and high area output, whether operating in low or high-yield regions. The cutterbar table can be adjusted manually from – 100 mm to + 100 mm. This means that the cutterbar is able to respond to differing crop conditions or varieties.

The wide range of models, from the CERIO 930 to the CERIO 560, allows the LEXION, TUCANO and AVERO to use CERIO cutterbars.



Technology.

- Manually adjustable table position from – 100 mm to + 100 mm
- Overall manual adjustment range of 200 mm
- Knife drive shaft with automatic, telescopic function
- Continuous knife bar and continuous reel
- Front attachment mechanical drive on one side
- Intake auger and knife bar mechanically driven via gearbox and drive shaft
- Reel with optimised reel tine carriers, wear-resistant tine tube bearings and a new design to reduce risk of wrapping and stalk take-up
- Angled cross-tube for a better view of the cutterbar table from the cab
- Intake auger height is infinitely adjustable
- Feeder housing and intake auger can be reversed
- Stripper bars adjustable from the outside
- LASER PILOT for automatic guidance system can be folded and adjusted without tools
- Automatic parking and transport position
- Automatic operating position

Cutterbar table retracted – grain (– 100 mm)

Cutterbar table extended – grain (+ 100 mm)

Cutterbar adjustment.

- Manual adjustment under cutterbar table
- Ten screw fixings allow adjustment of cutterbar table
- Five table positions can be set: + 100 mm, + 50 mm, 0 mm, – 50 mm, – 100 mm

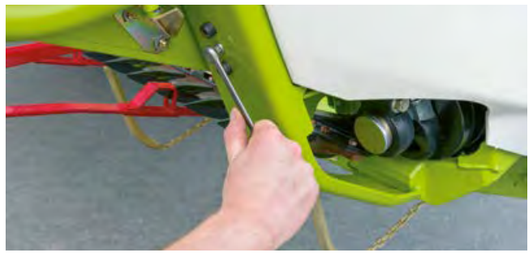
Rugged drive train.

As the drive train of the CERIO cutterbars is identical to that of the VARIO cutterbars, it features individual overload clutches to protect the feed roller and knife drive. This arrangement allows the CERIO cutterbar to withstand the most adverse conditions and ensures reliable operation at all times.

Use in rice.

The CERIO cutterbars are equipped ex factory – or can easily be converted – with a coated feed roller and a rice harvesting system for optimal performance in rice.

The dividers can be secured without tools thanks to the quick-release mounting system



Easy adjustment of divider height using the panel key

NEW

CONVIO FLEX / CONVIO.
The new draper cutterbar.

Powerful cutterbar for all crops.
Draper cutterbars for higher performance.

Draper cutterbars are used wherever low-growing and low-fruiting stalk crops or difficult conditions (laid grain, volunteers) necessitate very low cutting. The flexible cutterbar table ensures optimal ground contour following, even with large widths, while the belts make for a gentle and even crop flow.

NEW

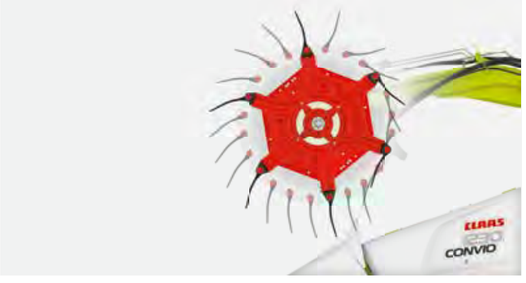
CONVIO FLEX / CONVIO.

Innovative reel for the highest throughput. New reel design.

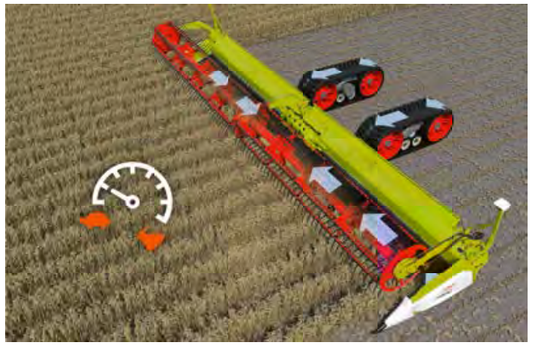
The newly developed reel with its innovatively shaped, adjustable cam track allows the reel tines to pick up the crop before it is cut, thereby keeping front attachment losses to a minimum, especially in laid grain. In short crops in particular, the tines optimise the feeding of the crop into the cutterbar. In addition, the unique flip-over concept prevents the crop from wrapping on the reel. In this way, the crop is fed efficiently, consistently and with minimal losses onto the belts of the CONVIO cutterbar, from where it is delivered evenly into the combine harvester.

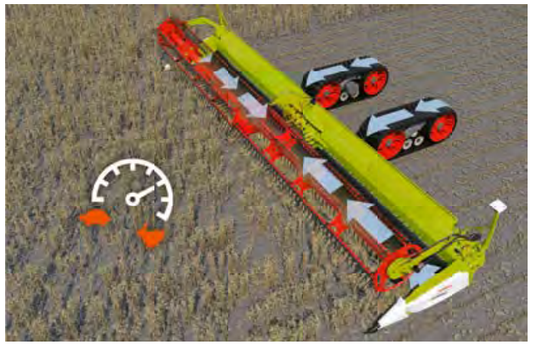
Automatic reel torque control.

Thanks to the hydraulic reel drive, the torque applied to the reel can be adjusted automatically to cope with difficult harvesting conditions, such as laid crops. An automatic height control system, which operates on the basis of the programmed pressure and sensitivity levels, prevents the tines from digging into the ground.



Cam-track-controlled reel with flip-over concept





AUTOMATIC BELT SPEED for the conveyor belts.

The AUTOMATIC BELT SPEED operator assistance system adjusts the speed of the belts to the harvesting speed continuously and completely automatically.

Advantages for the operator:

1 Constant, automatic adjustment of the belt speeds, especially in uneven crop stands
2 Speeds are always set correctly for an even crop flow

Reversing is possible with CMOTION (1) or toggle switch (2)

Reversing function for the critical elements.

Two reversing modes are available to ensure that it is possible to respond to the specific requirements of any situation: the toggle switch on the armrest reverses the reel, centre belt, intake auger and feeder housing, the button on the multifunction control lever reverses the centre and side belts while on the move.

In the event of belt slippage, the early warning system is triggered: this allows the operator to identify and intervene in critical situations at an earlier stage. Furthermore, the operator can monitor the correct load status of the belts – even in twilight or at night.

NEW

CONVIO FLEX / CONVIO.

Adjustment of ground pressure...

...from inside the cab

Optimal support makes for productive operators. ACTIVE FLOAT for the knife bar.

CONVIO FLEX is equipped as standard with the ACTIVE FLOAT hydropneumatic suspension. This suspension system allows the ground pressure of the knife bar to be adjusted to the field conditions from the cab while on the move.

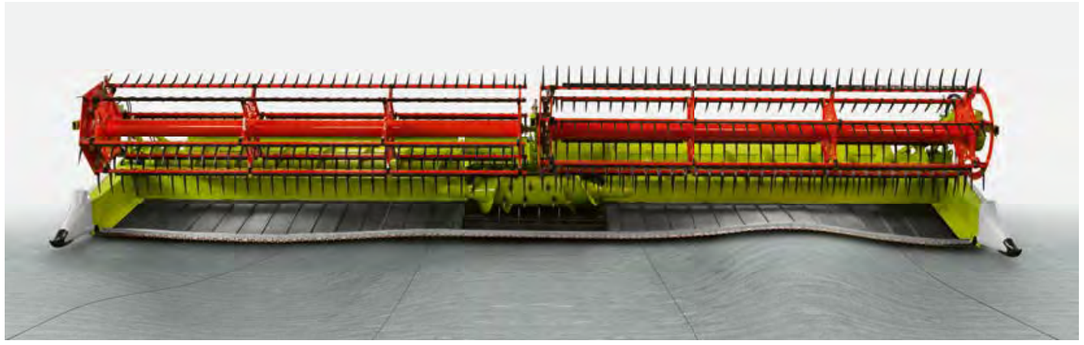
Advantages for the operator:

1 Precise cutterbar guidance close to the ground through optimal ground pressure
2 Ideal when working in conditions where the moisture level – dew in the morning or evening, for example – is rising

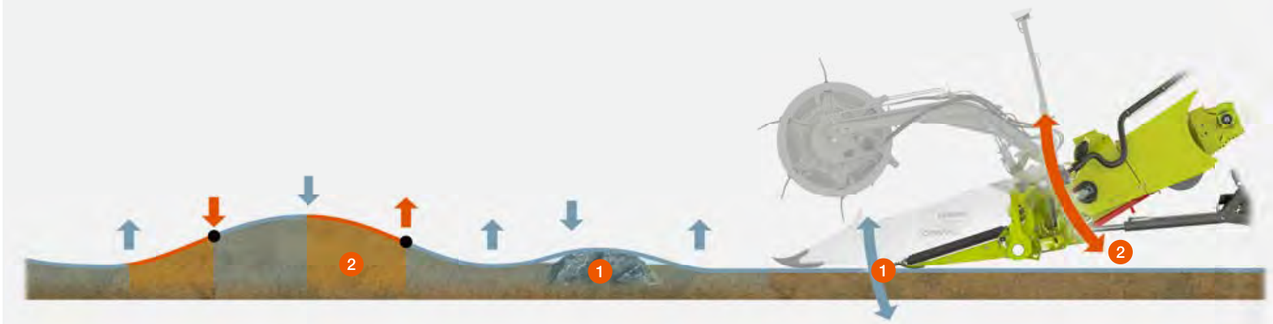
Maximum flexibility for all ground contours. CLAAS AUTO CONTOUR for optimal cutting.

Maximum reduction in operator workload with optimal cutting performance – CONVIO FLEX can be used in four different modes:

1 Grain: rigid cutterbar table
2 Laid grain: change from rigid to flexible at the touch of a button while on the move
3 Flex: for low-growing crops, such as soybeans, peas, grass
4 AUTO CONTOUR FLEX: automatically delivers the lowest cutting height

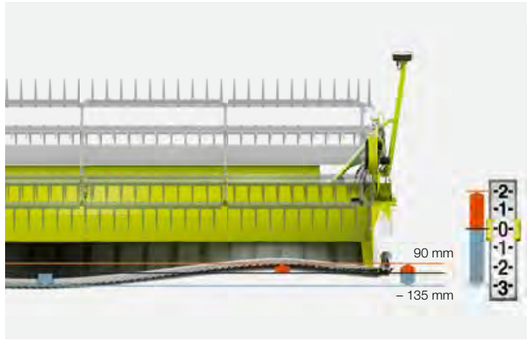


1 When ground irregularities (stones, ruts, mounds) are encountered, the knife bar can deflect 135 mm downward and 90 mm upward.
2 While the machine is on the move, CONVIO FLEX continuously determines if further correction of the front attachment height is necessary and makes the corresponding adjustments automatically.



1 Grain mode.
Cutterbar table and knife bar are set to a rigid configuration.

2 Laid grain mode.
The knife bar is rigid but can be changed to flexible mode with a touch of a button while on the move. This is especially useful for avoiding crop losses when dealing with isolated laid crop areas during grain harvesting.



3 Flex mode.
When flex mode is activated, the knife bar resting on its skids but exerting no ground pressure follows the ground contours. The flexible knife bar can avoid obstacles with a 90 mm upward deflection and also follow the ground contours with a downward deflection of 135 mm. With a total flex range of 225 mm, CONVIO FLEX is therefore able to adjust to practically all ground conditions.

4 AUTO CONTOUR FLEX mode.
Automatic adjustment of the front attachment height is provided by the new AUTO CONTOUR FLEX mode. In this mode, CONVIO FLEX automatically and continuously determines if the knife bar can be lowered further in order to ensure that the lowest cutting height is achieved at all times.

CORIO CONSPEED / CORIO.

Use.

The CORIO CONSPEED and CORIO model series are the right maize pickers for harvesting grain maize or corn cob mix. Whether working in high-yield crops or very dry maize stems, the CORIO CONSPEED and CORIO maize pickers ensure a clean, effective picking process, from the LEXION to the AVERO.

Functional principle.

The hoods ensure that the maize stalks are fed evenly and gently into the snapping rollers. The stalks are captured by the rollers and pulled downwards. At the same time, snapping plates separate the maize cobs cleanly from the stalks.

Horizontal choppers operating at a constant speed chop up the maize stalks which have been pulled down. The intake auger then transports the maize cobs to the feeder housing.

Technology.

- Efficient, free-running drive for all CORIO CONSPEED and CORIO models
- Quick and easy speed adjustment by changing the combination of gears
- Spiral intakes on the snapping rollers improve stalk intake
- Mechanically or hydraulically adjustable snapping plates allow the cobs to be separated cleanly
- Each snapping gear unit is individually protected against overload and foreign bodies
- The drives for the snapping rollers and knives are integrated in the robust gear housing
- Available in rigid or folding versions
- AUTO PILOT and AUTO CONTOUR optionally available for all models
- The horizontal chopper captures plants along the entire length of the picker opening.
- Row widths of 90, 80, 75 and 70 cm

17° operating angle.

At 17° the CORIO CONSPEED and CORIO models have the flattest operating angle in the market.

- The operating angle has been reduced by approximately 10%
- Reduction in cob losses, especially those resulting from "cob jump-off"
- In laid maize in particular, the flat angle and the unique hood shape help make for blockage-free operation

Top form.

The front part of the hoods has a new, unique shape.

- Even more gentle crop handling thanks to the optimised shape of the hoods
- The flanks of the hoods have been designed in such a way that maize stalk capture is delayed and takes place at a more flexible point in order to avoid cob losses
- Improved performance in laid maize

Horizontal chopper.

Each picking unit is equipped with a horizontal chopper integrated in the transmission unit. The position of the chopper knife enables precise chopping of the rest of the plant, resulting in fast rotting and the formation of a consistent seedbed for the following crop.

Practical folding mechanism.

The hoods can be folded easily into a compact transport position. As well as being easy to use, this arrangement makes for better visibility during on-road travel, as it allows the front attachment to be shortened by 80 cm.

CORIO CONSPEED / CORIO.

Conical – CORIO CONSPEED.

- Conical snapping rollers
- Hybrid or standard snapping rollers available
- Four bolt-on knives are fitted on the front section of each hybrid snapping roller
- Tungsten-carbide coating ensures high wear resistance
- Horizontal chopper can be switched off

Straight – CORIO.

- Straight snapping rollers (forward mounted bearings)
- Snapping roller knives along entire length
- Four bolt-on knives per snapping roller
- Horizontal chopper is driven continuously

Recommended uses.

Depending on the region and climate, the maturity of the maize plants varies at the time of harvest. CLAAS therefore offers a range of snapping rollers in order to enable the best possible picking performance.

1 With a uniform profile.
This roller shape is particularly suited to dry conditions. The profiles of the two rollers engage and the plants are pulled downwards very gently. In dry conditions, in particular, this arrangement prevents early detachment of the plants.
2 Hybrid snapping rollers.
The special snapping rollers are particularly suited to green crops. Four knives, which aggressively pull the thick stalk sections downwards, are bolted to the front end of each hybrid snapping roller. The rear end of the hybrid snapping rollers has the standard profile.
3 Straight – CORIO.
The straight snapping rollers can be used universally. The throughput speed of the maize stalks remains constant during picking.

Operating principle of conical rollers.

The key characteristic of the conical snapping rollers is that the speed with which each maize plant is pulled through the rollers increases as the diameter of the roller increases. In this way, even at higher ground speeds, the plant is drawn in gently at first and then more quickly. This means that it is possible to avoid cob losses as well as unnecessary plant residues in the machine resulting from the plants being broken off.

How you benefit.

- Top chop quality thanks to the low throughput speed at the lower end of the maize stalk
- Avoidance of cob losses and damage through breakage thanks to the gradual increase in throughput speed
- Fewer straws and plant residues in the machine mean higher throughput and, therefore, make it possible to attain a higher ground speed

Sunflower kit.

Simply turning round the feeder chain is all that is required to switch over quickly for sunflower harvesting. In addition, rigid knives are fitted on the snapping plates along with side hood extensions and a raised rear wall panel.

More good reasons for CLAAS attachments.

Cutterbars for every crop.

There is a CLAAS cutterbar to handle any threshable crop in any agricultural region around the world: for grains such as wheat, rye, barley, oats and triticale, or for rapeseed, maize, sunflowers, rice, soybeans, flax, beans, lentils, grass and clover seed or millet. Benefit from a unique combination of high-quality performance and equipment features.

MultiCoupler.

The central connection coupling for all the hydraulic and electronic connections to the cutterbar.

- You gain valuable time due to shorter attachment and removal procedures
- No danger of confusion thanks to the integrated design
- Easy to connect, even under pressure
- Environmentally friendly with no oil leakage

Central locking system.

A single lever on the left side of the cutterbar operates all locks simultaneously.

Replacement knife bar and crop lifters.

All CLAAS cutterbars are factory-equipped with a replacement knife bar. The knife sections are made of hardened material and are therefore extremely durable.

The use of crop lifters enables loss-free pickup of laid grain in particular while reducing the intake of stones. Crop lifter replacements can be carried conveniently at the rear of the cutterbar.

Automatic soft-start system.

A gradual, smooth start of the cutterbar avoids peak loads on the drive.

Hydrostatic reel drive.

A variable displacement pump on the basic machine supplies a maximum torque of 1000 Nm at the reel. The reel speed is automatically adjusted dependent on the ground speed.

- Plenty of pulling power thanks to high torque
- Greater efficiency than gear pumps
- A closed hydraulic circuit ensures better reel rotation
- Fast adjustment of the reel speed
- Large reel clearance height

Greater convenience with the MultiCoupler and central locking

Twin-axle front attachment trailer with steering rear axle.

The new twin-axle front attachment trailers with 4-wheel steering are available for the VARIO 1230, 1080 and 930 front attachments.

