

PERFORMANCE THAT YIELDS RESULTS

ENGINES FOR AGRICULTURAL APPLICATIONS



**FOR
A WORLD
THAT'S
ALWAYS ON™**

POWERING GLOBAL AGRICULTURE SINCE 1919

Since our very first engine, the HVID, was manufactured in 1919, Cummins has pioneered many industry firsts. From being one of the first companies to use diesel in commercial vehicles, to running the first diesel-powered race car, Cummins has consistently been at the forefront of technological innovation. We have built a solid reputation for reliability, durability and dependability.

As a global power leader, we design, manufacture and service diesel engines and related products including turbochargers, fuel systems, controls and emissions reduction technologies. As we all strive for a more sustainable future, we know our customers may wish to explore alternative power options. That's why we're developing a full power portfolio, including electric, hybrid, natural gas and hydrogen technologies.

We partner with our customers to find the best power solution for their needs.





80

**MANUFACTURING
PLANTS**



18

**ENGINE
FACTORIES**



11,300

**SERVICE / DEALER
LOCATIONS**

YOUR LOCAL PARTNER

Up to one million Cummins-powered agricultural machines are in operation around the world in applications such as tractors, sprayers, harvesters and specialist autonomous equipment. Not to mention Cummins-powered pickup trucks and generators. We have built a strong brand reputation in the farming community, powering equipment for more than 20 major agriculture OEMs.

Support from Cummins goes way beyond the sale. We make products exactly where customers need them and have common product platforms that give you consistency of installation, with emissions capability and cost tailored to your regional needs. Our dedicated global network is the largest in the industry and this gives confidence to equipment manufacturers and farmers who know that support is available for their products, all around the world.

TRANSFORMING THE FUTURE

EFFICIENCY, PRODUCTIVITY, SUSTAINABILITY

Our world is changing. Equipment manufacturers are focused on creating machines that meet the needs of an increasing population, alongside a reduction in farmland and the need for environmental sustainability.

Cummins is at the forefront of developing and applying new technologies to meet future customer requirements and emissions legislation. We invest close to \$1 billion per year, focused not just on reducing environmental impact, but also engineering value for our customers through benefits in performance, machine capability and lower running costs.

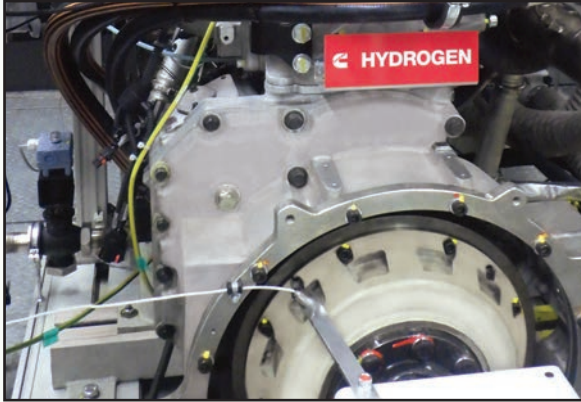
We have powered agriculture for over 100 years, and we plan to power it for 100 more. We know it's not a one-size fits all sector. That's why we're driving change, investing in new power solutions, increasing performance and lowering operating costs. Whatever stage you might be at, Cummins is ready with solutions to fit your operation and application.

KEY TECHNOLOGIES:

- Advanced, ultra-clean diesel
- Alternative fuels – natural gas / biogas
- Hydrogen fuel cells and hydrogen combustion engines
- Electrolysers
- Electrification / hybrid technologies
- Connectivity and digital solutions
- Powertrain optimization



