

SEM919/921/922 AWD Motor Grader



※ Featured machines in photos may include optional equipment

SEM919
SEM921
SEM922AWD

Product Advantage

- **High Productivity:** Load sensing hydraulic system provides consistent and precise blade movement
- **High Reliability:** A-frame designed drawbar provides strength in all blade positions
- **Comfort:** World Class industry control layout with low lever efforts for reduced operator fatigue

Website <http://www.semmachinery.com>

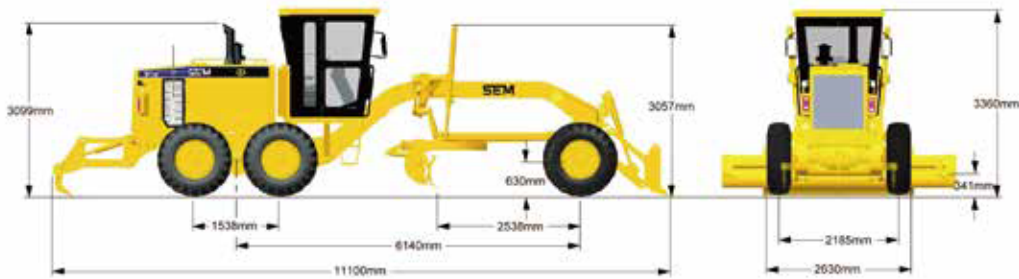


A Caterpillar Brand

Specifications

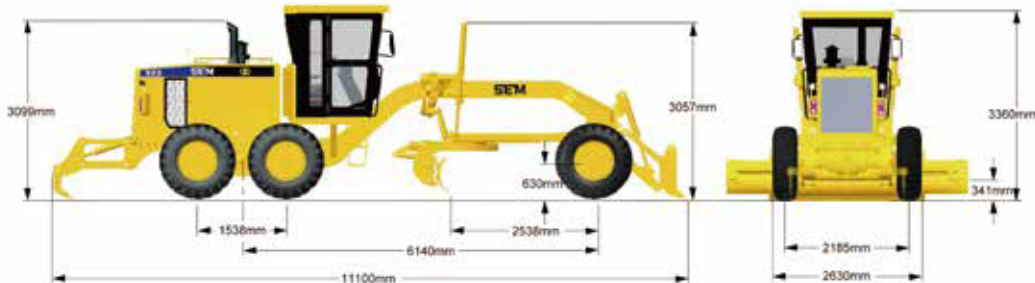
Items	SEM919	SEM921	SEM922AWD
Operation Weight (Base Machine)	15,070kg	15,930kg	18,120kg
Overall Dimensions (L*W*H)	8,703*2,630*3,360mm	8,854*2,630*3,360mm	10,324*2,728*3,360mm
Blade Length (L*W*H)	3,974*25*607mm	4,279*25*607mm	4,279*25*607mm
Max. Lifting Height	475mm	475mm	475mm
Max. Depth of Cut	715mm	715mm	715mm
Max. Drawbar	≥85kN	≥85kN	Front≥26kN Rear Axle≥86
Wheelbase	6,140mm	6,140mm	6,140mm
Frame Articulation Angle	20°	20°	20°
Min. Turning Radius	7.8m	7.8m	7.8m
Engine Brand	SDEC SC8D190.1G2	SDEC SC9D220G2	SDEC SC9D220G2
Rated power	140kW	162kW	162kW
Transmission Type	Hangchi 6WG180	Hangchi 6WG180	Hangchi 6WG180
Travel Speed (Forward/Rear)	40/25km/h	40/25km/h	40/25km/h
Rear Axle/Tandem	SEM ST22	SEM ST22	SEM ST22
Service brake	Outboard disc with brake caliper,Air to oil Control	Outboard disc with brake caliper,Air to oil Control	Outboard disc with brake caliper,Air to oil Control
Oscillation (Front up/Rear up)	15/25°	15/25°	15/25°
Max. Oscillation Angle	±16°	±16°	±16°
Steering Angle (Left/Right)	47.5°	47.5°	47.5°
Max. Lean Angle of Front Wheels	18°	18°	18°
Hydraulic System	Load sensing,PPPC	Load sensing,PPPC	Load sensing,PPPC

Dimensions



SEM919/921

SEM922 AWD



Caterpillar (Qingzhou) Ltd. Address: No.12999 Nanhuan Road,Caterpillar Industrial Park, Qingzhou City,Shandong Province, Zip Code: 262500 P.R.China

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Version: September 2016

Large Cab

- Cab mounted on the front frame provides exceptional view to blade and front axle even during articulation
- Large cab with 1.9m height and 30% larger space than most competitors, provides exceptional comfort



Optional Accessories

S = Standard, O = Optional

Specifications	SEM919	SEM921	SEM922 AWD	Specifications	SEM919	SEM921	SEM922 AWD
Shanghai Diesel D9-Stage II	S	S	S	Cab Heater only	S	S	S
Hangchi 6WG180	S	S	S	Headlight	O	O	O
Circle drive with slip clutch	O	O	O	Beacon	O	O	O
SEM Tandem/Axle	S	S	S	Start GP-Normal	S	S	S
Rim & Tire Group (14.0-24 12PR)	O	O	O	Start GP-Cold	O	O	O
Rim & Tire Group (17.5-25 12PR)	S	O	O	Start GP-Arctic	O	O	O
Rim & Tire Group (17.5-25 16PR)	O	S	S	Rear Ripper/Scarifier, Front Blade	O	O	O
Rim & Tire Group (17.5R25 G2)	O	O	O	Snow Wing Assembly	O	O	O
Rim & Tire Group (17.5-25 16PR L3)	O	O	O	Snow Wing Mount	O	O	O
Blade Group (12')	O	O	O	Tool Box	O	O	O
Blade Group (13')	S	O	O	Guard- underneath cab	O	O	O
Blade Group (14')	O	S	S	Guard- transmission	S	S	S
ROPS Cab Group	O	O	O	Rear Fenders	O	O	O
Load Sensing (Variable Piston Pump + CAT PPPC Valve)	S	S	S	HVAC (Heating Ventilation and Air Conditioner)	O	O	O
Non ROPS Cab Group (Cab Accessories GP-STD)	S	S	S	Roading arrangement- license plate mount and light	O	O	O
Non ROPS Cab Group (Cab Accessories GP-Premium)	O	O	O	Arctic Oils	O	O	O