- Excellent self-steering characteristics when cornering
- High directional stability
- Available in braked or unbraked versions for 25 km/h or 40 km/h
- The floating front axle can adapt optimally to uneven ground
- Special supports can be fitted to the trailers to allow SUNSPEED front attachments and maize pickers to be transported without any difficulty
- A cutterbar equipped with rapeseed knives can be placed on the trailer without any difficulty

The following options are also available ex-factory:

- Spare wheel
- Rotating beacon
- LED lights
- Marker lights
- Short or long drawbar

Transport container.

A locking transport container on all attachment trailers allows the rapeseed knives to be carried securely.

Twin-axle front attachment trailer with steering rear axle

Single-axle front attachment trailer

Locking transport container for rapeseed equipment

More intelligence for the cutterbar.

CLAAS CONTOUR ensures excellent adaptation to ground contours.

The cutterbar with CLAAS CONTOUR adjusts automatically to ground irregularities along the direction of travel. You select your preferred contact pressure and CONTOUR ensures that it will be uniformly maintained. Every time the cutterbar is lowered, the preselected cutting height feature ensures that the specified cutting height is always established automatically.

AUTO CONTOUR: faster and more accurate than ever.

AUTO CONTOUR goes a step further by compensating all ground irregularities, including those which are transverse to the direction of travel. Sensor bands underneath the cutterbar provide early detection of corrugations and trigger the corresponding cutterbar rams on the feeder housing.

- Electronic sensors detect the hydraulic pressure in the system and react quickly
- Valve-controlled, nitrogen-filled accumulators ensure optimal shock absorption with front attachments of different weights

The AUTO CONTOUR feature compares the actual and reference statuses fully automatically and optimally adapts the cutterbar position to the terrain accordingly. This greatly simplifies the harvesting process, particularly with large cutting widths, at night, with laid grain, on side slopes and in rocky soils. AUTO CONTOUR helps increase performance and make the use of the LEXION pay even greater dividends.

Automatic reel control.

The RPM of the reel and thus its speed adjust automatically and proportionally to the ground speed. The operator can select and save various settings for the ground speed to reel speed ratio. The reel speed can be adjusted continuously between forward, synchronous and lag. A digital RPM sensor ensures that the rotation speed is adjusted with absolute precision.

Different reel operating heights can be stored and retrieved for various cutting heights. Nevertheless, the reel height can always be adjusted directly.

2-way cutterbar rams control the ground pressure precisely

Automatic cutterbar control is easily activated by pressing the height adjustment button on the multifunction control lever

VARIO automation.

The VARIO cutterbar with automated reel control allows the reel levelling and table position settings to be saved and recalled by activating the automatic cutterbar control. Manual adjustments can also be made.

Parking position for VARIO 1230 to VARIO 500.

A touch of a button is all it takes for these two VARIO cutterbars to move into the parking position for mounting on the road transport trailer or, after coupling, to move straight into the working position. The threshing unit must be switched off before this function can be used.

Automated cutterbar control.

- CONTOUR / AUTO CONTOUR
- Automatic reel speed
- Automatic reel height
- Automatic reel levelling (VARIO only)
- Automatic table position (VARIO only)
- Automatic parking position (VARIO only)

Sensor bands detect the position of the front attachment

More performance from the feeder.

Straight cutterbar drive.

Lower fuel consumption without any loss in power – the straight cutterbar drive plays a key role in making this possible. The great benefit of this design is that it supports the full utilisation of all available power. As the performance of combines keeps increasing, the volumes that need to be conveyed through the feeder housing also grow, and drive systems therefore need to cope with these increased requirements.

Four different drives are available: S (constant), L (variable), XL (two-speed) and XXL (variable). CLAAS therefore offers the right drive for every range of applications and thus ensures maximum throughput.

The AUTO CONTOUR cylinder ensures a clean cut

For a clear view: dust extraction at the feeder housing

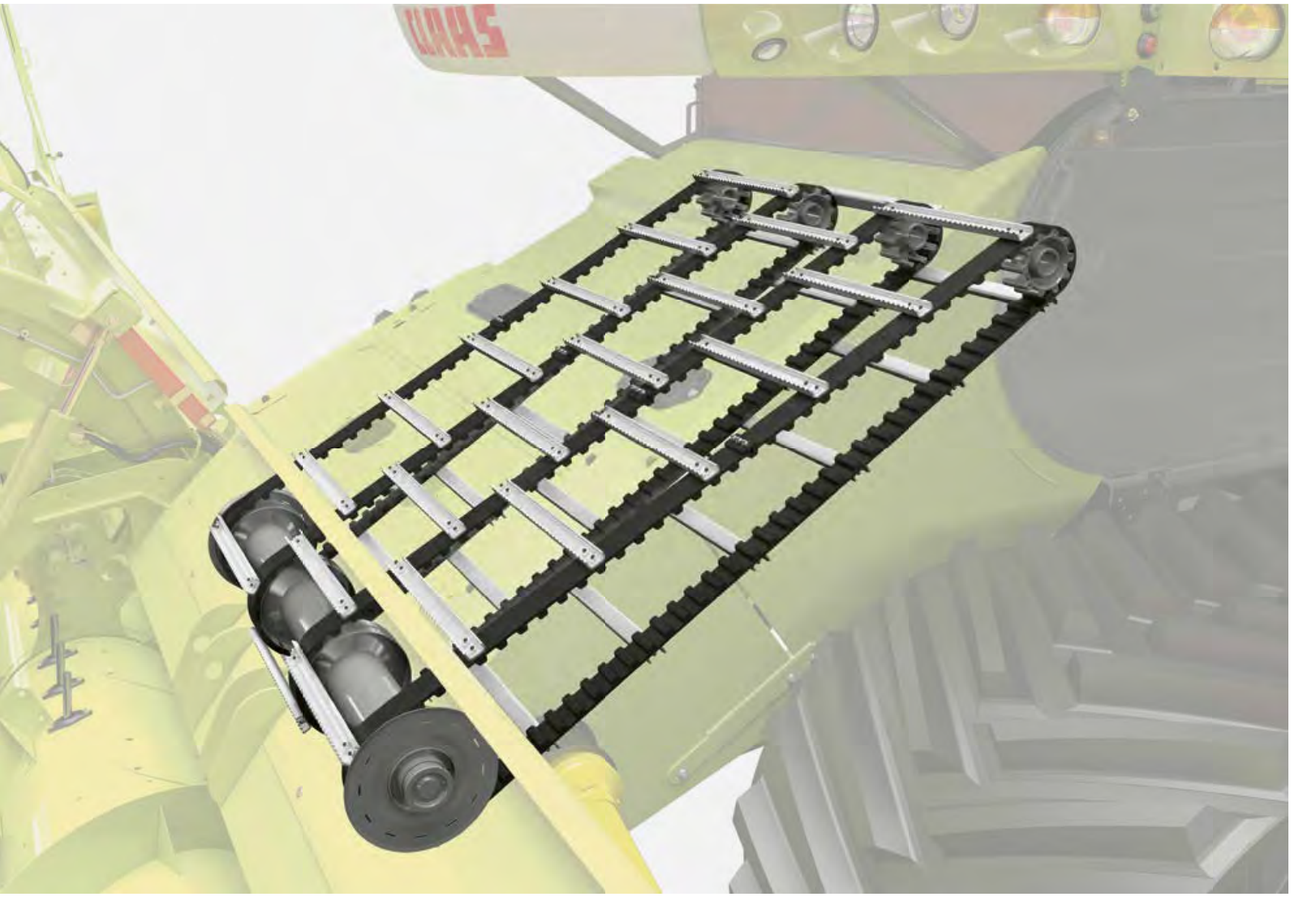
Front attachment drive brake.

Effective protection against foreign bodies and other causes of damage: the drive brake (1) allows the front attachment to be stopped immediately, if necessary, by means of the multifunction control lever. As the drive brake is fitted directly to the feeder housing, only a small mass needs to be braked. This means less braking torque and less wear.

Hydraulic reverse.

Blockages are taken care of easily: the hydraulic system (2) enables protective reversing with high starting torque. The hydraulic reverse can be actuated conveniently with a toggle switch in the cab. The direction of rotation of the hydraulic reel drive also changes automatically, providing additional support for the reversing procedure.

Optimised.
The feeder housing.



Time to grow.

The extremely high performance of our LEXION combine harvesters begins with the feeder housing. A completely new feeder housing system ensures that we live up to our high standards.

Conventional feeder housings use chains to link the feeder slats, but with this new design the feeder slats are connected via belts instead of chains. The belts are driven by means of teeth on the underside. This arrangement ensures both powerful feed action, even when working with large quantities of material, and powerful reversing. Compared with a conventional feeder housing, the belt conveyor offers a number of decisive advantages:

- Smooth and quiet operation
- Long service life and constant tension
- High durability and high resistance to damage caused by foreign objects

1 Universal feeder housing.
A shallow intake angle to the threshing components facilitates optimal crop flow. Rugged intake chains or belts with feeder slats ensure high stability, while a replaceable wear plate guarantees long service life.

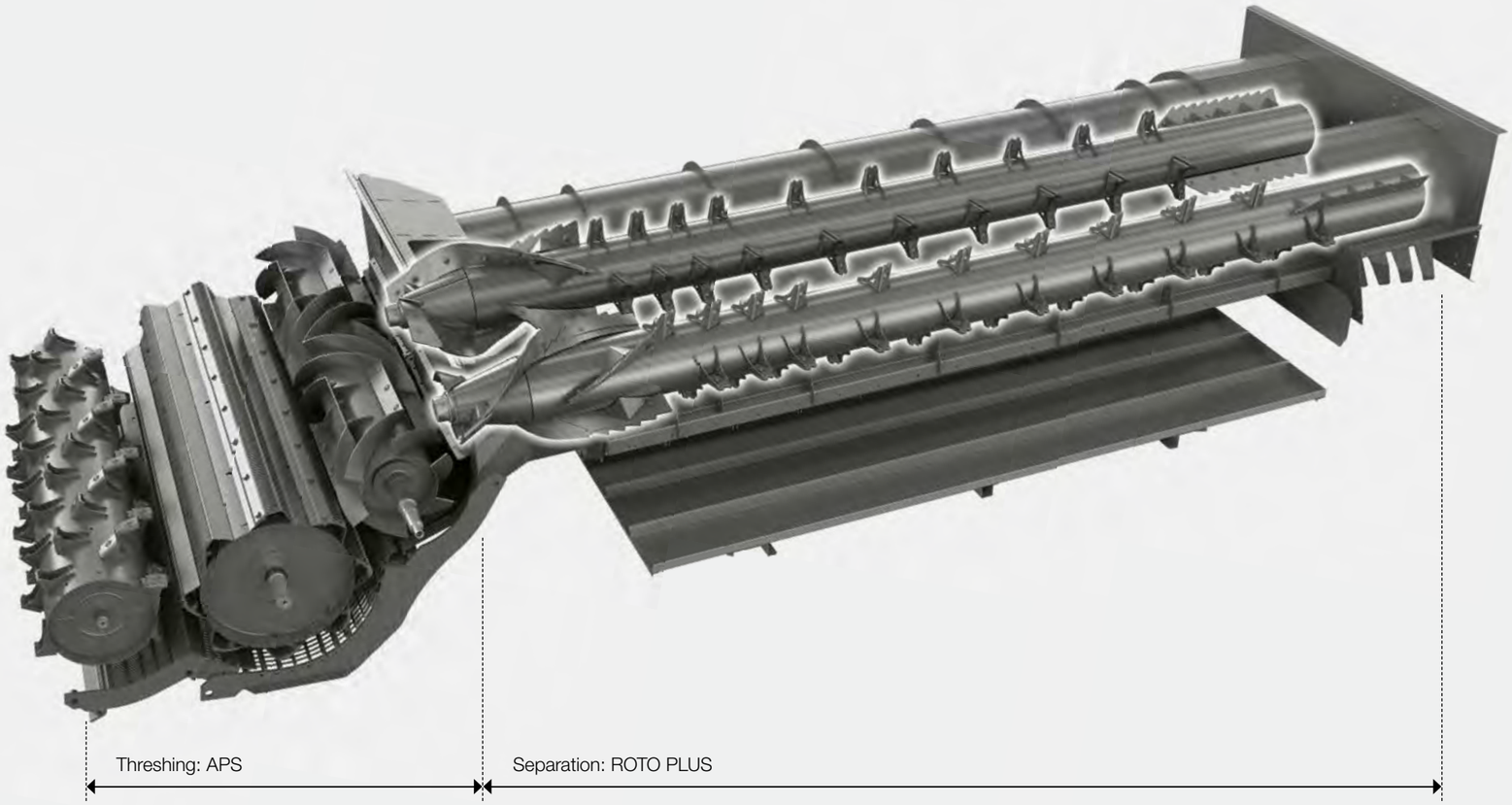
2 HP feeder housing.
The HP (header pitch) feeder housing allows manual adjustment of the cutting angle for optimal adaptation to all field conditions. The cutting angle can be moved 8° back and 11° forward from its central position. A top link on the feeder housing provides mechanical adjustment.

3 HP hydraulic feeder housing.
Hydraulic adjustment of the cutting angle is performed by means of a hydraulic ram. The cutting angle can be stored along with the four possible cutting heights. In laid crops in particular, when short stubble is required, the cutterbar is always at the optimal cutting angle.

4 V channel feeder housing.
With the flexible positioning of the cutterbar mount, the V feeder housing facilitates fast and easy mechanical adjustment of the cutting angle, even with a front attachment fitted. This ensures optimal adaptation to all field conditions and different types of tyres. The cutting angle is adjusted from a single central point and transmitted to both sides in parallel. The cutting angle can be read on a scale.

NEW: Reinforced feeder slats.
All LEXION 700 models are factory fitted with a new generation of harder feeder slats. They are particularly suited to high throughputs and difficult operating conditions.

More top technology.
APS HYBRID SYSTEM.



APS HYBRID SYSTEM
= APS + ROTO PLUS

The APS HYBRID SYSTEM. More than the sum of its high-performance parts.

The APS HYBRID SYSTEM – threshing technology from CLAAS – represents the combination of two outstanding technologies: the tangential APS threshing system and the highly efficient ROTO PLUS residual grain separation system.

Only CLAAS integrates both systems in one machine, with APS giving you a significant competitive edge over other systems.

This powerful duo offers you unbeatable advantages.

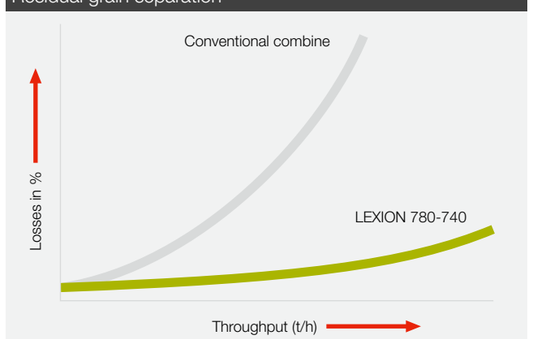
- Drum speed adjustment in the threshing system independent of rotor speed
- Individual adaptation of the entire process to changing field conditions over the course of the day
- Protective threshing with top throughput

Far ahead of the others.

With its effective residual grain separation system, crop flow speeds 10 times faster between the rotors and concaves and the high centrifugal force, the LEXION with the APS HYBRID SYSTEM offers separation qualities that differ fundamentally from straw walkers.

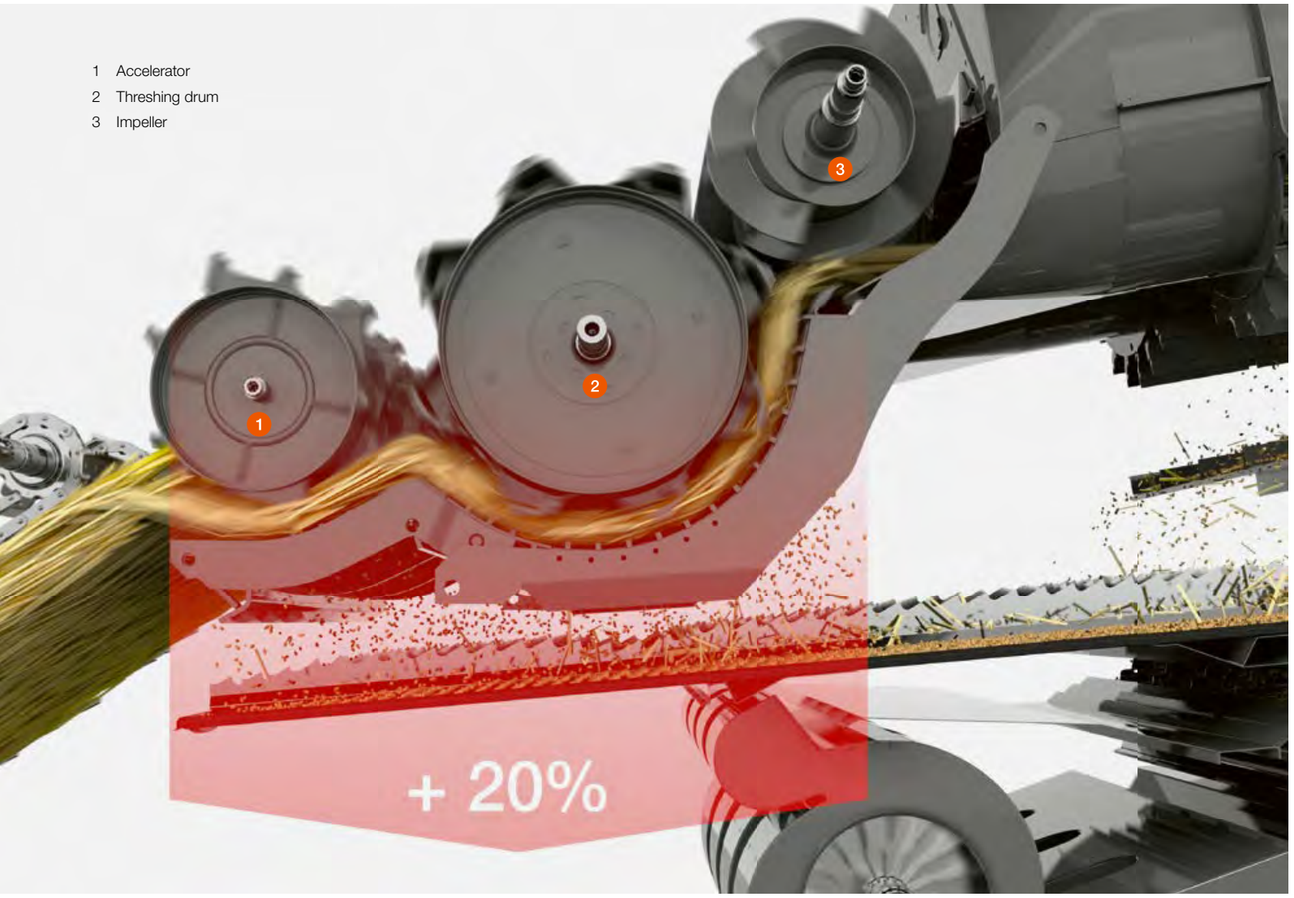
Take advantage of the unbeatable combination of APS + ROTO PLUS.