HERO PERFORMANCE, ZERO EMISSIONS

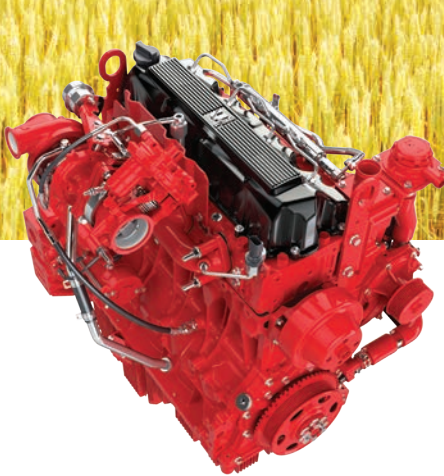


Through our PLANET 2050 strategy, we're actively embracing the challenge as the world shifts to decarbonized power. Our quest for performance and sustainability has taken another step forward with the testing of a hydrogen-fuelled internal combustion engine. The proof-of-concept product builds on our existing leadership in engine technology, alongside the opportunity to create high performance, zero emissions power.



PERFORMANCE THAT'S CUTTING EDGE

Performance Series engines deliver higher power and torque for more machine capability, while simpler architecture means more reliability, productivity and improved fuel efficiency. In addition, Cummins latest Single Module™ aftertreatment is up to 40% smaller and 20% lighter than previous systems, allowing the removal of EGR from F3.8, B4.5, B6.7 and L9 engines and facilitating easier packaging.



