

# SHANTUI

## SG21-3 Motor Grader

LET'S MAKE CONSTRUCTION EASIER



GROUP PRODUCTS



 **PT. BADAQ PRIMA LESTARI**

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Engine Model Cummins 6CTAA8.3-C215  
Gross Power 160kW @ 2200rpm

Operating Weight 16800kg

COMFORTABLE & SAFE OPERATING ENVIRONMENT

- Full-view, fully-sealed cab, equipped with shock-absorbing seat and A/C
- Integrated instrument dashboard
- Reversing alarm, 107 decibel alarm sound when reversing to ensure safety

EXCELLENT POWERTRAIN

- Cummins engine with reliable performance and large torque to ensure the stable output power
- The electro hydraulic control gearbox with ZF technology ensures the reliability of operation.



WORK DEVICE WITH ADVANCED DESIGN

- High-strength and wear-resistant blade.
- Use CAE analysis to optimize the frame structure.
- The external gear working device adopts independent patent technology, which has large transmission torque

HIGH RELIABILITY

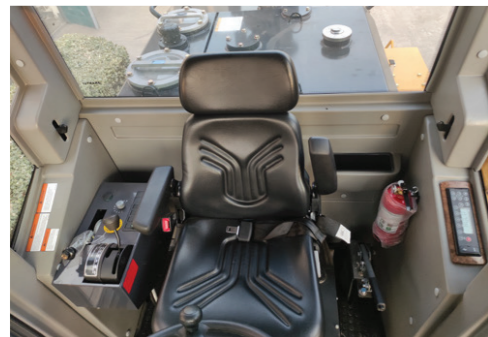
- Three-section integrated drive axle.
- Imported no-spin automatic differential.
- Tandem box driven by heavy roller chain.
- Imported gear pumps, multi-channel control valves, hydraulic cylinders and other key components
- Maintenance-free and high-performance battery
- The four-door steel engine cover
- The hydraulic oil tank adopts an overhead removable filter element
- Renowned multi-way valve and hydraulic dual-circuit brake system
- The key brake components are produced by MICO
- Frame adopts box beam structure





COMFORTABLE OPERATING ENVIRONMENT

Tetrahedral driving cab with a highly sealing property not only enable the driver to enjoy a wide-angle vision, also keep the driver free from external noise and dust. The cab with perfect visibility and large space maximumly secures the driver's safety and comfort during working.



LOW NOISE AND VIBRATION

Owing to the design of triple level shock absorption system, especially the air-suspension seat, the driver hardly senses any vibration when working



MULTI-FUNCTION DASHBOARD

The engine oil pressure gauge, water temperature gauge, voltmeter, charging indicator lamp, brake warning lamp, and turn signal indicator lamp are installed to indicate the operational data.



HUMANIZED INTERIOR

Equipped with radio, sunshade, A/C, spray wiper, USB player and cup holder. Also the cab is equipped with new console and side box, easy to operate, no need to step on the clutch plate.

① ENGINE

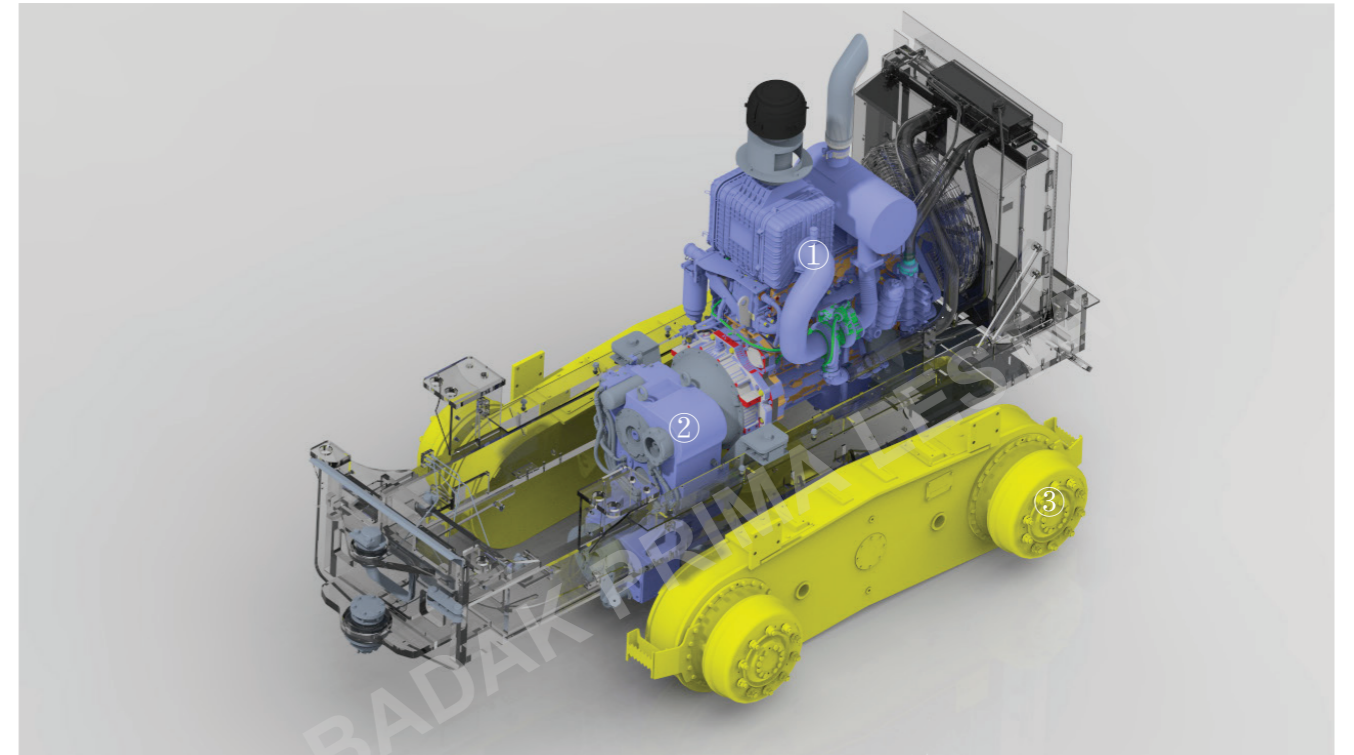
SG21-3 powered by Cummins 6CTAA8.3-C215 engine, a strong engine featuring compact structure, stable performance, high efficiency and torque reserve, which enables a stable power output under rough working conditions.