Residual grain separation



With conventional combine harvesters, the percentage losses increase sharply above a certain level of throughput because the residual grain separation is the factor limiting performance. The effective residual grain separation of the ROTO PLUS system in the LEXION enables much higher operating capacities without increased loss rates.

More pre-acceleration. APS.



Unique APS threshing system.

Only CLAAS offers this outstanding high-performance patented system with a pre-accelerator in the threshing unit. CLAAS generates its decisive competitive edge well before the threshing drum, with dramatically improved acceleration of the crop flow from 3 m/s to 20 m/s, triggering a chain of extremely efficient processes:

- The pre-accelerator separates the crop more thoroughly
- The crop flow is particularly even and up to 33% faster
- Higher centrifugal forces sort considerably more grains
- Up to 30% of all grains are already sorted in the pre-separation concave directly below the accelerator, significantly reducing the load on the main concave

This delivers a net performance increase of up to 20% with no increase in fuel consumption.

Closed threshing drum.

A closed threshing drum, which can be used for any crop, is available in addition to the open rasp bar threshing drum. This drum stands out with its optimised crop flow, which ensures even more protective handling of the crop, as well as improved grain quality.

Overload protection increases the daily output.

The concave is adjusted hydraulically from the operator's seat. Parallel concave control provides the best quality of threshing. At the same time, integrated hydraulic overload protection reliably prevents damage from foreign objects and enables you to use the full capacity of the machine without risk.

Top quality grain with the APS system.

The APS system is equipped with multistage adapters for optimal deawning. With the intensive threshing component and the deawning plates, which can be engaged in just seconds via a lever on the feeder housing, APS ensures outstanding grain quality.

Synchronised function.

The accelerator, threshing drum and impeller can be driven by a central variator. Each change in drum speed causes a corresponding adjustment of the speed of the accelerator and impeller.

The result is protective crop handling with even crop flow throughout.

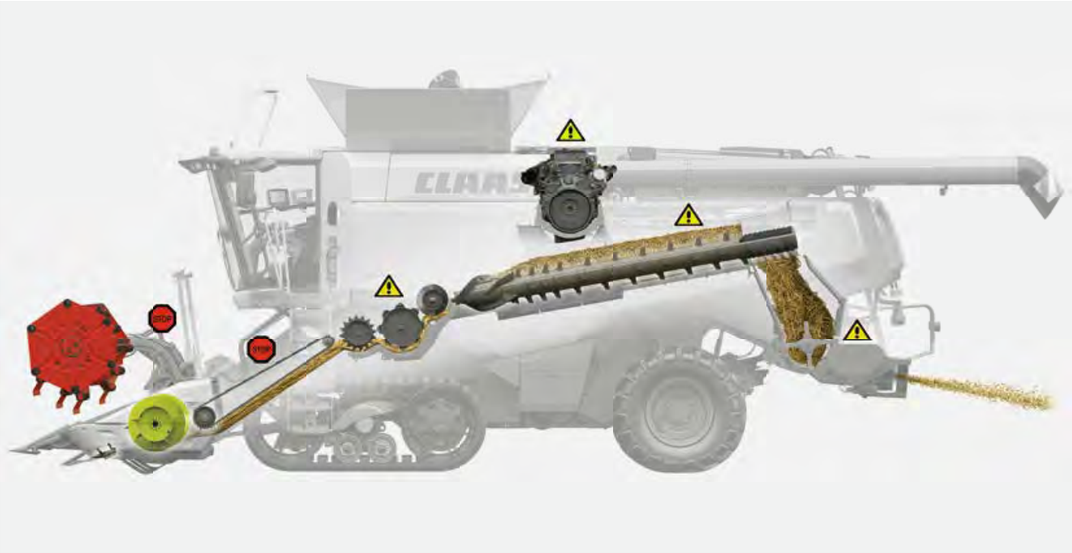
MULTICROP concave.

The pre-separation concave is designed as a MULTICROP concave capable of handling all types of crops. The three concave segments can be changed rapidly, minimising changeover times between crops and maximising efficiency and profitability.

The large, self-emptying stone trap is easy to open from the side

Segments can be changed quickly thanks to the MULTICROP concave

More safety and reliability.
AUTO CROP FLOW.



Monitoring risks.

What can we do to make harvesting operations safer and more reliable? In extreme harvesting conditions, the operator needs to concentrate fully at all times in order to guarantee trouble-free operation. Often there are only a few days when grain can be harvested while at optimum quality – and it is precisely then that every minute of operation counts.

Early warning.

The speeds of the following components of the machine are monitored to provide early warning of critical peak loads:
– APS threshing unit
– ROTO PLUS rotors in the residual grain separation system
– Engine

In the straw management area, the system detects if the straw chopper and power spreader are stationary.

Fast response.

If a preset slip limit is exceeded, the following measures are triggered automatically:
– Cutterbar brake is activated
– Feeder unit and front attachment are switched off
– Cruise control or CRUISE PILOT: speed is reduced to 1.5 km/h if the systems are active
– Grain tank unloading is switched off if it is active

These measures ensure that no more crop material enters the machine. This reduces downtime resulting from blockages or damage.

Matched to harvesting conditions.

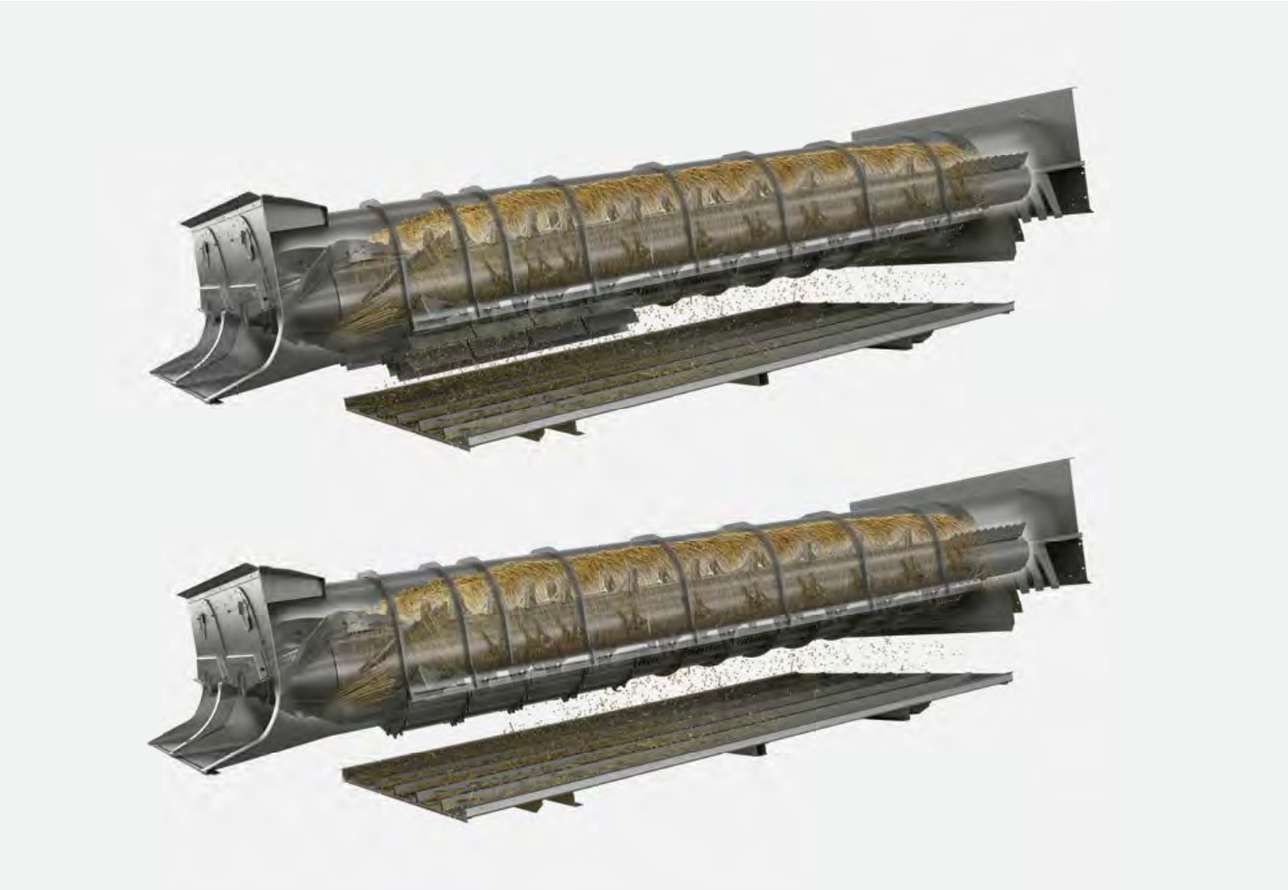
The AUTO CROP FLOW function can be switched on and off in CEBIS. This allows the operator to choose whether to use the system or not. The sensitivity of the slip limits can be set at three levels to match the system optimally to the conditions in the field.

Operate at the performance limits.

The AUTO CROP FLOW function is intended to support the operator in operating the machine at its performance limits. It provides the necessary safety margin by automatically monitoring the components relevant to the crop flow and initiating the necessary measures.

Harvesting is made more difficult by unevenly matured or laid crops

More of an edge in residual grain separation. ROTO PLUS.

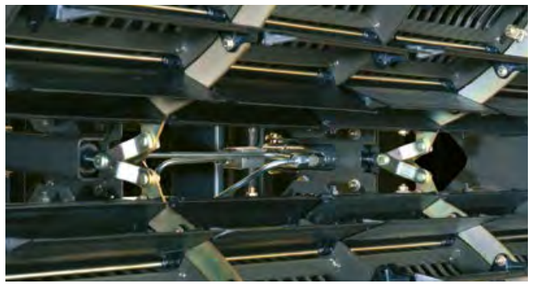


A superior integrated concept.

The unique APS enhanced by the exclusive ROTO PLUS concept results in the superior technology of the APS HYBRID SYSTEM, which once more impressively demonstrates the CLAAS advantage.

ROTO PLUS post-threshing grain separation.

The even feed of the APS creates ideal conditions for the separation of the remaining grain with ROTO PLUS. The principle behind ROTO PLUS is simple but extremely effective. The impeller of the APS threshing unit divides the straw into two flows of material and feeds them to the two counter-rotating, high performance rotors.



Hydraulically adjustable rotor flaps are used to adjust the separation area

High-performance rotors.

Eccentrically mounted rotors generate tremendous centrifugal force to separate the remaining grains from the straw. With a diameter of 445 mm and a length of 4.20 m each, the rotors in the LEXION provide a huge separation area.

The mixture of grain, straw and chaff first reaches the preparation floor through the returns pan before passing over the straw walker steps to the sieve pan. This significantly reduces the load on the sieve pan.

Conveniently adjustable rotor flaps.

Automatic control by means of CEMOS AUTO SEPARATION.
All LEXION models have hydraulically operated shutters to adjust the rotor separation area. The HOTKEY rotary switch is turned to reduce the open separation area of the rotor concave in steps simply and easily from the cab. This reduces the sieve load under very dry conditions and under wet field conditions the large separation area achieves more effective separation of residual grain. The result of variable rotor separation area adjustment is maximum throughput under all harvesting conditions.

Continuously adjustable variator.

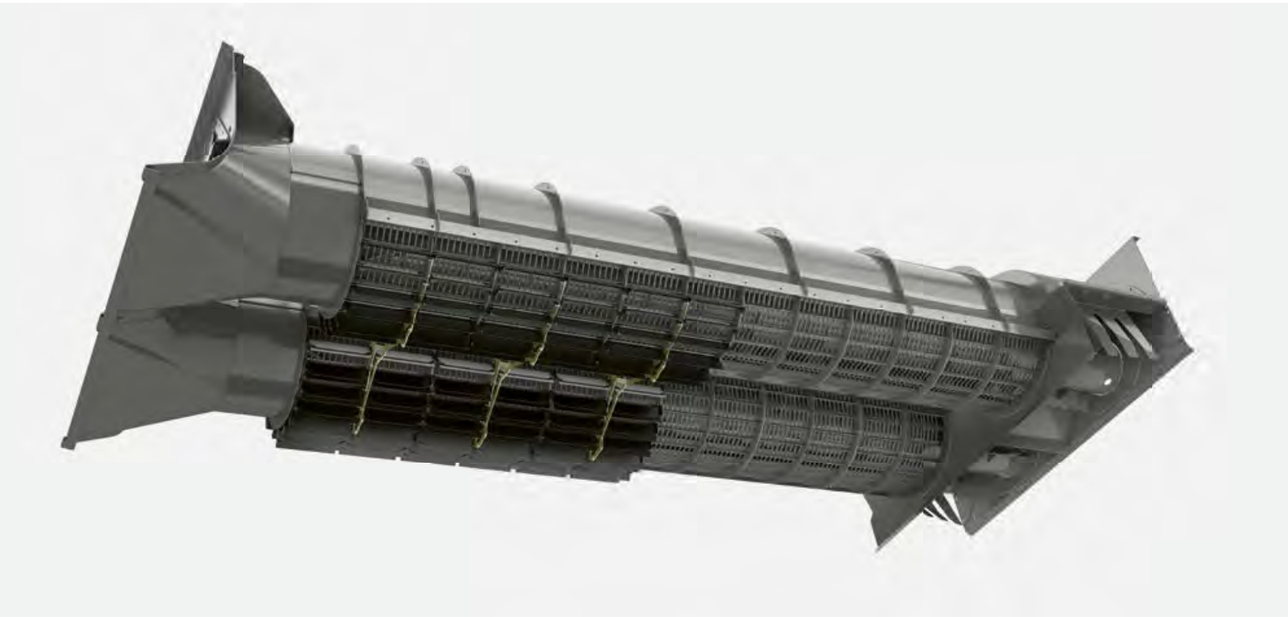
Automatic control by means of CEMOS AUTO SEPARATION.
The rotor speed can be continuously adjusted with ease from the operator's seat with the CEBIS rotary switch in the LEXION 770-740 models: from 350 to 1050 rpm, regardless of the threshing drum speed. This allows quick adjustment of the rotation speed in accordance with different crops as well as harvesting and straw conditions, making it easy to achieve the best work rates with the combine.

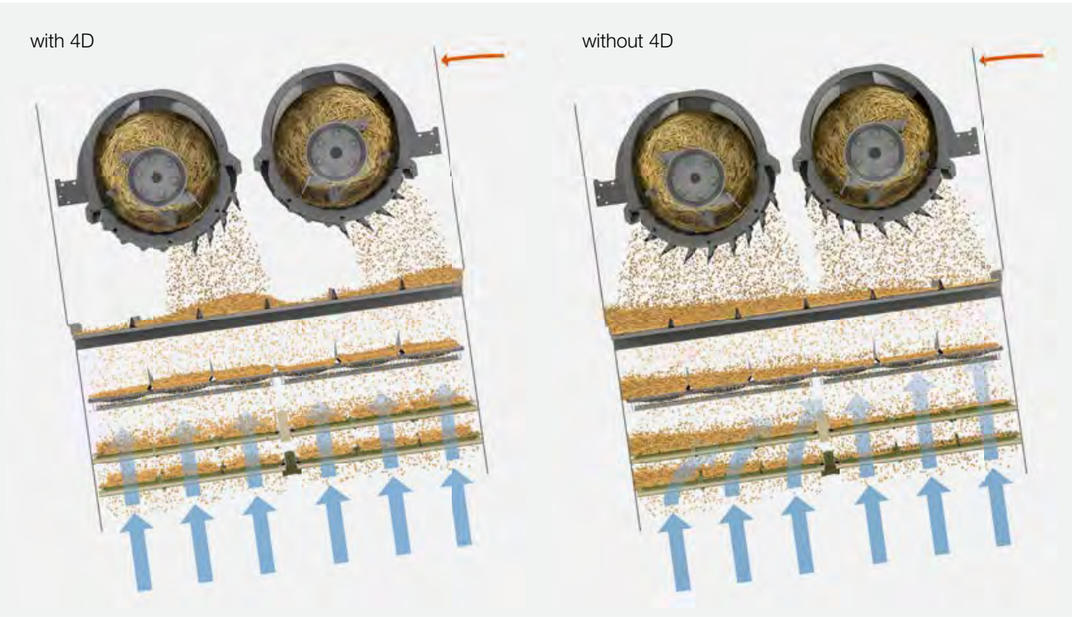
Committed to new dimensions of productivity. The LEXION 780 flagship model.

The performance of the ROTO PLUS residual grain separation has been aligned with the exceptionally high throughput of the LEXION 780: the speed of the two rotors has been increased to between 450 and 1250 rpm. Furthermore, an extra (sixth) rotor sieve installed under the rotors increases the separation area – and so enables even higher separation performance.

Rotorvariator

CLAAS 4D-cleaning system.





Meet challenges.

