

**GLEANER** S9 Series Combines & Headers



# The Next Generation Gleaner for the Next Generation of Farming

Since the introduction of the S Series combine platform in 2011, Gleaner has built an incredible reputation for what is important to farmers when it comes to harvesting, such as capacity, grain quality, low loss levels, reduced compaction and serviceability.

The new S9 Series is the culmination of millions of dollars of investment and a new generation of leadership that builds on the strong attributes of our previous models but adds more optimum harvesting performance, technology, comfort and convenience to take our current and future owners to a level not offered on any other combine.



# The New S9 Series

## Feeding

A number of changes have been made to the feeder house to optimise performance and improve feeding capacity in difficult crop conditions such as heavy canola swaths and green stem soybeans, where uneven feeding can occur. We have lowered the feeder house floor by 12.7 mm and raised the feeder house runners and torque tube 12.7 mm. This results in a 25.4 mm clearance under the torque tube and 12.7 mm clearance under the feed shaft. This change reduces stress on the shaft slightly, yet maintains good control of crop mat in these difficult feeding conditions.

The rear feed conveyor top shaft has been moved forward 38 mm and up 10 mm to optimise performance of the rock trap. In addition, the inside rear shaft is equipped with a larger bearing. Feed drum rings have been added to reduce the chance for rock damage to feed chain slats.

The feeder house has been lengthened 12 cm, which provides greater visibility to the header's cutter bar with the new Vision™ cab, and the geometry on the header lift cylinders has been redesigned to maintain excellent liftability.

## Automated Drives for Greater Operator Efficiency and Comfort

The new S9 Series employs new hydraulics for the propel drive and new electronics for gearshift and parking brake, eliminating all cables and linkage and providing total operator convenience. A new variable-displacement motor provides automatic high-low shifting through the hydrostatic propel system that was accomplished manually through the XR™ two-speed shift-on-the-go transmission of the S8 Series. The programming of speed and torque sets the hydrostatic motor to optimum displacement automatically and provides speed and torque when you need it, whether you are looking for a faster road speed or climbing a hill.

The parking brake is now set with the flick of a switch, and the operator knows whether it is engaged simply by viewing the new Tyton™ terminal.

The four-speed transmission is now electronically shifted. Just select the speed on the new Tyton™ terminal, and an icon lets you know what gear you are in. With the combine at a stop, simply select the gear on the terminal screen and hit the check mark. It's that easy and convenient.

## Improved Drives for Longer Life

The main drive belt in the S9 Series machines is a four-strand HB-section Opti-Belt for longer life and increased braking capability. The hydraulic spreader pump features cast iron around the gears and a closed-loop electrical system that constantly monitors the speed and adjusts the hydraulic control, maintaining constant spreader speed regardless of temperature. The propel drive belt increases in size from a three-strand to a four-strand V-belt for longer life. A new 200cc steering control unit has been integrated on all S9 models, and the Auto-Guide™ sensor is now integrated into the steering cylinder to eliminate any external linkage.

The Gleaner Gen 2 SmartCooling™ system, which consists of a variable-pitch cooling fan with reversing capability, has new fan-controlled software that uses charge pressure parameters to reduce pressure from 193 kg/m<sup>2</sup> to 28.5 kg/m<sup>2</sup> for improved performance and maximum efficiency.

## Improved Header Lift and Lower System

The Gleaner header lift system features a new proportional valve, which provides fine tuning from the new Vision™ cab for faster or slower header response. It also provides programming to ramp the valve for better control of cutting height. Adjusting speed up and down and changing sensitivity, as well as reading pressure on the header, can be achieved all from the comfort of the Vision™ cab.

## Residue Management

The chopper knives are made of a new material for several times greater life than previous knives.

For those customers ordering an impeller in lieu of our 24-knife high speed chopper, we have incorporated a 24.7 cm diameter pulley to provide a higher speed from 710 rpm to 940 rpm. The increased speed creates a similar vacuum to that of the high-speed chopper, which spins at 3,250 rpm for improved performance that keeps the processor clean of any potential build-up.

## Processor and Separator

For specialty crop harvesting, such as grass seed, we have added special holes in the processor housing to accommodate moving of the auger trough.

In addition, we have opened up the separator frame to reduce air velocity and allow more air venting, reducing the potential for trash plugging.

## Advanced Technology Sensor Harnesses

The Gleaner S9 Series 390-bushel grain bin has new sensors built in to alert you when it reaches 70 per cent and 90 per cent of capacity.

The satellite receiver now resides on the front grain bin extension and when the grain bin extensions are folded, the receiver folds with it.

# The New Gleaner Vision™ Cab

The S9 Series combines represent a number of developments that will make a significant difference in the productivity of your harvest.

Customers across the world generated feedback we used to deliver what farmers wanted in a totally new cab environment.

The Vision™ cab features 15 per cent more volume 3.6 m<sup>3</sup> versus 3.2 m<sup>3</sup> than the ComforTech™ cab it replaces. Visibility is enhanced with total glass area of 6 m<sup>2</sup> and front glass area was increased by 22 per cent to 3 m<sup>2</sup> for unmatched visibility.

This newly engineered cab has a much larger and deeper curved-glass windshield laminated with solar properties, narrower A-posts and B-pillars that have been moved for more room. The cab sound level is only 75.5 dBa in corn, making it a very quiet environment in the noisiest crop condition.



# The New Tyton™ Terminal

The Vision™ cab features our new Tyton™ terminal, with four quadrants, easier-to-read Gleaner-specific graphics and easier, simplified navigation through the screens. Two AgCam® cameras can be displayed on two of the four quadrants.

Tyton™ terminal:

- ▶ **FieldStar® Live includes AGCO yield sensor, AGCO moisture sensor and live mapping on the Tyton™ terminal.**

New Gleaner Vision™ cab automated software features:

- ▶ **Fuse® Connected Services monitoring and reporting**
- ▶ **Four cameras on the AgCam® Quad monitor and one or two on the Tyton™ terminal**
- ▶ **Automated shaft-speed calibrations**
- ▶ **Automated calibrations for fan choke, concave, chaffer/sieve and header**
- ▶ **2 programmable set speeds available at the push of a button**
- ▶ **10 user-programmable counters**
- ▶ **Auto-Guide® and compatible receiver**
- ▶ **Row guidance**

- ▶ **Convenience of Guidance Nudge from the palm-control handle**
- ▶ **Saves multiple header configurations, such as calibration, tilt speed, raise/lower two-speed**
- ▶ **Single button to activate AHHC (Automatic Header Height Control) and raise above the cut-line**
- ▶ **Armrest-actuated open/close of grain tank**



## Vision™ Cab Features

The Vision™ cab features numerous improvements and innovations over our previous ComforTech™ cab.

