



RD-165C RD-165H

MOTOR GRADERS

EXTRA



- **Net Horsepower**
119 kW (160 hp)
- **Operating Weight**
14300 kg (31,526 lb)
14600 kg (32,187 lb)

RD-165C RD-165H MOTOR GRADERS



- Excellent visibility and operator comfort
- Efficient performance
- Ease of operation

ENGINE

* Make and Model	CUMMINS QSB 6.7
Type	In-line, 6-cylinder
Aspiration	Turbocharged and CAC
Fuel system	HPCR Electronic
Gross Horsepower, SAE J1995	129 kW (173 hp)
Net Horsepower, SAE J1349/ISO 9249	119 kW (160 hp)
Rated rpm	2500 rpm
Maximum torque @ 1500 rpm	800 Nm (590 lb-ft)
Displacement	6.7 l (409 in ³)
Bore and Stroke	107 x 124 mm (4.2" x 4.9")
Air cleaner	2-stage, with service indicator

* Meets EU Stage IIIA and EPA Tier 3 emission regulations

TRANSMISSION AND TORQUE CONVERTER

Electronically controlled powershift transmission with integral torque converter provides 6 speeds forward and 3 reverse. Automatic or manual mode.

TRAVEL SPEEDS

Gear	Forward		Reverse	
	km/h	(mph)	km/h	(mph)
1 st	4.8	(3.0)	5.1	(3.2)
2 nd	7.4	(4.6)	12.0	(7.5)
3 rd	11.4	(7.1)	27.0	(16.8)
4 th	17.3	(10.8)	-	
5 th	25.5	(15.8)	-	
6 th	40.0	(24.9)	-	

FRAME

Material: construction steel, welded unit.	
Section	282 x 320 mm (11.1" x 12.6")
Wall thickness	16 mm (0.63")
Vertical section module, min.	1730 cm ³ (106 in ³)
Linear weight per length, average	235.7 kg/m (158.4 lb/ft)

FRONT AXLE

Wheel lean angle, left or right	22° / 22°
Oscillation, total	30°
Articulation, left or right	31° / 31°
Ground clearance at the center	550 mm (21.7")

REAR AXLE

Lug mounted, bevel gear with No Spin differential.

CIRCLE

Fabricated from heat treated carbon steel.	
Diameter (outside)	1350 mm (53.1")
Circle reversing control hydraulic rotation	360°

DRIVE SYSTEMS

RD-165C Tandem drive (4 wheels)

Oscillating, welded box section, oil tight housing	
Dimensions	1890x445x134 mm (74.4"x17.5"x5.3")
Axle spacing	1540 mm (61")
Tandem oscillation	17° / 17°
Ground clearance	450 mm (18")

RD-165H All-wheel drive (AWD)

Additional front wheel drive, hydraulic.

STEERING

Hydraulic power steering system with emergency steering capability.	
Steering column, adjustable height and angle.	
Minimum turning radius	7000 mm (23')
Articulation, left or right	27°

BRAKES

Service - wet multidisc, hydraulic applied, two-circuit with gas accumulators, effective on four tandem wheels
Parking/Emergency - disc type, mounted on output shaft of the transmission

HYDRAULIC SYSTEM

Load sensing system including variable displacement axial piston pump, multisection control valve and hydraulic lock valves automatically matches flow and pressure requirements for reduced heat generation and increased hydraulic efficiency and fuel economy.

Hydraulic pump displacement	97 l/min (25.6 gal/min)
Max. system pressure	160 bar (2320 psi)

CAPACITIES

	Liter	(US gal)
Fuel tank	325	(86)
Cooling system	40	(10.6)
Crankcase	16.4	(4.3)
Transmission system	35	(9.2)
Rear axle	8	(2.1)
Tandem housing	2 x 30	(2 x 8)
Final drives	4 x 4	(4 x 1)
Hydraulic system	117	(31)
Front wheel drive (RD-165H)	55	(14.5)