Using the machine to harvest fields which are not level presents the cleaning system with a particular challenge. With the machine running along a side slope, the material in the residual grain separation system moves to the side of the returns pan closest to the bottom of the slope. As a result, the preparation floor and the sieves are loaded on one side only. Therefore, when the machine is running up or downhill, the fan speed has to be adjusted in order to attain the optimum cleaning performance and avoid losses.

The CLAAS 4D-cleaning system.

The 4D-cleaning system is another module within CEMOS AUTOMATIC. It comprises the 4D function to control the rotor flaps and AUTO SLOPE to adjust the fan speed.

Central components: the rotor flaps.

The scope of the 4D-cleaning system includes a third pair of rotor flaps under the third separator concave. Furthermore, the individual rotor flap segments are divided so that the left or right half can be opened and closed separately.

How it works:
In order to ensure even loading of the cleaning system, 4D controls the rotor flaps on the basis of the transverse and longitudinal tilt as well as the current load on the cleaning system. In this way, the cleaning performance remains almost constant, even in difficult terrain. 4D adjusts the position of the rotor flaps automatically, acting in the background as an aid to the operator.

How does 4D work?

On a side slope:
– The uphill half of the rotor flap segment is opened
– The downhill half of the rotor flap segment is closed
The rotor flaps close sequentially from front to rear and open sequentially from the rear to the front (relative to the direction of travel in both cases).
When moving uphill:
– Fan speed is reduced
– Lower sieve is opened wider
When moving downhill:
– Fan speed is increased
– Lower sieve is closed further

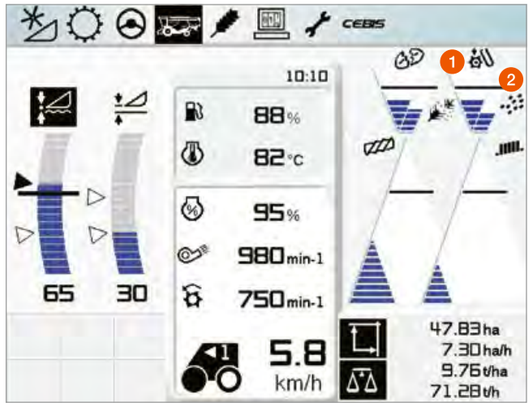
4D. How you benefit:

– Uniform distribution of material from residual grain separation process
– Although machine is operating on an incline, there is even loading of the
  – Returns pan
  – Preparation floor
  – Upper sieve / lower sieve
– The fan speed is adjusted automatically
– Improved sieve pan performance through adjustment of air volume
– Cleaning performance remains stable when operating on transverse and longitudinal slopes (in undulating terrain)
– Greater throughput and reduced losses on slopes

More thorough cleaning.
For impressive results.

Electric sieve adjustment

Divided preparation floor that can be pulled out towards the front



Returns and the GRAINMETER.

Automatic control by means of CEMOS AUTO CLEANING. The fill level and composition of the returns allow conclusions to be drawn about the best equipment settings to use. The cab also enables the operator to view the well-lit returns directly while seated.

All LEXION models can be fitted with a GRAINMETER in addition to the fill level indicator (1). The electronic returns quality display also allows the grain ratio (2) in the returns to be conveniently checked in CEBIS.

This data enables the operator to optimise the equipment settings manually or with the help of CEMOS to utilise the full production capacity of the LEXION.

JET STREAM.

The JET STREAM cleaning system is designed especially to work with the ROTO PLUS residual grain separation system.

- Dual ventilation step
- Height of the first step: 150 mm
- The long flow compensation channel ensures a consistent, extremely strong air blast
- 8-stage turbine fan (LEXION 780 / 770)
- 6-stage turbine fan (LEXION 760 / 750 / 740)
- Electrical sieve adjustment from the cab

Automatic control by means of CEMOS AUTO CLEANING and AUTO SLOPE.

Dual ventilation.

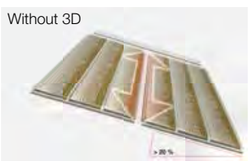
A dual ventilated step ensures intensive pre-cleaning while the multi-stage turbine fans, which can be adjusted continuously from the cab, create the necessary air flow.

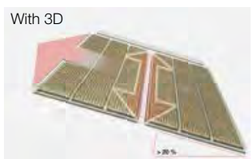
Preparation floor.

Pre-sorting of the grains (bottom) and chaff and broken straw (top) takes place on the preparation floor. The resulting lessening of the load on the upper sieve increases the cleaning capacity. The six (LEXION 780 / 770) individual plastic elements – or four in the case of the LEXION 760 / 750 / 740 – can be easily pulled out to the front for cleaning the preparation floor after harvesting is completed.

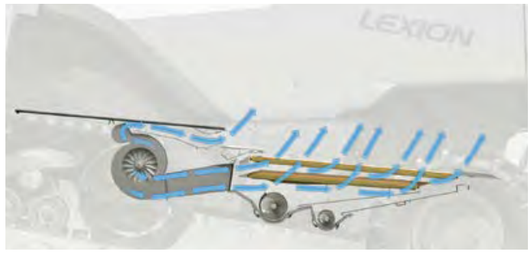
3D-cleaning system.

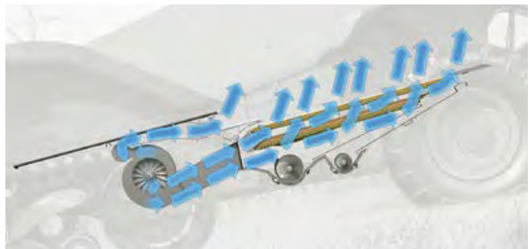
- Dynamic side slope levelling via active control of the upper sieve
- Completely consistent performance on side slopes up to 20%
- No wear – completely maintenance free
- Fast, simple retrofitting
- Ideal "hillside package" in combination with AUTO CONTOUR





AUTO SLOPE.
Automatic fan control.





The easy way to make the most of any incline.

Hilly terrain calls for extra concentration on the part of the operator. This is precisely why the AUTO SLOPE function provides support for adjustment of the cleaning system. If the machine is operating uphill, the fan speed must be reduced in order to avoid grain losses from the sieve pan.

Conversely, the fan speed must be increased during downhill operation to maintain the crop flow in the cleaning system and to ensure that the grains are separated.
AUTO SLOPE continuously adjusts the fan speed to the given conditions based on the fan speed preset by the operator.

How does AUTO SLOPE work?

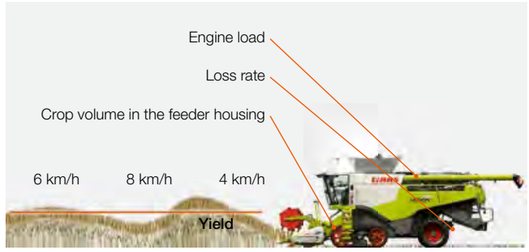
When moving uphill:
– Fan speed is reduced
When moving downhill:
– Fan speed is increased
How you benefit:
– No wear – completely maintenance free
– The fan speed is adjusted automatically
– Improved sieve pan performance through adjustment of air volume
– Cleaning performance remains stable
– Perfect interaction with 3D cleaning system in undulating terrain
– Greater throughput and reduced losses on slopes

CRUISE PILOT:
automatic forward travel control.

The CLAAS CRUISE PILOT automatically controls the harvesting speed for optimal results on the basis of the engine load. Depending on the travel mode, the system uses various machine parameters simultaneously for control: ground speed, crop volume in the feeder housing and grain losses.

The following travel modes are available, with parameters always adjusted on the basis of engine load:
– Constant speed – specified target speed
– Constant throughput – specified target throughput
– Constant throughput and losses – specified target throughput and loss rate

The factor responsible for restricting the harvesting speed, e.g. engine load, losses or throughput, is displayed in CEBIS. To enable superior control of the LEXION's power, you can set a maximum speed and five control response levels with quick, easy operation via the HOTKEY.



How you benefit:
The predictive CRUISE PILOT system responds before peak system loads occur. This automatically keeps your LEXION running at the upper limit of productivity at all times and delivers better harvest results.

NEW: Display and operation with the new CEBIS MOBILE.

The operator can now control the full functionality of CRUISE PILOT through CEBIS MOBILE as well as via CEBIS. The cockpit area of CEBIS MOBILE shows all the performance parameters, such as throughput per hour, engine load, crop volume in feeder housing and CRUISE PILOT activity. The operator has direct access which allows adjustments to be performed quickly and easily.

NEW

More adjustments per second. CEMOS AUTOMATIC.

CEMOS.

CEMOS is the CLAAS umbrella term for all the systems which optimise machine performance. There are two different CEMOS versions:

1 Dialogue-based systems, such as CEMOS DIALOG or CEMOS Advisor. These guide the operator through a number of steps in order to achieve the optimum machine configuration. This process requires the operator to confirm the suggested settings or apply them manually.

2 CEMOS AUTOMATIC, the term which covers various functions which optimise the machine and a particular process entirely automatically. All the operator has to do is activate the automatic system. The functions include CEMOS AUTO THRESHING, which adjusts the threshing unit, and CEMOS AUTO SEPARATION, which optimises the ROTO PLUS residual grain separation.

Harvest more – adjust less.

All CEMOS AUTOMATIC functions adjust the machine continuously and automatically in line with the current harvesting conditions. They provide maximum throughput with top grain quality and outstandingly clean grain while keeping fuel consumption to a minimum. All the operator has to do is activate the automatic functions.

Gold for CEMOS AUTO THRESHING at Agritechnica 2017

Automatic threshing, separation and cleaning.

CEMOS AUTO THRESHING finds the best setting for:
- Threshing drum speed
- Threshing concave distance

CEMOS AUTO CLEANING optimises the cleaning process by adjusting the following:
- Fan speed
- Upper sieve opening
- Lower sieve opening

CEMOS AUTO SEPARATION acts on the ROTO PLUS residual grain separation system and adjusts the following:
- Rotor speed
- Rotor flap position

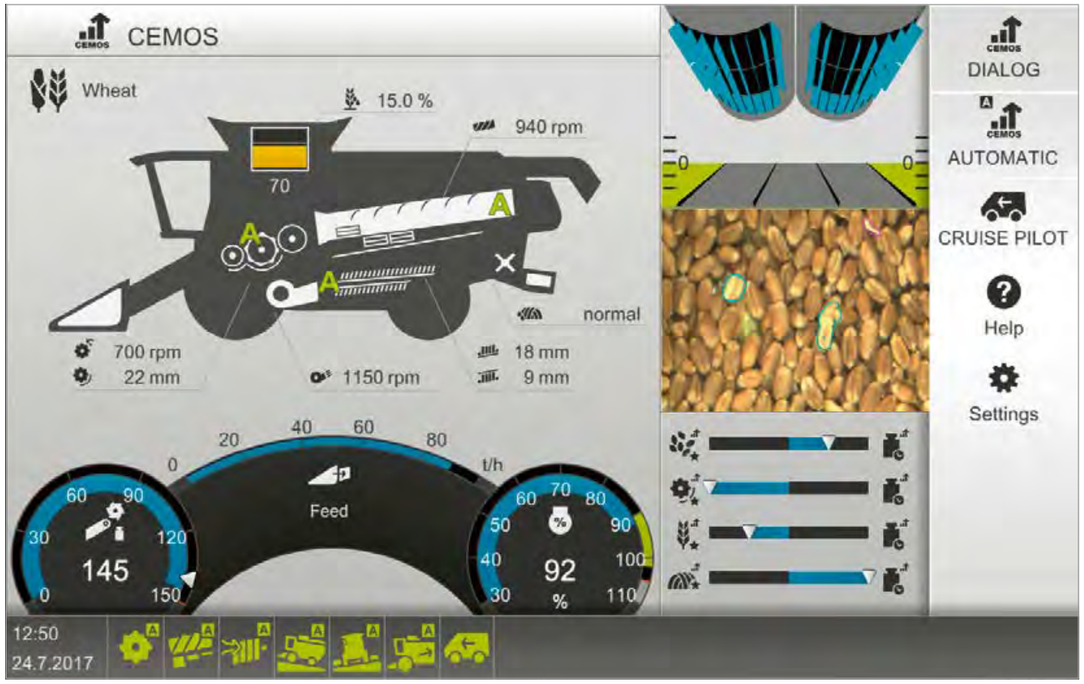
Functional principle.

When the combine starts work in the field, the CEMOS AUTOMATIC functions configure the machine to comply with certain preset values, quickly establishing the optimal setting for the work systems. Taking account of the changing harvesting conditions throughout the course of the day, this optimum configuration is repeatedly checked and continuously adjusted. As a result, the CEMOS AUTOMATIC functions carry out continuous readjustment on a scale which no operator would be able to achieve manually.

Range of applications.

CEMOS AUTO CLEANING and CEMOS AUTO SEPARATION are used for wheat, barley, triticale, rye, oats, rapeseed, maize and soybeans[1]. These functions are therefore available throughout the entire harvest season.

[1] Not available for CEMOS AUTO THRESHING



The new CEBIS MOBILE keeps you in the picture.

The current conditions of all major assemblies and active CEMOS AUTOMATIC functions are shown. In addition, the status of the 4D-cleaning system is indicated. The image from the GRAIN QUALITY CAMERA can also be shown. In this way, the operator can keep an eye on all the relevant information and adapt the operating strategy if necessary.

NEW: 4D-cleaning system status display.

The secondary display area can be configured to show the status of the 4D-cleaning system. This means that the current position of the rotor flaps is visible. CEMOS AUTO SEPARATION adjusts their position continuously in accordance with the required separation performance or straw moisture.

New look and operating concept for CEMOS.

The new CEBIS MOBILE touchscreen terminal allows the following functions to be controlled:
- CEMOS DIALOG
- CEMOS AUTO THRESHING
- CEMOS AUTO CLEANING
- CEMOS AUTO SEPARATION
- CRUISE PILOT
- AUTO CROP FLOW

Extremely easy activation via the AUTO PILOT button on the CMOTION or multifunction control lever

NEW

More capacity is used. Checked and proven.

Optimisation strategies.

The optimisation strategies are based on agricultural economics parameters:
- Grain quality
- Threshing quality
- Grain cleaning
- Straw quality (during swathing)
- Throughput

The selection made by the operator specifies the result which CEMOS AUTOMATIC is to attain in accordance with the required strategy. In order to do this optimally, the threshing, cleaning and residual grain separation settings are adjusted automatically by the CEMOS AUTO THRESHING, CEMOS AUTO CLEANING and CEMOS AUTO SEPARATION functions respectively.

The operator retains full control at all times.

CEMOS AUTO THRESHING, CEMOS AUTO CLEANING and CEMOS AUTO SEPARATION operate systematically on the basis of the CEMOS DIALOG software. The operator can intervene at any time and use the dialogue with CEMOS to establish the correct setting. Both automatic systems remain active in this situation.

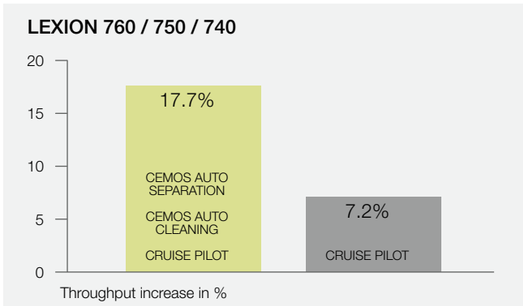
CEMOS DIALOG and CEMOS AUTOMATIC are linked. CEMOS DIALOG therefore handles the entire machine monitoring aspect and can provide additional operating suggestions in the form of text messages. Touching a text message opens a dialogue window with the relevant system suggestions.

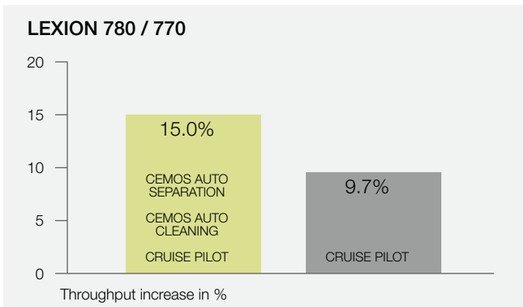
Fully automatic grain cleaning.

The GRAIN QUALITY CAMERA operates in conjunction with CEMOS AUTO THRESHING, CEMOS AUTO CLEANING and CEMOS AUTO SEPARATION to configure the settings automatically. The live image from the GRAIN QUALITY CAMERA can be displayed in CEBIS MOBILE. Touching the image opens a dialogue window for adjusting the sensitivity. In this way, the operator can set the required level of grain cleaning.

Proven performance increase.

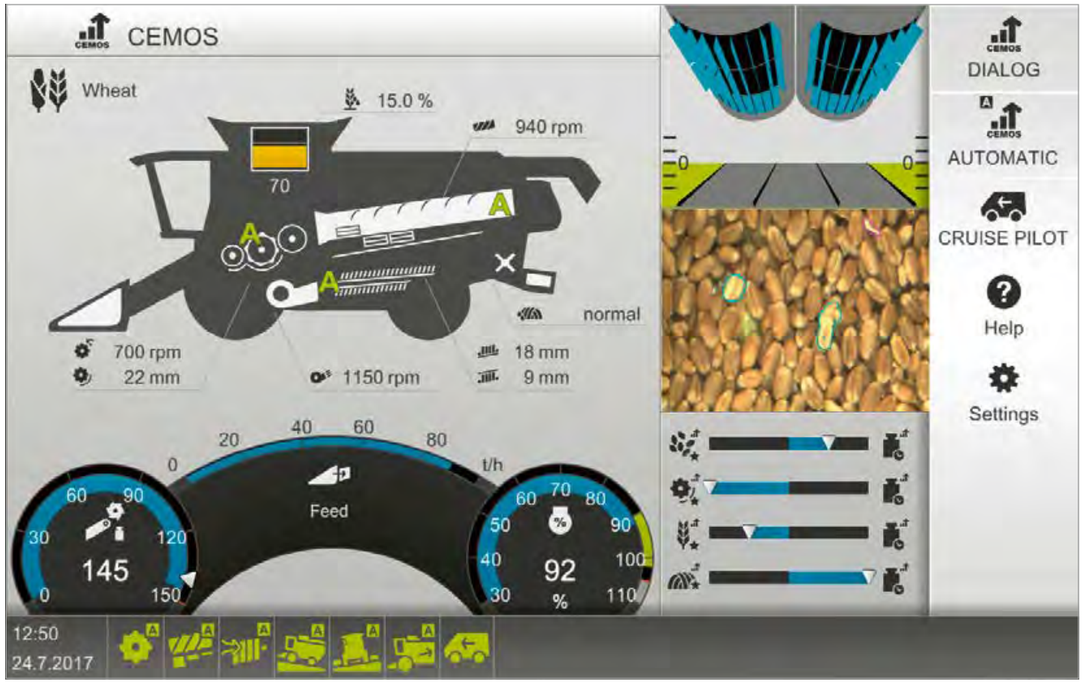
Analysis of 734 machines having logged a total of 78,617 hours of threshing in the years from 2013 to 2016 proved the performance increase resulting from CEMOS AUTO CLEANING and CEMOS AUTO SEPARATION.





