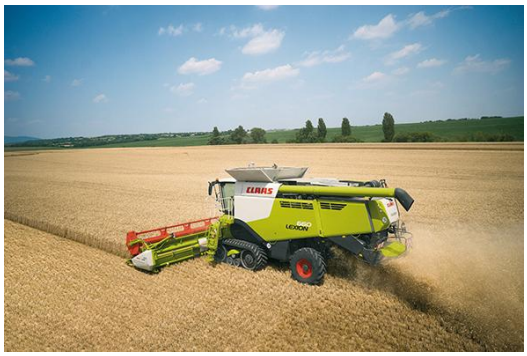
Advanced automation for new LEXION 600

Over the 20 years since the LEXION combine range was first introduced, it has led the way in the development and use of advanced technology to help users consistently maintain high outputs and optimum cost efficiency.

As part of the ongoing development of the LEXION 600 straw-walker combine range, 2017 models will benefit not only from new cost-efficient engines, a new straw chopper and other advanced features previously only available on the higher capacity LEXION 700 HYBRID range.

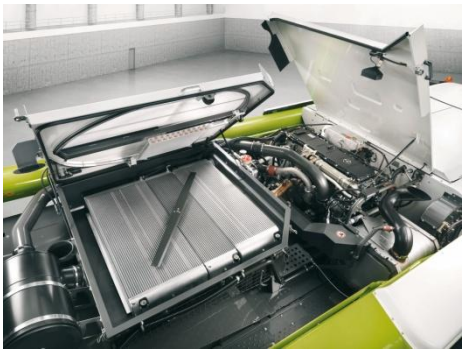
As before, the LEXION 600 range comprises of three 6-walker models (LEXION 670/660/650) with a drum width of 1700mm and two 5-walker models (LEXION 630/620) with a 1420mm-wide drum. MONTANA hillside versions of the LEXION 670 and 630 are also available and in addition to the TERRA TRAC LEXION 670TT, a new tracked version of the LEXION 660 has also been added to the range.

Instead of the Caterpillar engines previously used, all 2017 LEXION 600 range models are now powered by Mercedes-Benz T4F compliant engines. On the largest LEXION 670 and 660, the engines have a cubic capacity of 10.7 litres with power outputs of 435hp and 408hp respectively. LEXION 650/630/620 models come with 7.7 litre engines with power outputs of 354, 354 and 313hp respectively.



To provide adequate cooling for the new 10.7 litre engines on the LEXION 670/660, these now feature the unique CLAAS DYNAMIC COOLING system originally developed for the LEXION 700 range.

DYNAMIC COOLING incorporates a variable fan drive that automatically adjusts the cooling capacity as required by the engine, which helps save up to 20hp and so reduce fuel consumption. Located horizontally behind the engine, the radiator draws in clean air from above the combine through a 1.6m wide rotating sieve filter. The air is then directed downwards through the radiator and engine bay, before exiting through louvers that direct the air down the side of the combine, creating a curtain of air that prevents dust rising. As a result, the engine bay is kept far cleaner and maintenance time is reduced.



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Automated control

CLAAS leads the way in the development of automated systems for combines, which has helped LEXION 700 operators achieve higher outputs from their combine and some of which is now optionally available on the LEXION 600.

Combine output is often restricted by an operator's natural fear of pushing the combine too hard, resulting in a time-consuming blockage. To avoid this, the CLAAS AUTO CROP FLOW CONTROL developed for the LEXION 700 range last year is now available on all LEXION 600 models. Using sensors monitoring engine speed, the APS drum, the impellor drum and the straw chopper, the CROP FLOW CONTROL system automatically reacts and alerts the operator to a potential blockage, so they can confidently push the combine to its maximum capacity.

Another new feature is AUTO SLOPE control, which guarantees the cleanest possible sample and minimal losses on uneven terrain. AUTO SLOPE automatically controls the fan speed and continually adjusts this relative to the angle of the combine. When working uphill, the fan speed will be automatically reduced to avoid losses and then increased again as it goes downhill to ensure grain is cleaned sufficiently.

Taking this a stage further, the LEXION 600 is also now available with CEMOS AUTOMATIC CLEANING. Until now only available on the LEXION 700, CEMOS AUTOMATIC CLEANING fully automates the grain cleaning system to ensure the cleanest possible sample. Sensors throughout the combine automatically monitor and continuously react to changing harvesting conditions far more regularly and accurately than would be possible by the operator.

In addition to continuously adjusting the fan speed, the system fully automatically controls the opening of both the upper and lower sieves to ensure that grain is cleaned to a far higher level than would be humanly possible. Depending on what they require, the operator has the choice of four operating parameters: Maximum Throughput; Minimal Fuel Consumption/Straw Quality; High Grain Quality or an Optimum Balance of all of these.

Residue management

Larger 6-walker LEXION 670, 660 and 650 models also now benefit from a new straw chopper and radial spreader to ensure that crop residues are efficiently chopped and then evenly spread across the wider cutting widths on these combines.

In the straw chopper, the drum width has been increased by 5cm so that crop flow into and through the chopper is more uniform, resulting in a more even chop length. Acceleration of the chaff is also increased, resulting in a wider spread pattern. The straw chopper is also now engaged from the cab and there is tool less adjustment of the stationary knives and friction plate.

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The new radial spreader is now mechanically driven, meaning that the rotors maintain a constant speed for a more even spread and use less fuel. The radial spreader is hydraulically controlled from the cab and will automatically adjust the spread pattern to compensate for crosswind or when harvesting on a slope.

To reduce the time spent emptying, the offloading time has been increased on LEXION 670/660 to 130 litres/second and 110 litres/second on the LEXION 670 MONTANA and LEXION 650-620.

LEXION	**670 / TT / MONTANA**	**660 / TT**	**650**	**630 / MONTANA**	**620**
Engine cc / hp	10.7 / 435	10.7 / 408	7.7 / 354	7.7 / 354	7.7 / 313
Drum width (mm)	1700	1700	1700	1420	1420
Straw Walkers	6	6	6	5	5
Straw Walker area (m^2)	7.48	7.48	7.48	6.25	6.25
Separation area (m^2)	9.85	9.85	9.85	8.23	8.23
Grain Tank (litres)	11,000	11,000	10,000	9,000	9,000