



# MOTOR GRADERS

## TG Series



EQUIPMENT FOR YOUR SUCCESS

MOTOR GRADERS

TG motor graders ensure high-powered performance in heavy-duty applications while providing a comfortable environment for operators.

Turbocharged YAMZ engines with intercooler bring proven power, reliability and fuel efficiency.

ISO certified ROPS & FOPS cab provides safety, excellent operator comfort and visibility.

Adjustable steering column and instruments ensure comfortable seating and standing operation.

Heavy-duty frame fabrication with high strength castings brings structural rigidity and durability.

NAF tandem bogie:

- Gear train in the balance arms for reliable transmission operation in the toughest road and soil conditions
- Rear axle no-spin differential lock
- Oil-immersed service disk brakes



Fully automatic ZF transmission (6 forward/3 reverse) with self-diagnostics function for smooth operation, traction, outstanding control and ease of maintenance.

Wide range of attachments

Front:

- dozer blade, snow plowing equipment
- road-laying equipment

Rear-mounted ripper



► **TG140**  
Weight: 15 100 kg  
Engine power: 125 kW/170 h.p.  
Wheel arrangement: 1x2x3



► **TG180**  
Weight: 17 300 kg  
Engine power: 158 kW/215 h.p.  
Wheel arrangement: 1x2x3



► **TG200**  
Weight: 18 900 kg  
Engine power: 191 kW/260 h.p.  
Wheel arrangement: 1x3x3



► **TG250**  
Weight: 24 180 kg  
Engine power: 191 kW/260 h.p.  
Wheel arrangement: 1x3x3



BUILT TO PERFORM

Frame articulation allows 26° turns each direction ensuring grading beyond wheel spacing e.g. when sloping, ditching and working on the road shoulders. The front wheels and frame turning the same direction shortens the grader turning radius.



Front wheel lean feature helps when working slopes and compensates reaction forces on the moldboard in case of wide working angles.

Front axle on TG200/TG250 heavy-duty motor graders features hydrostatic wheel drives allowing several modes of operation:

- ▶ Engagement simultaneously with the rear wheel main drive substantially enhances the blade pushing force and overall performance.
- ▶ The front axle drive engagement when the main drive is off (gearbox in neutral) allows finishing surface works.



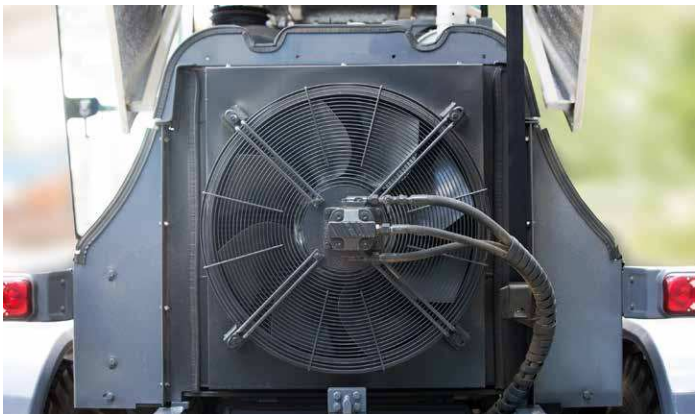
T-frame drawbar is designed to handle heavy loads. The moldboard hydraulic cylinders feature hydraulic locks fixing the moldboard positions for precise blading control.



Non-slewing dozer blade comes as standard across all grader classes except for quarry graders.



Rear ripper is used to loosen compacted or heavy soil and break road cover.



Integrated cooling system includes radiators for the engine, gearbox, and front axle hydraulic drive (if equipped).



High-performance cooling is ensured by the state-of-the-art Fan Drive system (electronically controlled hydrostatic fan drive). The processor receives signals from the radiator sensors and sets the required fan rotation speed.



NAF tandem bogie paired with ZF automatic transmission delivers high drive wheel torque and traction in various operating conditions.