F3.8 PERFORMANCE SERIES

Displacement

3.8 Liters

Power

74 hp / 55 kW*
100-173 hp / 75-129 kW

Max. Torque

457 lb.-ft. / 620 Nm

Emissions Level

Stage V / Tier 4 Final

Product Technologies

Single Module DPF/SCR
EGR-Free
Wastegate Turbo



B4.5 PERFORMANCE SERIES

Displacement

4.5 Liters

Power

120-200 hp / 90-149 kW

Max. Torque

575 lb.-ft. / 780 Nm

Emissions Level

Stage V / Tier 4 Final

Product Technologies

Single Module DPF/SCR
EGR-Free
Wastegate Turbo



B6.7 PERFORMANCE SERIES

Displacement

6.7 Liters

Power

155-326 hp / 116-243 kW

Max. Torque

1014 ft.-lb. / 1375 Nm

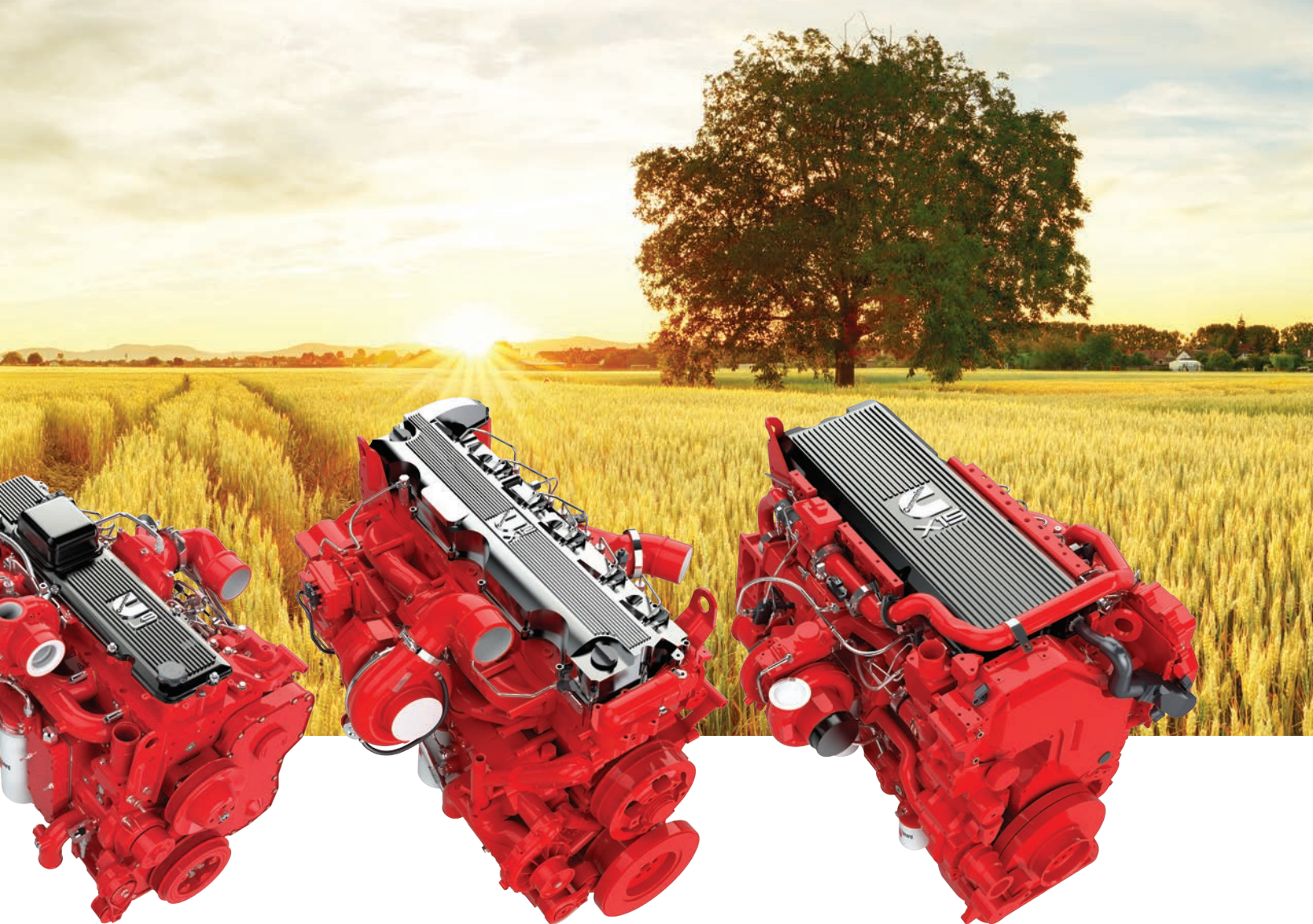
Emissions Level

Stage V / Tier 4 Final

Product Technologies

Single Module DPF/SCR
EGR-Free
Variable Geometry Turbo

*F3.8 74 hp/55 kW rating available for compact equipment requiring high levels of torque. Product technologies include cooled EGR and DOC/DPF aftertreatment system.



L9™
PERFORMANCE
S E R I E S

Displacement

9 Liters

Power

275-430 hp / 206-321 kW

Max. Torque

1361 lb.-ft. / 1846 Nm

Emissions Level

Stage V / Tier 4 Final

Product Technologies

Single Module DPF/SCR

EGR-Free

Wastegate Turbo

X12™
PERFORMANCE
S E R I E S

Displacement

12 Liters

Power

335-512 hp / 250-382 kW

Max. Torque

1700 lb.-ft. / 2305 Nm

Emissions Level

Stage V / Tier 4 Final

Product Technologies

DPF/SCR & EGR-Free

Wastegate Turbo

X15™
PERFORMANCE
S E R I E S

Displacement

15 Liters

Power

450-675 hp / 336-503 kW

Max. Torque

2049 lb.-ft. / 2779 Nm

Emissions Level

Stage V / Tier 4 Final

Product Technologies

DPF/SCR & Cooled EGR

Variable Geometry Turbo

PERFORMANCE SERIES: AGRICULTURE-SPECIFIC PRODUCTS

F4.5 STRUCTURAL ENGINE

As part of our Performance Series range, the F4.5 delivers high machine capability and substantial productivity benefits for farmers. For OEMs, flexibility is a core consideration and the F4.5 can be tailored to suit a variety of installations with customizable oil pan, fan hub and turbocharger positions.

