



# ROAD CONSTRUCTION EQUIPMENT & SPECIALTY MACHINES

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## MOTOR GRADERS



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## PRODUCTIVITY WITH NO COMPROMISE ON COMFORT

OVERHAUL OF DIRT AND GRAVEL ROADS

MAKING OF ROADBEDS

EMBANKMENT FILLING

REMOVAL OF SNOWDRIFTS

GRADING AND LEVELING

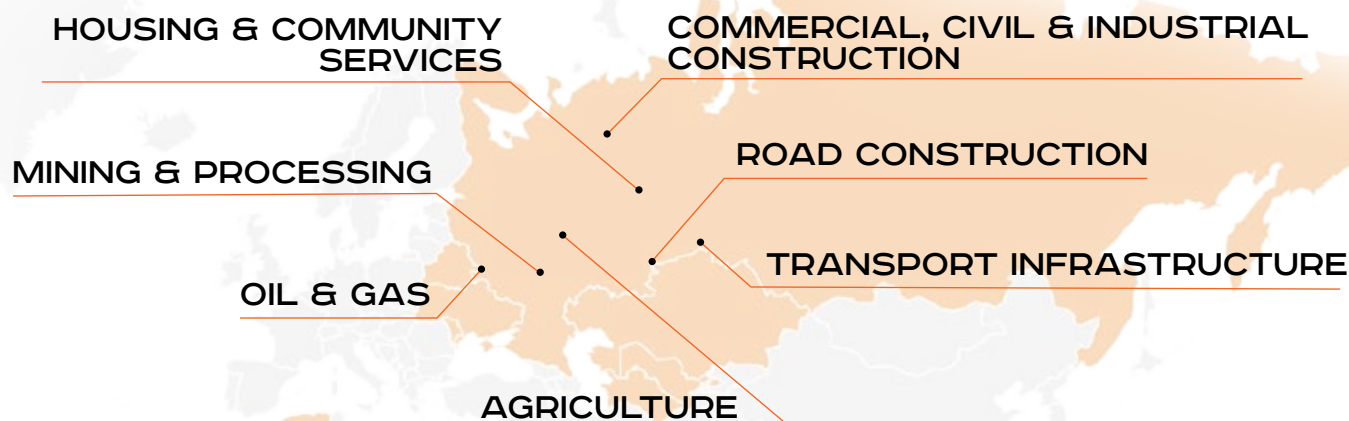
MOVING OF AGGREGATES WITH STABILIZATION AGENTS WHEN MIXING ON THE ROAD

RIPPING AND LOOSENING OF FROZEN AND HEAVY SOILS

DESTRUCTION OF ROAD SURFACES







**UMG CE** is the Russia's sole maker of a wide range of motor graders of all classes – from light-duty models to AWD heavy-duty machines. Areas of application: earthwork and grading operations in quarries and road construction including road reconstruction and maintenance; housing & community services and agricultural sector.

All motor graders are powered with YaMZ engines from the Yaroslavl Motor Plant which is one of the most hi-tech engine plants in Europe. The reliable transmission ensures high tractive effort and smoothness of operations.

The fast coupler arrangement provides for attachment of various tools – Russian- and foreign-made. You can mount around 15 types of attachments. The most commonly used are dozer blade, moldboard and rear ripper. That makes it possible to expand the area of application of the motor grader both in the winter and summer seasons. All our motor graders are prepared for installation of automatic leveling system that ensures meeting of all modern requirements imposed on quality of the road.

FOPS/ROPS guarantees a high level of safety.





# MOTOR GRADER DZ SERIES



Motor grader DZ-98V – AWD heavy machine for energy-intensive earthwork and grading operations in different soil conditions. This machine will easily tackle a wide range of tasks from major overhaul of dirt and gravel roads to making of roadbeds. This grader can do embankment filling, ripping & loosening of frozen and heavy soils, destruction of road surfaces, and shift aggregates with stabilization additives when mixing on the road is necessary.