Rear bogie features robust fenders protecting the cab and hood from dirt which can be used as additional platform to carry out maintenance.



## OPERATOR CABIN

- ▶ Cab design and glazing ensure excellent front and rear visibility
- ▶ Cab complies with FOPS-ROPS (falling object/roll-over protection) safety standards
- ▶ Cab noise level with closed doors is 74 dBA
- ▶ Air conditioner and adjustable suspension seat come as standard
- ▶ Windshield wipers may be installed to cover 85% of the glazing (optional)
- ▶ All-window defogging and defrosting as standard
- ▶ Air filter in the forced ventilation system
- ▶ 4 sun blinds are standard
- ▶ Tinted glass for sun protection
- ▶ Tilt-adjustable steering wheel; depending on the job at hand, the operator may either stand or sit
- ▶ Dashboard features a multifunctional LCD display including: speedometer, tachometer, hour meter, indicating lights, emergency lights, engine fuel level/coolant temperature/hydropneumatic accumulator/engine oil pressure indicators; ZF transmission readings – transmission oil pressure and temperature, pressure in the hydraulic torque converter.



## CONTROLS

The following work tool controls are positioned on both sides of the steering wheel:

Moldboard sideshift, moldboard turn, moldboard raising/lowering from the left/right side, drawbar shift, dozer blade raising/lowering

### Switches under steering wheel:

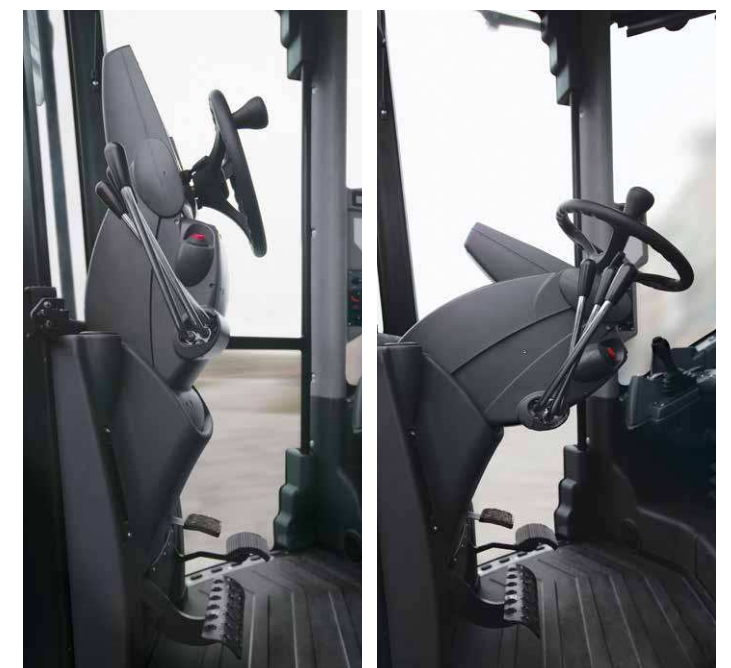
- ▶ Turning circle lock-up, moldboard cutting angle, frame articulation, front wheel lean (right/left), scarifier (ripper) raising/lowering, dozer blade turning/raising/lowering (option)

### Transmission and electrical equipment console (positioned to the operator's right):

- ▶ Automatic transmission joystick allows both automatic and manual modes
- ▶ Front axle drawbar joystick; when transmission is not engaged, the joystick sets the front wheel speed
- ▶ Rocker switch to engage the front drive, front wheel lock-up switch, front drive emergency shut-down switch (indication lamps turn on)
- ▶ Rocker switches to engage lighting fixtures, rotating beacons, and windshield washers and wipers
- ▶ Battery ON/OFF switch
- ▶ Radio
- ▶ AC unit and heater controls are positioned higher on the post
- ▶ ZF transmission display positioned above

Hand brake lever is to the operator's left.