- ▶ **A new ladder that swivels toward the front for transport and provides improved visibility, a comfortable ladder angle and long handles.**
- ▶ **A new integrated step design on the front side of the cab allows for easy access to the front window and cab roof lights.**
- ▶ **12 new cab lights with a high-lumen projection will light up the night for unmatched nighttime visibility.**
- ▶ **The new A/C and climate control system has a larger capacity to provide unparalleled comfort.**
- ▶ **New steering wheel post with improved functionality**
- ▶ **Fridge as standard**
- ▶ **Larger instructor seat that folds down for a mobile desk**
- ▶ **Electric shift and park brake**
- ▶ **Programmable light-control memory**
- ▶ **New radio/speaker features:**
  - ▶ **Four Kicker® speakers and a subwoofer**
  - ▶ **Bluetooth® capability (Hands-free and audio streaming)**
- ▶ **New operator interface (armrest, controls, Tyton™ terminal, centre display and light-control panel)**
- ▶ **New internal trim**
- ▶ **Improved leg room**
- ▶ **New roof, headliner and floor mat**
- ▶ **New dual mirrors (remote heated)**
- ▶ **Standard telemetry**
- ▶ **Mounting brackets on unload auger beacon light and engine compartment for AgCam® cameras**
- ▶ **Egress lighting with 4½-minute delay**
- ▶ **Automatic functions, including two memory-control speeds**
- ▶ **Right-hand storage tray with rubber liners**
- ▶ **Seven cup holders**
- ▶ **Rubber storage net behind operator seat**
- ▶ **Storage on back of instructor seat**

# Harvesting Performance

All combines have the same goal: to harvest crop dependably with the least amount of loss, foreign material, fuel, field damage and interruptions possible. Most combine designs are similar to each other and therefore have similar results.

The Gleaner design is fundamentally different and offers a level of harvesting performance that other combine makes are unable to achieve.

We call it Optimum Harvesting Performance, and its aim is to give you more and better results for every minute, litre and dollar you put in.

Harvesting performance is affected by six core elements and our approach to combine design addresses these elements in unique ways.



## The ability of the combine to produce a clean grain sample while minimising loss

Gleaner combines use a two-stage cleaning process. As crop threshes and separates on the rotor, a set of distribution augers and accelerator rolls thins the crop mat and propels it at four times the speed of free fall through an air blast above the cleaning shoe, pre-cleaning crop material before it hits the shoe.

## The cleaning shoe with its lower-duct air stream to finish the cleaning

The Gleaner system offers a superior grain sample because material is cleaned in two stages with two different processes. Because of the position and action of the distribution augers and accelerator rolls, crop material is oriented toward the front of the shoe utilising the full length of the shoe and reducing the likelihood that grain will be lost out the back of the machine.

## The efficiency of power delivery from the engine to the threshing and separating process

Gleaner combines weigh significantly less than competitive designs. Less horsepower devoted to moving a heavy combine means more horsepower directed to the processor and not wasted through parasitics.

Our design utilises straight-through-shafts and avoids 90-degree gearboxes that can rob power. It does not require ancillary feeding systems such as beaters or pre-threshers. Our cooling fan and chopper designs are also designed to require less horsepower than other designs.

## The utilisation of functional space in the combine's systems and the resulting weight, size and efficiency

Gleaner combines thresh and separate the entire circumference of their rotors whereas other designs have a closed top section. The 360-degree threshing and separating area allows the Gleaner to have more separating surface area in a compact design.

The design of the Gleaner cleaning system pre-cleans crop before it touches the shoe and drops material in the same spot at the front of the shoe-utilising the entire shoe for cleaning. This differs from other designs that may drop crop in several places on the shoe or may direct crop to one side of the shoe.

## The number of times crop must be redirected, moved, compressed or shifted by the combine

Gleaner combines feed crop directly into the processor without shifting, bunching or changing direction. This natural feeding flow allows smooth and consistent threshing and separating.

Other designs must change crop direction between feeding and threshing. This shift in direction can increase wear, damage crop, limit capacity and negatively affect grain sample quality.

## The time and expense needed to set and maintain the combine's peak performance across changing conditions

Because the Gleaner design pre-cleans crop material in mid-air and always drops crop at the front of the cleaning shoe, the machine's sensitivity to changes in crop characteristics is reduced. The mid-air Gleaner cleaning design resists the affect of gravity on up to 23+% slopes.

Competitors' designs often require complex concave and rotor set-up to respond to changing conditions. Axial design is sensitive to slope, which can cause material to build up on one side and result in shoe loss.

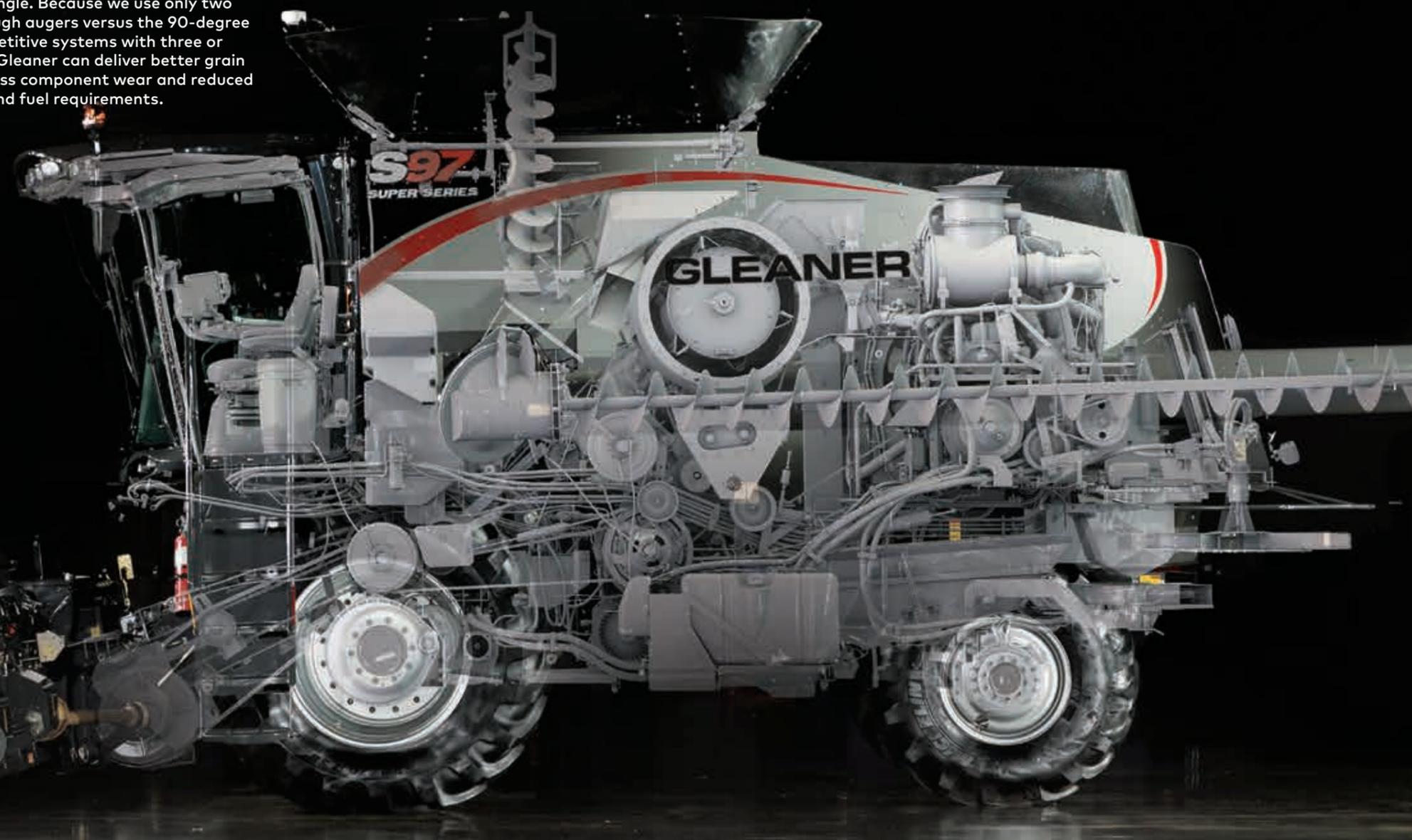
Gleaner combines rarely require changing concaves, and the transverse design of the processor means the majority of service points can be reached while standing on the ground beside the combine.