HOCHSCHULE OSNABRÜCK
UNIVERSITY OF APPLIED SCIENCES

Produced in cooperation with Osnabrück University of Applied Sciences within the context of a Master thesis.



Display and operation.

CEMOS AUTO THRESHING, CEMOS AUTO CLEANING and CEMOS AUTO SEPARATION can each be controlled and monitored via the machine's CEBIS terminal or the CEBIS MOBILE terminal. The CEBIS MOBILE terminal provides the operator with a permanent overview of all the functional units of the machine and their settings. The machine's CEBIS terminal can only be used to control the units; it does not provide an overview of them. CEMOS AUTO THRESHING is only available in combination with the new CEBIS MOBILE.

It couldn't be easier.

The four slide controllers allow the operator to achieve the desired result extremely quickly. If the operator taps the slide controllers in the secondary display area, a larger slide controller pop-up menu opens. The slide controllers can now be adjusted to improve the grain quality, threshing, grain cleaning or straw quality. The sliders can be moved to the right to increase the throughput.

NEW

More dialogue.
CEMOS DIALOG.

Operators benefit, results improve.

CEMOS DIALOG is an impressive, reliable partner for operators, motivating them to optimise combine performance by adapting settings to the given situation. CEMOS DIALOG provides a sense of security and increases skills through ongoing learning.

CEMOS DIALOG – the right approach for the right setting.

CEMOS DIALOG meets the desire for an assistant capable of finding the right combine settings every time, balancing performance, quality, safety and efficiency. The CLAAS-specified values in the crop log constitute good averages for nearly any harvesting conditions, but there is usually room for optimisation. CEMOS helps to utilise this potential consistently.

NEW: CEMOS DIALOG with new operating concept.

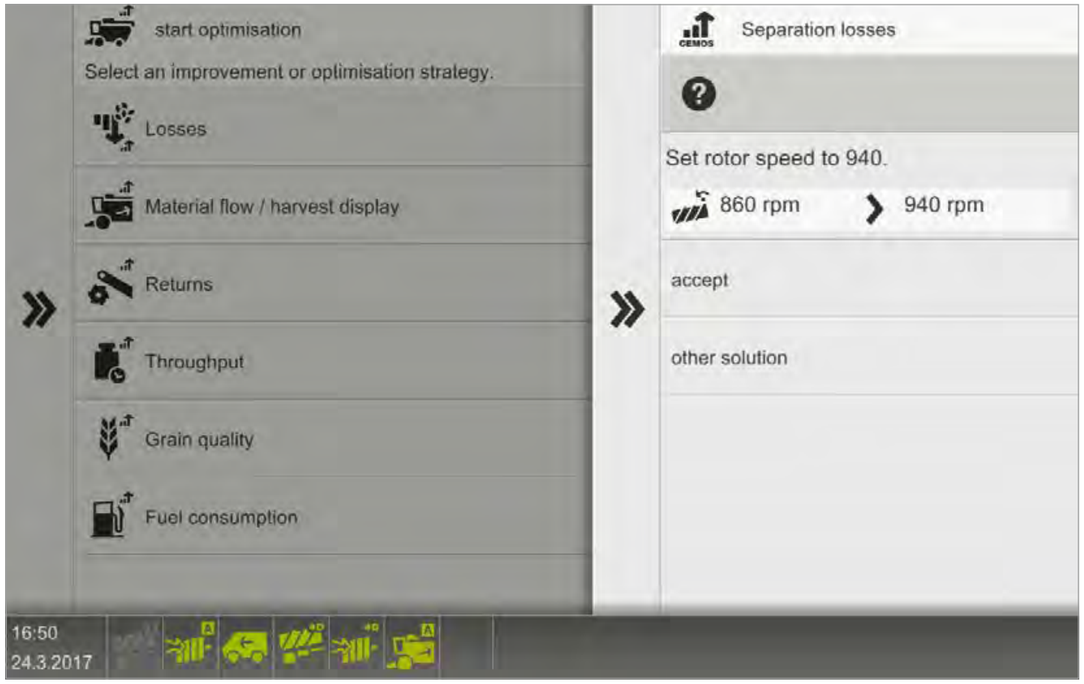
CEMOS DIALOG operating and display functions are controlled through the new CEBIS MOBILE terminal. The main display area shows the current status of all functional units.

Tried and tested.

CEMOS DIALOG has proven outstandingly successful in practical use. Our customers have confirmed increases in throughput many times over. Another recognised benefit for the operator is the learning effect which results from continuous communication with CEMOS.

Top award at Agritechnica 2009: CEMOS was awarded a gold medal by the German Agricultural Society (DLG)

The CEMOS Advisor App for smartphones provides mobile help for CLAAS combine harvesters



A working dialogue.

CEMOS DIALOG guides the operator to optimal settings using an on-screen dialogue.

Optimisation occurs in three steps:

1 The operator requests a suggestion for a setting (for example, to reduce losses)
2 CEMOS DIALOG makes a logical setting suggestion
3 The operator accepts this setting suggestion or rejects it

Steps 2 and 3 are repeated until the operator is satisfied with the result or CEMOS DIALOG has no further suggestions. Equipment adjustments (such as fan speed) are performed by CEMOS DIALOG whenever possible but must always be confirmed by the operator.

No adjustments are made automatically without operator confirmation. Nearly every CEMOS DIALOG screen offers comprehensive help. If a manual adjustment is necessary, CEMOS DIALOG displays an image to illustrate the setting for the operator.

Suggestions for mechanical adjustments.

Since CEMOS DIALOG takes the entire crop flow into account, the operator can also request suggestions for adjustments to mechanical components. If, for example, a crop flow problem arises in the cutterbar, CEMOS DIALOG provides relevant text messages and illustrations to assist the operator in troubleshooting.

More grain in the tank.

A perfect fit.
Solutions for controlled traffic farming.

The VARIO 1230, 1080 and 930 cutterbars are a perfect fit for 12 m, 10 m and 9.0 m controlled traffic farming systems. CLAAS can provide the appropriate grain tank unloading tubes for these cutterbars.

In this way, the transfer vehicle can run in the track left by the combine harvester. The VARIO 1230 is used in combination with the 7 XL grain tank unloading tube for 12 m controlled traffic farming systems. The 7 XL grain tank unloading tube is simply folded for on-road travel.

Convenient yield checking.

The large window in the back wall of the cab allows convenient visual inspection of the harvested crop. The interior of the grain tank is illuminated for work at night. An inspection port provides constant access so samples can be taken manually any time.

The sample cup, which is always to hand in the space provided in the inspection port, also serves as a calibration container for determining the bulk density.

Grain tank capacity of up to 13,500 l.

After the threshing unit, residual grain separation and cleaning systems have done their work, the cleaned grain is collected in the expandable grain tank.

Here too, with a large volume of up to 13,500 litres, the LEXION demonstrates its capacity for high performance, enhanced by numerous other strengths.

PROFI CAM – everything in view.

All LEXION models can be equipped with a PROFI CAM at the end of the grain tank unloading tube. This camera position has been chosen precisely to allow up to three processes to be monitored simultaneously on an additional colour display from the comfort of the cab:

- Grain tank unloading tube deployed: transfer process
- Grain tank unloading tube retracted: distribution of chopped material
- Grain tank unloading tube retracted: rear of machine during reversing or on-road operation

CEBIS rear camera.

The image from the rear camera fitted on the rear hood is fed straight to the CEBIS screen. There is no need for an additional screen in the cab. The image from the camera is displayed automatically on the CEBIS screen as soon as the multifunction control lever or CMOTION is used to move the LEXION backwards. It is also possible to use the DIRECT ACCESS button to call up the image from the camera.

Up to four cameras can be connected to the system and simultaneously feed their images to the colour monitor as well as the S10 terminal in the cab.

Greater transparency.
GRAIN QUALITY CAMERA.

A sensor that makes all the difference.

The GRAIN QUALITY CAMERA is the most important sensor for the automatic adjustment of the threshing unit and the cleaning system. It provides real-time pictures of the crop from the elevator head. As it does this, non-grain constituents (NGC) and broken grains are identified and their levels determined. The information acquired in this way is considerably more accurate than a visual assessment by the operator, as some of the crop in the grain tank becomes segregated. Conducting a visual assessment of the level of NGC and broken grain content is therefore very difficult for the operator.

Display and operation in CEBIS.

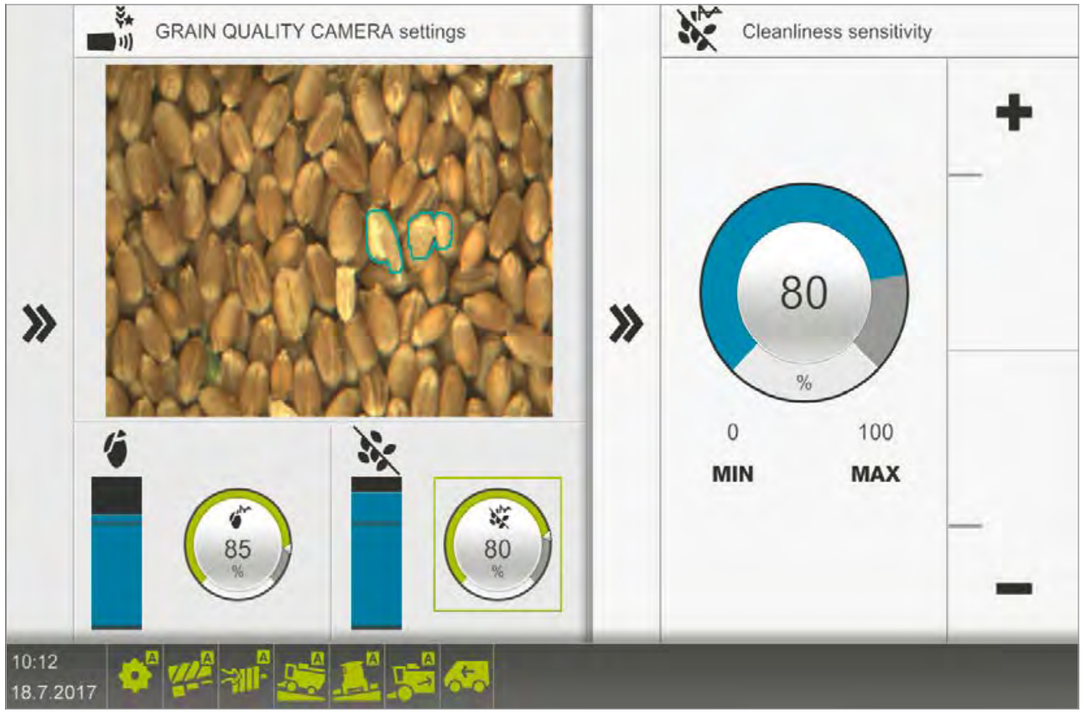
The grain quality can be represented in CEBIS in two ways. It can be shown as a live video image which can be assessed by the operator in conjunction with the display of the proportion of broken grains and NGC shown in two columns at the right edge of the picture. If there is a change in the quality of the crop, the operator can react immediately. Alternatively, the proportion of broken grains and NGC can be shown in the "typical" CEBIS harvest display next to the returns display.

Possible crops.

The GRAIN QUALITY CAMERA can evaluate the following crops:

- Wheat
- Rapeseed
- Maize
- Barley
- Rye
- Triticale

It is, of course, also possible to show the video image of other crop types in order to inspect the crop flow.



Display and operation in CEBIS MOBILE.

If the machine is additionally equipped with the CEBIS MOBILE terminal, the video image from the GRAIN QUALITY CAMERA can be displayed continuously. It cannot then be displayed on the machine's CEBIS screen. Tapping the camera image opens the dialogue window with a large live image from the camera, the two columns showing the proportions of broken grains and NGC as well as the sensitivity adjustment options.

The interaction.

The assessment by the GRAIN QUALITY CAMERA is a very important control parameter for the AUTO THRESHING, AUTO CLEANING and AUTO SEPARATION functions of the CEMOS AUTOMATIC system.

The AUTO THRESHING function is associated with the GRAIN QUALITY CAMERA whereas AUTO CLEANING and AUTO SEPARATION are able to function without this feature. The sensitivity of the camera is such that the control behaviour of the CEMOS AUTOMATIC functions can be influenced by it and adjusted to obtain the desired result.

Even better.
The straw management.

Efficient and precise.

The new straw chopper, the new mechanically driven power spreader and the automatic discharge direction adjustment form the effective and well-thought-out straw management system for your LEXION.

More performance. More convenience.
The new straw chopper.

For more throughput.

Sometimes, bigger is better. Crop intake and transport are improved significantly by the increased diameter of the new straw chopper. The extended floor of the straw chopper extends the transit time of chopped material and accelerates the material to a significantly greater degree. When used with the standard deflector, this increases the projection distance and spreading quality dramatically.

CLAAS straw management. With SPECIAL CUT.

From the rotors, the straw moves directly to the chopper, the intensity of which can be varied depending on the conditions. Up to 108 closely arranged dual bladed knives, a cross blade and a static knife array are the recipe for finely chopped straw. The LEXION also has a swivelling concave plate element for the best straw chopping and spreading. The finely chopped material is subsequently fed to the power spreader.

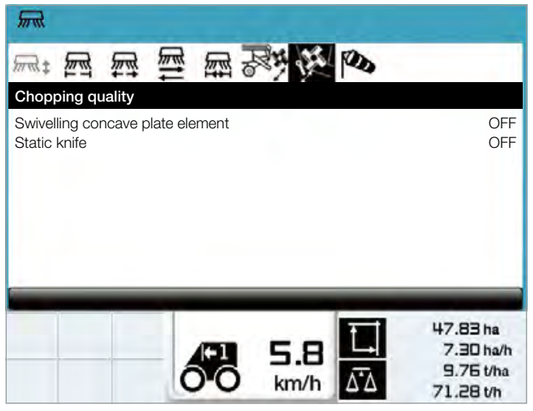
1 Adjustable cross-cutter
2 Rotor shaft
3 Knife
4 Friction bar
5 Swivelling concave plate element
6 Adjustable static knife array

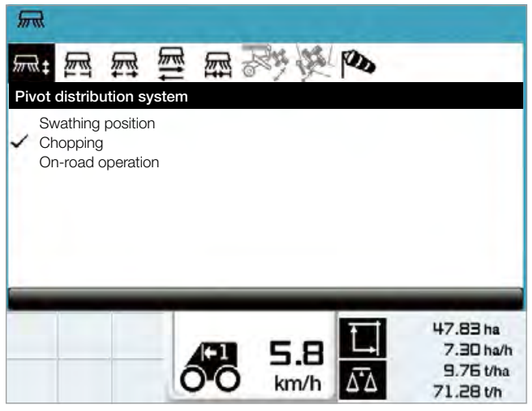
Convenient optimisation of chopping quality.

In the new straw chopper, both the swivelling concave plate element (5) and the static knife array (6) can be adjusted hydraulically. This means that the chopping quality can be adjusted in CEBIS while the machine is working, thereby enabling a flexible reaction to field conditions. A mechanical adjustment system, which is operated by two levers without the need for any tools, is also available.

Switchover to swathing from the cab.

Needing to get out of the cab is now a thing of the past, at least when it is a matter of switching the straw chopper from swathing to spreading chopped material. This task can be performed effortlessly from the cab via CEBIS. If only certain parts of a field need to be chopped, the operator can switch the machine over in a matter of seconds.





Greater efficiency. Greater precision.
The new power spreader.

NEW: Mechanically driven power spreader.

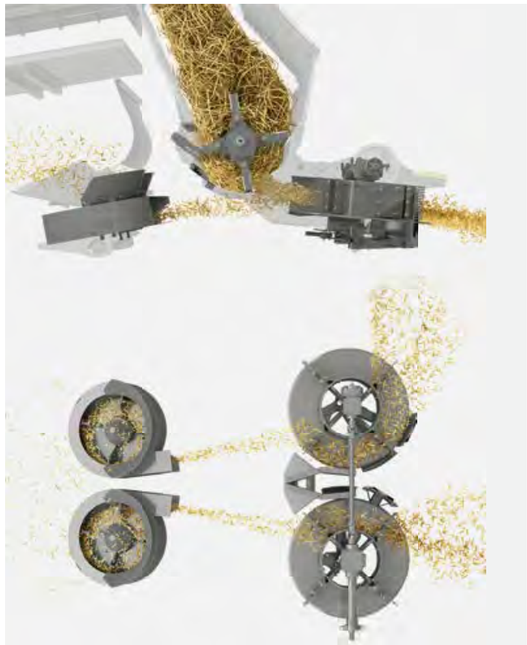
Perfect straw spreading of the highest quality is guaranteed by the mechanically driven power spreader. The two counter-rotating spreading rotors are driven by a belt and therefore always run at a constant speed. This unique drive concept ensures consistent spreading quality.

Precise spreading of chopped material and chaff.

Both the chopped material and the chaff from the cleaning system are caught in motion by the power spreader and accelerated further. This approach, together with a mechanical drive, keeps the power requirement down and makes for low fuel consumption.