All Wheel Drive (922 AWD)



- All wheel drive (AWD) function designed for poor underfoot applications (snow, sand, gravel, mud, etc.)
- Infinitely variable speed pumps and two-speed motors maximize torque in each gear delivering the most power to the ground
- Exclusive steering compensation system enables a “powered turn” with improved control and a dramatic reduction of turning radius in poor underfoot conditions

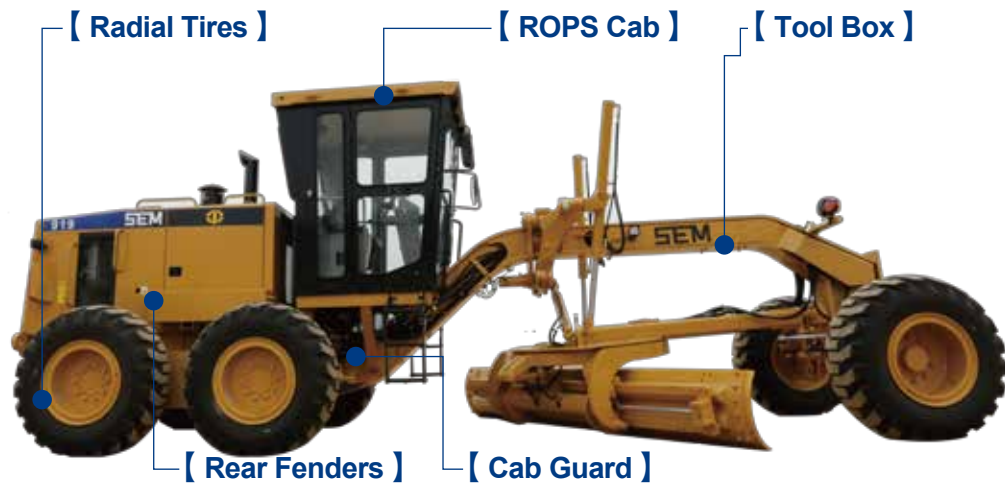
Optional Attachments



[Slip Clutch]



[Snow Wing]



Cat® Product Link™

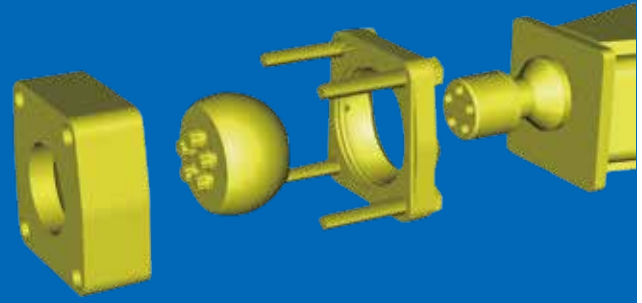


Cat® Product Link™ will support your business, and accurately convey information of the equipment to relevant personnel in a timely and effective manner for your better equipment management.

Drawbar



- A-frame tubular design drawbar provides maximum strength and durability
- Replaceable drawbar draft ball (bolted – not welded) for less service time and cost
- Easy removal of wear shims to adjust drawbar



Front Frame

- Flanged box section design removes welds from high stress areas, improving reliability and durability
- Continuous top and bottom plate construction provides consistency and strength, improving front frame durability
- Hydraulic hose routing minimizes exposure to damage and provides quick access for service
- Maintenance-free bushings improve durability and reduce overall service cost



Control Layout



- Short throw levers are efficiently spaced, allowing ease of multi-function control
- Short lever travel (40mm) with low lever effort reduces operator fatigue



SEM Tandem Axle

- Leveraging Caterpillar designing and experience on MG tandem axle
- Improved bearing Layout and optimized load distribution with 4 planetary gears final drive
- Less down time and reduced labor and service cost for maintenance and repairing
- Longer service interval for lubrication oil change
- Leading in class manufacturing and quality control level, mandatory performance testing before delivering to MG assembly line



Control System

7 position link bar with electric over hydraulic control allows ease of operation from within the cab

- Optimum blade reach capability, quick DCM re-positioning for greater reach for better working on high bank side slope
- The link bar is essential for extending reach capability when cutting a bank slope or back slope of a ditch
- Replaceable bushings reduce service time and cost



Blade Float

Standard blade float function allows blade to lower without hydraulic pressure for increased versatility

- Blade float is engaged by pushing the left and right lift cylinder controls all the way forward past the detent
- Provides protection for machine and pavement during snow removal and snow plowing



Hydraulic System



- Proportional Priority Pressure Compensating (PPPC) Valves contain specifically cut spools for motor grader applications, continuously matching of hydraulic flow and pressure to power demands, allowing ease of multi-function control for optimizing working efficiency
- World-class variable displacement piston pump, efficiently reduces power consumption and hydraulic system heat, improving fuel efficiency
- Load-sensing hydraulic system provides consistent and precise blade movement, improving finishing performance
- Inboard lock check valves within PPPC, prevents inadvertent cylinder movement and potential leaks