# Heart & Soul of a Gleaner

While the S9 Series is a new generation, its components are not untested technology. Over eight decades, the Gleaner combine has become known for its unique design and performance, and many of those attributes and mechanisms remain in this latest edition. The Gleaner performance comes from the combination of our own patented processes and components with a design unlike any of our competitors.

- ▶ The two-stage, four-strand gathering-chain system allows the cylinder to be smoothly fed at the same angle regardless of the header height.
- ▶ The Natural Flow™ transverse rotor in our Tritura processor keeps crop moving in one uninterrupted direction directly from the header into the rotor and out the rear of the machine.
- ▶ Distribution augers spread material evenly before it enters the cleaning process, allowing a uniform ribbon of material without the uneven feeding and bunching of other designs.
- ▶ Industry-exclusive accelerator rolls speed the crop's descent, allowing more air to clean the crop more thoroughly with reduced sensitivity to hills and slopes but without the expense and complexity of self-leveling cleaning systems.
- ▶ The transverse fan has exclusive two-stage cleaning:
  - The first stage cleans heavy material beneath the accelerator rolls, pushing chaff out the rear of the combine.
  - The second stage comes up through the sieve and chaffer, lifting remaining chaff and carrying it out the rear of the combine. Together, they greatly improve cleaning efficiency over competitors' designs.
- ▶ A fully welded frame keeps the S9 Series solid and strong and provides a stable foundation for all shafts and components.

- ▶ Low centre of gravity, heavy final drives and welded frames on the S9 Series provide for a standard bin capacity of 13,743 L on the S96, S97 and Class 8 S98, one of the largest bin capacities on any Class 6 through Class 8 combine in the industry.
- ▶ Unique DirectFlow™ two-auger design features a large 305 mm grain bin cross auger that feeds the 356 mm swivel unloader auger at a 29-degree angle. Because we use only two straight-through augers versus the 90-degree turns of competitive systems with three or more augers, Gleaner can deliver better grain quality with less component wear and reduced horsepower and fuel requirements.



# Commitment to Quality

As part of ensuring the quality of our combines, we've invested in a combine dynamometer testing area. The dynamometer, or dyno for short, is a testing bay that puts the combine through a series of extensive external and internal tests while providing feedback on critical areas.

The dyno bay features a "jounce" test that rocks the combine back and forth, evaluates combine sensors, electrical, hydraulic and diagnostic systems and provides a thorough break-in of transmission and final drives. Even the cab lighting is adjusted to the proper angles. Over 120 areas are checked and monitored before a Gleaner goes to post-production inspection.

## Paint System

In addition to the dyno bay, our unique to the industry paint system represents a \$40 million investment in the quality and longevity of your Gleaner combine.

We realise how important paint is to the value of farm equipment. Our state-of-the-art system puts on a finish like no other, and you can be confident in the durability of your Gleaner thanks to its durable e-coat and powder paint finish.

AGCO is the first company to e-coat and powder paint all major parts on harvesting products. These parts go through a 17-step process from the dip system that includes removal of rust, scale and laser oxides, e-coating, and baking in e-coat ovens before powder paint.

- ▶ On the following page a Gleaner welded mainframe is picked up by the special hanging device. It is carried into the first high-temperature dip tank, containing an alkaline solution at 71° C. The frame will be fully immersed for 90 seconds and coated inside and out. Each one of these 15 dip tanks has a 132,489 litre capacity.

- ▶ The second and third dip tanks rinse the mainframe at ambient temperature for 30 seconds each.
- ▶ Next, two acid pickling dip tanks, one at ambient temperature and one at 71° C, remove any rust, scales and laser oxides.
- ▶ The mainframe then enters another rinse tank at ambient temperature and another alkaline solution tank at 71° C for one minute each, followed by two reverse-osmosis rinse tanks at ambient temperature.
- ▶ Next, it is lowered into a zirconium coat dip tank, then undergoes two more reverse-osmosis rinses.
- ▶ Finally, the mainframe reaches the e-coat tank, where it receives the special e-coat primer with a high-voltage and high-amperage charge for 180 seconds. Then it goes through two more rinse tanks, one at ambient temperature and one at 71° C.
- ▶ The mainframe is now ready to go to one of 10 e-coat ovens to be baked at 190° C for 40 minutes. This is followed by a 20-60 minute cool down.
- ▶ Parts going to the powder booth system can be painted one of five different colours. These booths feature an automatic section of 32 paint guns and two manual reinforcement painters. They also fully reclaim all unused powder. From there, parts go to the powder oven for 60 minutes.





## Weight & Height

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### Transport Height

Even with one of the largest grain bin capacities on any combine in the industry, the Gleaner S9 Series' unique standard power-foldable 390-bushel bin extensions fold down in under 20 seconds with the push of a button on the console, to an overall height of 3.78 m. This compactness can make a big difference when transporting or storing your combine.

### Centre of Gravity

Gleaner combines have their rotor in the centre, which allows the grain tank to sit low and wrap around the processor. The result is a larger grain bin capacity that also provides the machine with a low centre of gravity. Our competitors must compromise their axial rotor design in order to fit their grain bin in their combines. The axial design places the weight higher, creating a higher centre of gravity and ultimately, a smaller grain bin.