② TRANSMISSION

The electro-hydraulic control power shift transmission produced by German technology has 6 forward and 3 reverse gears. The best gear can be selected according to the working conditions to achieve the perfect combination in walking and operation.

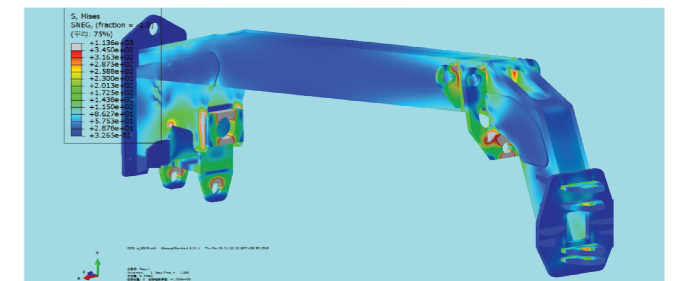
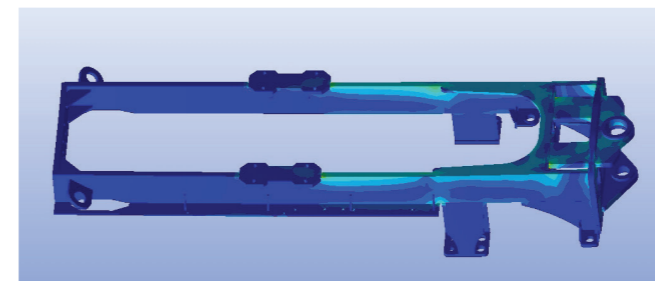
③ AXLE

The rear axle is built internally with No-Spin automatic slide-proof differential to guarantee stable and reliable drive. The heavy roller chain drive tandem box can swing by  $\pm 15^\circ$ , to ensure the middle and rear wheels touch the ground at the same time to significantly increase the traction.



EXCLUSIVE POWER TRANSMISSION TECHNOLOGY

SG21-3 has a reasonable layout and compact structure. The power transmission system is scientifically matched, the heat dissipation system is designed by fluid simulation, the hydraulic pipeline is reasonably placed, the overall fuel consumption can be lower by 5%.



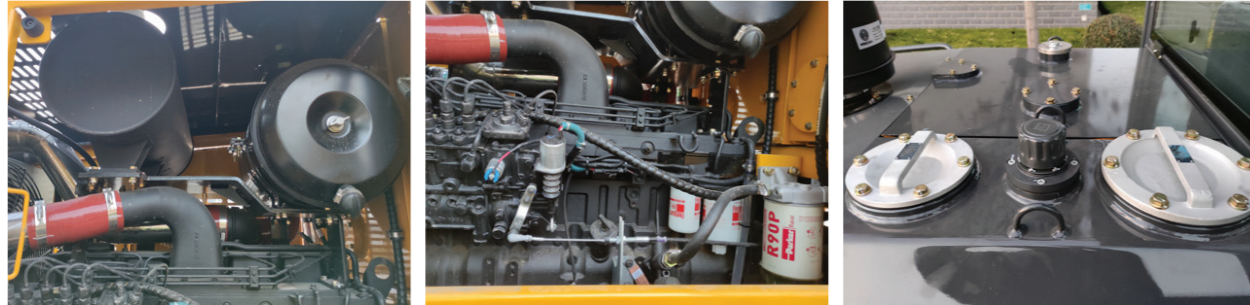
R&D AND TEST SYSTEM

All key structural parts are designed by finite element simulation analysis. Every machine must go through reliability test, gradeability test, traction performance test, hydraulic performance test, and machine inspection.