Sun blinds come as standard.





MAINTENANCE

New generation TG graders are an innovation in the construction and road-building equipment market making the operation and maintenance comfortable and easy.

TG family features state-of-the-art Tier 3 engines with ECU.

TG graders come with 2000 motor/hours or 1 year warranty subject to timely scheduled maintenance and use of recommended spare parts.

Service interval during the warranty period is 250 motor/hours.



WORK ATTACHMENTS

SNOW PLOWING EQUIPMENT

<b>Intended use:</b>	
▶ cleaning road shoulders and slopes from snow	
▶ cleaning snow over the road barriers (curbs)	
<b>Specifications</b>	
Length	2800 mm
Height	750 mm
Shoulder reach outside of tires	3500 mm
Windrow cutting	up to 15°
Bank sloping	up to 30°
Lateral shift	from 0° to 50°
Road fence height (up-and-over reach)	up to 900 mm
Attachment weight	1600 kg
Control	Electro-hydraulic

SIDE WORK ATTACHMENTS

<b>Intended use:</b>	
▶ road slope/ditch levelling	
▶ bank sloping	
▶ cleaning road shoulders and slopes from snow	
▶ cleaning snow over the road barriers (curbs)	
<b>Specifications</b>	
Length	1900 mm
Height	620 mm
Shoulder reach outside of tires	2600 mm
Windrow cutting	up to 40°
Bank sloping	up to 75°
Longitudinal shift angle	from 0° to 50°
Road fence height (up-and-over reach)	up to 900 mm
Weight	950 kg
Control	Electro-hydraulic

MID-MOUNTED SCARIFIER

<b>Intended use:</b>	
▶ loosening hard soils and eliminating ruts on dirt roads	
<b>Specifications</b>	
Number of teeth	11
Number of hydraulic cylinders	2
Max. ripping depth	280 mm
End-to-end teeth spacing	1150 mm
Control	Manual-hydraulic
Weight	750 kg

REAR RIPPER

<b>Intended use:</b>	
▶ ripping asphalt and hard rock	
<b>Specifications</b>	
	TG 140 TG 180 TG 200
Number of teeth	3 5
Number of hydraulic cylinders	2 2
Max. ripping depth	300 mm 300 mm
End-to-end teeth spacing	1460 mm 2240 mm
Teeth spacing	730 mm 560 mm
Control	Electro-hydraulic
Weight	750 kg 980 kg



MOLDBOARD

MOLDBOARD AGILITY ALLOWS OPERATORS TO PERFORM VARIOUS GRADING JOBS.



- ▶ Raising and lowering one or both sides simultaneously
- ▶ 90° vertical rotation of the moldboard
- ▶ Turning circle sideshift (left/right)
- ▶ Moldboard sideshift (left/right)
- ▶ Horizontal plane turning
- ▶ Changing the cutting angle

All moldboard cylinders feature hydraulic locks.

The turning circle is driven with 2 hydraulic cylinders, turning angle ± 65°.



