

# MOTOR GRADER

## BG 160 T-4 (6 x 4) BG 160 TA-4 (6 x 6)



### Engine Data

Make/Model	CUMMINS/diesel engine
Typ	4 cycle, direct injection, turbo charged, water-cooled, intercooled
Rated net horsepower (SAE J 1995) at 2200 RPM,	119 kW/162 HP
No. of cylinder	in line 6
Bore & stroke	107 x 124 mm
Displacement	6,7 litres

Engine equipped with a dual element, dry-type air cleaner with dust ejector. 24 volt starting and electrical system. 70 Amp alternator 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.	4,3
2.	6,7
3.	11,0
4.	17,2
5.	25,0
6.	40,0
Reverse	km/h
1.	4,3
2.	11,0
3.	25,0

Acoustic back up alarm in reverse driving



### Operating weight

Total weight	approx. 15 000 kg
On rear wheels	approx. 10 700 kg
On front wheels	approx. 4 300 kg

Weights shown include cab, all operating fluids, 4-teeth rear ripper, front dozer blade



### Rear Axle

Oscillating tandem axle with axle insert.  
No-Spin 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 (make ZF 6 WG) with freely selectable microprocessor controlled hydrostatic front axle drive. Power train is controlled appropriate to tyre traction.



### Rear axle drive system

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



### Tandems

Drive via roller chains.	
Torsion-proof box section.	
Height	550 mm
Width	184 mm
Thickness of walls	20 mm
Wheel base	1542 mm
Oscillation	± 15°
Ground clearance	435 mm



## Wheels & Tyres

Tyre size	13.00 - 24 TG diagonal
Rim size	10.00 x 24 DC



## Brakes

### Service brake

Dual circuit, power-booster, 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	546 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	465 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	546 mm



## Steering

Hydraulic power steering	
Minimum turning radius without dozer blade	6900 mm
Minimum turning radius with dozer blade	7650 mm
Steering angle	45°



## Frame

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

<b>Front:</b> Fully welded box section	
Minimum dimensions of box section	270 x 270 mm
Plate thickness	20 mm

<b>Rear:</b> Fully welded box section	
Dimensions (solid main bars)	250 x 80 mm
Hydraulic articulated frame steering (left & right)	30°



## Circle

Hardened teeth, flame-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	1348 mm
Thickness	40 mm
Height	95 mm
Adjustable guide 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)	30 x 175 mm
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## Moldboard (Standard)

Moldboard (12 ft)	3660 x 580 x 20 mm
Blade material	High carbon steel
Blade pull (at a friction factor of 0,8)	
BG 160 T-4	80 kN
BG 160 TA-4	105 kN



## Blade Range

Reach outside tyres without articulation (RH&LH) blade resting on levelled surface	2220 mm/1780 mm
Reach outside tyres with articulation (RH&LH), blade resting on levelled surface	3050 mm/2610 mm
Blade side shift	1250 mm
Blade tilt range	38°-78°
Bank sloping angle (RH&LH)	90°
Lift above ground	480 mm
Cut below ground	520 mm
Distance blade/front axle	2204 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	310,0 litres
Hydraulic oil tank	170,0 litres
Engine oil	18,0 litres
Ergopower transmission	34,0 litres
Axle drive front (BG 160 TA-4)	8,3 litres
Axle drive rear	13,5 litres
Planetary gears front (BG 160 TA-4)	3,6 litres
Planetary gears and brakes	16,0 litres
Tandem case (2 x 21 litres)	42,0 litres
Circle drive	6,0 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, 2 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 amount 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 205 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, hydraulically-sprung 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.

Hight / Width / Depth 1980 / 1470 / 1700 mm

### Low-profile cab, tiltable

Hight / Width / Depth 1760 / 1470 / 1700 mm

### NAIS control panel

### Air-condition for cab

### Auxilliary 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 strenght and minimum wear. The circle is held positively in place by an adjustment-free roller bearing. Drawbar fully welded solid section in "Y"-design.

Circle diameter 1348 mm

Tool widht 78 mm

Height 130 mm

Moldboard (11 ft) 3355 x 580 x 20 mm

Moldboard (14 ft) 4267 x 580 x 20 mm

### Cover plate for upper guide rail of moldboard

Adjustable moldboard corner shoe, left or right

Moldboard extension, left or right 305 mm

### Float position for both moldboard lift cylinders

Electric fuel pump with automatic switch-off

Towing device, tiltable

### Wheels and tyres

Tyre size 22-20 12 PR  
Rim size 17.00 x 20

Tyre size 16/70-24  
Rim size 13.00 x 24

Tyre size 405/70 R24  
Rim size 13.00 x 24

Tyre size 455/70 R24  
Rim size 13.00 x 24

Other types on request.