Displacement:

4.5 liters

Power:

118-158 hp / 88-118 kW

Max. torque:

476 lb.-ft. / 646 Nm

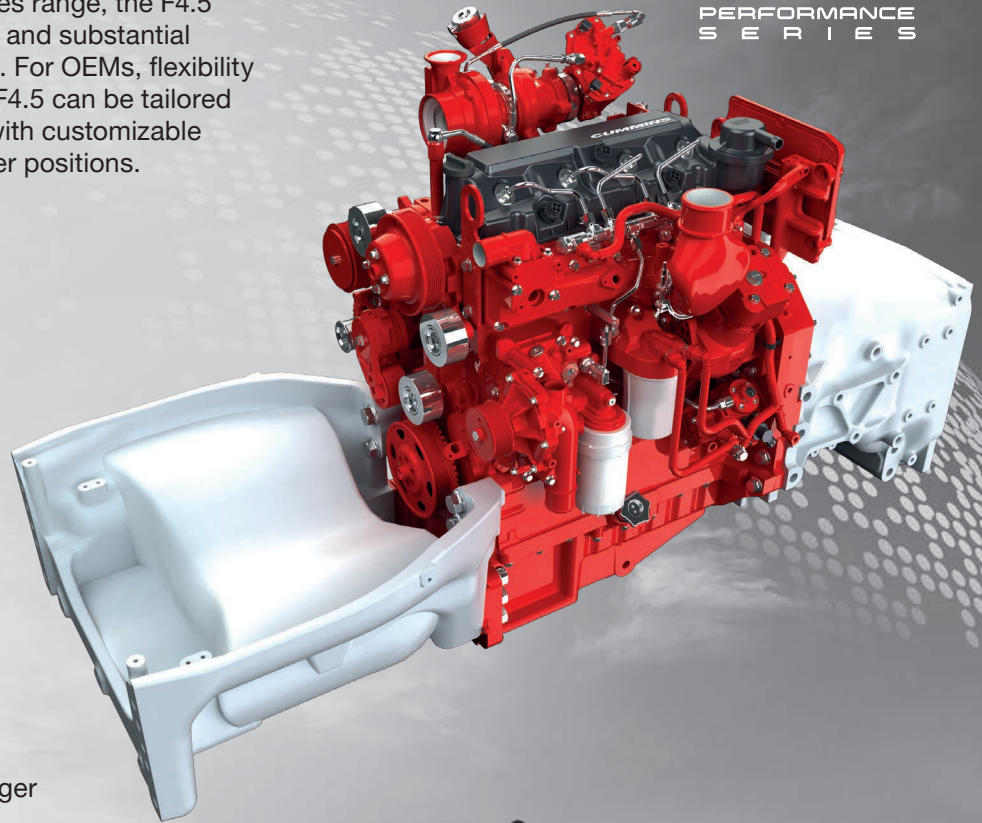
Emissions level:

Stage V

Product technologies:

- High low end torque
- Cummins Flex Module aftertreatment with no DRT pipe for easier packaging
- EGR-free
- Structural block and oil pan
- Holset® wastegate turbocharger
- Packaging optimization with a short and narrow block and oil pan to suit compact tractors
- Filters and oil fill/level gauge suitably positioned for easy access for service and repair

F4.5™
PERFORMANCE
S E R I E S

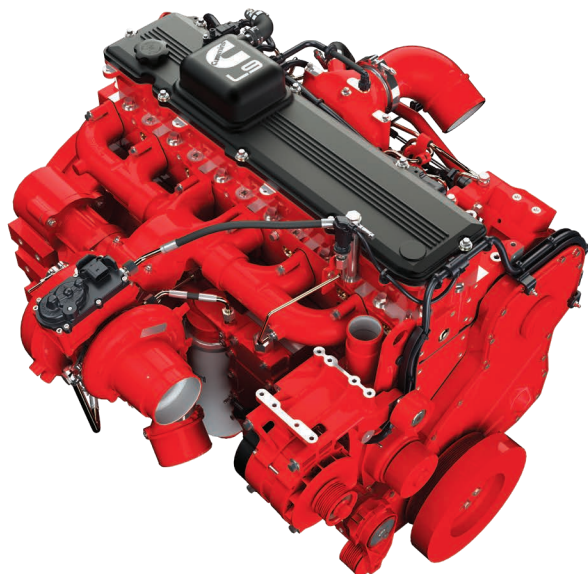




L9-HARVEST EDITION

The proven L9 Performance Series engine is now available with optimized power and torque curves specifically for combine harvester operation.