	TG140	TG180	TG200	TG250
ENGINE				
Model	YAMZ-53416-10	YAMZ-5362	YAMZ-5366	YAMZ-5366
Type	4 cylinder	6 cylinder	6 cylinder	6 cylinder
	Diesel turbocharged engine with water cooling and air intercooler			
Displacement	4.43 liters	6.65 liters		
Bore and stroke	105 x 128 mm	105 x 128 mm		
Gross power	132 kW at 2100 rpm	161 kW at 2000 rpm	192.5 kW at 2000 rpm	192.5 kW at 2000 rpm
Max. torque	760 Nm at 1400 rpm	980 Nm at 1400 rpm	1100 Nm at 1400 rpm	1100 Nm at 1400 rpm
Electrical system	Electric start 24 volt. Two batteries 12 volt 190 Ah 650 A. Alternator 28 volt, 70 A			
Air cleaner	2-stage, 2-element dry type air cleaner with restriction indicator			
TRANSMISSION				
Model	ZF 6WG 160 B	ZF 6WG 190	ZF 6WG 210	
Type	Full automatic with manual override ZF gearbox with self-diagnostics. Pressure control in the hydraulic clutch enables smooth shifting between gears.			
Gear/speed (km/h)*	Forward/Reverse			
First	4.8/5.0	9.0/5.2	4.5/4.7	4.4/4.6
Second	7.3/-	7.6/-	6.9/-	6.7/-
Third	11.3/11.9	11.7/12.3	11.1/11.7	10.8/11.4
Fourth	17.4/-	18.0/-	17.0/-	16.6/-
Fifth	26.3/27.6	27.0/28.6	26.2/28.0	25.8/27.2
Sixth	40.5/-	41.2/-	40.8/-	39.7/-
WHEELS AND TIRES				
Tires	14.00-20 G2	14.00-24 G2		16.00-24 G2
Rims	8,50-20	10.00-24		11.25-24
Ply rating (PR)	16			
BRAKES				
Type	Hydraulic braking system with cermet oil immersed disc brake pack on each wheel			
Parking brake	Spring-applied, hydraulically released disc brake on the tandem bogie input shaft with park brake shift inhibit			
AXLES				
Front axle	Fabricated steel beam with wheel lean and oscillation function are standard. Fully sealed hubs for total bearing protection from contamination resulting in minimum downtime and low maintenance costs			
Axle lean angle	18° to the left and to the right			

	TG140	TG180	TG200	TG250
Axle pivot angle	±16°			
Ground clearance	600 mm	635 mm	660 mm	
Rear axle	NAF tandem bogie axles with No Spin differential gear.			
Model	TAP 5501.105(BRA)	TAP 7506.103	TAP 7601.165 BRA 08	
Axle spacing	1540 mm			1632 mm
Pivot angle	±15°			

### STEERING

Type	Wheel steering with 2 hydraulic cylinders	Wheel steering with 1 hydraulic cylinder		
Min. turning radius	7800 mm			9 900 mm

### FRAME

Type	<p>Rear semi-frame designed for the equipment installation ensures rigidity during work attachment operation.</p> <p>Front semi-frame represents inclined welded box-type structure designed for improved forward visibility.</p> <p>Frame articulation point has two hydraulic cylinders articulating the frame 26° to the left and to the right.</p> <p>Pilot-controlled check valve ensures steady operation.</p>			
------	--	--	--	--

### HYDRAULIC SYSTEM

Type	<p>Hydraulic system with fixed displacement pump and pump unloading in neutral position of the hydraulic control valve levers.</p> <p>Balanced hydraulic system ensures coordinated, precise and quick control. Main operating equipment is mechanically controlled through the 6-section hydraulic control valve with control of additional operations through 4 relay-controlled hydraulic control valves. The system is equipped with pilot-controlled check valves in the circuits of blade lifting, blade pitch, turning circle shift, wheel lean and frame articulation. Filters: pressure and drain filters with 10 micron filtering degree.</p>			
Performance at 2000 rpm of pump	68 l/min			
Maximum pressure	140 Bar			

### MOLDBOARD

Type	Outstanding blade mobility enables wide cutting angles during trenching and back sloping outside the machine wheel spacing		
Dimensions	3660x630x20 mm	4270x700x20 mm	4880x800x20 mm
Blade bolt spacing	152 mm		
Bolt diameter	16 mm		
	Right/Left		
Outreach outside wheel spacing, straight frame	1920 mm/2020 mm	2218 mm/2322 mm	2651 mm/2835 mm
Outreach outside wheel spacing, curved frame	2556 mm/2762 mm	2856 mm/3062 mm	3628 mm/3680 mm
Moldboard sideshift	700 mm/700 mm		700 mm/796 mm

