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GR180

Operating Weight (kg)	15400
Length x chord height (mm)	3660×610/3965×610
Maximum depth of cutting (mm)	500
Engine Model	CTAA8.3/SC8D190G2B1
Engine Rated Output (Kw/r/min)	138/2200 140/2300

GR SERIES

MOTOR GRADER

GR Series Motor Grader

GR100\GR135\GR165\GR180\GR200
GR215\GR230\GR260\GR300
GR215A\GH215

XCMG GR Series Motor Grader is widely used in large area terrain levelling, trenching, buldozing, soil loosening and snow removal operations for roads, airports and farmlands. In addition, the machines have also been used in national defense, mining, urban and rural development, water conservation and farmland projects.

Main Technical Parameters

Model		GR100	GR135	GR165	GR180	GR200	GR215	GR230	Unit
Engine	Manufacture	Dongfeng Cummins	Dongfeng Cummins	Dongfeng Cummins / Shanghai Diesel Engine	Dongfeng Cummins / Shanghai Diesel Engine	Shanghai Diesel Engine	Imported Cummins / Dongfeng Cummins	Dongfeng Cummins	
	Engine model	4BTA3.9	6BT5.9	6BTA5.9/SC8D170G2B1	CTAA8.3/SC8D190G2B1	SC8D200G2B1	CTAA8.3/6CTA8.3	6CTA8.3–C230– Ⅱ	
	Rated power/rotated speed	74/2200	97/2200	125/2200	138/2200 140/2300	147/2300	153/2200 160/2200	172/2200	kw/rpm
Performance parameters	Forward speed	5,8,11,17,24,38	5,8,13,20,30,42	5,8,11,19,23,38	5,8,11,19,23,38	5,8,11,19,23,38	5,8,11,19,23,38	5,8,11,19,23,38	km/h
	Rearward speed	5,11,24	5,13,30	5,11,23	5,11,23	5,11,23	5,11,23	5,11,23	km/h
	Tractive force (f=0.8)	41.6	61.3	82	84	87	90	90	kN
	Max.gradeability	30	30	30	30	30	30	30	%
	Min.turning radius	5.9	6.6	7.3	7.3	7.3	7.3	7.3	m
Operating parameters	Max. Lifting height	300	410	450	450	450	450	450	mm
	Max. shoveling depth	350	515	500	500	500	500	500	mm
	Max. side–tipping angle	45	90	90	90	90	90	90	°
Blade	Cutting angle	28~70	54~90	28~70	28~70	28~70	28~70	28~70	°
	Slewing angle	120	360	360	360	360	360	360	°
	Length x chord height	3048x450	3660 × 610	3660 × 610/3965 × 610	3660 × 610/3965 × 610	4270x610	3965 × 610/4270 × 610	4270x610	mm
Overall dimensions (LxWxH)		6880x2375x3150	8015x2380x3050	8900x2625x3470	8900x2625x3470	8932x2625x3470	8970x2625x3470	8970x2625x3470	mm
Operating Weight (Standard)		7000	11200	15000	15400	16000	16500	16500	kg

Model		GR260	GR300	GR215A	GR180R	GR215H	GR215LII	GH215	Unit
Engine	Manufacture	Dongfeng Cummins	Imported Cummins	Imported Cummins / Dongfeng Cummins	Imported Cummins	Dongfeng Cummins	Dongfeng Cummins	Imported Cummins / Dongfeng Cummins	
	Engine model	6CTA8.3–C260– Ⅱ	QSL9	QSB6.7/6CTA8.3–C215– Ⅱ	QSB6.7	6CTA8.3–C215– Ⅱ	6CTA8.3–C215– Ⅱ	QSB6.7/6CTA8.3– Ⅱ	
	Rated power/rotated speed	194/2200	224/2100	164/2200 160/2200	142/2050	160/2200	160/2200	164/2200 160/2200	kw/rpm
Performance parameters	Forward speed	5,8,11,19,23,38	5,8,11,19,23,40	5,8,13,19,23,38	3,8,6.6,8.7,15,19,32	5,8,11,19,23,38	5,8,11,19,23,38	5,8,11,16,26,38	km/h
	Rearward speed	5,11,23	5,11,23	5,11,23	3,8,8.7,19	5,11,23	5,11,23	5,8,11,16,26,38	km/h
	Tractive force (f=0.8)	132	143	115.3	80	90	90	98	kN
	Max.gradeability	36	36	36	30	30	30	30	%
	Min.turning radius	8.3	8.3	7.3	7.3	7.3	7.3	7.3	m
Operating parameters	Max. Lifting height	450	450	450	460	450	450	450	mm
	Max. shoveling depth	500	500	500	500	500	500	500	mm
	Max. side–tipping angle	90	90	90	90	90	90	90	°
Blade	Cutting angle	28~70	28~70	28~70	28~70	28~70	28~70	28~70	°
	Slewing angle	360	360	360	360	360	360	360	°
	Length x chord height	4572x787	4877x787	4270x610	3660 × 610	4270x610	4270x610	4270x610	mm
Overall dimensions (LxWxH)		10280x3100x3550	10500x3100x3550	9180x2625x3470	8900x2625x3470	8970x2625x3300	8970x2625x3300	9105x2625x3470	mm
Operating Weight (Standard)		24000	26000	16100	14500	16500	16500	16500	kg