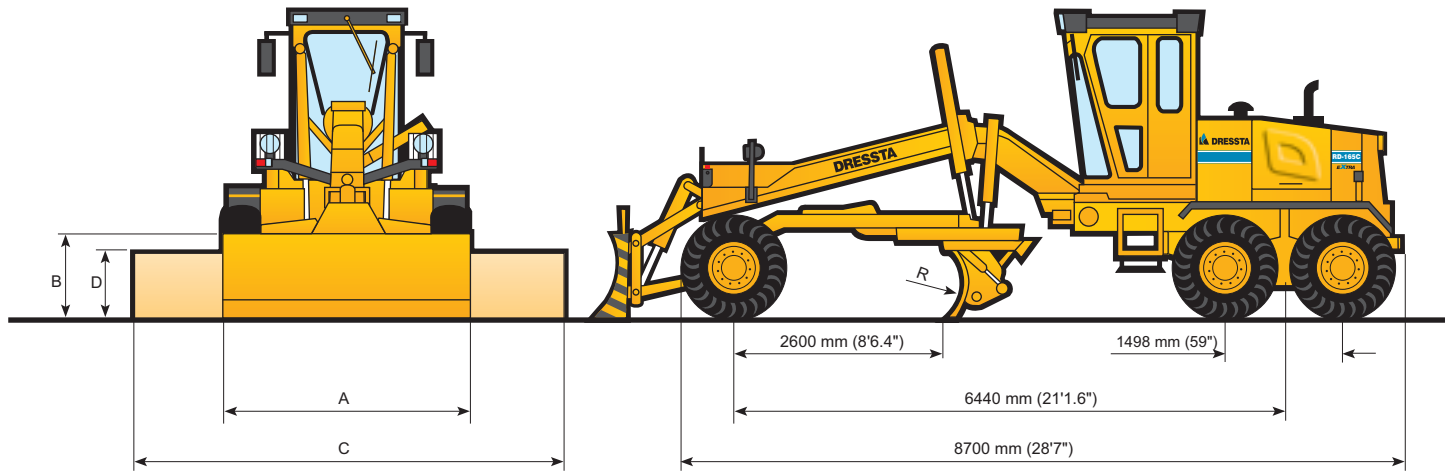
INSTRUMENTATION

Indicators: brakes, transmission and operative condition, hand brake, flashlight, road and turn lights, transmission display: actual gear selected and error codes

Gauges: engine rpm, fuel level, engine coolant temperature, transmission oil temperature, battery charge, hourmeter (daily and actual hrs)

OPERATING WEIGHT

Includes standard equipment:	
RD-165C	14300 kg (31,526 lb)
RD-165H	14600 kg (32,187 lb)



DIMENSIONS

Length, standard machine	8700 mm (28'7")
Length, machine equipped with ripper	9000 mm (29'6")
Length, machine equipped with front blade (dozer/angle)	9400/9700 mm (30'10"/31'10")
Length, machine equipped with ripper and front blade (dozer/angle)	9700/10000 mm (31'10"/33')
Width, tire center lines	2086 mm (6'10")
Width, outside tires	2550 mm (8'5")
Height, high profile cab	3500 mm (11'6")
Height, beacon light mtd	3750 mm (12'4")
Height to axle	777 mm (2'7")
Height to exhaust pipe	2650 mm (8'8")

MOLDBOARD

Blade width (C)	3640 mm (143.3")
Blade height (D)	650 mm (25.6")
Arc radius (R)	370 mm (14.6")
Blade thickness	16 mm (0.63")
Cutting edge thickness	16 mm (0.63")
End bits thickness	16 mm (0.63")
Sideshift, RH/LH	800 mm (31.5")
Full circle rotation	360°
Max. blade position angle	90°
Blade pitch	35°
Max. lift above ground	500 mm (19.7")
Max. cutting depth	350 mm (13.8")
Blade pull (RD-165C)	8000 kg (17,640 lb)
Blade pull (RD-165H AWD)	9610 kg (21,186 lb)
Down pressure	6890 kg (15,190 lb)

SCARIFIERS

Shank holders	9 / 11
Frame width	1260/1583 mm (50"/62")
Working width	1220/1525 mm (48"/60")
Scarifying depth	250 mm (10")
Shank holder spacing	150 mm (5.9")
Weight, total	350/410 kg (772/904 lb)