Performance map-controlled spreading.

Each spreading rotor has two movable deflectors whose spreading widths can be adjusted either together or separately. This allows the system to be adjusted to any conditions encountered in practice. In this way, the LEXION is able to spread straw efficiently using minimal energy – even under very unfavourable conditions such as extremely high straw volumes, differing degrees of straw moisture, strong crosswinds or sloping terrain.

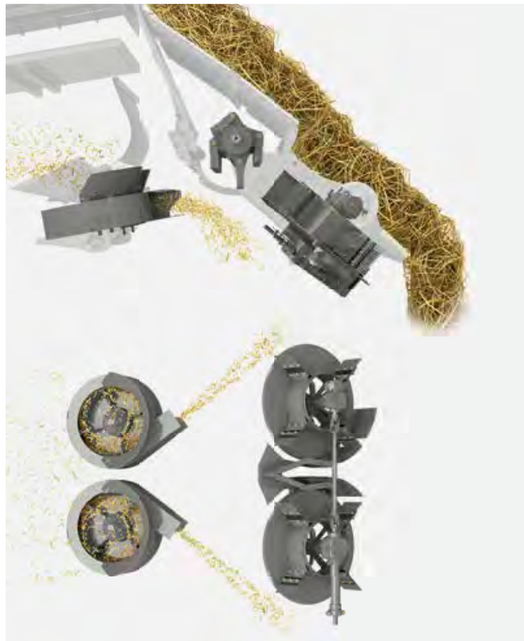


The power spreader in chopping mode.

The straw chopper feeds the material straight to the power spreader. The power spreader accelerates the crop flow again and spreads the material across the entire working width.

Combination of power spreader and chaff fan.

Short straw and chaff are routed from the sieve pan to the chaff fan. The chaff fan feeds the material straight to the power spreader. In this way, the mixture of chaff and short straw, which can account for up to 25% of the total throughput, is fed into the active spreading system which spreads it across the entire working width.



The power spreader during swathing.

In swathing mode, the power spreader is simply folded away downwards and the drive is completely disengaged. The power spreader is now stationary and no longer requires any power. Chaff and short straw from the sieve pan are now spread by the chaff fan.

Power spreader positions: transport, chopping, swathing

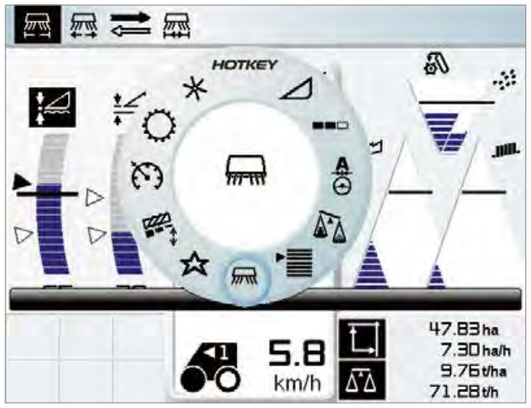
More effective spreading.

Automatic discharge direction adjustment.

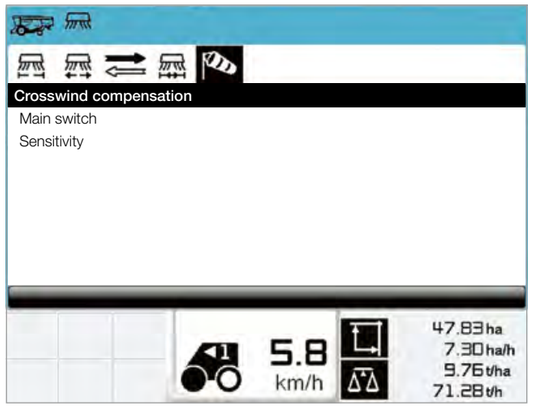
All LEXION models with a power spreader can be equipped with two sensors for automatic adjustment of the direction in which the chopped material is discharged. The sensors are fitted on the light brackets at the left and right of the machine. The operator can adjust the sensitivity of the sensors easily in CEBIS.

Even chaff distribution.

Short straw and chaff are routed from the sieve pan to the chaff spreader or chaff fan. The chaff spreader is hydraulically driven and spreads the sieve pan discharge evenly behind the machine. The speed, and therefore the spreading width, can be adjusted individually via a flow control valve.



Manual setting of the direction and width of spreading in CEBIS



Settings in CEBIS

Automatic crosswind compensation.

Crosswinds affect the discharge direction of the chopped material. This results in inconsistent straw distribution and chopped material at the crop edge, which can inhibit the crop flow in the cutterbar (A). The remedy: sensors at the rear of the machine detect the strength of the crosswind, and the discharge direction of the chopped material is adjusted to compensate. The resulting benefits are automatic, uniform distribution of the chopped material and a reduced workload for the operator (B).

Automatic discharge direction adjustment when operating on sloping terrain.

When the machine is operating on sloping terrain, gravity keeps the sensors at the rear vertical at all times. The automatic discharge direction adjustment system also enables uniform distribution of the chopped material across the entire working width (D) when operating on sloping terrain, thereby reducing the operator's workload in crosswinds and when working in sloping terrain.

Committed to performance.
CLAAS POWER SYSTEMS (CPS).

Optimal drive for maximum performance: CPS.

At CLAAS, machine development means an ongoing effort to achieve even greater efficiency and reliability as well as greater profitability in the field.

Of course, this applies to all aspects of a CLAAS combine harvester. The drive system is of decisive importance – and requires much more than just a powerful engine.

In CLAAS POWER SYSTEMS, we have brought together the best components to create a drive system in a class of its own. One that always delivers maximum performance every time it is needed. Ideally matched to the work systems and with fuel-saving technology that quickly pays for itself.

It goes without saying that the LEXION also embodies this development philosophy: the combination of experience gained over 75 years of combine production and 15 years of LEXION development has resulted in the best ever CLAAS drive system that delivers the best working results.

More technological landmarks and engineering refinements: for maximum reliability even under extreme conditions. The LEXION is ready.

More power reserves.
The engines.

Power and intelligence in one.

The new Mercedes-Benz engines with a displacement of up to 15.6 l deliver top performance for the LEXION while keeping operating costs down. With the new Mercedes-Benz engines, all LEXION 700 models meet the requirements of exhaust emissions level Stage IV (Tier 4). With a displacement of 15.6 l, the two top models, the LEXION 780 and 770, have copious reserves of power. In the case of the LEXION 780, in fact, a maximum output of 626 hp is available. The LEXION 750 and 740 models have a displacement of 10.7 l and are now also equipped with DYNAMIC COOLING. Only the LEXION 760 is powered by a Perkins engine, which, like all the others, benefits from the full range of CLAAS Service support.

The facts.

- Mercedes-Benz OM 473 LA, 15.6 l (LEXION 780 / 770)
- Perkins 2206F, 12.5 l (LEXION 760)
- Mercedes-Benz OM 470 LA, 10.7 l (LEXION 750 / 740)
- Emissions standard Stage IV (Tier 4)
- Optimised combustion process
- Improved engine running characteristics
- High torque
- Low fuel consumption
- Optimal power transmission

Stage IV (Tier 4) through SCR and EGR.

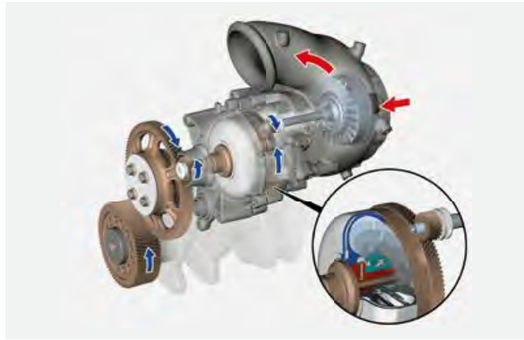
All LEXION 700 models comply with the Stage IV (Tier 4) emissions standard by means of SCR (Selective Catalytic Reduction). This process converts the nitrogen oxides in the exhaust flow into pure nitrogen and water. The urea solution necessary for this is carried in an 80-litre tank. In addition, EGR (Exhaust Gas Recirculation) is used to mix a proportion of the engine exhaust gas with the intake air. This reduces the combustion temperature in the engine which in turn largely prevents the formation of nitrogen oxides.

Turbo-compound technology for LEXION 780 / 770.

To increase efficiency at full load, the 15.6 l engine is equipped with a second turbine in the exhaust flow from the turbocharger. The energy recovered by this turbine is transferred to the engine flywheel, thereby increasing its efficiency by 3% (up to 37 kW). As well as increasing efficiency, this technology makes for very smooth running and stable torque.

80 l tank for urea solution

Two batteries for the 24 V engine electronics, one battery for the 12 V onboard electronics



More cool intelligence.
DYNAMIC COOLING.

DYNAMIC COOLING.
Now for all LEXION 700 models.

All LEXION 700 models are equipped with a revolutionary, horizontal cooling system. It is optimally situated in a horizontal position behind the engine compartment. A large rotating sieve with a diameter of 1.6 metres ensures that it is able to take in sufficient fresh air at all times. Permanent cleaning is performed by an automatic dust extraction system. The large radiator package has sufficient reserves to ensure continuous cooling while also providing the benefit of extended cleaning intervals.

Save fuel through variable fan drive.

Unique among combine harvesters, all LEXION models are equipped with a variable fan drive whose speed is adjusted automatically in accordance with the degree of cooling required. This makes it possible to save power which the rest of the machine can call on. This intelligent system only draws power when it really requires it.

Silver SIMA Innovation Award 2013

It's curtains for heat build-up.

The design of the cooling system provides an ideal air flow. Air is drawn in at the top, passes downwards through the radiator and is then vented through the engine compartment and side cooling fins.

This creates a particularly useful curtain effect. The air flow actively inhibits dust from rising, thus preventing soiling of the radiator and effectively functioning as a permanent cleaning system. This has two advantages for you: sufficient cooling at all times and long maintenance intervals.

More performance on steep slopes. LEXION 760 / 750 MONTANA.

The working hydraulics: more lifting power, faster response.

The outstanding performance of the LEXION is now also better than ever on steep slopes. The working hydraulics offer improved operation of the entire MONTANA control system:

- Higher efficiency of the working hydraulics thanks to an axial variable displacement pump (LS pump)
- Operating pressure 200 bar (+10%)
- Oil displacement of the working pump: 120 l/min (+50%)
- Greater front attachment lift capacity: +10% weight / +50% faster response (proportional valve technology)
- Maximum reversing power even when idling, 10% more torque
- Synthetic oil with a high viscosity index provides better friction characteristics
- Low noise thanks to constant system pressure
- Efficient pump distributor gear

Effective threshing just like on level ground.

The drive axle is the key component of the LEXION MONTANA. Hydraulic swing rams turn the portals to adjust the wheels to the ground. The MONTANA chassis compensates cross tilt up to 17% and longitudinal tilt up to 6%. As a result, it is able to operate effectively on steep terrain and deliver a high threshing output, just like on level ground. The operator is in an optimal, comfortable seated position on any slope, enabling even long working days to be handled without stress.

MONTANA feeder housing for cutterbars up to 9 m.

Based on the axle position, the innovative MULTI CONTOUR system moves the pivoting frame, adjusts the cutting angle and performs all the familiar AUTO CONTOUR functions. The MONTANA feeder housing is equipped with a horizontal ram for cutting angle adjustment as well as two vertical rams for AUTO CONTOUR control and side slope levelling. The reinforced design enables harvesting with a VARIO cutterbar up to 9.0 metres wide.

Operating panel with MONTANA control system

3D-cleaning system for extra reliability.

In the LEXION MONTANA as well, the 3D-cleaning system ensures good performance on side slopes above 17%.

The advantages of MONTANA at a glance:

- Side slope levelling up to 17%
- Longitudinal levelling up to 6%
- Suitable for cutterbars up to 9 metres wide
- Improved traction through differential lock
- Easier operation
- Improved functionality of the entire MONTANA control system thanks to working hydraulics
- 30 km/h hydrostatic ground drive
- Car-like driving characteristics
- More comfort for the operator
- Same performance as on level fields

The differential lock enables the combine to proceed safely even on very steep slopes. The wet hydraulic multiple disc brake provides additional safety.

30

Greater soil protection in the field.

Thoroughly proven in practical use.

CLAAS has offered its proprietary TERRA TRAC system for over 20 years. Thousands of TERRA TRAC crawler tracks have proven themselves in practical use in the most challenging conditions time and time again.

At home on any road.

With a choice of four different TERRA TRAC tracks in three widths, the LEXION models can be specified for the particular requirements of any road infrastructure and road traffic regulations. This means that there is a suitable TERRA TRAC for every requirement.

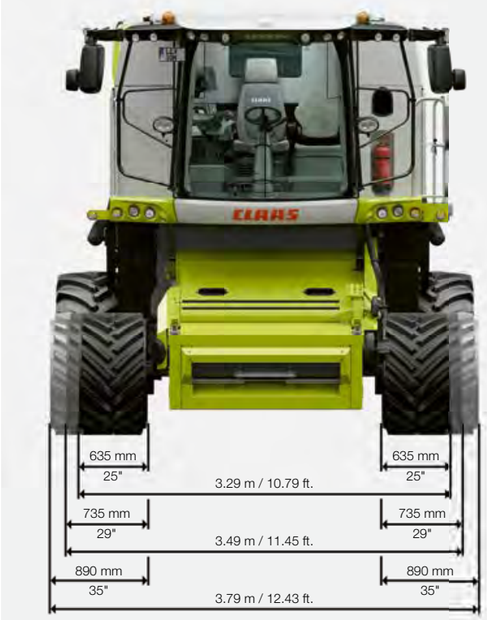
A new dimension of comfort.

Equipped with the TERRA TRAC system, your LEXION moves gently over the field. Independent suspension for all the TERRA TRAC components (drive wheel, land wheel and support rollers) protects the machine, increases comfort and ensures better stability on corners.

- Hydropneumatic suspension which can be raised and lowered while the machine is operating
- Hydraulic rams with an integrated pressure reservoir support the suspension
- Automatic level compensation from 2 km/h
- Effect: improved stability on corners

635 mm

LEXION 760 / 750



LEXION 780 / 770

At a glance: the TERRA TRAC crawler track assembly.

Protecting the soil and preventing compaction during harvesting means you won't have to worry about crop losses in the future.

- Transport width only 3.29 m (LEXION 760 / 750)
- Transport width 3.49 m (LEXION 780 / 770)
- Soil protection: 66% lower ground pressure than with wheeled machines
- Improved traction (maize/rice/wet conditions/slopes)
- Greater stability on slopes (side slopes)
- Less drive resistance, less slippage, lower fuel consumption
- Longer operating times, better seasonal performance
- Fully suitable for road travel at 30 or 40 km/h

Three different chassis heights can be set in CEBIS to adjust the machine's ground clearance.

735 mm

890 mm, grain

890 mm, rice

More manoeuvrability.
The 4-link axle.

Four links for exceptional manoeuvrability.

LEXION – a commitment: to the active pursuit of new solutions. This design, developed and patented by CLAAS, sets new standards with two outstanding advantages. It ensures unrestricted mobility, even with large tyres up to 1.65 metres high (30"). And it provides exceptionally high stability and load-bearing capability.

Rather than responding to uneven terrain like a conventional swing axle with just a swing motion about the suspension point, the new 4-link axle also features a lateral movement. This gives the 4-link axle considerably greater flexibility with a small turning radius.

30" tyres up to 1.65 m high.

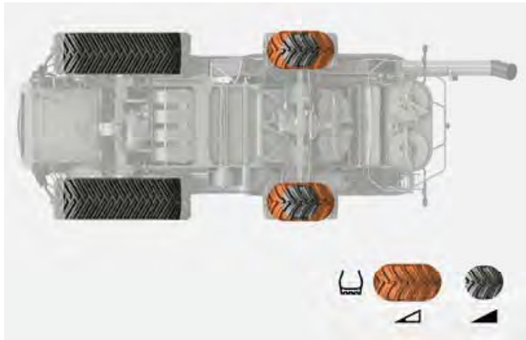
The greater contact area results in a reduced track depth. So you are protecting the ground not only with TERRA TRAC at the front, but with the unique CLAAS 30" tyres on the rear wheels.

- Tyre size 500/85 R 30
- Tyre height up to 1.65 m

Tyre pressure control system for steering axle.

In order to provide even greater traction, the steering axle of the LEXION 780-740 can be equipped with a tyre pressure control system. The operator can then easily adjust the tyre pressure from the cab via CEBIS. If the required tyre pressures for road and field use have been stored, the appropriate setting is applied automatically when the on-road switch is actuated.

As an alternative to using CEBIS, the tyre pressure can also be adjusted manually in the field by means of a toggle switch mounted in the cab roof.



Lowering the tyre pressure in the field reduces soil compaction and slip while increasing traction. Adjusting the pressure for on-road operation increases directional stability while reducing wear and fuel consumption.

Unique 30" tyres for excellent soil protection

Hydrostatic ground drive.

Thanks to the electrohydraulic control system, the LEXION can be equipped with the CRUISE PILOT for automatic forward travel control. But whether used in manual or automatic mode, it drives like a luxury car with such a high level of operating comfort that performance is enhanced immediately.

Depending on the model, it is possible to select an on-road top speed of 20, 25, 30 or 40 km/h.

Differential lock.

If, under extremely wet conditions, the wheels begin to slip and spin, the differential lock can be used to redirect the drive torque: from the wheel which is spinning to the one with better traction. The ability to enhance traction in this way ensures that progress can continue to be made even when the ground is wet. The wheeled versions of the LEXION 780 and 770 can be equipped with the differential lock.

POWER TRAC.

A touch of a button is all that is required to summon up the full power of the LEXION, ensuring that it can continue to operate even in the most challenging soil conditions: with maximum pulling power, yet reduced fuel consumption. The all-wheel drive operates reliably and is maintenance-free.