## DZ-98V

The new hexagonal cab significantly improves the visibility. Easy installation and deinstallation of the cab enable transportation of the motor grader on a trailer or car hauler. Improved ergonomics of the operator's working environment. Air-conditioning (option) ensures comfortable temperature inside the cab.

The hood system gives easy access to the engine and its systems. The motor grader is powered by the Euro-O diesel engine. The



muffler and air cleaner are under the hood. The quarry version of the motor grader has two hydraulic cylinders making the steering of the front wheels very easy. Tire size 20.5-25. The motor grader is equipped with a reliable 6\*6 drivetrain with a driveshaft that transmits power to the front axle. The hydromechanical transmission (option) ensures higher tractive effort and smoothness of operations. The upgraded frame makes it possible to mount the rear ripper.

**SPECIFICATIONS****DZ-98V****ENGINE**

Model	YaMZ-238NDZ-3	YaMZ-236NE2-40
Type	Diesel 8-cylinder	Diesel 6-cylinder
Displacement, L	14.86	11.15
Power, kW / rpm	173 / 1,700	169 / 2,100

**TRANSMISSION**

Type	Manual by ChSDM	Hydromechanical 6WG-180
No. of gears forward / reverse	6 / 6	6 / 3
Max travel speed forward / reverse, kmph	41 / 48.5	35.4 / 24.5
Hill-holder, %	At least 20	

**DRIVETRAIN**

Drivetrain arrangement	1 x 3 x 3	
Live (drive) axles	3	
Steering axle	Front	
Size of tires, in	16.00–24	20.5–25
Tire pressure, MPa (kgf/cm <sup>2</sup> )	250±25 (2.5±0.25)	250±25 (2.5±0.25)

**STEERING & CONTROL**

Min turning radius, mm	18,000
Transmission, speed increaser, reverse and front axle control	Manual
Hydromechanical transmission (option)	Controller (control lever)
Clutch control	Mechanical with power booster
Front-wheel steering	Hydraulic
Brake control: wheel / parking	Pneumatic / Mechanical
Work equipment control	Hydraulic

**WORKING RANGES & ATTACHMENTS**

Blade turning angle, deg.	± 360
Moldboard, width / height, mm	4,100 / 700
Moldboard sideshift – right / left, mm	900 / 900
Circle centershift right/left, mm	900
Moldboard cutting angle range, deg.	40-70
Maximum slope angle for grading operations, deg.	90
Max lift of moldboard for transport, mm	350
Max depth of cut of moldboard, mm	500
Dozer blade, width / height, mm	3,220 / 990
Max depth of cut of dozer blade, mm	100

**WEIGHT CHARACTERISTICS**

Operating weight, kg	19,680 / 24,330	19,080 / 23,730
Front axle weight, kg	6,850	
Axle load, kg	17,480	

**DIMENSIONS**

Overall length, mm	9,700
Overall width (blade in transport position), mm	3,150
Overall height of cab (w/o beacons), mm	4,000
Overall height of cab with beacons, mm	4,200
Wheelbase, mm	6,000
Rear track width, mm	2,507
Front track width, mm	2,629
Ground clearance (under blade in transport position), mm	350
Width, outside front tires, mm	3,064
Width, outside rear tires, mm	2,942
Distance from front axle to blade, mm	2,700
Rear wheelbase, mm	1,620



# MOTOR GRADER GS-SERIES



The GS motor graders are designed for earthwork and grading operations on soils of I-IV categories.



## PRODUCT SPECIFICATIONS FOR GS MOTOR GRADERS

The hood system ensures full & easy access to the engine for service & maintenance. The reliable diesel engines are adapted to the most severe conditions of operations. The spacious and safe FOPS/ROPS cab provides perfect visibility and comfortable working environment for the operator. The transmission ensures optimal tractive force and efficiency. 90° blade sideshift (both sides) enables

effective operations on slopes and roadsides without application of extra equipment. The all-angle moldboard ensures high productivity and allows for operations in reverse. The external tooth rim transmits significant efforts when turning the blade. A wide choice of implements and attachments for front and rear mounting.