Key technologies such as turbocharging are specified to best fit for the responsiveness, cost of operation and productivity expected by combine users.



Displacement:

8.9 liters

Power:

349-429 hp / 260-320 kW

Max. torque:

1362 lb.-ft. / 1846 Nm

Emissions level:

Stage V / Tier 4 Final

Key features:

- Optimized fuel consumption specifically for combine operation to lower total cost of ownership for farmers
- Cummins VGT™ variable geometry turbocharger added to enable better load acceptance (transient response) – this enables farmers to run the combine at higher load
- Substantial low end torque for strong acceleration
- Two year filter change interval lowers total cost of ownership for farmers

WHY CHOOSE PERFORMANCE SERIES

Delivering more power and torque with less complexity, Cummins Performance Series is compliant to EU Stage V and Tier 4 Final, as well as a range of lagging emissions standards. For global manufacturers, this means the same installation can be used across many countries, with the only difference being the aftertreatment system.



KEY DESIGN FEATURES

SIMPLICITY

Engines up to 12 liters are EGR-free. The simpler architecture means lower maintenance and higher reliability in a smaller, lighter package.

PROVEN IN-HOUSE TECHNOLOGIES

Performance Series uses proven Holset® wastegate or VGT™ variable geometry turbocharging technology for responsiveness with fuel-efficient performance. The lineup's single turbocharger configurations are simpler and easier to maintain than equivalent series turbocharger setups.

For 3.8 to 9 liter displacement engines, Cummins latest Single Module™ aftertreatment technology is smaller and lighter than its predecessor.

The savings are up to 40% in envelope size and up to 20% in weight. The higher NOx conversion efficiency enables the required level to be met without the use of EGR. The system also removes 99.9% of all particulate matter (PM) by weight and count.

GLOBAL ENGINE PLATFORMS

Having a shared installation for domestic and export business means manufacturers can have increased production flexibility, with common integration points wherever the equipment will be sold. The exhaust aftertreatment is the only key difference between specifications. Engine envelope differences between the latest and lagging emissions products are minimized in the design, reducing complexity for OEMs in their manufacturing processes. With no EGR, the high sulfur fuel tolerance of up to 5,000 ppm (without aftertreatment) adds to this global capability.

START-STOP

Integrated stop-start capability delivers lower emissions, reduced noise levels and improved operating costs by reducing fuel burned and urea consumed. With start-stop, less maintenance is required due to fewer engine running hours, optimizing uptime and improving machine resale values.

CUSTOMER BENEFITS

FOR EQUIPMENT MANUFACTURERS

The Performance Series' higher power density offers downsizing opportunities for manufacturers to potentially save costs by using a lower displacement engine with no impact on operation. Alternatively, machine capability can be increased to improve competitiveness and add more value to farming operations.

The smaller, lighter engine packages with Single Module™ aftertreatment are easier to install, saving engineering resources and time. The EGR-free design lowers installed costs, with less to cool, driving potential cost savings on the cooling package.

FOR FARMERS

Cummins' reputation for durability means that farmers and equipment contractors have a product they can trust. With improved reliability, operators have higher machine availability, while lower noise and near-zero emissions support sustainable operations. Higher fuel efficiency, longer service intervals, reduced running costs and increased responsiveness means that work gets done quicker. Plus, Cummins' latest telematics capability enables a faster response time for repairs, reducing downtime as service technicians arrive on-site fully informed and with the right tools and parts.

ENGINES FOR ALL EMISSION STANDARDS

With the most extensive engine lineup in the industry, Cummins provides optimized engine and generator set solutions wherever you are in the world. Our leadership in driveline innovation ensures we can achieve our goal of maximizing customer value by providing the most appropriate solution, integrated into each equipment type and market.

