



RM165

MOTORGRADER



Unprecedented precision and ease of operation.



The frame, drawbar forged steel circle are designed for durability in heavy duty applications. The strong frame drawbar uses a durable material. The top surface of the circle teeth are hardened to reduce wear and ensure component reliability. A large tapered roller bearing at the lower pivot carries loads evenly and smoothly.



1. Angled cab doors, big rear window assure excellent visibility to the work area.
2. Easy-to-read, high-visibility gauges and warning lamps keep the operator aware of critical system information.
3. The Rhino Comfort seat and arm/wrist rests are fully adjustable for improved comfort and productivity.

More grading options, more productivity

1. Grading in deviation

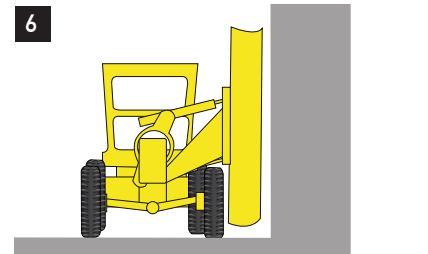
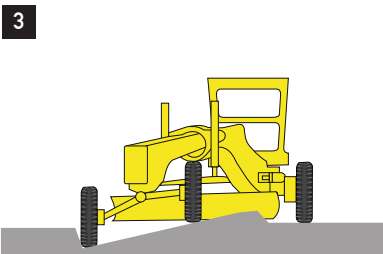
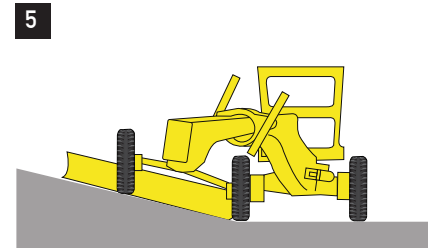
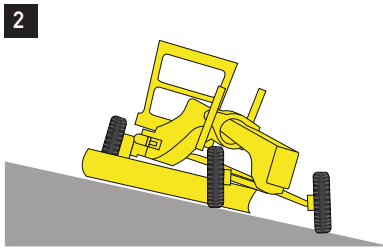
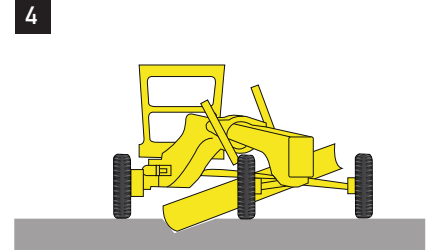
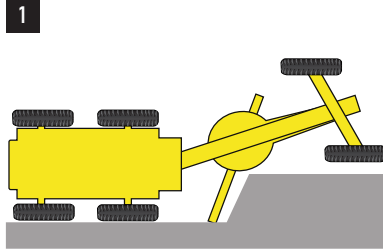
2. Grading on a slope

3. Backfill

4. Digging a hard road surface

5. Grading when front wheels on a low slope

6. Sloping angle 90°



The Rhino Motor Grader's tall mainframe lets these highly productive graders shoulder larger loads and navigate more easily over obstacles. Provides plenty of clearance for a mid-mount scarifier, and simplifies blade setup and operation, too. You won't find an easier-running grader, either.

1. Control Panel provide a comfortable and ergonomic space to increase productivity and efficiency at the work site.

2. Reliable and durable Cummins diesel engine, more efficient with low maintenance costs.

3. High quality hose products mean fewer hose changes. Rhino Equipment offers a broad line of high, medium and low-pressure hoses and couplings that are engineered and tested far beyond industry standards for top performance and long life.