## Feeding

One of the main things that makes a Gleaner S9 Series unique is the Natural Flow™ feeding and threshing. With the rotor setting the width of the combine, the crop does not compress or change directions when moving from the feeder house to the rotor.

The process begins as grain enters the machine through the 1,752 mm x 1,003 mm feeder house that is powered by a 219 mm-diameter front feed drum. The feeder house can be reversed with the touch of a button from the operator's seat in the event of a plug.

In addition to keeping the crop moving in a smooth ribbon from feeding to threshing, the Natural Flow™ system has an additional feature that distinguishes it from competitors' designs. Because the rotor moves in line with the way the crop is fed into the machine, material is pulled into the rotor rather than being pushed in from the feeding system. This design ensures smooth feeding and reduces plugs. Bottlenecks are reduced because a Gleaner does not narrow the crop mat when moving it from the feeder house to the rotor. The width of crop mat remains the same from the time it enters the feeder house to the time it enters the rotor, also reducing plugs and increasing threshing efficiency.

### Natural Flow™

We call our feeding system Natural Flow™ because the crop material flows straight into the combine, straight into and around the rotor and straight out the back. Our competitors shift the crop's path and change its direction, requiring more horsepower to do the same threshing and separating.

### Feeder House

While Gleaner has a narrow, 762 mm feeder house compared to other combines, the opening that feeds the rotor is actually wider because Gleaner does not narrow or compress the crop mat.

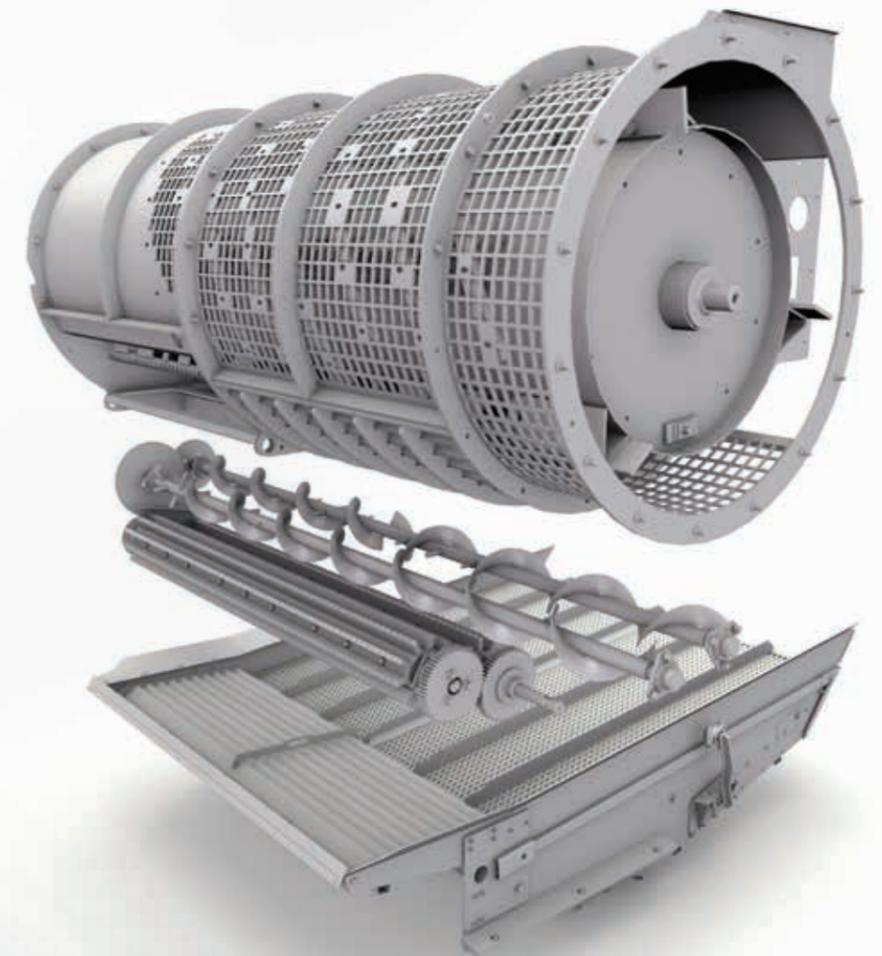
# Threshing & Separating

Once the crop enters the rotor, separation takes place throughout the full 360 degrees of the rotor cage, resulting in more effective threshing with less power.

The 762 mm-diameter CDF rotor uses six rows of 18 mm high-profile bars that are chromed and reversible in the threshing area. The bars build just enough pressure to release grain that often escapes other rotors, while taking less of a toll between bar and cage on the green-stem material. A four-section 17-bar concave and wider helical bars provide gentle threshing and reduce horsepower requirements.

## Threshing Area

Threshing begins once the crop enters the rotor, it separates and falls through a 360° cage. It is crucial that crop be threshed only long enough to release it from heads, pods or cobs. Crop that remains in the threshing area too long can be damaged. Our 360° cage allows grain to exit the rotor cage once it is threshed. Our competitors' designs are closed on top, keeping free grain inside, where it continues to contact the rotor's threshing elements.



# Cleaning

The cleaning process begins with distribution augers just underneath the threshing and separating system distributing the material flow into a smooth and even cascade into the accelerator rolls.

Two large-diameter five-fluted polyurethane accelerator rolls accelerate grain and chaff downward at four times the speed of free fall. The grain is then propelled through an evenly distributed air curtain from a large 330 mm-diameter, cab-controlled transverse fan. The two-stage, high-velocity cleaning process provides a high-quality clean tank sample, even at the highest harvesting rates. The separated grain lands on a cushion of grain on the cascade pan just ahead of the chaffer.

## Perforated Cascade Pan

The perforated cascade pan is slanted at a 6-degree angle, and an additional 0.64 m<sup>2</sup> has been converted to a pneumatic cleaning area for a total of 5.6 m<sup>2</sup>. This design provides additional cleaning capacity and allows high-moisture corn and other high-moisture crops to fall through sooner and reach the sieve and clean grain cross auger faster. ①▶

## Slope Sensitivity

Gleaner propels grain through the air blast and onto the cascade pan. Because Gleaner does not rely on gravity to move the grain, the direction of the grain stays consistent, even on slopes up to 23+%.



## Air Velocity

Our transverse system drops material in a position parallel to the fan, which means every piece of grain is hit with the same velocity of air. With an axial rotor, grain can drop at any point on the rotor, meaning grain that drops early is hit with one air velocity and grain that drops later with another. Gleaner's ability to pre-clean the grain before the shoe and use the shoe as a highly effective secondary cleaning system is why it can obtain such clean grain with low loss levels.

## Shoe Overload

Many axial combines, due to their concave design, tend to overload the cleaning shoe on one side of the machine. As the rear portion of the shoe becomes overloaded with grain and MOG (material other than grain), grain can be carried out the back of the combine.