	TG140	TG180	TG200	TG250
Turning circle sideshift	660 mm / 760 mm			
Slope cutting angle	90°/90°			
Moldboard ground clearance	400 mm	450 mm		
Moldboard depth of penetration	450 mm	500 mm	600 mm	
Blade cutting angle	30° - 70°			

### DRAWBAR

Type	Draw bar is a welded box-type structure in the form of narrow T ensuring an optimal work area visibility. Lift cylinder supports are equipped with double attachments to the frame to ensure maximum strength and reliability.			
------	--	--	--	--

### TURNING CIRCLE

Type	Turning circle is supported in 3 points by adjustable locking plates ensuring optimal support and load distribution. Double-cylinder hydraulic drive system provides the circle with required rotation forces and its retention under full load, equipped with damping valves to protect against impact damage.			
------	---	--	--	--

Circle diameter	1458 mm	1658 mm
Number of locking plates	3	
Number of hydraulic cylinders	2	
Number of force application points	2	
Turning angle	±65°	

### CAPACITIES

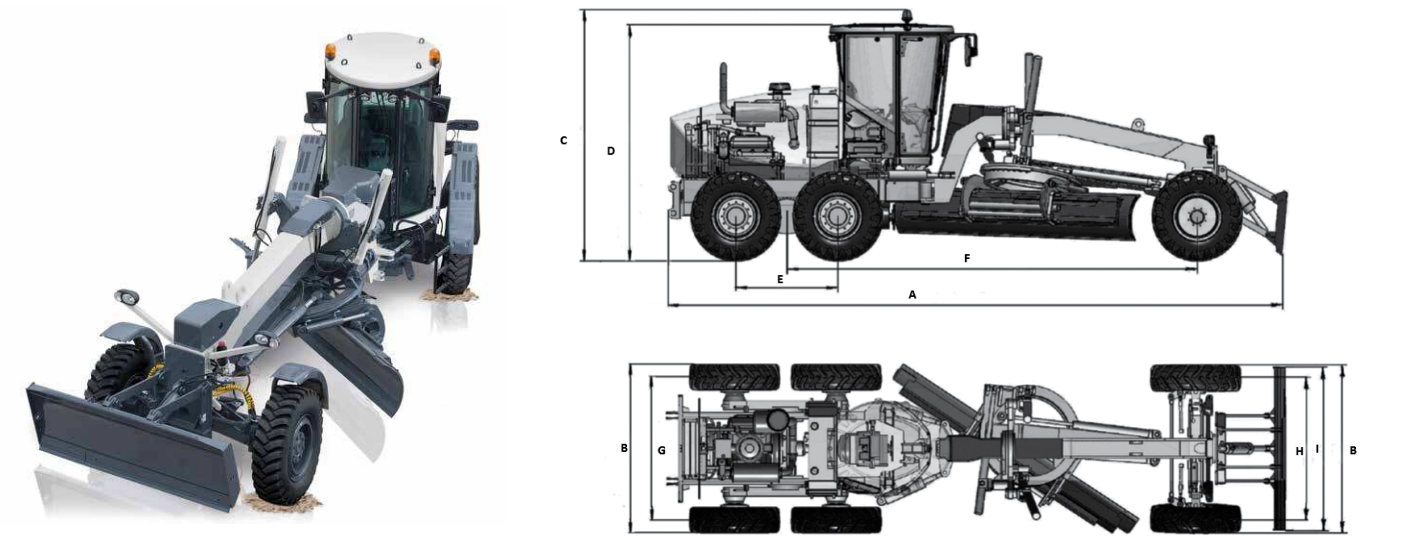
Fuel tank	350 liters			
Transmission	38 liters			
Main gear	30 liters			
Balance arms (each)	22 liters			
Hydraulic tank	120 liters			
Engine crankcase	28 liters			
Cooling system	50 liters			