ENGINE

Engine Make / Engine Model	Cummins / QSB6 or Rhino / RMC6121-3
Emission Rating (optional)	Tier 2 (Tier 3, Tier 4)
Net Peak Power, kW (hp) @ 2,200rpm	164(220)
Displacement, L (cu in.)	6.7(409)
Net Peak Torque Nm (lb-ft) @ 1,500 rpm	800(590)
Net Torque Rise	12%
Aspiration	Turbocharged charged air cooled
Lubrication	Full-flow spin-on filter
Air Cleaner	Under-hood, dual element dry

ELECTRICAL

Volts	24
Alternator amps	70

POWERTRAIN

Transmission	Hydrodynamic Powershift with separate filtration
Type	
Speed Range - Forward	6
Speed Range - Reverse	3
Maximum Travel Speeds With 17.5-25 tires	
Max. Travel Speed - fwd, kph (mph)	47(29)
Max. Travel Speed - rev, kph (mph)	32(20)
Front Axle	
Oscillation (total)	32 degrees (16 degrees each side)
Wheel Lean Angle	19 degrees
Wheel Turning Angle	49 degrees
Differentials	Spiral bevel gear with automatic differential lock
Steering	Fully hydraulic power frame articulation for increased productivity and maneuverability; front wheels lean to increase stability on slopes and reduce side-drift.
Turning radius mm (ft)	7,300(24.0)
Articulation (both right and left)	26 degrees
Final Drives	Tandem configuration with sprocket and chain sealed in oil
Brakes	Foot pedal activation, hydraulically operated drums on all 4 tandem wheels
Service Brakes	Hydraulically actuated drums effective on all 4 tandem wheels

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HYDRAULIC SYSTEM

Pump Type	Gear pump
Pump Flow, L/min (gpm)	205(54)
System Pressure, MPa (psi)	17(2,466)
Pump Displacement cm ³ (cu. In)	45(2.7)

BLADE FUNCTION

Fully hydraulic, industry standard lever placement of blade-function controls, adjustable angle for added comfortability to the operator.

Blade Lift Above Ground, mm (in)	450(17.7)
Blade Side Shift, Right, mm (in)	1,920(75.6)
Blade Side Shift, Left, mm (in)	1,520(59.8)
Pitch at Ground Line	
Forward	46 degrees
Back	0 degrees
Shoulder Reach Outside Wheels, Right, mm (ft in)	1,990(6.5)
Shoulder Reach Outside Wheels, Left, mm (ft in)	1,850(6.1)
Bank Cut Angle	90 degrees (both sides)

ELECTRICAL

Voltage	24
Number of Batteries	2
Battery Capacity	1,700 CCA
Reserve Capacity	460 min
Amp-Hour Rating	120 amp-hour
Alternator Rating	70 Amp
Lights	6 front lights and 2 rear lights; one orange rotating light on the back of the cab

MAINFRAME

Type	Welded box construction
Width mm (in)	930(36.6)
Height mm (in)	365(14.4)
Thickness mm (in)	100(3.9)

CIRCLE

Welded structure, heat treated for extra strength, machined for flatness

Circle diameter mm (in)	1,415(55.7)
Rotation	360 degrees
Drive	Hydraulic motor and worm gear
Circle Side Shift (right and left) mm (in)	455(17.9)



MOLDBOARD

High strength, heat treated high-carbon steel and reversible end bits;

blade side shift system includes replaceable wear inserts

Base Length mm (ft) 4,320(14.2)

Height mm (in) (measured from edge to edge including cutting edge) 645(25.4)

Thickness mm (in) 22(0.9)

CUTTING EDGE

Heat treated carbon steel

Thickness mm (in) 18(0.7)

Width mm (in) 154(6.1)

REAR RIPPER

Parallelogram linkage

Width of Cut mm (ft) 2,300 (7.5)

Number of Shanks 5

Lift Above Ground mm (in) 350(13.8)

Max. Penetration mm (in) 460(18.1)

Shank Size mm (in) 63x293 (2.5x11.5)

TIRES 17.5R25 on 356mm (14in) Rim

Overall Width mm (ft) 2,600(8.5)

Ground Clearance (front axle) mm (in) 610(24.0)

REFILL CAPACITIES L (gal)

Fuel Tank 350(92)

Cooling System 60(16)

Engine Oil 27(7)

Transmission Fluid 45(12)

Tandem (each) 84(22)