With Gleaner, after grain falls from the processor, a set of distribution augers keeps the crop mat consistent. The crop is then propelled by the accelerator rolls through an air blast at four times the speed of free fall and onto the grain pan. These distribution augers ensure a uniform ribbon of crop feeding into the remainder of the cleaning system, no matter where crop falls from the processor.

① The perforated cascade pan has 1.9 cm ridges with holes running throughout. This design allows heavier-density seed to fall through as it comes down from the accelerator rolls. This process helps avoid potential buildup and substantially reduces shoe load. This design increases our capacity by approximately 10% in these conditions. In addition, the air duct has been moved forward 3.81 cm to redirect the air to the crop that is falling through this perforated area to the front of the sieve or directly to the clean grain cross auger.

# Grain Handling

The unique DirectFlow™ swivel unloader on all Gleaner S9 Series combines accomplishes the marvel of an average unloading speed of 4 bushels per second throughout the entire unloading process with a large 305 mm grain bin cross auger that feeds a massive 356 mm unloader auger – unloading the entire grain bin in 98 seconds.

Because Gleaner uses two augers rather than three or more, like our competitors, we provide more efficient unloading with better grain quality and less wear. No gearboxes. No open drives. No vertical augers. ①▶

With the transition angle between the grain bin cross auger and swivel auger reduced, it requires less horsepower and less fuel to achieve this impressive unloading rate.

The unloading auger has a 4.54 m discharge height and a 7.56 m reach from centre.

The S96, S97 and S98 have one of the largest grain bin capacities of any Class 6 through Class 8 combine, at 390 bushels (13,743 L), with standard power-foldable bin extensions that fold down in less than 20 seconds to the lowest overall transport height – 3.75 m.

① Most competitive designs have a four-auger unloading system, with two horizontal cross augers that feed the clean grain to the vertical auger and then to the unloading auger. These two 90-degree angles require excessive horsepower while unloading. They also make grain more susceptible to cracking, and the multiple transition points create high-wear areas that have required manufacturers to offer costly optional packages to minimise wear. The Gleaner exclusive two-auger system can achieve a 4-bushel-per-second average unloading rate all while creating less wear, better grain quality and lower startup horsepower requirements than the competition.



A large, deep clean grain auger trough features a lowered cross auger below the centreline of the trough to maintain speed but avoid cracking the grain and to increase capacity to move grain away from the shoe quickly; this change, along with heavier paddles, increases elevator capacity by 30 per cent to over 5,000-bushel-per-hour elevator rating.



## Residue Management

Where oat, wheat, barley and canola residue is dense and tough, zero-till requirements call for the shortest straw possible and the widest width of spread for no-till air-drill planting. The S9 Series attacks this problem in two ways:

Straw exits the rotor discharge where non-grain material is handled by either an impeller or chopper.

The S9 Series features a two-speed chopper for greater residue-chopping demands when required. For high-speed chopping, the small 19.5 cm chopper drum features 24 knives, a 50 per cent increase over previous designs, for greater chopping and a 16 per cent increase in speed to 3,250 rpm to create enough vacuum pressure to pull residue on through and keep the processor cage clean, optimising processor performance. ❶ ▶

For severe chopping requirements in zero-till conditions a retractable stationary six-knife bed provides even greater chopping and straw breakup. This retractable feature allows those not requiring an extra-fine chop to minimise horsepower requirements by disengaging the knives.

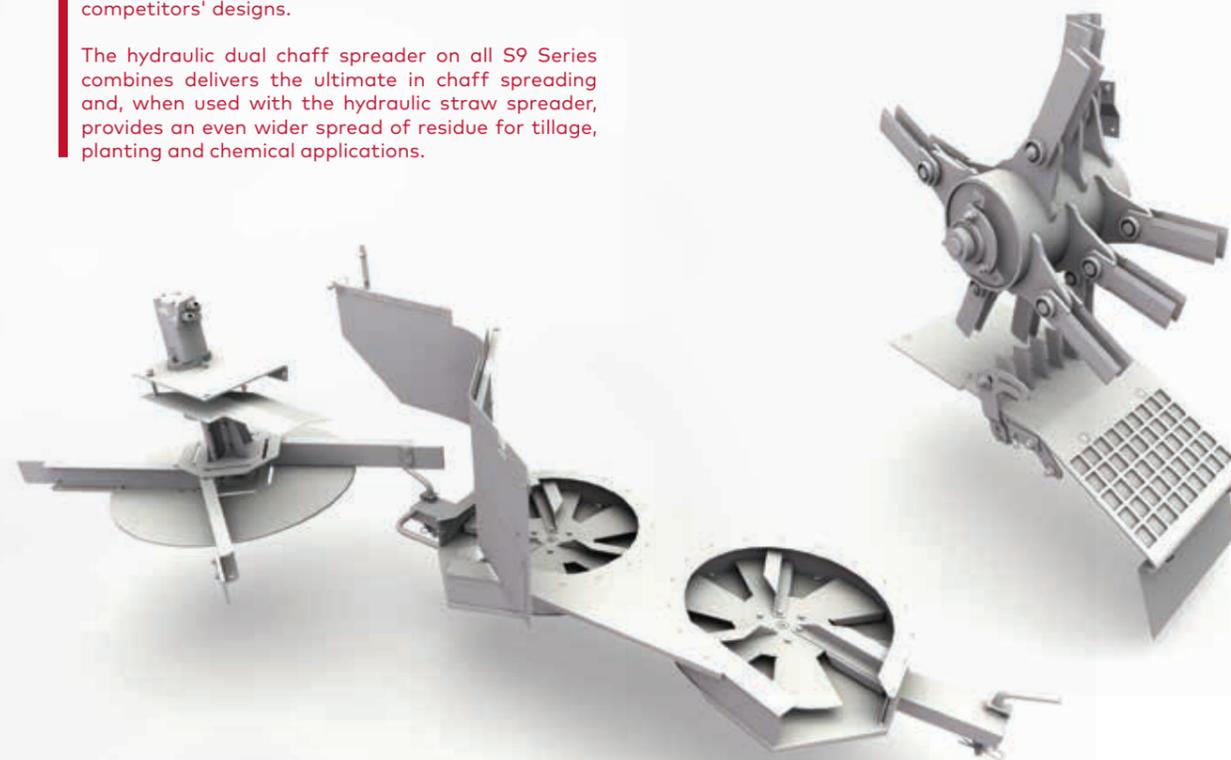
Bale straw by simply changing from the large-diameter pulley to the small pulley, reducing rotor speed, removing the standard hydraulic spreader and dropping the residue into a clean, compact windrow. The Tritura™ processor delivers a high quality straw sample because the material spends less time in the processor, creating longer undamaged straw – perfect for baling.