## DURABILITY

### EASY MAINTENANCE

The real-time online malfunction monitoring is applied for the machine. The lubricating ports are centrally located, the double engine hoods are applied to offer a convenient access. Fuel filter element and hydraulic oil filter element are centrally placed for easy maintenance. Relying on Shantui's global agent service system, it minimizes downtime caused by failures and guarantees your smooth construction.



## STANDARD EQUIPMENT

- Cummins 6BTA8.3-C215 engine
- Hangchi transmission
- Meritor rear axle
- Electro-hydraulic control swing support structure
- 13ft(3995mm) moldboard
- Cabin with A/C
- Grammer seat
- 17.5-25 PR12 tire
- Radio
- 4 front and 2 rear working lights
- 4 Cab mounted LED lights
- Reverse alarm
- Front and rear windshield wiper
- Sunshade

## OPTIONAL EQUIPMENT

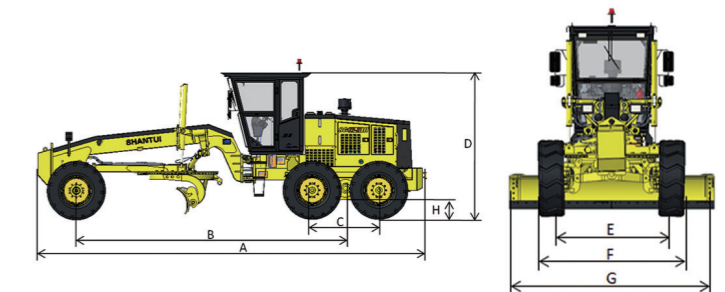
- Front blade
- Rear ripper
- 12ft(3660mm) moldboard
- 14ft(4270mm) moldboard
- ZF transmission
- Gearbox protective cover
- Overload worm wheel box
- Centralized lubrication
- Bypass valve
- Tire protection system
- Standard seat
- Fire extinguisher
- Turbo prefilter
- Reverse camera



## SPECIFICATIONS

ENGINE	
Model	Cummins 6CTAA8.3-C215
Number of cylinders	6
Type	4-cycle, direct injection, water-cooled
Aspiration	Turbocharged, air-air intercooled
Bore x stroke	114*135mm
Displacement	8.3L
Gross power	160kW @ 2200rpm
Max. traction	88.2kN
Max. torque	980N.m @ 1500rpm
Rated fuel consumption	223g/kW.h
Air cleaner	2-stage, dry type
POWER TRAIN	
Transmission	Fixed-axis type, electro-hydraulic control
Torque converter	Single-stage, single-phase, three basic elements
Rear axle	Modular, planetary reduction, "no-Spin" anti-skid differential
Tandem drive	Roller chain. Oscillating angle:±15°
Tire	17.5-25PR12
Front axle	Solid bar construction with oscillation about the central mounting pin Oscillating angle:±15° Tilting angle:±17°
STEERING	
Type	Hydraulic power
Front wheel steering angle	±45°
Articulation angle	±25°
Min. turning radius	8200mm
BRAKES	
Service brake	Disc type, foot operated, single circuit, hydraulically actuated on four tandem wheels
Parking brake	Drum type, manually actuated
MOLDBOARD	
Type	Hydraulic power, replaceable cutting edges, hardened cutting edges and end bits
Rotation	360°
Blade width	3660/3965/4270mm
Blade height	635mm
Blade thickness	20mm
Blade tip angle	37~83°
Max. cutting depth	500mm
Max. lifting height	440mm
Blade side shift (left/right)	650/700mm
Max. shoulder reach (left/right)	1900/1950mm
Max. tilting angle (left/right)	± 90°
SPEED	
Forward, 1-6	5.4\9.4\12.2\20.5\25.4\39.7km/h
Reverse, 1-3	5.4\12.2\25.4km/h
HYDRAULICS	
Tandem pump	Gear pump.28ml/r
Overflow pressure for working	16MPa

CAPACITIES	
Fuel tank	340L
Hydraulic oil tank	110L
Engine crank case	27L
Engine coolant	35L
Tandem box	2x23L
Rear axle	28L
Transmission	28L
ELECTRICAL SYSTEM	
Battery	2x12V,105Ah
Alternator	28V,70A
Starter motor	24V,7.5kW
OPERATING WEIGHT	
Standard	16600kg
With rear ripper	16820kg
With front blade	17210kg
With front blade & rear ripper	17430kg
RIPPER (OPTIONAL)	
Ripping depth	320mm
Shank holders	5
Shank holder spacing	500mm
Working width	2085mm
FRONT BLADE (OPTIONAL)	
Width x Height	2740x930mm
Thickness	10mm
Max. lifting height	500mm
Max. digging depth	210mm



DIMENSIONS	
Overall length: Standard	9315mm
Overall length: With rear ripper	9919mm
A Overall length: With front blade	10307mm
Overall length: With front blade & rear ripper	10911mm
B Length: Front axle to mid tandem	6560mm
C Length: Between tandem axles	1538mm
D Height: Cab	3400mm
E Tread	2155mm
F Width: Outside tires	2600mm
G Blade width	3660/3965/4270mm
H Minimum ground clearance	430mm