The drive concept:
- Additional traction is provided by a central hydrostatic drive on the rear axle
- All-wheel drive with intelligent control technology can be engaged while on the move
- Classic two-wheel drive possible by mechanically disengaging rear-wheel drive: offers increased efficiency during on-road operation
- More pulling power

Committed to operator comfort. The cab.

Greater support for the operator. The LEXION pulls out all the stops to maintain a high level of operator motivation and sustained productivity – even when working days are particularly long.

More space. More comfort.
A more productive workplace.

For optimal working conditions.

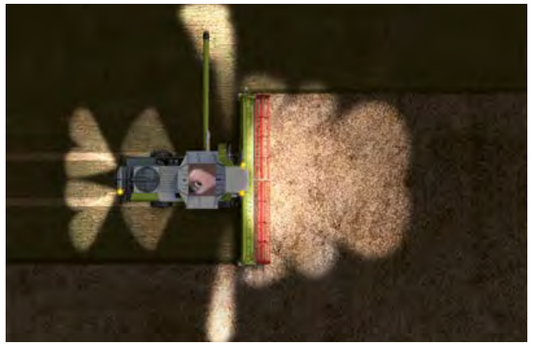
The LEXION gives the operator freedom of movement, a clear control layout and excellent visibility on all sides. The air conditioning maintains a consistently comfortable atmosphere which, together with superb soundproofing and a three-position adjustable steering column, provides first-class working conditions.

Cushions, supports, ventilates and keeps you warm: the deluxe operator's seat.

Full support for dynamic, active work while seated. Active comfort control ensures optimal ventilation and sweat removal without subjecting the operator to unhealthy draughts. The air suspension seat with automatic height control adjusts automatically to the operator's weight and effectively attenuates vibrations by up to 40%. A pneumatic, two-part lumbar support keeps your back in shape, while the automatic thermostat for the seat heating keeps you warm and comfortable. The leather seat is also air-suspended, heated and ventilated.

Fully featured: passenger seat with integrated refrigerator box.

- Integrated left armrest on the door
- Folding backrest doubles as a table
- Larger refrigerator box with 43-litre capacity and a bottle holder
- Many other stowage compartments



Long-range work light.

The lighting systems ensure that visibility of the entire work area and machine parts remains optimal at night. Intelligent features, such as the afterlight function, make for a complete package. The LED light packages turn night into day.

- Up to twelve work lights on the cab roof
- Long-range work light with extended range for illumination of large areas
- Lighting for folding front attachments
- Side lights, stubble lights, steering axle lights
- Automatic lighting of the unloading tube
- Automatic reversing lights
- Lighting for the cleaning system, grain tank and returns
- Service lights beneath the side panels, in the tool compartment, on the steps to the engine compartment and in the engine compartment itself
- Mobile work light

Refrigerator box integrated in the passenger seat

More informed, more monitoring.

All's clear on the operating panel!

The panel is integrated with the operator's seat and provides flexible functions that can be adapted as needed. Function switches include:

A Menu selection rotary/push switch
B CEBIS direct menu rotary switch
C Escape button
D HOTKEY rotary/push switch
E HOTKEY direct menu rotary switch
F Information button
G DIRECT ACCESS button
H CEBIS screen
I Front attachment on/off
J Threshing unit on/off
K Front attachment reverser
L Rapeseed knife, left, on/off
M Lateral adjustment of cutterbar / changes to values in HOTKEY menu / longitudinal adjustment of VARIO cutterbar table
N Gear shift
O Parking brake
P LASER PILOT left/right preselection
Q All-wheel drive
R Diesel engine speed (three speeds)
S Actuate grain tank cover
T CMOTION multifunction control lever

CEBIS controls and HOTKEY

Keeping the operator in the picture at all times.

Information, registration, control and monitoring are all tasks handled by the CEBIS electronic on-board information system, which stands out through its clear, logical organisation of functions in the menu structure.

A brief glance at the CEBIS display gives an overview of current processes and statuses: all relevant information for driving or harvesting is displayed clearly and succinctly on the screen. Warning messages are delivered audibly as a buzz tone and visually as icons and text.

An eye-catching 21 cm screen.

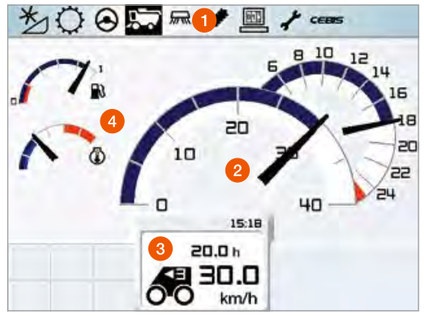
The 8.4" colour CEBIS screen offers an ideal view thanks to its ball coupling mount, which enables the monitor to be adjusted as required by the operator. It can be tilted and adjusted both horizontally and vertically.

Clear, simple and fast operation.

- The basic machine settings in working mode are made via the CEBIS rotary switch (B)
- An additional HOTKEY rotary switch allows fast access to other functions (E)
- The position of the rotary switch is shown on the CEBIS display (H)
- The CEBIS and HOTKEY rotary/push switches (A / D) are used for menu navigation and making changes to settings
- A Compact Flash Card makes data exchange particularly easy
- The DIRECT ACCESS button provides direct access to the most recently changed menu setting. It also offers fast access to the camera image

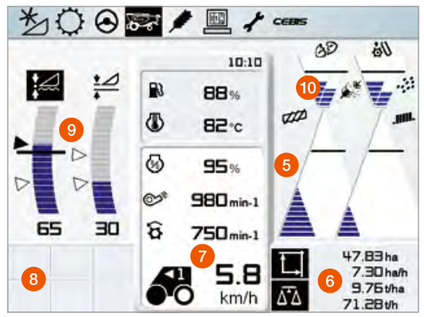
CEBIS on the road.

1 Menu bar
2 Travel speed and rpm
3 Operating hours
4 Fuel level and temperature display as well as urea level



CEBIS in the field.

5 Throughput monitoring
6 Area scaling and yield metering
7 Driving information (up to 40 displays freely selectable)
8 Message window (for alarms and information)
9 Front attachment position (AUTO CONTOUR / cutting height)
10 Returns check (volume / quality) GRAIN QUALITY CAMERA (broken grains / non-grain constituents)



More functions at your fingertips.

CMOTION. One control, greater comfort.

The multifunction control lever, which is integrated in the right armrest of the operator's seat, plays a key role in making the LEXION so user-friendly and comfortable for the operator. The CMOTION has been specially developed for ergonomic operation with the right hand. The innovative three-finger control concept allows several functions to be controlled intuitively without having to reposition the hand.

1 Extend grain tank unloading tube
2 Retract grain tank unloading tube
3 Grain tank unloading on / off
4 Cutterbar stop
5 Reel operation
6 Front attachment height control
7 AUTO PILOT (guidance, CRUISE PILOT, CEMOS, CEMOS AUTOMATIC)

Another toggle switch (8) is located at the back of the multifunction control lever. With three functions assigned to it, this switch enables either manual lateral control of the cutterbar, changes to values in the HOTKEY menu or manual adjustment of the VARIO cutterbar table.

The choice is yours: multifunction control lever or CMOTION

Toggle switch (8) with triple function

Comprehensive information.

CEBIS is simple to use, allowing a wealth of equipment information to be displayed and printed in addition to performing full control and monitoring.

- Automatic crop setting
- CRUISE PILOT – automatic forward travel control
- GPS PILOT, LASER PILOT, AUTO PILOT – automatic guidance
- Automated cutterbar control
- QUANTIMETER – yield determination / moisture measurement
- GRAINMETER, measurement of grain content in returns
- Area counter
- Fuel consumption measurement
- Yield mapping – crop log
- Performance display – remaining diesel running time / range / grain tank fill level
- Job management
- Maintenance interval display and tasks
- On-board diagnostics, alarm lists and alarm history
- Speed monitoring, slippage display (for the threshing drum, for example)

Fleet View and TELEMATICS.

A full overview with just a click of the mouse.

The CLAAS TELEMATICS feature gives you comprehensive access to all the important data for your combine anytime, anywhere via the internet. Enjoy the benefits of TELEMATICS.

Fleet View app.

The Fleet View app from CLAAS allows the grain transport team in your harvesting fleet to be coordinated in such a way that the combine harvesters can keep on working without downtime. The app continuously informs all the operators in near real time about the positions of all the machines in the fleet and their current grain tank fill levels.

Improve work processes.

A report comprising an operating time analysis and other important machine evaluations is sent to you by e-mail each day. This enables you to review the specific data from the previous day and determine when and how efficiently the combine operated before you start work again. The machine's working tracks can additionally be viewed together with the event log in order to optimise transport logistics. TELEMATICS enables planned fleet management and helps avoid unprofitable idle time.

Simplify documentation.

Use TELEMATICS to export the relevant data to your field catalogue and save valuable time. Transfer data on area-specific yields, for example.

Optimise your settings.

Use your personal access to the TELEMATICS web server to quickly compare the performance and harvesting data for your machines so that you can fine-tune the settings for optimal results under all conditions every day.

Automatic documentation.

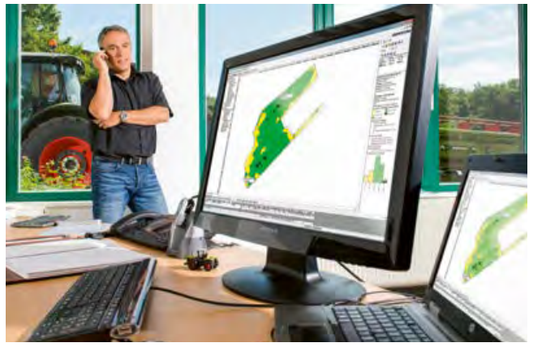
This function automatically documents and processes all process data. As an extension to TELEMATICS, automatic documentation transfers the work data relating to specific field deployments to the server, where they are interpreted and processed – all without any intervention by the machine operator. Data interpretation and processing are based on the field boundaries previously uploaded from your system. Further processing is straightforward, as all machine-relevant data can be exported in IsoXML format.

More potential when you need it.

Job management.

Manage your jobs with CEBIS. AGROCOM MAP START software from CLAAS additionally allows you to prepare customer and parcel data to be run and processed via CEBIS.

- All data is stored when a specific task is completed or the working day comes to an end
- The data can be printed out on the combine or transferred via a data card
- All data can be viewed and processed further on a PC
- Daily counts, crop counts and total counts can also be displayed and printed in CEBIS



Yield mapping.

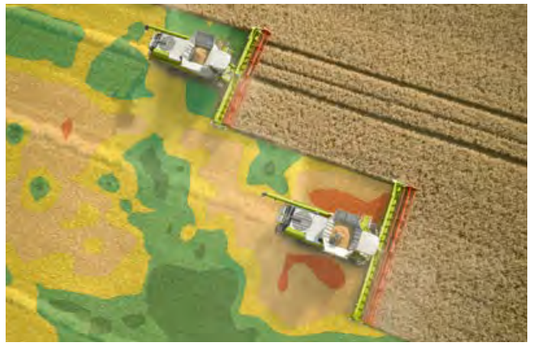
Building on the foundation of the job management data, you can use your LEXION to perform yield mapping. Sensors in the LEXION measure the yield and grain moisture, while CEBIS adds geographic coordinates using GPS satellite data.

All measurements are stored on portable chip cards to facilitate transfer. AGROCOM MAP START software is included to enable you to produce informative yield maps to use as a basis for your future production strategy.

The QUANTIMETER measures and checks.

The primary functions of the QUANTIMETER are throughput measurement, moisture content measurement and data display in CEBIS. The throughput measurement is grain-specific. The moisture content of the crop is monitored continuously and displayed upon request.

During the volume measurement in the grain elevator, a photo cell records the filling of the individual paddles. Using appropriate correction factors, including the transverse and longitudinal tilt of the machine among other things, the QUANTIMETER automatically determines the precise quantity harvested.



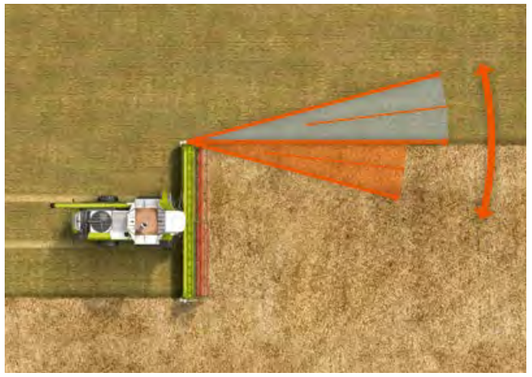
Task management just got even easier.

The S10 terminal can be used not only for GPS guidance, but also as an operating terminal for ISOBUS functions. A new feature is ISOBUS-based task management. ISO TC-BAS is used to gather key data such as the area worked, yield, grain moisture and working time. ISO TC-GEO is used to generate yield maps and transmit live images to the cab.

Even more precise yield maps.

A valuable and essential function for your yield measurements is included in every ISO-TC-GEO licence with immediate effect: the working width is corrected and adjusted automatically so that the operator no longer has to make any manual changes. This ensures that the areas worked are recorded with even greater accuracy and so enables the production of even more precise yield maps.

More precise guidance.



LASER PILOT.

The electro-optical sensors of the LASER PILOT use pulses of light to scan between the crop and stubble and guide the LEXION automatically along the edge.

The LASER PILOT can be folded away for transport and is available for both the left and right side of the cutterbar. Its optimal positioning on the cutterbar side close to the crop edge enables a good viewing angle and ensures high functional reliability even with laid grain and slopes.

AUTO PILOT.

Two digital sensors, incorporated in one of the picker units, record the position of the LEXION and automatically guide it on the best path through the rows of maize in all field conditions. In this way, AUTO PILOT contributes to greater performance and efficiency.

Choose from three automatic guidance systems.

All LEXION models can be equipped with three automatic guidance systems, which can be selected as needed according to your application requirements.

- GPS PILOT – the satellite-based guidance system
- LASER PILOT – the electro-optical guidance system
- AUTO PILOT – the electro-mechanical guidance system

The way you want it.

Portable displays from CLAAS offer a flexible solution for ISOBUS and guidance systems. The terminal can also be moved from one tractor or self-propelled harvester to another, depending on the season or job at hand. Fit your LEXION with the equipment you need, straight from the factory or as a retrofit option:

- S10: high-resolution 10.4" touchscreen terminal with guidance and ISOBUS functions: up to four cameras can be viewed
- S7: high-resolution 7" touchscreen terminal with guidance functions

Support at the headlands.

TURN IN makes it easier for the machine to line up correctly. As the combine approaches the intended track, the automatic guidance takes over from an angle of 90° (where the direction of travel of the machine is the only reference parameter) or even 120° (where there is a field boundary). TURN IN allows the operator to concentrate on the attachment and the machine without also having to attend to lining up correctly. TURN IN is standard with both guidance system terminals (S10 / S7 terminal).

Automatic guidance even at the headland.

The AUTO TURN function takes care of turning manoeuvres at the headland. The direction of the turn and the next track to be worked are pre-selected on the terminal. The guidance system does the rest.

GPS PILOT FLEX.

GPS PILOT can be used not only with hydraulically actuated steering, but also with the GPS PILOT FLEX automatic steering wheel. This steering wheel allows you to operate the machine with a high degree of accuracy. The great advantage of the GPS PILOT FLEX is its versatility.

- No need to touch the hydraulics
- Guidance system can be transferred quickly between different machines

The electric steering wheel transfers steering commands from the terminal and navigation controller to the steering axle in order to steer the machine.

Maintenance made easy.

NEW: The convenient maintenance package.

Daily maintenance tasks should be convenient and user-friendly. The new convenient maintenance package features a number of smart solutions:

- Water tank with 15-litre capacity, separate shut-off valve for hand washing on the side of the tool compartment, can be removed for filling
- Compressed air hose reel with 15 m hose and integrated automatic system for rolling up the hose
- Bracket for grease gun in tool compartment

Low maintenance.

The LEXION also impresses as a model of restraint as far as maintenance requirements are concerned. Service intervals are long: 1000 hours for the oil in the hydraulic system. And when it's time to do the job, easy access to all maintenance points makes the task fast and simple.

- Hinged radiator for fast, manual cleaning
- Mobile, foldable ladder for easy access to the engine compartment and other maintenance areas
- Fully folding rear hood
- Compressed air system with compressed air hose and gun for convenient cleaning
- Central lubrication system or lubrication banks for fast access to lubrication service points
- Storage box, for example for the toolbox
- Unique side panel design (aluminium sandwich construction) for even simpler access

The central lubrication system.

The central lubrication system supplies grease to practically all lubrication service points as required. Lubrication points and intervals only need to be programmed once. In contrast to individual manual lubrication, grease is supplied to the various lubrication service points from the central reservoir.

How you benefit:

- Reliable and controlled lubrication of all points while the machine is running
- Service life of pins and bearings is extended
- Cost savings through reduced grease consumption and reduced wear
- Reduced maintenance work and costs

Whatever it takes.
CLAAS Service & Parts.

Your requirements count.

You can always rely on us: we'll be there whenever you need us. Everywhere. Fast. Reliable. 24 hours a day if necessary. With a complete solution for your machine or business. Keeping you up and running.

ORIGINAL parts and accessories.

Specially matched to your machine: precision-manufactured parts, high-quality consumables and useful accessories. We will supply exactly the right solution from our comprehensive product range to ensure that your machine is 100% reliable. Whatever it takes.

For your business: CLAAS FARM PARTS.

CLAAS FARM PARTS offers one of the most comprehensive ranges of parts, regardless of brand and sector, for all agricultural applications on your farm. Whatever it takes.

Always up to date.

CLAAS dealers are among the most efficient agricultural technology businesses in the world. Our service teams are ideally qualified and equipped with the all-important special tools and diagnostic systems. CLAAS Service stands for high-quality work which meets all your expectations with regard to expertise and reliability. Whatever it takes.

Reliability can be planned.

Our service products help you to increase machine reliability, minimise the breakdown risk and base your calculations on predictable costs. CLAAS MAXI CARE offers planned reliability for your machine. Whatever it takes.

Worldwide coverage from Hamm.