The new S9 Series residue-management system provides today's chopping and spreading requirements but accomplishes it with substantially less horsepower than competitors' choppers, which must process all the straw and chaff across the entire width of their machine and require a higher velocity of air to spread their increased residue density. ❷ ▶

❷ The integral chaff spreader on the Gleaner S9 Series uses the high volume of air passing below the accelerator rolls to blow chaff out the back of the combine. The spreader features an adjustable tailboard and fins to help spread material other than grain (MOG) into a wider swath as it leaves the machine. There is no stripping of material and no mechanical drives that rob horsepower as in competitors' designs.

The hydraulic dual chaff spreader on all S9 Series combines delivers the ultimate in chaff spreading and, when used with the hydraulic straw spreader, provides an even wider spread of residue for tillage, planting and chemical applications.

❶ For high-speed chopping, the small 19.5 cm chopper drum features 24 knives and a retractable stationary six-knife bed for greater residue-chopping demands. The chopper knives are made of a new material for several times greater life than previous knives.



# Serviceability

The Gleaner S9 Series is designed to have the fewest belts, chains, augers and gear drives possible to reduce the total number of moving parts, points of potential wear or breakage and the number of hours you have to spend on service.

The walk-in rear-engine compartment is the industry's largest, and the combine's overall low centre of gravity puts most machine parts within easy reach from the ground. Easily accessible suction-type hydraulic filters, single reservoir and sight-level tube all work to limit service time demands without risking hydraulic system integrity. ❶▶

## SmartCooling™

The standard AE50 award-winning SmartCooling™ system consists of a variable-pitch cooling fan with reversing capability. The "Smart" system has new software that varies the pitch based on engine temperature, providing a more accurate means of regulating the amount of cooling required versus outside ambient temperature. The fan pitch varies automatically, resulting in only the amount of cooling required. ❷▶

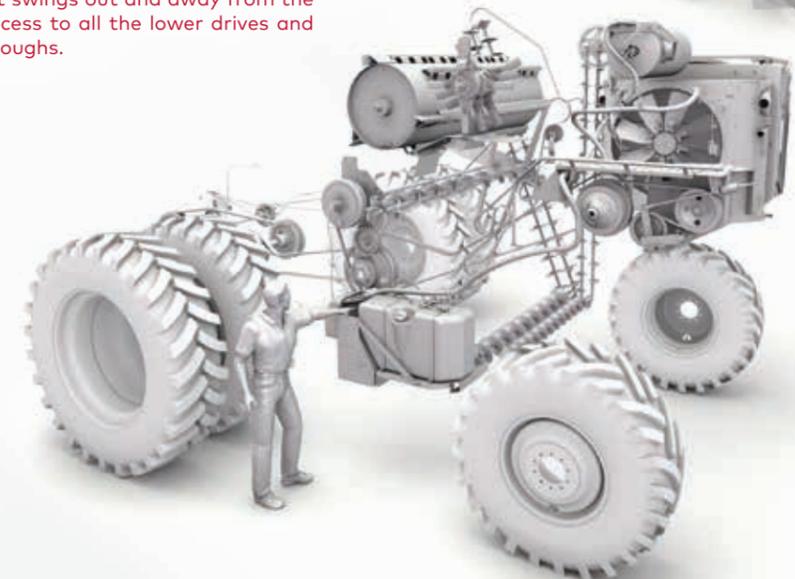
❶ Because Gleaner S9 Series combines use straight-through shafts, changing belts and making adjustments to the machine is easier, which can be done with both feet on the ground, taking less time away from your harvest. The S9 Series rotor can be removed in a fraction of the time it takes to remove a rotor from our competitors' combines.

Gleaner S9 models feature an integrated tool box located in the front of the DEF tank for easy ground-level access. The DEF tank support includes a pivoting feature that swings out and away from the machine for easy access to all the lower drives and drains for elevator troughs.

The reduction in fan pitch results in a significant increase in available horsepower while saving fuel. The minimum fan pitch can be reduced to 20 degrees, and the fan pitch will not increase until the engine temperature rises over 82.7°C. The pitch will increase in relationship with the temperature of the engine until the engine reaches 100° C, at which time the cooling fan is at its maximum pitch. This system allows Gleaner S9 Series combines to optimise cooling based on engine performance, engine load and engine temperature.

When the separator is engaged, the fan will reverse pitch at full rotation for 1.5 seconds every 15 minutes to clean the radiator, coolers and rotary screen. The fan returns to 100 per cent pitch for 15 seconds to clean the engine compartment and then goes back to variable pitch to save horsepower and fuel. The SmartCooling™ fan can also be manually reversed from the cab via the Tyton™ terminal.

❷ The entire rotary screen box and coolers pivot out for easy service inspection. Exclusive SmartCooling™ eliminates the need for daily cleaning of the radiator, coolers and rotary screen even in heaviest soybean dust and chaff.



## Fuse® Technology

Fuse® is AGCO's next-generation approach to precision agriculture that connects the entire crop cycle from enterprise planning to planting, crop care, harvesting and grain storage-providing mixed-fleet farming operations improved access to their farm data to make more informed business decisions, resulting in enhanced productivity and profitability.

You can choose from two options on the Tyton™ terminal:

### FieldStar® Live Option

Gleaner S9 Series combine come standard with integrated FieldStar® Live yield-monitoring systems. FieldStar® Live uses yield and moisture sensors, global positioning and the Tyton™ terminal to track yield data.

FieldStar® Live includes AGCO yield sensor, AGCO moisture sensor and live mapping on the Tyton™ terminal.

### Auto-Guide™

Gleaner offers the optional Auto-Guide™ guidance system, featuring a NovAtel satellite receiver that comes from the factory set up for WAAS. The system integrates Auto-Guide™ control into the Tyton™ terminal and eliminates the need for a separate screen in the cab.

In addition, with the Auto-Guide™ system, you can simply upgrade your correction system accuracy by contacting your Gleaner dealer for an unlock code.

Gleaner Tyton™ terminal screen showing FieldStar® Live real-time yield mapping.



## AgCommand®

AgCommand® is available at two levels of service. Whether you opt for self-monitoring in Level 1 or take full advantage of your dealer's expertise in Level 2 and beyond, AgCommand® helps you minimise downtime and run your operation more efficiently.

Features of the new and improved AgCommand® include:

- ▶ Customisable and pre-populated vehicle and engine information
- ▶ Automated, actionable, near real-time alerts
- ▶ Prioritised notifications
- ▶ Pre-populated service and maintenance intervals
- ▶ Machine geofencing
- ▶ Broader geographic coverage via both GSM and CDMA networks
- ▶ Fully accessible via your web browser.

## Fuse® Connected Services

Fuse® Connected Services utilises Fuse® technology to enable customers to receive equipment and operational support from your Gleaner dealer to improve efficiency, increase productivity and optimise farming operations season-to-season, throughout the crop cycle.