SPECIFICATIONS		GS-14.02		GS-18.05	
ENGINE					
Model	YaMZ-236G6		YaMZ 236-D7		
Type	diesel 4-stroke				
Displacement, L	11.15		11.15		
Power, kW / rpm	110 / 1,700		130 / 2,100		
TRANSMISSION					
Drivetrain arrangement	1 x 2 x 3				
Type	Manual		Manual with hydraulic friction clutches		
No. of gears forward / reverse	FWD 6	Reverse 2	FWD 12	Reverse 4	
Travel speed	FWD	Reverse	FWD	Reverse	
	32.3	12.6	40	8.5	
Min turning radius, mm	7,500		7,800		
TIRES & WHEELS					
Tires	14.00–20		14.00–24		
Rim size, in	8.5–20		10.0–24		
FRONT AXLE					
Oscillation angle, deg	±16				
Camber angle, deg	±18				
REAR BOGIE					
Rear wheel track, mm	1,420		1,495		
Balance arms' oscillation angle, deg	±15				
STEERING					
Min turning radius, mm	7,500		7,800		
MOLDBOARD					
Dimensions, mm	3,740 x 620 x 16		3,660 x 630 x 20		
Span of straight blade off gauge, mm	Right	Left	Right	Left	
	1,570	1,680	1,920	2,020	
Span of curved blade off gauge, mm	2,100	2,200	2,556	2,762	
Blade sideshift – right/left, mm	700	700	700	700	
Circle centershift right/left, mm	260	430	660	7600	
Maximum slope angle for grading operations, deg.	90				
Ground clearance under blade, mm	350		450		
Max depth of cut, mm	450				
Blade pitch, deg	30–70				
DOZER BLADE					
Operating weight, kg	13,500		16,340		
Front axle load, kg	4,300		5,600		
CIRCLE					
Type	Full-swing		Limited-swing		
Diameter, mm	1,200		1,458		
No. of locking plates	3		3		
Turning angle, deg	360		± 65		
WEIGHT CHARACTERISTICS					
Operating weight (with dozer blade, w/o ripper), kg	12,850		15,295		
Front axle load, kg	4,000		4,800		
Tandem bogie load, kg	9,200		10,750		
DIMENSIONS					
Overall length, mm	8,825		9,370		
Overall width, mm	2,500		2,550		
Overall height, mm	3,535		3,635		
Overall height of cab, mm	3,445		3,545		
Wheelbase, mm	6,000		6,200		
Rear track width, mm	2,050		2,068		
Front track width, mm	2,050		2,072		
Dozer blade width, mm	2,475		2,475		
Bogie wheelbase, mm	1,420		1,495		



# MOTOR GRADER TG-SERIES

The TG motor graders ensure high productivity when doing big volumes of work and maximum comfort for the operator.



## PRODUCT SPECIFICATIONS FOR TG MOTOR GRADERS

The latest 530 YaMZ engines with a turbo-charger and intercooler ensure high power, reliability and efficiency.

The FOPS/ROPS cab provides a high level of safety, comfort and perfect visibility.

Transformer steering column makes the steering process even more easy and operator-friendly.

The metal structures which use robust high-strength die cast parts ensure a long service life.

We offer an enhanced standard configuration: liquid prestart heater, dozer blade, prepared for installation of the rear ripper.

The tandem bogie from NAF:

- pinion drive in balance arms ensures reliable functioning of the transmission

in most severe road and offroad conditions;

- no-spin differential of the rear axle;
- oil-immersed disc-type service brake.

The hydromechanical transmission from ZF with automatic gear shift and self-diagnostics (6 forward gears / 3 reverse gears) makes the process of choosing the driving mode easy and quick. The transmission ensures a high tractive effort, easy steering and maintenance.

Attachments:










- front snow pusher;
- angled snowplow;
- rear ripper;
- self-levelling systems.



