

MOTOR GRADER



Specifications

Operating weight	14,650 kg
Front axle	5,350 kg
Rear axle	9,300 kg
Engine power	118 kW (160 HP)
Blade	3,600 mm

Features

- ▶ Powerful turbo-charged Deutz diesel engine
- ▶ Fully automatic ZF hydrodynamic transmission with 6 forward and 3 reverse gears
- ▶ Fully sealed hubs on front axles for long life and minimum downtime
- ▶ NAF tandem bogie axles with no slip differential gear for greater maneuverability
- ▶ Hydraulic system with fixed displacement pump and unloading
- ▶ Oil immersed disc brake system for reduced servicing and excellent braking performance
- ▶ Productive and versatile range of attachments available for front and rear frame
- ▶ Comfortable operator cab with excellent visibility and well positioned controls

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SPECIFICATIONS

ENGINE

Engine	DEUTZ AG BF 4M1013FC
Type	4 cylinder, in line, four cycle diesel engine with water cooling, turbo charging and air intercooler
Piston Displacement	4.76 litres
Bore x Stroke	108 x 130 mm
Gross Power	121 kW (165 hp) @ 2,000 rpm
Net Power	118 kW (160 hp) @ 2,000 rpm
Maximum Torque	700 Nm @ 1,400 rpm
Electrical	24 volt electric start. Two 12 volt 190 Ah batteries with a cold cranking capacity of 650 Amperes, 45 A alternator.
Air Cleaner	2-stage, 2-element dry type air cleaner with restriction indicator

TRANSMISSION

ZF 6WG 160 RPC.

ZF-Gearbox with self-diagnostics. Full automatic with manual override ZF gearbox with self diagnostics. Rotational pressure control of the hydraulic clutches provides smooth shifting between gears.

Speeds km/h	Gear	Forward	Reverse
	1	4,8	5,0
	2	7,3	—
	3	11,3	11,9
	4	17,4	—
	5	26,3	27,6
	6	40,5	—

Speeds at gears with standard tires and 2,000 rpm engine speed.

TYRES AND WHEELS

Tyres	14.00-24 G2
Rims	Standard 8.50-20. For optional tyre, 8.5/00-24, 10.00-24 for 14.00-24 tire
Ply rating (PR)	16

BRAKES

Type	All hydraulic braking system with sealed and oil immersed disc brake pack on each wheel.
Parking:	Spring-applied, hydraulic released disc on input shaft of tandem bogie axle with park brake shift inhibit.

AXLES

Front axle: Fabricated steel beam with wheel lean and oscillation function as standard. Fully sealed hubs for total bearing protection from contamination resulting in minimum downtime and low maintenance.

Wheel lean angle	18° to the left and to the right
Axle pivot angle	±16°
Ground clearance	600 mm

Rear axle: NAF tandem bogie axles with No Spin differential gear.

Model	TAP 5501.105(BRA)
Distance between axles	1540 mm
Pivot angle	±15°

STEERING

Hydrostatic power steering on front wheels with two hydraulic cylinders	
Minimum turning radius	7800 mm

FRAME

Front: The front frame represents welded box-type structure designed for improved forward visibility.

Rear: Rear frame with power perimeter allowing modular installation of equipment which simplifies drive

maintenance and ideal for working equipment attachment.

Frame articulated point has two hydraulic cylinders articulating the frame to 26° to the left and to the right.

Pilot-controlled check valve ensuring steady operation.



HYDRAULIC SYSTEM

Performance at 2000 rpm of pump	56 l/min
Maximum pressure	160 bar

Hydraulic system with fixed displacement pump and pump unloading at neutral position of control levers of hydraulic control valves. 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 circuits of blade lifting, blade pitch, shift of turning circle, wheel lean and crippling of the frame. Filters: Pressure and drain filters with 10 micron filtering degree.

MOLDBOARD

Excellent mobility of the blade enables to use wide angles of cutting during trench excavation and back slope outside the machine wheel spacing.