Fuse® Connected Services will improve productivity and increase yields through a combination of technology products and dealer services including off-season inspections, preventative maintenance, condition monitoring, training and year-round support.

### Fuse Connected® Services Levels

Get the support you need, when you need it, with the flexibility of different levels of dealer engagement, ensuring maximum productivity for your operation.

- ▶ Level 1: Access & Insight
  - ▶ Make informed decisions using information generated from AGCO and/or non-AGCO equipment, while pro actively managing equipment through automated reports and condition monitoring. Level one puts you in control.
- ▶ Level 2: Consult & Monitor
  - ▶ Rely on the expertise of a dedicated dealer analyst to monitor equipment, inform you of potential issues and provide recommendations for operational improvement. Level two adds hands-on support from your dealer, so you can focus on your business.

# Engine & Drivetrain

The S9 Series features a new variable-displacement motor providing automatic high-low shifting through the hydrostatic propel system. This was accomplished manually through the XR™ two-speed shift-on-the-go transmission of the S8 Series. The programming of the hydrostatic motor to optimum displacement automatically provides speed and torque when you need it, whether you are looking for a faster road speed or climbing a hill.

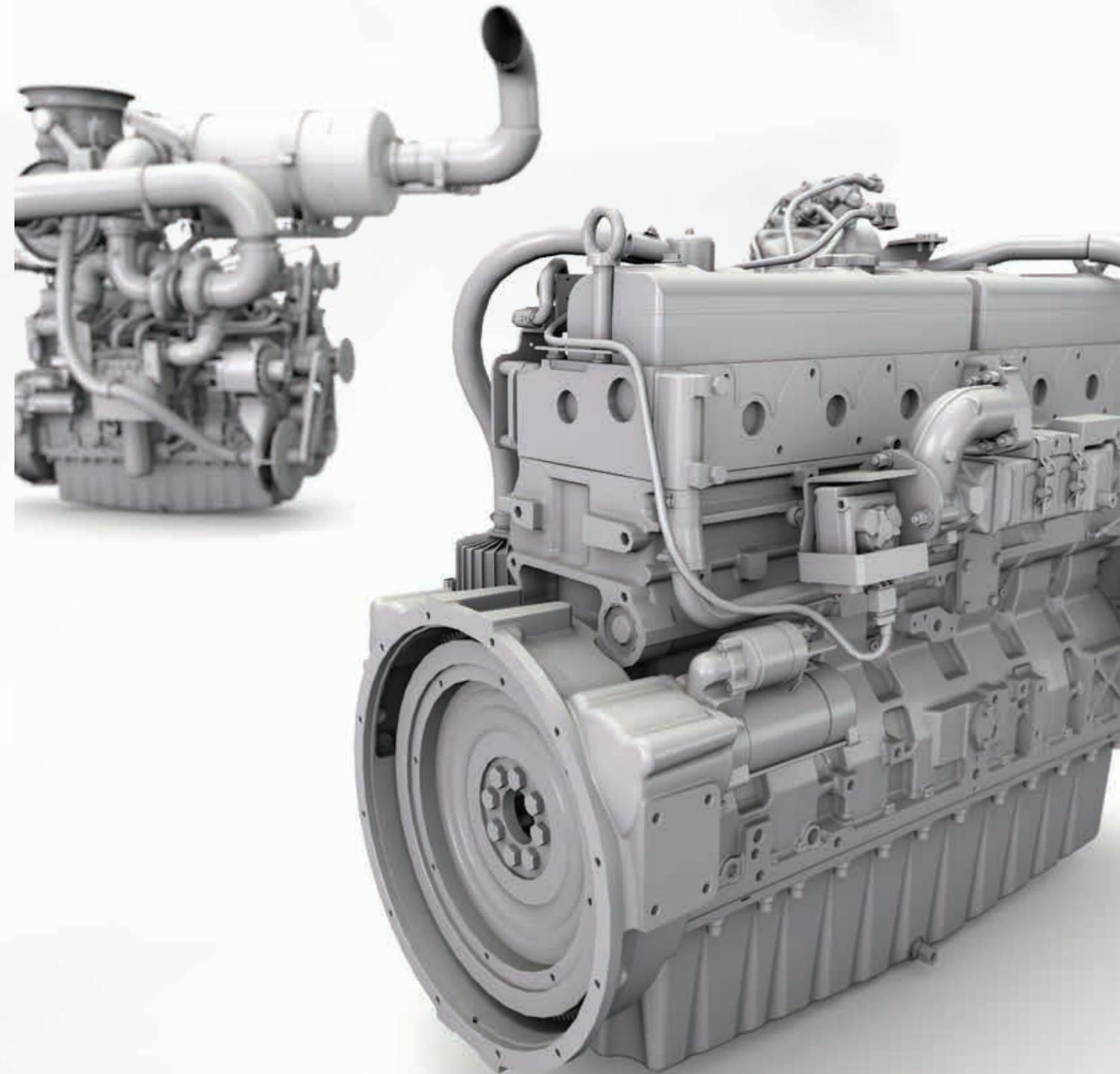
The rear adjustable steering axle and factory or field installed Rear Wheel Assist (RWA) keeps the combine moving through soft field conditions.

Pushing all Gleaner S96 Class 6 combines is a dependable high-torque fuel-efficient easy-to-service AGCO POWER 84 AWF liquid-cooled 8.4L twin-turbocharged diesel engine. The Gleaner S97 Class 7 and S98 Class 8 combines feature a new high-torque, fuel-efficient AGCO POWER 98 AWF liquid-cooled 9.8L twin-turbocharged diesel engine. These engines feature SCR clean-air technology that is more fuel efficient at higher horsepower ratings than previous models. From a rated 322 hp (240 kW) in the S96, 375 hp (279 kW) in the S97 and 430 hp (320 kW) in the S98, maximum boost power jumps to 398 hp (296 kW) on the S96, 451 hp (336 kW) on the S97 and 471 hp (351 kW) on the S98. The rear-mounted engine distributes weight better for less noise and vibration and is more accessible for service and maintenance.

Model	Engine hp (kW)	Maximum Boost hp (kW)
Gleaner S96	322 (240)	398 (296)
Gleaner S97	375 (279)	451 (336)
Gleaner S98	430 (320)	471 (351)

AGCO POWER 84 AWF and 98 AWF engine features:

- ▶ **Four-valve-per-cylinder cross-flow head permits our engineers to centre the injector over the piston, improving fuel/air mixing to control emissions and fuel consumption better.**
- ▶ **Bosch common-rail fuel injection system takes its commands from the EEM3 electronic engine management software for precise, faster response and more power per litre of diesel.**
- ▶ **Three-ring pistons seal tightly for efficiency and better oil control.**
- ▶ **Dual centrally supported cylinder liners eliminate liner cavitation, prolonging cylinder life.**
- ▶ **Lightweight, big-end connecting rods fracture-split production process, leaves a rough edge at the face to improve holding power and durability while minimising vibration.**
- ▶ **Large 870-litre polyethylene fuel tank, protected by in-line canister-style separators, ensures an adequate supply of clean fuel to feed the system.**
- ▶ **Three-stage pilot injection.**
- ▶ **Automatic fuel-temperature compensation.**





# Headers

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## New Gleaner 9255 DynaFlex™ Draper Headers

With up to 12.2 m of cut, the new generation 9255 DynaFlex™ draper header allows for increased capacity and harvesting rate and reduces operator fatigue. The flexible cab-controlled cutter bar provides you with a full 20 cm of vertical travel, allowing you to take crop at ground level.