Two blade length options are available for users to choose from.

Key Parts

Power Configuration

Shanghai Diesel Engine SC8DG2B1, Dongfeng Cummins and imported Cummins engines are available to provide powerful operation and large power reserve coefficient. The engines ensure normal operation and that the emission level adhere to the standards of different markets.

- Shanghai diesel engine SC8DG2B1
- Dongfeng Cummins
- Imported Cummins

Drive System

- Hydraulic power-mechanical transmission.
- Hydraulic - mechanical transmission.
- Hydraulic - hydraulic power-mechanical transmission.
- Gearbox-fixed shaft engaged electrohydraulic gearbox is used to ensure convenient operation and stable transmission.
- Hangzhou Gear, Liuzhou ZF, DANA and importer ZF gearboxes are used.

Gearbox

Gearbox with electrohydraulic control that offers six forward gears and three reverse gears.

Hydraulic System

Imported parts are used for key components.
Hydraulic parts from international manufacturers, such as US' EAT.N, Husco and Mico, and Italy's Hydrocontrol, are used to ensure stability and reliability.

Shovel Blade

Shovel blade movement is controlled by an adjustable, multidimensional twin lever system. The blade is made of high strength and wear resistant material that provides great service life extension. The shovel angle is controlled by a cylinder that offers good balance. The shovelling angle can be adjusted according to the material type.

Steering System

A hydraulic steering system with load sensors, good control and energy-saving features is used together with a hinged frame to provide flexible steering of the vehicle.

Operational Component

The rails are coated with wear-resistant materials to ensure flexible blade rotation, high precision and low maintenance cost.

GR100/GR135

Small Motor Grader

It is mainly used for leveling, ditching, slope scarping, dozing, soil loosening, and snow removal for roads etc. Large-area site, and is a machinery required for urban and rural roads, water conservancy construction, and farmland improvement.

Performance Features

- The machine used a Dongfeng Cummins engine, which is highly reliable, has low fuel economy, as well as low noise and emission level. With the hinged frame design, the front wheels can turn easily and freely, ensuring a small turning radius. Gear change is controlled by an electrohydraulic system that provides six forward gears and three reverse gears.
- Hydraulic parts from international manufacturers are used to ensure good operational reliability.
- Shovel blade movement is controlled hydraulically.
- The reverse axle features a three-section drive design with a self-locking mechanism.
- The adjustable control panel, driver seat and control levers are arranged ergonomically to facilitate easy control and improve overall operational comfort.
- The spacious and elegantly designed cab provides good field of vision and quality sealing.

GR165/GR180/GR200
GR215/GR230 Common Motor Grader

Widely used for large area terrain levelling, trench digging, bulldozing, soil loosening and snow removal operations on roads and at airports.
In addition, the machine can also been used in national defense, mining, urban and rural development, water conservation and farmland projects.

Performance Features

- New structural design.
- The hinged frame design ensures flexible and easy turning of the front wheels with a small turning radius.
- Gear change is controlled by an electrohydraulic system that provides six forward gears and three reverse gears.
- Hydraulic parts from international manufacturers are used to ensure good operational reliability.
- Shovel blade movement is controlled hydraulically.
- The reverse axle features a three-section drive design with a self-locking mechanism.
- The adjustable control panel, driver seat and control levers are arranged ergonomically to facilitate easy control and improve overall operational comfort.
- The spacious and elegantly designed cab provides good field of vision and quality sealing.
- Optional tools include front bulldozing plate, rear soil loosening blade, front soil loosening blade and automatic levelling device.

GR215A
All Wheel Drive Motor Grader

Widely used for large area terrain levelling, trench digging, bulldozing, soil loosening and snow removal operations on roads and at airports. The vehicle can facilitate six-wheel, four-wheel and two-wheel drive. Power can be improved by 30% using a six-wheel drive compared to the four-wheel drive, making it suitable for operation in muddy and snow conditions. Using the two-wheel drive (front wheels), fine levelling operations can be performed.

