



## MOTOR GRADER

### BG 190 T-4 (6 x 4) BG 190 TA-4 (6 x 6)



#### Engine Data

Make/Model CUMMINS /diesel engine  
 Typ 4 cycle, direct injection, turbo charged, water-cooled,  
 Rated net horsepower (SAE J 1995) at 2200 RPM 129 kW/176 HP  
 at 2000 RPM 133 kW/181 HP  
 No. of cylinders in line 6  
 Bore & stroke 107 x 124 mm  
 Displacement 6 litres  
 Engine equipped with a dual element, dry-type air cleaner with  
 dust ejector. 24 volt starting and electrical system. 70 amp alter-  
 nator and 24 volt starter with 3,7 kW (5,0 HP).  
 2 batteries 74 Ah each.

#### Speeds (all wheel drive and rear axle drive systems)

Forward	km/h
1.	3,8
2.	6,6
3.	8,8
4.	15,4
5.	19,4
6.	40,0
Reverse	km/h
1.	3,8
2.	8,8
3.	19,4

Acoustic back up alarm in reverse driving.



#### Operating weight

Total weight approx. 18 700 kg  
 On rear wheels approx. 13 700 kg  
 On front wheels approx. 5 000 kg

Weights shown include cab, all operating fluids, 6-teeth rear ripper,  
 front dozer blade.



#### Rear Axle

Oscillating tandem axle with axle insert.  
 Operator controlled wet multiple disc lock/unlock differential.  
 Multi-disc brakes in all four wheel hubs.  
 Parking brake at powershift transmission.



#### All wheel drive system

Hydrodynamic rear axle drive with 6-speed Ergopower transmission  
 and torque converter as well as freely selectable micropro-  
 cessor controlled hydrostatic front axle drive. Power train is con-  
 trolled appropriate to tyre traction of front and rear wheels.



#### Rear axle drive system

Hydrodynamic rear axle drive with 6-speed Ergopower transmis-  
 sion (make ZF 6 WG) and torque converter.



#### Tandems

Drive via roller chains.  
 Torsion-proof box sections.

Height	550 mm
Width	184 mm
Thickness of walls	20 mm
Wheel base	1542 mm
Oscillation	±15°
Ground clearance	480 mm



## Wheels & Tyres

Tyre size	14.00-24 (TG) diagonal
Rim size	10.00 x 24



## Brakes

### Service brake

Dual circuit, power-boosted, multiple-disc oil-bath type, effective on four wheels. Includes reserve power and operator warning system

### Parking brake

Independent electrically operated, acting on power shift. Hydraulic spring accumulated single disc type.



## Front Axle

### 3 types are available

Oscillation	15° up and down
Steering angle	45°

### Non driven with wheel lean (T version)

Stable welded steel beam with wheel lean	
Wheel lean	±17°
Ground clearance	591 mm

### Driven without wheel lean (TA version 1)

Stable tractor-based axle with axial piston engine (concentric on axle protected), pulling power on surface conditions electronically adjustable (infinitely variable).	
Differential, self locking	45 %
Ground clearance	471 mm

### Driven with wheel lean (TA version 2)

Stable welded steel beam with wheel lean and radial piston engines in wheel hubs, pulling power on surface conditions. Electronically adjustable (infinitely variable), possibility to fit in the hydraulic differential lock.	
Wheel lean	±17°
Ground clearance	591 mm



## Steering

### Hydraulic power steering.

Minimum turning radius without dozer blade	7500 mm
Minimum turning radius with dozer blade	8050 mm
Steering angle	45°



## Frame

Front and rear frame sections connected with an adjustment-free articulated pin.

Front: Fully welded box section	
Minimum dimensions of box section	300 x 310 mm
Plate thickness	20 mm

Rear: Fully welded section	
Dimensions (solid main bars)	270 x 90 mm

Hydraulic articulated frame steering (left & right)	30°
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## Circle

Hardened teeth, cut on inside of circle for maximum strength and minimum wear. The circle is held positively in place at four points by four clamps and guide shoes. The clamp and guide shoes are located where greatest loading occurs.

Diameter	1510 mm
Thickness	40 mm
Height	110 mm
Adjustable shoes and clamps	4



## Circle drive

Hydraulically driven worm gear transmission. Circle drive system fully protected against impact damage by an overload clutch.

Rotation	360°
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## Drawbar

Y-shaped fully welded construction.