### WEIGHT CHARACTERISTICS

Weight	15 100 kg	17 300 kg	18 900 kg	24 180 kg
Front axle load	5 350 kg	6 150 kg	6 550 kg	8 450 kg
Tandem bogie load	9 750 kg	11 150 kg	12 350 kg	15 730 kg
Weight with bulldozer blade and rear ripper	16 850 kg	18 450 kg	20 050 kg	25 540 kg



OVERALL DIMENSIONS



	TG140	TG180	TG200	TG250
A Length, mm	9 400	9 400	9 400	10 500
B Width, mm	2 550	2 550	2 550	3 150
C Height, mm	3 700	3 700	3 700	3 780
D Height to top of cab, mm	3 540	3 540	3 540	3 630
E Axle spacing, mm	1 540	1 540	1 540	1 632
F Wheel base, mm	6 200	6 200	6 200	7 000
G Rear wheel spacing, mm	2 020	1 990	1 990	2 270
H Front wheel spacing, mm	2 080	2 080	2 080	2 270
I Bulldozer blade width, mm	2 475	2 475	2 475	2 632



STANDARD EQUIPMENT

Cab

- ▶ Steel box-section cab with panoramic windows
- ▶ Windshield and rear window wipers
- ▶ Two side doors
- ▶ FOPS/ROPS protection
- ▶ Tilt-adjustable steering column
- ▶ Mechanical suspension seat with adjustable arm rests and seat belt
- ▶ Control levers on the steering column
- ▶ Roller blinds on the windshield, rear and two side windows
- ▶ FM/Mp3 sound system
- ▶ Compartment for personal belongings
- ▶ Hydraulic anti-vibration cab mounts
- ▶ Electric horn and reverse signal
- ▶ Two rear view mirrors (right and left)
- ▶ Molded rubber mat (noise and vibration insulation)
- ▶ Climate control system:
  - Air conditioner and heater
  - Air flow distribution in the cab
  - Adjustable guide heads (defrosters) for window blow-off
  - Outside air intake control device
  - Replaceable filter element

Performance monitoring

- Diagnostics display readings:
- ▶ Fuel level
  - ▶ Engine coolant temperature
  - ▶ Engine oil pressure
  - ▶ Hour meter
  - ▶ Electrical network voltage
  - ▶ Emergency lights
  - ▶ Battery charge
  - ▶ Clogged air filter

Electrical

- ▶ Battery (2 x 12V x 100 A/h)
- ▶ Battery switch with remote switching
- ▶ 1 outlet to connect portable lights in the powertrain compartment
- ▶ Lights required for road travel (low and high beam headlamps, turn signals, tail lamps, and stop-signals)
- ▶ 6 cab-mounted halogen lights
- ▶ 2 beacons

OPTIONS

- ▶ Rotating front moldboard
- ▶ Rear ripper
- ▶ Snow equipment
- ▶ Side blade
- ▶ Engine pre-heater
- ▶ Independent cab heater
- ▶ Push block
- ▶ Mid-mounted scarifier
- ▶ Rear view camera
- ▶ Automatic fire suppression system with manual override
- ▶ Automatic diesel fuel heater
- ▶ Automatic secondary fuel filter heater
- ▶ Automatic Lincoln lubrication system
- ▶ Hood winterization cover
- ▶ Automatic 2D and 3D levelling
- ▶ GLONASS module





15/35 Rochdelskaya st.,  
Moscow, 123022  
Phone: +7 (495) 728-49-55  
E-mail: [info@rm-terex.com](mailto:info@rm-terex.com)  
[www.rm-terex.com](http://www.rm-terex.com)



**Service and Warranty Support:**  
[service@rm-terex.com](mailto:service@rm-terex.com)  
+7 (495) 723-49-55 (ext. 73836)

The standard configuration and optionally installed equipment may vary. For more information, please contact the dealers. Contacts of dealerships are listed on the company's website. Equipment shown in the photographs and illustrations may differ from the available for ordering. Materials and specifications are subject to change without notice.

**August 2015**