No matter what emissions standard you're working to, we have a solution to meet your needs.

Engine	Engine Type	Power Range	Stage III A	Tier 4 Final / Stage IV	Performance Series Stage V / Tier 4 Final
QSF 2.8	Electronic	49 - 74 hp (37 - 55 kW)	✓	✓	
QSF3.8 / F3.8	Electronic	74 - 173 hp (55 - 129 kW)	✓	✓	✓
QSB4.5 / B4.5	Electronic	97 - 200 hp (72 - 149 kW)	✓	✓	✓
QSB6.7 / B6.7	Electronic	133 - 326 hp (99 - 243 kW)	✓	✓	✓
QSC8.3	Electronic	215 - 305 hp (160 - 227 kW)	✓		
QSL9 / L9	Electronic	230 - 430 hp (172 - 321 kW)	✓	✓	✓
QSG12 / X12	Electronic	335 - 512 hp (250 - 382 kW)		✓	✓
QSZ13	Electronic	380 - 575 hp (283 - 429 kW)	✓		
QSX15 / X15	Electronic	450 - 675 hp (336 - 503 kW)	✓	✓	✓
QSK19	Mechanical & Electronic	480 - 760 hp (358 - 567 kW)	✓	✓	

Ratings could differ depending on specific engine at different emission standards.

A selection of the engines above are available for lagging emissions regions.
Please consult your Cummins representative for more details.

Engine capacity in liters is noted in the product name.

POWER GENERATION – WHEN EVERY SECOND COUNTS

For more than 100 years, farmers all over the world have trusted Cummins. From tractors, sprayers and pickup truck engines, to backup generators and irrigation pumps, Cummins has you covered in terms of both the equipment you run – and support you can depend on.

Reliability is paramount when it comes to livestock farming, where a power outage can disrupt automated feeding and watering systems, as well as HVAC systems. When there's a power disruption from the grid, backup generators have to fire up immediately and stay on for the duration.

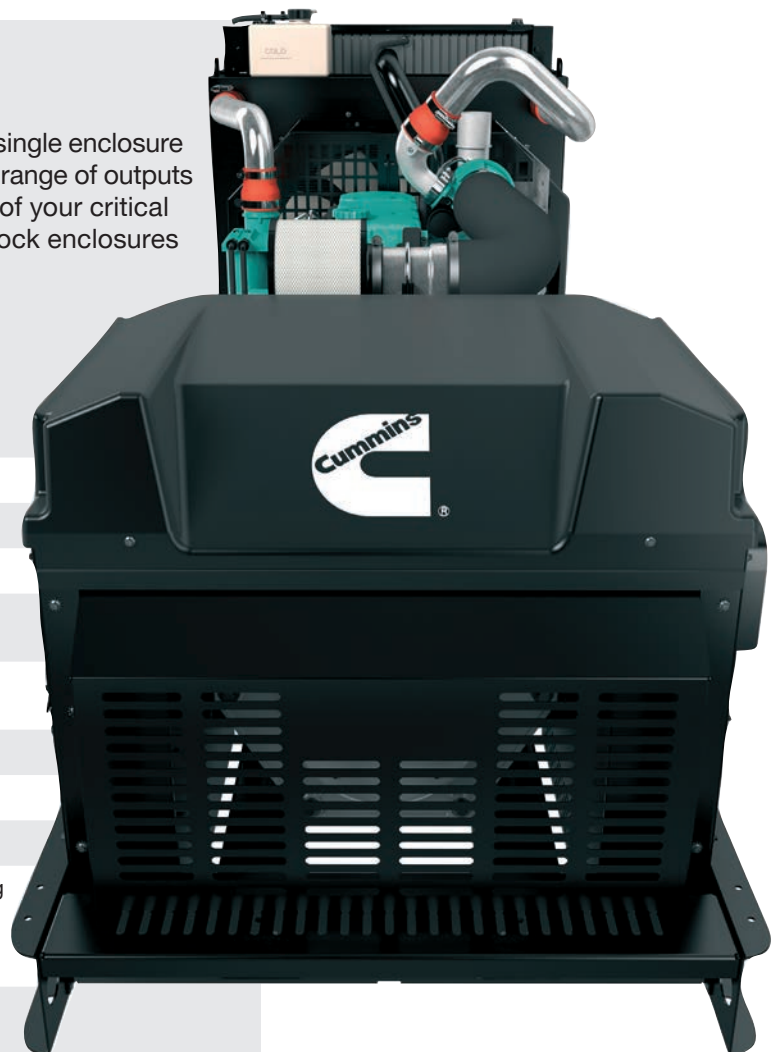
We design, manufacture and integrate every component from the engine, alternator and electronic controls into a complete backup generator system. That means each element is optimized for maximum performance and efficiency, and total quality control is maintained.