Performance Features

- The machine used a Dongfeng Cummins engine, which is highly reliable, has low fuel economy, as well as low noise and emission level.
- Gear change is controlled by a ZF electrohydraulic gearbox system that ensure flexible and easy operation.
- The rear axle has a three-section drive design with automatic No-Spin anti-slipping mechanism to provide stable and reliable transmission
- The front wheels' auxiliary hydraulic drive system can be interlocked with the gear of the back wheels to archive six-wheel, four-wheel and two-wheel drive.
- Double hydraulic circuit braking system is used to provide safety and reliability.
- The ROPS cab, with its automatic ventilation and spacious and luxurious design, provides good field of vision and sealing.
- Optional tools include front bulldozing plate, rear soil loosening blade, front soil loosening blade and automatic levelling device.

GR260/GR300/GR300A

Mining Series Motor Grader

Widely used for terrain levelling and cleaning operations at open coal and iron mines. Its heavy weight and powerful performance ensures maximum stability.

Performance Features

- The electric fuel injection technology used by the GR260 engine ensures that the emissions meet National Level II emission standards. The GR300 and GR300A meet Euro III emission standards.
- The worm gearbox with overload protection ensures great power for the blade.
- The machine features a load sensing hydraulic system.
- It also comes with electronic detection and a three-level warning system.
- The electrohydraulic gearbox provides easy changing of gears.
- Wet control drive and double hydraulic circuit braking systems provide good braking under any conditions.
- The cab is completely sealed and features a heating and air-conditioning system that provides defrosting and ventilation.
- A high strength, wear resistant blade is used to provide long service life.
- The GR300 and GR300A use an independent cooling system.
- The machine is CE certified.

GR215L

Cold Regions Series Motor Grader

Widely used for large area terrain levelling, trench digging, soil loosening and snow removal operations on roads and at airports. The machine is able to operate even at -30oC.

Performance Features

- The machine can operate even at -30oC and the power system, featuring the Cummins 6CTA8.3-C215-II engine, can offer excellent performance even under harsh conditions.
- Gear changing is controlled by a ZF electrohydraulic gearbox system that ensures flexible and easy operation.
- The rear axle has a three-section drive design with an automatic No-Spin anti-slipping mechanism to provide stable and reliable transmission.
- The double hydraulic circuit braking system provides good braking under any conditions.
- The steering system, featuring a full hydraulic load sensing system, hinged frame design and large steering angle, ensures flexible operations.
- The luxurious cab provides a good field of vision and excellent sealing, and has good thermal insulation and heating. In addition, it supports frost removal, as well.
- A cooling medium heating system and an air preheating system ensure that the engine can start normally even in extremely cold conditions. A high power heating fan, an electrically warmed seat and with a fuel heater providing heating and defrosting for the cab, a comfortable operating environment is ensured.
- The machine uses an advanced and reliable hydraulic system featuring imported valves and hydraulic locks.

GR180R

Desert Bulldozing Series Motor Grader

Widely used for large area terrain levelling, trench digging, bulldozing, soil loosening and snow removal operations on roads and at airports and farmlands. The machine can be operated at 50oC and harsh conditions thanks to its strong adaptability.

Performance Features

- The Cummins QSB6.7 (Stage III) engine is used, offering great power and low noise and emission. The large reserve torque ensures normal operations even in extreme environments.
- Gear change is controlled by a ZF electrohydraulic gearbox system that ensure flexible and easy operation.
- The rear axle has a three-section drive design with automatic No-Spin anti-slipping mechanism to provide stable and reliable transmission
- The double hydraulic circuit braking system provides good braking under any conditions.
- The steering system, featuring a full hydraulic load sensing system, hinged frame design and large steering angle, ensures flexible operations.
- ROPS&FOPS cab is used, with internal column soft wrapped, and with electrical window washing device, frost removal device, and air conditioning equipped, having frost removal and ventilation functions.
- The adjustable control panel, driver seat and control levers are arranged ergonomically to facilitate easy control and improve overall operational comfort.
- The machine used advanced and reliable hydraulic systems featuring imported valves and hydraulic locks.
- The machine uses a ball-bearing rotary mechanism and frictionless worm gearbox to ensure reliable operation and good service life.
- The machine is specially designed in the XCMG style.

GR215H

Plateau Series Motor Grader

Widely used for large area terrain levelling, trench digging, bulldozing, soil loosening and snow removal operations on roads and at airports. The machine can be operated at altitude of 4500m above sea level.