Rear ripper with depth penetration indicator 4 teeth (max. 7)  
Width 2120 mm  
Ripping depth 285 mm  
Lift above ground 580 mm  
Weight 522 kg

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

Front dozer blade with position indicator 2490 x 703 mm  
Width/Height  
Cut below ground 250 mm  
Lift above ground 605 mm  
Weight 691 kg

### Scarifier, in front of front axle

#### Front dozer, articulated

#### Front dozer, removable

Front ballast instead of dozer blade 380 kg

Mudguards on rear wheels

Mudguards on front wheels

#### Protective cover for powershift transmission

#### Articulation angle indicator

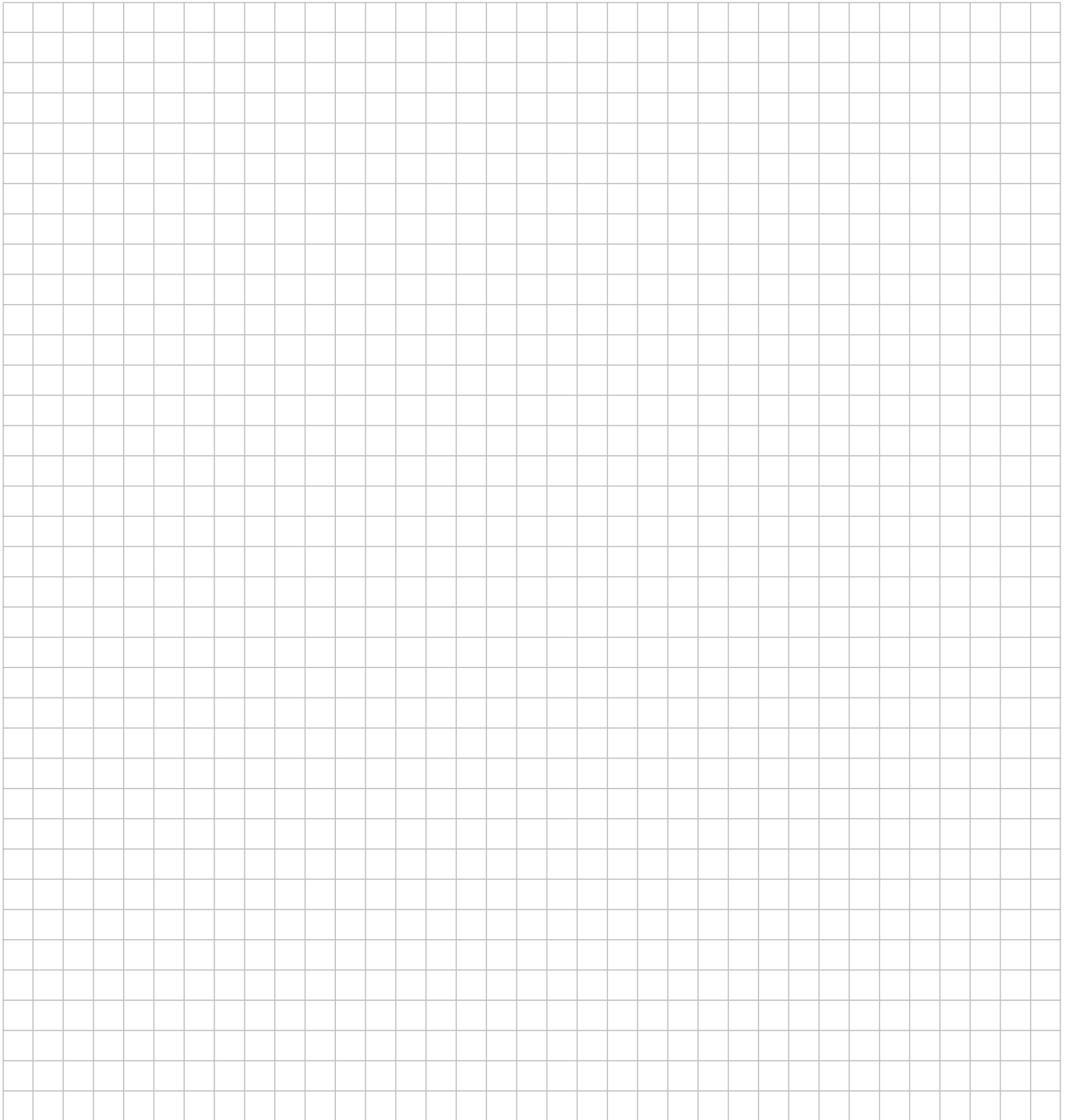
#### Lock-up clutch for torque converter

#### Special paint

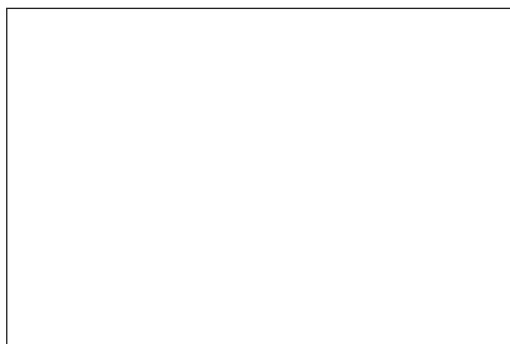
Tool kit, wheel chocks, warning triangle, fire extinguisher, first aid kit etc.

#### Automatic blade control

Various automatic laser or ultrasonic controlled blade systems



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Technical data are subject to alteration.