SPECIFICATIONS		TG140		TG180	TG200	TG250
ENGINE						
Model	YamZ-53416		YamZ-53662	YamZ-5366	YamZ-5366	
Type	Diesel 4-cylinder		Diesel 6-cylinder			
Displacement, L	4.43		6.65			
Power, kW / rpm	131 at 1,900	125 at 2,200	160 at 1,900	191 at 1,900		
TRANSMISSION						
Drivetrain arrangement						
Type	Automatic transmission with manual shift mode and self-diagnostics from ZF					
No. of gears, forward / reverse	FWD 6			Reverse 3		
Travel speed, forward / reverse, kmph	38.6 / 26.3		41.2 / 28.6		34.5 / 23.7	
Min turning radius, mm	7,800					9900
FRONT AXLE						
Oscillation angle, deg	15					16
Camber angle, deg	18					
REAR AXLE						
Rear wheel track, mm	1,540					1,495
Balance arms' oscillation angle, deg	±15					
TIRES & WHEELS						
Tires	14.00–20 G2		14.00–24 G2		16.00–24 G2	
Rim size, in	8.50–20		10.00–24		11.25–24	
STEERING						
Min turning radius, mm	7,800					9900
MOLDBOARD						
Dimensions, mm	3,660 x 630 x 20		4,270 x 700 x 20		4,880 x 800 x 20	
Span of straight blade off gauge, mm	left / right		left / right		left / right	
	1,920 / 2,020		2,218 / 2,322		2,651 / 2,835	
Span of curved blade off gauge, mm	left / right		left / right		left / right	
	2,556 / 2,762		2,856 / 3,062		3,628 / 3,680	
Blade sideshift – right/left, mm	left / right					left / right
	700 / 700					800 / 800
Circle centershift right/left, mm	left / right					
	660 / 760					
Maximum slope angle for grading operations, deg	90					
Ground clearance under blade, mm	400		450			
Max depth of cut, mm	450		500		600	
Blade cut angle, deg	30–70					
CIRCLE						
Type	limited-swing					
Diameter, mm	1,458					1,658
No. of locking plates	3					
Turning angle, deg	± 65					
WEIGHT CHARACTERISTICS						
Operating weight (with dozer blade, w/o Ripper), kg	14,875		17,520	18,800	23,275	
Front axle load, kg	4,400		5,990	7,010	8,525	
Bogie load, kg	10,475		12,620	12,900	14,730	
DIMENSIONS						
Overall length, mm	9,400		9,400	9,400	10,500	
Overall width, mm	2,550		2,550	2,550	3,150	
Overall height, mm	3,700		3,700	3,700	3,780	
Overall height of cab, mm	3,570		3,540	3,540	3,630	
Wheelbase, mm	6,200		6,200	6,200	7,000	
Rear track width, mm	2,034		1,990	1,990	2,270	
Front track width, mm	2,080		2,080	2,080	2,270	
Dozer blade width, mm	2,475		2,475	2,475	2,632	

# OPTIONAL ATTACHMENTS



		DZ-98V	GS	TG
Snow wing		■	■	■
Dozer blade		■	■	■
Moldboard		■	■	■
Front ripper		■		
Rear ripper		■	■	■
V Plow		■		
Moldboard		■	■	■ (excl. TG 250)
Center-mount scarifier				■ (excl. TG 140)
Moldboard OBG2			■	(exc. TG 250)



# OPTIONS



	DZ-98V	GS	TG
Front axle with two hydraulic cylinders and steering pump with increased displacement	■	standard	STANDARD (excl. TG200, TG250)
Automatic self-leveling (2D and 3D)	■	■	■
GLONASS module	■		■
Lincoln automatic lubrication system	■	■	■
Rear-view camera to ensure visual control of ripping	■	■	■
Additional beacon	■	standard	standard
Additional work lights (4 directions)	standard		■
Fuel filter heater	■	■	■
Stereo system with MP3, USB 2.0	standard	standard	standard
Air-suspension heated operator's seat	■		
Heated rear-view mirrors	■	standard	standard
Parking heater	■	■	■
Automatic fire fighting system with manual engagement option	■	■	■
Automatic diesel fuel heater (to keep fuel from gelling while driving during extremely cold temperatures)	■	■	■
Hood winter cover	■	■	■



MADE IN RUSSIA

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