Performance Features

- The Dongfeng Cummins 6CTA8.3 engine is used, offering great power and low noise and emission. The large reserve torque ensures normal operations even in highland at altitude of 4500m above sea level.
- Gear change is controlled by a ZF electrohydraulic gearbox system that ensure flexible and easy operation.
- The rear axle has a three-section drive design with automatic No-Spin anti-slipping mechanism to provide stable and reliable transmission
- The double hydraulic circuit braking system provides good braking under any conditions.
- The steering system, featuring a full hydraulic load sensing system, hinged frame design and large steering angle, ensures flexible operations.
- The luxurious cab provides good field of vision and excellent sealing, and have good thermal insulation and heating. In addition, it supports frost removal and offers UV protection as well.
- Cooling medium heating system and air preheating system ensure that the engine can start normally even under extreme cold conditions.
- High power heating fan, electrically warmed seat and the fuel heater providing heating and defrosting for the cab to ensure a comfortable operating environment.
- The machine used advanced and reliable hydraulic systems featuring imported valves and hydraulic locks.
- Overload protection worm gearbox, ball-bearing rotary mechanism, buffer damping system, blade motion system and reinforced blade design help to ensure reliable operation and long service life.
- The machine is specially designed in the XCMG style.

GR135C/GR165C/GR180C
GR215C/GR215AVI CE Series Motor Grader

Widely used for large area terrain levelling, trench digging, bulldozing, soil loosening and snow removal operations on roads and at airports. Hydraulic transmission is used for driving, tool operation, steering and braking. Operators can switch between manual and automatic gear and tool operation based on the different work conditions.

Performance Features

- An imported Cummins electronic diesel injection engine (Tier 3), featuring low noise and emission, is used.
- The electrohydraulic gearbox with ergonomically arrange lever and buttons provides flexible and easy operation.
- The rear axle has a three-section drive design with automatic No-Spin anti-slipping mechanism to provide stable and reliable transmission
- Ordinary and ROPS & FOPS cab options to choose from, both featuring window cleaning and defrosting devices. In addition, an air-conditioning unit is installed to ensure ventilation.
- The double hydraulic circuit braking system provides good braking under any conditions.
- The blade has a protection function that help absorb impact.
- The steering system, featuring a full hydraulic load sensing system, hinged frame design and large steering angle, ensures flexible operations.
- The machine is CE certified and can fulfil the EU environmental protection requirements.

Key Parts

Front dozer
The blade installed in front is used for shovelling operations at narrow spaces that cannot accommodate the shovel blade and ground levelling operations. The floating mechanism allows the blade to stay on top of road surface and is good for different terrain conditions, as well as snow removal.

Rear ripper
Multi-toothed mechanism installed at the back that is used to excavate terrain that is too hard for the blade to handle and loosen compact soil formation for further work.

Slewing ring
The machine uses a ball-bearing rotary mechanism and frictionless worm gearbox to ensure reliable operation and good service life.

Overloaded protective worm gear case
The safe unloading device and intermediate output axle offer dual support for the machine. During normal operation, the worm gear and intermediate output axle will be rigidly connected, generating effective torque that is transferred to the axle for great operational performance. There is a slipping mechanism during overloading that offers protection to the system.

Automatic leveling device
The device ensures automatic levelling with high precision, saving materials and reducing the amount of manual operation to improve efficiency.

Front ridger
A soil loosening mechanism installed at the front of the machine with adjustable digging depth. It can be used on hard ground in preparation of levelling operations.

Snow remover
This device is mounted at the front of a grader, which is mainly used for removal of floating snow on road, and has a floating function, with “V” shaped design applied for left and right swing plates, to ensure good snow removal.

Hydraulic pull-pin
Ensures that the tools stay at the same position at different conditions. The electrohydraulic system facilitates pull pin operation, effectively eliminating manual intervention and making operations easy to control.

Air conditioning
The air-conditioning unit drastically enhances the interior environment and provides great comfort for the operator.

ZF Box
The ZF Box, jointly developed byChina and Germany, offers steady performance, high reliability and can operate in challenging conditions.

Application Case-Studies

Shandong interprovincial highway construction plans

Grader used by Sudan Peace keeping troops

Construction of Dashan Highway

Erdos open pit construction plans

Inner Mongolia Open Mine Construction Plans

Construction in Dezhou City, Shandong

Application Case-Studies

Inner Mongolia Open Mine Construction Plans

Site Leveling at Qingdao

Snow Removal in Harbin

Huai'an Economic Development Zone Construction

Wenchuan disaster relief

Las Vegas Show