THE RIGHT SIZE.

Whether you are specifying backup power for a single enclosure or multiple containment units, Cummins offers a range of outputs up to 3500 kW to cover all the electrical needs of your critical equipment. These units are optimized for livestock enclosures based on most commonly specified options.

60 HZ PRODUCT RANGE

kW	Standby – 10 kW to 3500 kW; Prime – 9 kW to 3000 kW
Fuels	Diesel, natural gas and propane
Engine	Cummins (above 20 kW)
Phase	Single and 3 phase
Voltages	120/240 AC single phase, 120/208 AC 3 phase and 277/480 AC 3 phase
Enclosures	Open, weather protective and sound attenuated
Breaker	No breaker or customer specified
Listing	UL-2200
Battle Short	Factory enabled or customer defined
Options	Fuel tanks, remote displays and paralleling solutions. Can be customized with many other options – please consult your sales dealer



DIGITAL SOLUTIONS FOR MAXIMUM UPTIME

MONITORING: **CONNECTED DIAGNOSTICS™**

Make informed decisions on when to really stop and when to continue working by understanding the suggested root cause of fault alerts and knowing how long you have before an issue is likely to escalate. Wirelessly connect engines to Cummins using telematics for continuous monitoring and diagnosis using alert notifications sent via a convenient mobile app, email or web portal.

CALIBRATING: **CONNECTED SOFTWARE UPDATES™**

Cummins-powered equipment can remain on the farm while beneficial performance or fuel efficiency enhancements are applied at a fraction of the cost using integrated telematics systems and wireless, over-the-air connectivity services. This enables farmers to calibrate engine control modules remotely with minimal downtime.

SERVICING: **CUMMINS GUIDANZ®**

Guidanz technology is a simple, plug-in device that streamlines every aspect of the Cummins service experience, accelerating the diagnostic and repair process in a few simple steps. The Guidanz mobile app, when paired with the Bluetooth®-enabled INLINE™ mini datalink adapter, displays Cummins fault codes and other key engine information anywhere you need it. Its Immediate Assessment feature enables you to determine root cause of a fault, review estimated repair times and identify the most likely parts for easier service. You can provide this information to your nearest certified service provider, who will arrive fully informed and with the correct parts.

The Guidanz mobile app is compatible with Stage IIIA/Tier 3 and newer off-highway engines.





**ANY CUSTOMER,
ANY QUESTION,
ANY CHANNEL,
ANY TIME.**



Cummins Care is not a typical call center. We are a solutions center helping to prevent issues, provide answers quickly and reimburse accurately. We are your connection to a whole new level of customer service, to support and deliver faster personal attention with rapid results. From the moment you engage Cummins Care, you will have access to a Cummins expert with specialized skill sets, experience and in-depth knowledge to take care of your needs.

- **CUSTOMER SERVICE**
- **TECHNICAL SUPPORT**

- **WARRANTY ASSISTANCE**
- **CONNECTED SERVICE**

We are experts with advanced technology to make your life easier while providing a seamless support experience.

Contact us at care.cummins.com or:

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