

4180D

MOTOR GRADER

Tier 2 / Stage II



SPECIFICATIONS

Operating weight	15,500 kg
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Operating weight includes the machine weight with standard work device, no additional equipment or accessories, full fuel tank, all fluids at required level and an operator 75 kg.

Tractive force	86 kN
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ENGINE

Description

Dongfeng Cummins EPA Tier 2 / EU Stage II-approved, 5.9 liter, 6-cylinder straight turbocharged diesel engine with mechanical direct fuel injection system.

Cummins turbocharged system, high transient response.

Cummins fuel filtration system, high filtration efficiency.

Air cleaning: Whirlwind pre filter, two stage air filter.

Cooling system: Air-to-air intercooler, direct driven fan and suction type cooling system, single radiator layout.

Emission rating	EPA Tier 2 / EU Stage II
Engine manufacturer	Dongfeng Cummins
Engine model	6BTAA5.9-C190
Rated power	142 kW
Rated speed	2,200 rpm
Peak torque	800 N·m @ 1,500 rpm
Displacement	5.9 L
Number of cylinder	6
Aspiration	Turbocharged, air-to-air intercooled

AXLE

Differential type	Limited slip standard
Final drive type	Chain drive
Axle oscillation	16°
Front axle type	All welded steel frame
Front axle, wheel lean angle	Left / right 18°

HYDRAULIC SYSTEM

Description

System supply: Two gear pumps with fix displacement.

Multi- spool valves distribute the oil independently for controlling the position of a grader blade: lift, hold, lower, shift, roll-over and rotation.

Tilt function: With a tilt cylinder, the front wheel lean angle can be up to a maximum of 18°.

Cylinders: Double-acting cylinders for all functions.

Main pump type	Gear
Main relief pressure	20±0.5 Mpa
Pilot pump flow	132 L/min

TRANSMISSION

Description

Torque converter: single-stage, three elements.

Transmission: countershaft power shift transmission,

Gear shifting system: Number of speeds, forward-6, reverse-3. Compact, high efficiency, low noise, easy to operation.

Drive	4 Wheel Drive
Torque converter	Single stage, three elements
Max. travel speed, fwd	42 km/h
Max. travel speed, rev	26.2 km/h
Number of speed, fwd	6
Number of speed, rev	3

SERVICE CAPACITY

Fuel tank	348 L
Engine oil	18 L
Cooling system	40 L
Hydraulic reservoir	165 L
Transmission & torque converter	33 L
Tandem drive, each	28 L

STEERING

Description

Steering system: Load-sensing hydraulic articulated steering.

System supply: The steering system has priority feed from a gear pump with fix displacement.

Steering cylinders: Two double-acting cylinders.

Steering configuration	Articulated
Steering relief pressure	16.7±0.5 Mpa
Minimum turning radius	7,200 mm
Steering angle	±50°
Frame articulation angle	±27°

BRAKES

Description

Two independent brake circuits, accurate control with the main valve & gear pump.

Service brake type	Fully hydraulic, shoe type
Parking brake type	Electro-hydraulic, disc type

TIRES

Standard tire size	17.5-25/L3
Inflation pressure	0.32~0.35 MPa

CAB

Description

Instrumentation: All important information is centrally located in the central instrument panel and operator's field of vision.

Adjustable steering column, high back seat and A/C with all-around air outlets.

The cab is tested and approved according to ROPS (ISO 3471), FOPS (ISO 3449).

SOUND & ENVIRONMENT

Sound level in cab according to ISO 6396-2008 81 dB(A)

External sound level according to ISO 6394-2008 112 dB(A)

Heating capacity 5 kW

Air conditioning 4 kW

ELECTRICAL SYSTEM

Description

The central warning system is a conronic electrical system with central warning light and buzzer for the following functions: Low braking system pressure, interruption in communication (computer failure).

A central warning light and buzzer when the gear is engaged is for the following functions: Low engine oil pressure, low transmission oil pressure, high transmission oil temperature, low brake pressure, engaged parking brake, brake charging failure, high hydraulic oil temperature.

