



MOTOR GRADER

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



Engine Data

| | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Make/Model | CUMMINS / diesel engine |
| Type | 4 cycle, direct injection, turbo charged, water-cooled, intercooled |
| No. of cylinder | in line 6 |
| Bore & stroke | 107 x 124 mm |
| Displacement | 6.7 litres |
| Base Power | |
| Rated net horsepower (SAE J 1995) at 2200 RPM, | 119 kW/162 HP |
| APA Power | |
| Rated net horsepower (SAE J 1995) at 2200 RPM, | 142 kW/190 HP |
| Rated net horsepower (SAE J 1995) at 2000 RPM, | 145 kW/195 HP |
| Engine equipped with a dual element, dry type air cleaner with dust ejector. 24 V starting and electrical system. 70 Amp alternator and 24 V starter with 3.7 kW (5.0 HP). 2 batteries 74 Ah each. | |



Rear axle drive system

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

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 | |
| 1. | 4.3 |
| 2. | 11.0 |
| 3. | 25.0 |

Acoustic back up alarm in reverse driving



Operating weight

| | |
|-----------------|-------------------|
| Total weight | approx. 16 200 kg |
| On rear wheels | approx. 11 200 kg |
| On front wheels | approx. 5 000 kg |

Weights shown include cab, all operating fluids, 4-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.



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 |



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.



Wheels & Tyres

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



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

2 types are available

| | |
|------------------|-----------------|
| Oscillation | 15° up and down |
| Steering angle | 45° |
| Wheel lean | ±17° |
| Ground clearance | 546 mm |

Non driven with wheel lean (T version)

Stable welded steel beam with wheel lean.

Driven with wheel lean (TA version)

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.



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.

| | |
|-----------------------------------|--------------|
| Front: Fully welded box section | |
| Minimum dimensions of box section | 270 x 270 mm |
| Plate thickness | 20 mm |

| | |
|--------------------------------|-------------|
| Rear: 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 overbad clutch.

| | |
|----------|------|
| Rotation | 360° |
|----------|------|



Drawbar

Y-shaped fully welded construction.

| | |
|-----------------------------|-------------|
| Dimensions (solid sections) | 30 x 175 mm |
|-----------------------------|-------------|



Moldboard (Standard)

| | | |
|------------------------------------------|--------------------|--------|
| Moldboard (12 ft) | 3680 x 580 x 20 mm | |
| Blade material | High carbon steel | |
| Blade pull (at a friction factor of 0,8) | | |
| | BG 160 T-4 | 89 kN |
| | BG 160 TA-4 | 114 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 |
| Engpower 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 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 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, 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

Low-profile cab, tiltable
Height / Width / Depth 1760 / 1470 / 1700 mm

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 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 width 78 mm

Height 130 mm

Moldboard (11 ft) 3355 x 580 x 20 mm

Moldboard (13 ft) 3962 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 610 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

Width/Height 2490 x 703 mm

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