Other great features include, the 12-degree header tilt adjust interface to adjust for the best cutting angle.

A dual mechanical SCH® sickle-drive system has been redesigned with a heavy-duty flywheel, eliminating the need for a counter weight from the side. The new design considerably narrows the

divider. This permitted a redesigned narrower profile end shield and includes a new taller crop divider.

An updated single-height skid design has been integrated, and the improved skid geometry over the previous 9250 models reduces potential for wear to extend life. Larger diameter outer hydraulic cylinders have been incorporated for longer life and improved reliability. A new AGCO-built and -designed one-piece reel has been incorporated into the 9255 DynaFlex™ header, improving visibility and performance.

Choose from two sickle options:

- ▶ **Schumacher® row crop or small grain sickle with rollers.**
- ▶ **AGCO high-capacity row crop or small grain sickle with self-adjusting spring hold downs.**

# Specifications

	S96	S97	S98
<b>Feeding System</b>			
Chain size	#557 serrated		
Variable speed drive	Available		
Feed reverser	Electro-hydraulic, #60 chain		
Housing width in. (cm)	39.5 (100.3)		
SmarTrac™ lateral tilt	Standard		
<b>Threshing / Separation System</b>			
Type	Transverse rotor		
Concave type	4 sections with 17 bars		
Concave wrap	87°		
Rock protection	Stone trap		
<b>Rotor / Cylinder / Threshing</b>			
Bars, type	Chrome, reversible		
Diameter in. (m)	30 (7.62)		
Length in. (m)	88 (2.2)		
Separation area	360°		
Speed, low-range rpm	180-480		
Speed, high-range rpm	336-900		
Concave area in² (m²)	960 (0.61)		
Threshing & separating area in² (m²)	6,047 (3.89)		
<b>Cleaning System</b>			
Cleaning stages	2		
Cascade pan in² (m²)	992 (0.63)		
Chaffer area in² (m²)	3,889 (2.51)		
Sieve area in² (m²)	3,397 (2.19)		
Total area in² (m²)	8,721 (5.62)		
Max. Cleaning fan speed rpm	1,250		
Cleaning fan diameter in. (mm)	13 (330)		
<b>Grain Handling System</b>			
Tank capacity bu (L)	390 (13,743)		
<b>Unloading Auger</b>			
Diameter in. (cm)	14 (35.6)		
Unload rate bu/sec (L/s)	4.0 (141)		
Length from centreline in. (m)	298 (7.56)		
Discharge height in. (m)	185.5 (4.712)		
Clearance height in. (m)	169.5 (4.305)		
<b>Crop Residue Disposal</b>			
Chopper	2 speed, 24-knife, FineCut II		
Maximum chopper speed rpm	3,250		
Straw spreader	Hydraulic, Variable speed		
Hydraulic chaff spreader	Standard		

	S96	S97	S98
<b>Engine</b>			
Model	AGCO POWER 84AWF	AGCO POWER 98AWF	
Displacement in³ (L)	513 (8.4)	598 (9.8L)	
No. of cylinders/type	6/inline	7/inline	
Horsepower @ 2,100 rpm SAE hp (kW)	322 (240.1)	375 (279.6)	430 (320.6)
Maximum boost hp (kW)	398 (296.7)	451 (336.3)	471 (351.2)
Fuel tank capacity gal (L)	230 (870.6)		
<b>Engine Cooling System</b>			
Type	SmartCooling™ GEN 2 w/variable pitch and reversing capability		
<b>Drive / Propulsion System</b>			
Transmission (std.)	4-speed electronically shifted w/single speed hydrostatic		
Proportional speed hydro transmission (opt.)	4-speed w/automatic changes in speed and torque		
Park brake	Electronically activated		
Final drive type	Spur gear S-42		
Tread width standard/reversed in. (m)	120/145 (3.05/3.65)		
<b>Steering Axle</b>			
Tread width adjustable axle in. (m)	119/143 (3.02/3.65)		
Tread width RWA in. (m)	126/144 (3.20/3.65)		
Steering type	Dual cylinder		
Turning radius in. (m)	270 (6.85)		
<b>Hydraulic System</b>			
Hydraulic pump	Gear		
Control valve	Electro-hydraulic		
Tank capacity gal (L)	13 (49.2)		
<b>Cab &amp; Controls</b>			
Interior volume ft³ (m³)	130 (3.68)		
Total glass area ft² (m²)	66 (6.13)		
Front glass area ft² (m²)	32.9 (3.05)		
<b>Lighting</b>			
Standard	(8 halogen cab roof, 2 LED header, 2 LED row finder)		
NightSight™ (opt.)	(8 LED cab roof, 2 LED header, 2 LED row finder)		
Standard Cab	High back/air ride, cloth seat Standard lighting package AM/FM, USB, Bluetooth® (streaming only), weatherband, MP3 w/4 speakers Remote outside mirrors		

	S96	S97	S98
Deluxe Cab	Premier™ heated and cooled seat NightSight™ lighting package AM/FM, CD, Satellite-ready, weather band, MP3, Bluetooth® head unit and 4 Kicker® speakers w/subwoofer Cooler Remote heated outside mirrors		
<b>Terminal</b>			
Type	Tyton™		
Screen	Glass w/LED backlighting and touch control		
Size in. (cm)	10.4 (26.4)		
Display area in² (cm²)	51.7 (333)		
Video	Camera-ready for operating 2 cameras through Tyton™ terminal, 2 brackets (rear beacon light, grain bin extension & unloader tube) Optional 4 camera-ready with AgCam 9" Quad monitor <i>Cameras/cable kit not included.</i>		
<b>Yield Monitor</b>			
Fieldstar Live™ (std.)	Yield and moisture sensors, live mapping data through Tyton™ terminal		
<b>Dimensions</b>			
Transport height in. (m)	141 (3.58)		
Length w/o header in. (m)	339 (8.61)		
Wheelbase in. (m)	134 (3.40)		
Base weight with tyres lb. (kg)	31,920 (14,479)	32,220 (14,615)	
Ground clearance in. (cm)	23.5 (59.7)		

# GLEANER® S9 Series Combines & Headers

[gleanercombines.com](http://gleanercombines.com)

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