Hydraulic Tank 70(18)

Brakes 0.8(0.2)

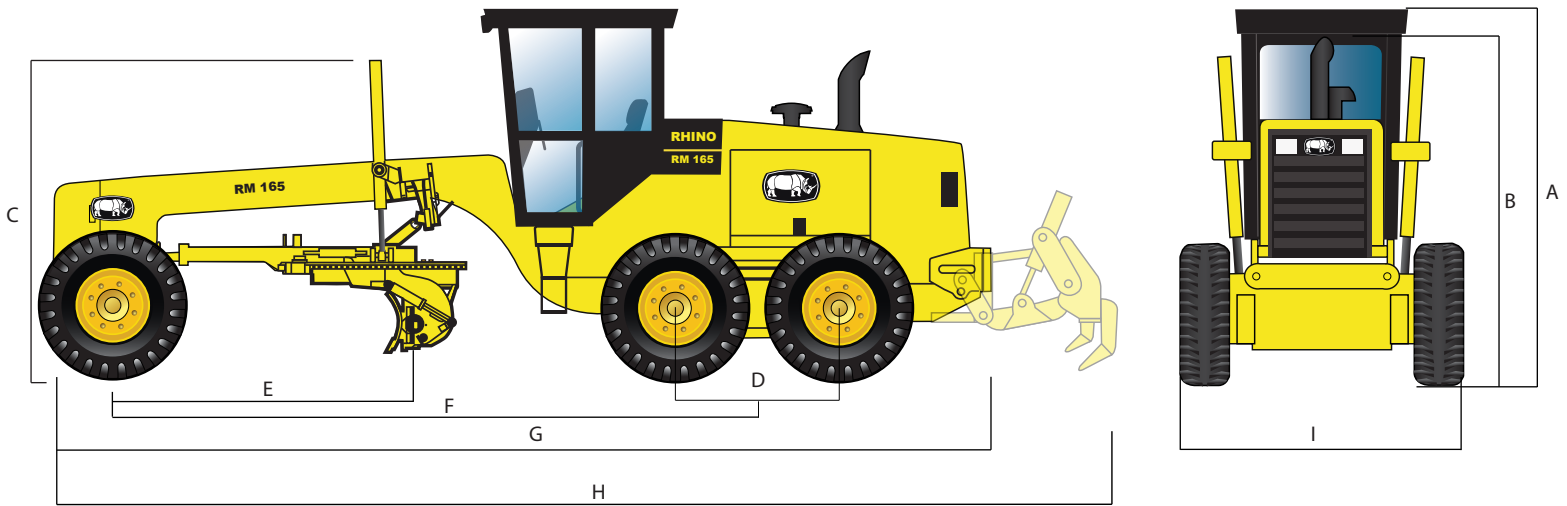
OPERATING WEIGHTS

Front kg (lb) 4,920(10,847)

Rear kg (lb) 11,480(25,309)

Total kg (lb) 16,400(36,156)

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DIMENSIONS

A. Height to Top of Cab mm (ft)	3,400(11.2)
B. Height to Top of Exhaust mm (ft)	2,860(9.4)
C. Height to Top of Blade-Lift Cylinders mm (ft)	2,780(9.1)
D. Tandem Axle Spacing mm (ft)	1,530(5.0)
E. Blade Base mm (ft)	2,575(8.4)
F. Wheelbase mm (ft)	6,150(20.2)
G. Overall Length mm (ft)	8,990(29.5)
H. Overall Length with Ripper mm (ft)	9,895(32.5)
I. Overall Width with 17.5R15 Tires mm (ft)	2,600(8.5)

OPTIONS

Rhino Motor Graders come standard with rear ripper. They can come with front scarifier, front dozer blade, mid-body scarifier, and rear scarifier. As well as many other options depending on client requirements. Tier 3, Tier 4 Engine.

Grader operating information is based on machine with identified linkage and standard equipment, standard tires, full fuel tank, and 79-kg (175 lb.) operator. This information is affected by changes in tires, ballast, and different attachments.

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