BLADE EQUIPMENT, FRONT

Type of blade	DOZER	ANGLE
Blade width (A)	2500 mm (98.4")	3080 mm (121.3")
Blade height (B)	850 mm (33.5")	850 mm (33.5")
Max. lift	430 mm (16.9")	430 mm (16.9")
Cutting depth	50 mm (2")	50 mm (2")
Max. blade angle		33°
Weight of blade equipment	700 kg (1,543 lb)	800 kg (1,764 lb)

RIPPER

Ripper width	1500 mm (59")
Width of ripping	1320 mm (52")
Ripping depth	250 mm (9.8")
Shanks holders	5
Shank holder spacing	350 mm (13.8")
Weight, total	380 kg (838 lb)
Penetration force	10800 kg (23,810 lb)
Pryout force	9200 kg (20,282 lb)

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STANDARD EQUIPMENT

- Air cleaner, 2-stage, dry type w/service indicator
 - Air conditioner
 - Alarm, back-up
 - Alternator, 75A
 - Axles rear, planetary type
 - Batteries, (2) 12 V, 120 Ah, low maintenance
 - Beacon light, rotating
 - Brakes, service: wet multidisc, hydraulic applied, two-circuit with gas accumulators, effective on four tandem wheels; parking: disc type, mounted on output shaft of the transmission
 - Cab ROPS (SAE J1040) w/sound suppression, CD radio, front and rear wipers and washers, lockable door
 - Cooling module, includes radiator, transmission and torque converter oil cooler and charge air cooler, isolation mounted
 - Differential, No Spin
 - Electrical system, 24 V
 - Extinguisher
 - Fan, hydraulically driven
 - Fenders, rear
 - Hood sides for engine compartment
 - Horn, electric
 - Hydraulic system, load sensing, 9-spool valve
 - Instrument panel
 - Lights, travelling - front and rear, turn signals
 - Lights, working, cab and radiator bonnet mounted
 - Manuals, parts and operator's
 - Mirrors, rear view, R. H. and L. H., heated
 - Moldboard, full 360° circle rotation, hydraulic sideshift and pitch
 - Monitoring and control system
 - Muffler with exhaust pipe
 - Pusher plate, front 850 kg (1,874 lb)
 - Rear ballast plate 425 kg (937 lb)
 - Rear door for engine and radiator compartment
 - Seat, adjustable, suspension type, with arm rests and seat belt (SAE J386)
 - Starting aid - air grid heater
 - Steering column, adjustable and tiltable
 - Steering, hydrostatic
 - Steps, left and right
 - Tool kit
 - Torque converter
 - Transmission, full powershift, 6 speeds forward and 3 reverse, electronically controlled, automatic or manual mode
- DRIVE SYSTEMS**
RD-165C - Tandem drive
tires 16.9 - 24 IND TI04 12PR
RD-165H - All-wheel drive (AWD)
tires 14.00 - 24 G-2 16PR

OPTIONAL ATTACHMENTS

- Batteries (2) 12 V, 170 Ah, maintenance free
- Blade equipment:
 - Angle blade, 3080 mm
 - Dozer blade, 2500 mm(front mounted, instead of pusher plate)
- Centralized lubricating system
- Fenders, front
- FOPS structure, for use with cab
- Hydraulic system, additional control valves for front and rear mounted equipment
- Open Cab ROPS, with front window only
- Ripper with 5 shanks
(instead of rear ballast plate mounted)
- Scarifiers with 9 or 11 shanks, front mounted, V-type, hydraulically controlled
- Spare wheel
- Tires: 14.00-24 G-2 16PR
14.00-24 S29 24PR, rock application

Specifications subject to change without notice. Illustrations and pictures may include optional equipment and may not include all standard equipment.

DRESSTA Co.Ltd.

Kwiatkowskiego 1, 37-450 Stalowa Wola, POLAND
tel. +48 (15) 813 5252, 813 4556 fax: +48 (15) 844 4714
www.dressta.com.pl