Our central spare parts warehouse delivers all ORIGINAL parts quickly and reliably all over the world. Your local CLAAS partner can supply the right solution for your harvest or your business within a very short time. Whatever it takes.

Always networked with your distributor and CLAAS.

Using Remote Service, your CLAAS distributor can access your machine and your specific data. This allows you and your distributor to work together, quickly and directly, to respond to maintenance and servicing situations.

TELEMATICS also provides the option of using the internet to access important data about your machine at any time and anywhere. Whatever it takes.

The CLAAS Parts Logistics Center in Hamm, Germany, stocks more than 155,000 different parts and has a warehouse area of over 100,000 m².

The LEXION 700 at a glance.

1 GPS PILOT
2 Comfort cab
3 CEMOS AUTOMATIC functions
4 CEMOS
5 CEBIS
6 LASER PILOT
7 Centre-bearing supported reel and intake auger
8 Folding dividers
9 Stripper bars adjustable from the back
10 Divided knife bar
11 MultiCoupler
12 VARIO cutterbar table
13 Hydrostatic reel drive
14 Synchronised gearbox drive
15 AUTO CONTOUR
16 GRAIN QUALITY CAMERA
17 APS threshing system
18 DYNAMIC COOLING – cooling system with variable fan
19 PROFI CAM
20 ROTO PLUS with 4D
21 Mercedes-Benz or Perkins engine
22 Power spreader with mechanical drive and automatic discharge direction adjustment
23 SPECIAL CUT chopper
24 4-link axle with 30" tyres up to 1.65 m in height
25 Tyre pressure control system
26 Chaff fan
27 JET STREAM cleaning with 3D
28 Separate returns pan
29 TERRA TRAC / Tyre technology
30 Turbine fan

Built on experience.
The features.

Cab.

- The new soundproofed comfort cab provides an exceptionally quiet environment to enable you to focus on your work
- CEBIS MOBILE touchscreen for controlling CEMOS DIALOG and CEMOS AUTOMATIC
- CEMOS AUTOMATIC, CRUISE PILOT and automatic guidance help the operator make optimal use of the machine's performance capacity.
- GRAIN QUALITY CAMERA for automatic monitoring of grain quality
- Job management, yield mapping and TELEMATICS enable simple and practical data management

Cutterbars.

- VARIO cutterbars in widths up to 12.27 m facilitate up to 10% better performance by optimising the crop flow
- The AUTO CONTOUR intelligent cutterbar guidance system automatically compensates for surface irregularities both in and across the direction of travel
- Wide choice of front attachments: CERIO, VARIO, CONVIO, MAXFLEX, SUNSPEED, CORIO, SWATH UP and folding cutterbars ensure multicrop capability
- NEW: CONVIO and CONVIO FLEX draper cutterbars for optimal ground contour following and a perfect crop flow

Threshing technology.

- Up to 20% more throughput with the APS threshing system – improved grain quality through closed threshing drum
- APS + ROTO PLUS = unique APS HYBRID SYSTEM
- 13,500-litre grain tank, unloading rate up to 130 l/s
- Grain losses on slopes kept to a minimum by 4D and 3D-cleaning systems as well as AUTO SLOPE
- Professional straw processing with SPECIAL CUT and power spreader for even spreading of straw over the entire working width
- AUTO CROP FLOW protects against overloads and reduces downtime

CPS – CLAAS POWER SYSTEMS.

- Mercedes-Benz OM 473 LA, Perkins 2206F and Mercedes-Benz OM 470 LA engines to the latest emissions standard offer reliable power reserves
- DYNAMIC COOLING for all LEXION 700 models – cooling concept with variable fan drive
- Top speed of up to 40 km/h enables fast transfers between fields
- TERRA TRAC and tyre pressure control system for optimal soil protection
- Unique 4-link axle with tyres measuring up to 1.65 m in height (30")

LEXION		780 / 780 TERRA TRAC	770 / 770 TERRA TRAC	760 / 760 TERRA TRAC / 760 MONTANA	750 / 750 TERRA TRAC / 750 MONTANA	740
Threshing system						
APS acceleration and pre-separation		●	●	●	●	●
MULTICROP		●	●	●	●	●
Drum width	mm	1700	1700	1420	1420	1420
Drum diameter	mm	600	600	600	600	600
Drum speed	rpm	450-1050	450-1050	450-1050	450-1050	450-1050
with reduction gear	rpm	180-400	180-400	180-400 (– MONTANA)	180-400 (– MONTANA)	180-400
Rasp bar threshing drum		●	●	●	●	●
Closed rasp bar threshing drum		○	○	○	○	○
7/18 concave		○	○	○	○	○
Concave wrap angle	degrees	142	142	142	142	142
Main concave area	m^2	1.26	1.26	1.06	1.06	1.06
Concave adjustment, electrohydraulic, with overload protection		●	●	●	●	●
Synchronised accelerator and impeller		●	●	●	●	●
Automatic drum variator tensioner		●	●	●	●	●
Large stone trap		●	●	●	●	●
Rice threshing unit		–	○	○	○	–
Residual grain separation						
ROTO PLUS high performance rotors	No.	2	2	2	2	2
Rotor length	mm	4200	4200	4200	4200	4200
Rotor diameter	mm	445	445	445	445	445
Rotor sieves	No.	6	5	5	5	5
Rotor speed	rpm	–	960/800/640	960/800/640	960/800/640	960/800/640
with VRS	rpm	500-1200	400-1000	400-1000	400-1000	400-1000
Variable rotor separation area		○	○	○	○	○
Crop cleaning						
JET STREAM cleaning system		●	●	●	●	●
Plastic preparation floor (divided, removable from the front)		●	●	●	●	●
Fan		8-turbine	8-turbine	6-turbine	6-turbine	6-turbine
Fan adjustment, electric		●	●	●	●	●
Dual ventilated step		●	●	●	●	●
Divided, counterdirectional sieve pan		●	●	●	●	●
3D-cleaning system		○	○	○	○	○
4D-cleaning system		○	○	○	○	○
Total sieve area	m^2	6.2	6.2	5.1	5.1	5.1
Sieve adjustment, electric		●	●	●	●	●
Returns feed to accelerator		●	●	●	●	●
Returns visible from the cab on the go		●	●	●	●	●
Returns display in CEBIS		○	○	○	○	○
GRAINMETER		○	○	○	○	○
Grain tank						
Capacity (as per ANSI/ASAE S312.2)	l	12800 (13500 TERRA TRAC)	11500/○ 12800 (13500 TERRA TRAC)	11000 (12000 TERRA TRAC, 9000 MONTANA)	10000 (11000 TERRA TRAC, 9000 MONTANA)	10000/○ 9000
Unloading auger swivel angle	degrees	101	101	101	101	101
Unloading rate	l/s	130	130	130 (110 MONTANA)	110/○ 130	110/○ 130
QUANTIMETER yield meter		○	○	○	○	○
Automatic chain lubrication for grain tank unloading		○	○	○	○	○

● Standard ○ Option ◻ Available – Not available

LEXION		780 / 780 TERRA TRAC	770 / 770 TERRA TRAC	760 / 760 TERRA TRAC / 760 MONTANA	750 / 750 TERRA TRAC / 750 MONTANA	740
Straw management						
SPECIAL CUT straw chopper, 108 knives		○	○	–	–	–
SPECIAL CUT straw chopper, 72 knives		–	–	○	○	○
Hydraulic adjustment static knife and swivelling concave plate element		○	○	○	○	○
Power spreader		○	○	○	○	○
Hydraulic changeover from cab (road travel, swathing, chopping)		●	●	●	●	●
Chaff spreader		–	–	○	○	○
Chaff fan with power spreader		○	○	○	○	○
Automatic discharge direction adjustment		○	○	○	○	○
Running gear						
Side slope levelling up to 17%		–	–	● (MONTANA)	● (MONTANA)	–
Longitudinal levelling up to 6%		–	–	● (MONTANA)	● (MONTANA)	–
TERRA TRAC crawler tracks with hydropneumatic suspension		● (TERRA TRAC)	● (TERRA TRAC)	● (TERRA TRAC)	● (TERRA TRAC)	–
POWER TRAC		○	○	○	○	○
2-speed manual transmission		●	●	● (MONTANA / TERRA TRAC 40 km/h)	○ (● MONTANA / TERRA TRAC)	–
40 km/h		–	–	○ (TERRA TRAC)	○ (TERRA TRAC)	–
30 km/h		●	○/● (TERRA TRAC)	○ (● MONTANA / TERRA TRAC)	○ (● MONTANA / TERRA TRAC)	–
Car-like driving characteristics		●	●	●	●	●
Differential lock		○	○	– (● MONTANA)	– (● MONTANA)	–
4-link axle for 30" tyres		●	●	–	–	–
Tyre pressure control system		○	○	○ (– MONTANA)	○ (– MONTANA)	○
Engine						
Manufacturer		Mercedes-Benz	Mercedes-Benz	Perkins	Mercedes-Benz	Mercedes-Benz
Model		OM 473 LA	OM 473 LA	2206F	OM 470 LA	OM 470 LA
Cylinders / displacement	No./l	S 6/15.6	S 6/15.6	S 6/12.5	S 6/10.7	S 6/10.7
Engine control		Electronic	Electronic	Electronic	Electronic	Electronic
Maximum output (ECE R 120)	kW/hp	460/626	430/585	370/503	320/435	300/408
Emissions standard Stage IV (Tier 4)		●	●	●	●	●
Exhaust aftertreatment SCR		●	●	●	●	●
Urea tank		●	●	●	●	●
DPF exhaust aftertreatment		–	–	●	–	–
Fuel consumption measurement		○	○	○	○	○
Fuel tank capacity	l	1150	1150	1150 (800 MONTANA)	800 (○ 1150)	800 (○ 1150)
DYNAMIC COOLING		●	●	●	●	●
Data management						
TELEMATICS		●	●	●	●	●
Job management		○	○	○	○	○
Yield mapping		○	○	○	○	○
Operator assistance systems						
CRUISE PILOT		○	○	○	○	○
CEMOS AUTO THRESHING, CEMOS AUTO SEPARATION, CEMOS AUTO CLEANING, AUTO SLOPE		○	○	○	○	○
CEMOS DIALOG		○	○	○	○	○
GRAIN QUALITY CAMERA		○	○	○	○	○
AUTO CROP FLOW		○	○	○	○	○
Guidance systems						
GPS PILOT, LASER PILOT, AUTO PILOT		○	○	○	○	○
Weights						
(can vary depending on equipment) Wheeled machine without front attachment, straw chopper and chaff spreader, full fuel tank	kg	18200	18200	17000	16800	16800

● Standard ○ Option ◻ Available – Not available

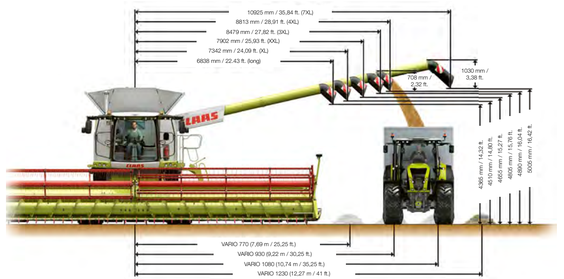
LEXION			780	770	760	760[1]	750	750[1]	740
Tyres on the drive axle									
Tyre size		**ø cat.**	**External width**						
IF900/60 R 38 MI	m	2.05	3.90	3.90	3.62	–	3.62	–	3.62
IF800/70 R 38 MI	m	2.05	3.79	3.79	3.49	–	3.49	–	3.49
800/70 R 38 CHO	m	2.05	3.79	3.79	3.49	–	3.49	–	3.49
900/60 R 32	m	1.95	3.90	3.90	3.62	3.62	3.62	3.62	3.62
IF800/70 R 32 MI	m	1.95	3.78	3.78	3.49	3.49	3.49	3.49	3.49
800/70 R 32 CHO	m	1.95	3.78	3.78	3.49	–	3.49	–	3.49
800/70 R 32	m	1.95	3.76	3.76	3.49	3.49	3.49	3.49	3.49
710/75 R 34 MI	m	1.95	–	–	3.36	–	3.36	–	3.36
IF680/85 R 32 MI	m	1.95	3.50	3.50	3.22	3.29	3.22	3.29	3.22
680/85 R 32	m	1.95	3.50	3.50	3.22	3.29	3.22	3.29	3.22
IF 800/70 R 32 TR	m	1.95	3.78	3.78	3.49	–	3.49	–	3.49
800/70 R 32 MI	m	1.95	3.78	3.78	3.49	3.49	3.49	3.49	3.49

LEXION			780	770	760	760[1]	750	750[1]	740
Tyre size		**ø cat.**	**External width**						
TERRA TRAC, 635 mm	m	–	3,49	3,49	3,29	–	3,29	–	–
TERRA TRAC, 735 mm	m	–	3,79	3,79	3,49	–	3,49	–	–
TERRA TRAC, 890 mm	m	–	3,99	3,99	3,79	–	3,79	–	–
Stahlhalbraupe, 900 mm	m	–	–	–	3,93	–	3,93	–	–
Tyres on the steering axle									
Tyre size		**ø cat.**	**External width**						
750/65 R 26 Mi	m	1,65	3,96	3,96	4,12[2]	–	–	4,12[2]	4,12[2]
710/60 R 30	m	1,65	3,90	3,90	–	–	–	–	–
620/70 R 30 IMP	m	1,65	3,70	3,70	–	–	–	–	–
620/75 R 26	m	1,65	3,70	3,70	–	–	–	–	–
500/85 R 30 IMP	m	1,65	3,49	3,49	3,49[2]	–	3,49[2]	–	3,49[2]
600/65 R 28 IMP	m	1,50	3,70	3,70	3,49	3,49	3,49	3,49	3,49
VF520/80 R 26 Mi	m	1,50	–	–	–	–	3,29	–	3,29
500/85 R 24 IMP	m	1,50	3,49	3,49	3,29	3,49	3,29	3,49	3,29
710/45-26.5 (700/50-26.5) IMP	m	1,35	–	–	3,71	–	3,71	–	3,71
710/60 R 30 IMP	m	1,65	3,90	3,90	–	–	–	–	–
VF620/70 R 30 MI	m	1,65	3,70	3,70	–	–	–	–	–
VF520/85 R 30 MI	m	1,65	3,49	3,49	–	–	–	–	–
VF 620/70 R26	m	1,50	–	–	3,49	3,49	3,49	3,49	3,49
VF 520/80 R26	m	1,50	–	–	3,29	3,29	3,29	3,29	3,29

[1] MONTANA

[2] Machine is higher than 4 m, not authorised in all countries

More height and reach for easy offloading.



As CLAAS continually develops its products to meet customers' requirements, all products are subject to change without notice. All descriptions and specifications in this brochure should be considered approximate and may include optional equipment that is not part of the standard specifications. This brochure is designed for worldwide use. Please consult your nearest CLAAS dealer and their price list for local specification details. Some protective panels may have been removed for photographic purposes in order to present the function clearly. To avoid hazards, never remove these protective panels yourself. Please refer to the relevant instructions in the operator's manual in this regard.
All technical specifications relating to engines are based on the European emission regulation standards: Stage. Any reference to the Tier standards in this document is intended solely for information purposes and ease of understanding. It does not imply approval for regions in which emissions are regulated by Tier.

● Standard ○ Option ◻ Available – Not available

Cutterbars			
Front attachments			
VARIO cutterbars		VARIO 1230, VARIO 1080, VARIO 930, VARIO 770	
CERIO cutterbars		CERIO 930, CERIO 770	
CONVIO FLEX / CONVIO cutterbars		CONVIO FLEX 1230, CONVIO FLEX 1080, CONVIO 1230, CONVIO 1080	
Rapeseed equipment		For all VARIO and CONVIO FLEX / CONVIO cutterbars, not available for CERIO cutterbars	
Folding cutterbars		C 540, C 450	
CORIO CONSPEED	rows	12, 8	
CORIO	rows	8	
SUNSPEED	rows	12, 16	
MAXFLEX		MAXFLEX 1200, MAXFLEX 1050, MAXFLEX 930, MAXFLEX 770	
VARIO rice cutterbars		Available as HD version with rice harvesting accessory pack	
CERIO rice cutterbars		Available as HD version with rice harvesting accessory pack	
SWATH UP		SWATH UP 450	
Variable speed drive front attachment, electrohydraulic	rpm	284-420	
Front attachment step drive	rpm	332, 420	
Instant cutterbar brake		○	
Standard cutterbars			
Effective cutting widths		CERIO 930 (9.22 m), CERIO 770 (7.70 m)	
Drive		Single-side gear drive	
Folding dividers		●	
Spacing: knife bar – intake auger	mm	480-680, manually adjustable	
Cutting frequency	strokes/min	1218	
Multifinger intake auger		●	
Reverser, hydraulic		●	
Automated cutterbar control			
CONTOUR		●	
AUTO CONTOUR		○	
Reel speed control		●	
Reel height adjustment		●	
Parked position		●	
Replacement knife bar		●	
Crop lifters		●	
VARIO cutterbars			
Effective cutting widths		VARIO 1230 (12.27 m), VARIO 1080 (10.74 m)	VARIO 930 (9.22 m), VARIO 770 (7.70 m)
Drive		Synchronised gear drives on both sides	Single-side gear drive
Folding dividers		●	●
Spacing: knife bar – intake auger	mm	490-1135, 700 mm continuously adjustable travel range	490-1135, 700 mm continuously adjustable travel range
Knife bar		Divided, synchronised drive on both sides	Undivided
Cutting frequency	strokes/min	1218	1218
Reel and auger bearing		Divided reel and intake auger with central bearing	Undivided reel and auger
Intake auger diameter		660	660
Automated cutterbar control			
CONTOUR		○	●
AUTO CONTOUR		●	○
Reel speed control		●	●
Reel height adjustment		●	●
Reel levelling system		●	●
Table positioning		●	●
Parked position		●	●
Replacement knife bar		●	●
Crop lifters		●	●

● Standard ○ Option ◻ Available – Not available

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