Dimensions	3660x630x20 mm	
Blade fixation bolt spacing	152 mm	
Bolt diameter	16 mm	
	On the left	On the right
Outreach outside wheel spacing, straight frame	1,920 mm	2,020 mm
Outreach outside wheel spacing, curved frame	2,556 mm	2,762 mm
Lateral shift of blade (Offset)	700 mm	700 mm
Lateral shift of turning circle	660 mm	760 mm
Slope cutting angle	90°	90°
Blade ground clearance	400 mm	
Blade depth of penetration	450 mm	
Blade cutting angle	30° to 70 °	

DRAWBAR

Draft frame represents welded box-type structure in the form of narrow T which ensures optimal view of work area. Lift cylinder supports are equipped with double attachments to the frame to ensure maximum strength and reliability.

TURNING CIRCLE

Turning circle is supported in 3 points by adjusted locking plates which ensure optimal support and load distribution.

Circle diameter	1,458 mm
Number of locking plates	3

Double-cylinder hydraulic drive system provides the circle with required rotation forces and its retention under full load, equipped with damping valves for protection against impact damages.

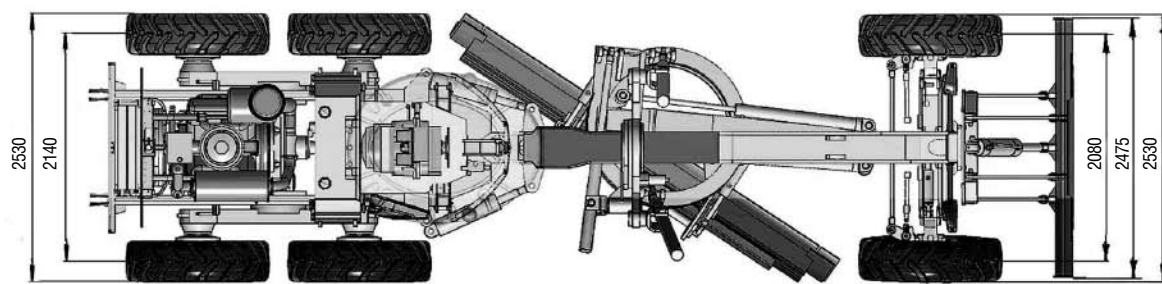
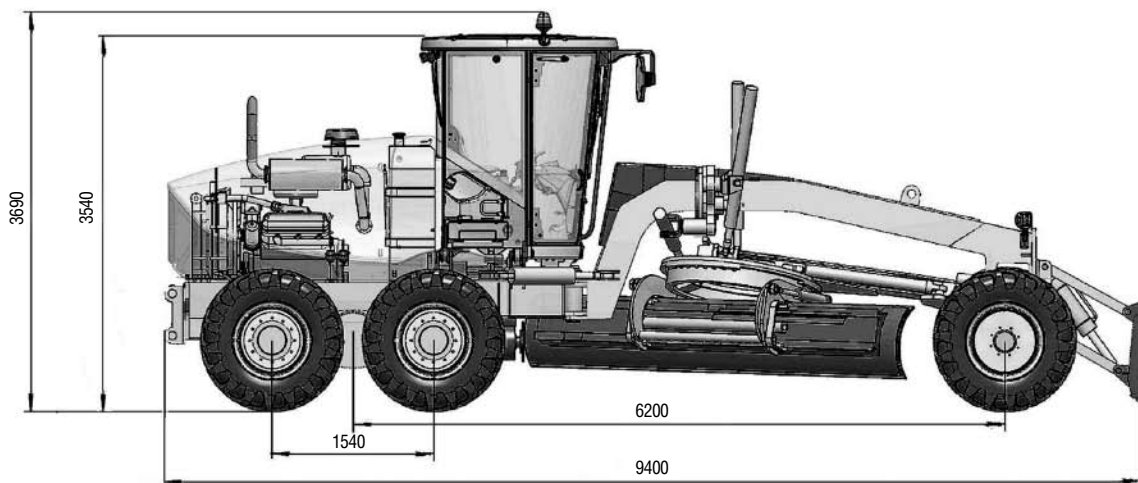
Number of hydro cylinders	2
Number of force application points	2
Turning angle	±65°