Dimensions (solid sections)	40 x 210 mm
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## Moldboard (Standard)

Moldboard (12 ft)	3660 x 630 x 20 mm
Blade material	High carbon steel
Blade pull at a friction factor of 0,8	BG 190 T-4 96 kN BG 190 TA-4 121 kN



## Blade Range

Reach outside tyres without articulation (RH&LH)

	2485 / 1920 mm
Reach outside tyres with articulation (RH&LH) blade resting on levelled surface	3335 / 2770 mm
Blade side shift	1250 mm
Blade tilt range	36°-76°
Bank sloping angle (RH&LH)	90°
Lift above ground	470 mm
Cut below ground	430 mm
Distance blade / front axle	2632 mm

All blade movements and positions can be controlled from the operator's seat.



## Operator's Platform

Dimensions	
Width	1150 mm
Depth	1400 mm
Available with various options as listed under "Optional equipment", moldboard control acc. to EURO-standard.	



## Capacities

Fuel tank	480,0 litres
Hydraulic oil tank	170,0 litres
Engine oil	18,0 litres
Ergopower transmission	34,0 litres
Axle drive, front (BG 190 TA-4)	8,5 litres
Axle drive, rear	13,5 litres
Planetary gears, front (BG 190 TA-4)	3,6 litres
Planetary gears and brakes	16,0 litres
Tandem (2 x 21 litres)	42,0 litres
Circle drive	9,0 litres
Coolant	33,0 litres



## Light Equipment

2 headlights front, 2 direction indicator lights each (including warning signal flasher) front and rear and additional 2 at cab, 2 tail lights, 2 stop lights, 1 back-up light, clearance lights, 2 working lights rear, two working lights front each at lower and upper edge of cab.



## Load-Sensing Hydraulics

The control valves of the working hydraulics may be actuated at a time and independent of each other. The load-sensing pump (axial piston pump) discharges only the required quantity of oil, if a control valve is actuated. When hydraulic power is not required, system pressure is only 24 bar and this low standby pressure improves fuel-efficiency and reduces heat generation.

Lock valves and brake valves prevent a cylinder drift under load.

Operating pressure	184 bar
Oil flow, max.	99l/min



## Optional Equipment

Standard-Cab, tiltable

Integrated ROPS/FOPS cab mounted on isolators to limit vibration and noise entering the cab. Excellent all-round visibility. Roomy and comfortable. Adjustable steering pedestal with EURO control lever arrangement. Interior of cab fully lined, floor covering. Tinted safety glass windows, sliding doors left and right with lockable intermediate positions, fresh air heating with pre-filter, air circulation. Adjustable, mechanical spring mounted driver's seat with safety belt. One inside mirror and two folding outside mirrors.

Front window washer.

Wipers front and rear.

Blinds front and rear.

Height / Width / Depth	1980 / 1470 / 1700 mm
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Low-profile cab, tiltable

Height / Width / Depth	1760 / 1470 / 1700 mm
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NAIS control panel

Air-condition for cab

Auxiliary heating

Beacon (orange)

Air-cushioned driver's seat

Recording speedometer

Cooling box

Stereo radio with CD-player

Sliding side windows

Protective grids for lights and cabin

Circle Drawbar

Hardened teeth, machine-cut on inside of circle for maximum strength and maximum wear. The circle is held positively in place by an adjustment-free roller bearing. Drawbar fully welded solid section in "Y"-design.

Circle diameter	1510 mm
Tool width	83 mm
Height	130 mm

Moldboard (11 ft)	3355 x 630 x 20 mm
Moldboard (13 ft)	3962 x 630 x 20 mm
Moldboard (14 ft)	4267 x 630 x 20 mm

Cover plate for upper guide rail of moldboard

Adjustable moldboard corner shoe LH & RH

Moldboard extension, left or right	305 mm
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Float position for both moldboard lift cylinders

Electric fuel pump with automatic switch-off

Towing device, tiltable

Wheels and tyres

Tyre size	17.5-25 diagonal
Rim size	14.00 x 25/1.3

Tyre size	17.5 R25 (M+S)
Rim size	14.00 x 25/1.3

Tyre size	17.5 R25 TL
Rim size	14.00 x 25/1.3

Other types on request.

Rear ripper, with depth indicator	4 teeth
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Width	2120 mm
Ripping depth	260 mm
Lift above ground	630 mm
Weight	610 kg

Heavy-duty rear ripper, with depth indicator	6 teeth
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Width	2120 mm
Ripping depth	375 mm
Lift above ground	590 mm
Weight	1529 kg

Front dozer blade, with position indicator

Width / Height	2490 x 780 mm
Cut below ground	170 mm
Lift above ground	505 mm
Weight	865 kg

Scarifier in front of front axle

Front dozer, articulated

Front dozer, removable

Mudguards on rear wheels

Mudguards on front wheels

Protective cover for powershift transmission

Articulation angle indicator

Special paint

Lock up clutch for torque converter

Tool kit, wheel chocks, warning triangle, fire extinguisher, firstaid kit etc.

Automatic blade control

Various automatic laser or ultrasonic controlled blade systems