Voltage 24 V

Batteries 6-SPB-50C

Battery capacity 2 x 55 Ah

Starter motor output 2 kW

BLADE RANGE

Blade width 610 mm

Blade length 3,960 mm

Moldboard - Thickness 19 mm

Maximum lift above ground 600 mm

Maximum depth of cut 680 mm

Blade tilt angle 90°

Circle rotation 360°

Moldboard side shift - Left 645 mm

Moldboard side shift - Right 755 mm

Shoulder reach - Left 1,745 mm

Shoulder reach - Right 2,110 mm

Cutting angle 28°-74°

Arc Diameter 826 mm

Circle Diameter 1,455 mm

Blade Ground Pressure $\geq 7,600$ kg

DIMENSIONS

A Shipping Length 9,090 mm

H Shipping Height – Top of cab 3,380 mm

B Bladebase 6,230 mm

C Tandem Center Distance 1,538 mm

D Shipping Width 2,600 mm

ATTACHMENTS

Mold blade

Width 2,740 mm

Depth below ground 215 mm

Lift above ground 850 mm

Weight 1,084 kg

Ripper

Width 2,200 mm

Ripping depth - maximum 445 mm

Lifting height 716 mm

Ripper shank holders, quantity 5

Weight 1,155 kg

Scarifier

Working width 1,655 mm

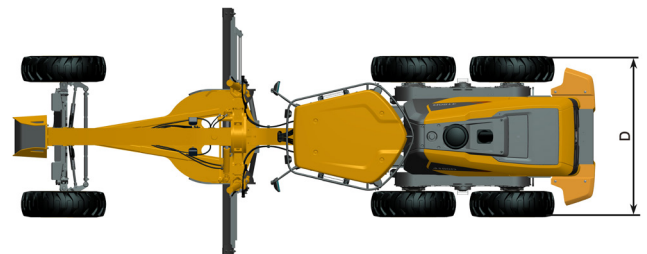
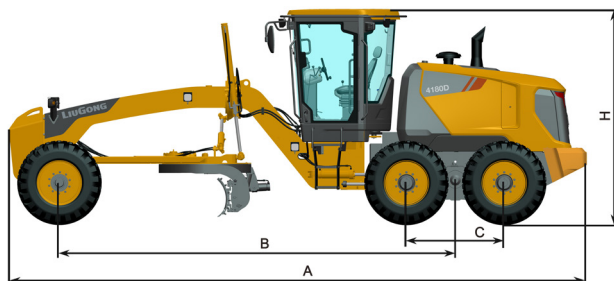
Scarifying depth - maximum 157 mm

Scarifier shank holders, quantity 11

Counterweight

Front 780 (0,+20) kg

Rear 870 (0,+20) kg



STANDARD EQUIPMENT

ENGINE

- Cummins 6BTAA5.9 Engine, EPA Tier 2 / EU Stage II Engine output net 142 kW (190 hp) air-to-air intercooled, 6 cylinders, 4 stroke
- Mechanical direct fuel injection system
- Pre-filter with water separator
- Fuel filter

TRANSMISSION

- ZF 6WG200 automatic power shift transmission
- FNR, F6/R3
- Transmission oil level sight gauge

AXLE

- Front axle - LiuGong
- Rear axle - Meritor dry axle with limited slip differentials
- Caliper disc service brake system

HYDRAULIC SYSTEM

- Two gear pumps with fix displacement hydraulic system

STEERING SYSTEM

- Load sensing system with flow amplification and steering in priority

TIRE & RIM

- 17.5-25/L3 bias tire

CHASSIS FRAME

- A type structure traction frame
- Large section box structure front frame

ELECTRIC SYSTEM

- Headlights on top of cab, 2 front, 2 rear
- Four lights on front frame
- Turn signals with flasher
- Batteries, free of maintenance
- Cigarette lighter, 24 V power outlet
- Electric horn
- Front windshield wiper
- Back-up alarm
- Radio/player with USB port
- Reversing warning light, automatic

GAUGE GROUP

- Engine coolant temperature
- Transmission oil temperature
- Fuel level
- Hour meter
- Voltage
- Brake oil pressure

INDICATOR GROUP

- Intake air filter alert
- Battery charging
- Parking brake applied
- Power cut-off
- Turning lights
- Transmission oil pressure alarm
- Beam of front light

CAB

- Cab
- Seat - mechanical suspension with 2 inch seat belt
- 2-way adjustable steering column
- Rubber cab mounts
- Cab fresh air filter
- One interior & dual exterior rear-view mirrors
- Air conditioner

OPTIONAL EQUIPMENT

ENGINE

- Cold start aid

CAB

- ROPS
- Rear windshield wiper
- Fire extinguisher
- Cab rear windshield defroster
- Rear-view camera display
- Rotating beacon

ATTACHMENT

- Dozer
- Ripper
- Scarifier
- Friction Plate Gearbox

TIRE & RIM

- Full fender

OTHERS

- Self-leveling system



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