CAPACITIES

Fuel Tank	450 liters
Transmission	38 liters
Main gear	30 liters
Balance arms (each)	22 liters
Hydraulic System (Tank)	120 liters
Engine Crankcase	34 liters
Cooling system	50 liters

DIMENSIONS

TG140



OVERALL DIMENSIONS

Length	9,400 mm
Width	2,530 mm
Height	3,690 mm
Turning radius tire center	7,800 mm

CAB

Excellent visibility, ROPS (EN ISO 3471) and FOPS** (EN ISO 3449) certified, protection system built into the frame.

Air suspension seat, height and tilt adjustable steering wheel.

85% of all glasses can be equipped with window wipers.

Pressurised cab with air conditioning as standard.

Ergonomically designed driver station with functional design, very good circumferential visibility and optimally designed control elements. All operating functions are ergonomically arranged.

High quality sound system, coat hook, sun visor and storage area.

WEIGHT CHARACTERISTICS

Operating weight	14,650 kg
Wheel load, front axle	5350 kg
Wheel load, tandem bogie	9300 kg
Weight characteristics with various additional equipment	
Full weight of base complement with bulldozer blade and rear ripper	15,635 kg

OPTIONAL ATTACHMENTS

ANGLE DOZER BLADE

Angle dozer blade is installed with the help of spacing bracket, allowing it to turn around 30° from straight position. It is used for shifting material to the side when pioneer road blading, cutting and backfilling.

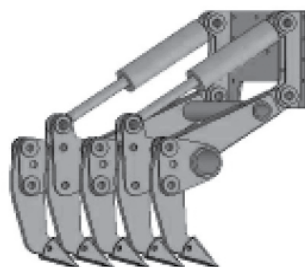
Blade width

2900 mm



REAR RIPPER / SCARIFIER

Upon separate order the grader may be completed with ripper/scarifier, which allows for hoeing hard rock, simplifying the displacement of ground by the dozer blade, and thus increasing the work efficiency and performance. It is installed onto the underframe plate.

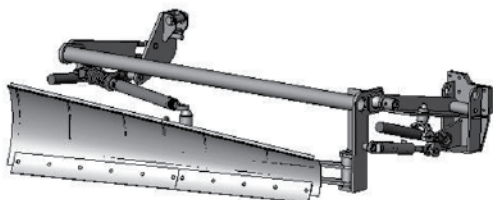


SIDE GRADE BLADE

Side grade blade is installed to increase coverage and is used simultaneously with the main blade.

Blade width

2800 mm

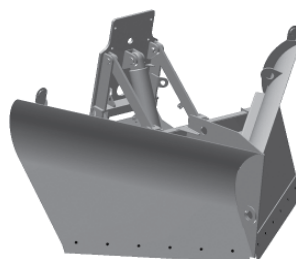


DOUBLE-BLADED SNOW PLOW

The snowplow is designed for graders and is equipped with double-acting hydraulic motor with pilot-controlled check valve. Due to its design, it is particularly useful for dealing with snowpack of high density and high snowpack (of up to 1 m). It is installed instead of a dozer blade.

Blade width

2840 mm

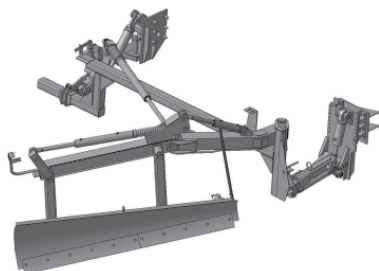


SNOW-REMOVAL EQUIPMENT

Slope and road ditch trimming, dam sloping, clearing of road sides and slopes, removing snow behind road fences. In summertime it can be used for skimming light materials, including gravel, etc.

Blade width

2800 mm



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