

KOMATSU

GD675-7

EU Stage V Engine

MOTOR GRADER



GD675

ENGINE POWER

165 kW / 221 HP @ 2.100 rpm

OPERATING WEIGHT

17.350 kg
19.220 kg
(with ripper and front dozer)

BLADE LENGTH

4,27 m

Walk-Around

GD675-7



ENGINE POWER

165 kW / 221 HP @ 2.100 rpm

OPERATING WEIGHT

16.995 kg
19.220 kg
(with ripper and front dozer)

BLADE LENGTH

4,27 m



INCREASED PRODUCTIVITY & OUTSTANDING FUEL ECONOMY

High Productivity & Low Fuel Consumption

- Low consumption EU Stage V engine
- Eco guidance & auto idle stop
- Engine with variable horse power for best power/speed ratio
- Smooth and powerful low-speed operations with torque converter engine stall prevention

Optimised Work Equipment

- Long wheel base and short turning radius
- Versatile moldboard geometry
- Excellent blade controllability with multifunctional control valves
- Blade lift accumulators
- Reinforced blade circle and resin wear plates

First-Class Operator Comfort

- Fingertip EPC work equipment control
- Steering lever & steering wheel combination
- Fully adjustable air-suspended seat
- Electrically adjustable arm console
- Improved front visibility
- Hexagonal cab for exceptional all-round visibility
- Rear-view camera
- Quiet and spacious operator environment

State-of-the-Art Controls

- Shift Lever and F-N-R switch
- Gearshift preset function
- “Stop-at-centre” articulation
- Provision for Machine Control

Reliability & Maintenance

- Multifunction monitor with troubleshooting function
- Easy access AdBlue® tank
- Hydraulic driven, reversible cooling fan

KOMTRAX

- Komatsu Wireless Monitoring System
- 3G mobile communications
- Integrated communication antenna
- Increased operational data and fuel savings



A maintenance program
for Komatsu customers

Powerful and Environmentally Friendly



Variable engine power

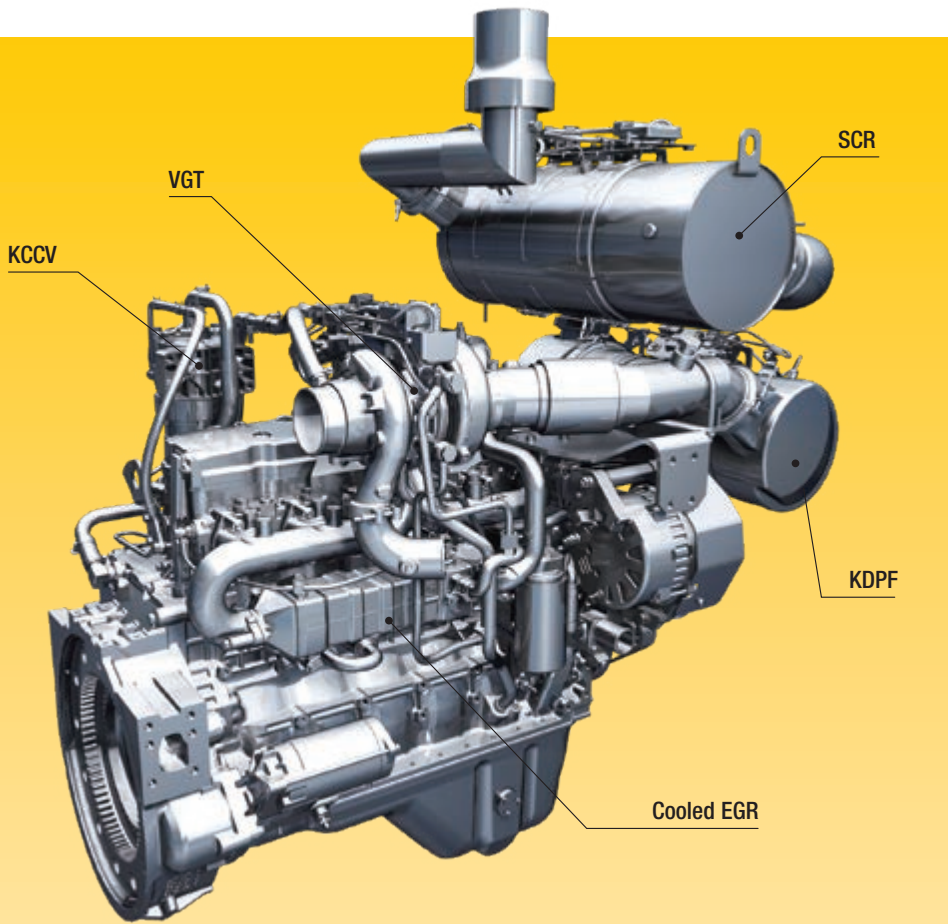
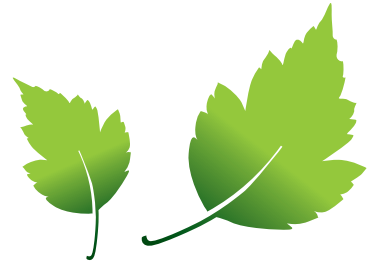
To obtain the right tractive force, engine horse power can be varied between gears. To further fine tune and save fuel the system allows selection of the appropriate mode between Power or Economy mode according to each working condition.

Fuel-efficient hydraulic system

Normally, the variable displacement pump idles at low output. When it senses a load requirement, the pump supplies quick flow and pressure to match the demand. The result is less hydraulic system heat, quick response and lower fuel consumption. Because of the large pump output and proportional flow control function, implement speed is constant regardless of engine speed.

Adjustable idle shutdown

To reduce unnecessary fuel consumption and exhaust emissions, and for lower operating costs, the Komatsu auto idle shutdown automatically turns off the engine after it idles for a set period of time, which can be easily programmed from 5 to 60 minutes. An Eco-gauge and Eco guidance tips on the cab monitor further encourage efficient operations.



Komatsu EU Stage V

The Komatsu EU Stage V engine is productive, dependable and efficient. With ultra-low emissions, it provides a lesser environmental impact and a superior performance to help reduce operating costs and lets the operator work in complete peace of mind.

Heavy-duty aftertreatment

The aftertreatment system combines a Komatsu Diesel Particulate Filter (KDPF) and Selective Catalytic Reduction (SCR). The SCR system injects the correct amount of AdBlue® at the proper rate to break down NOx into water (H₂O) and nontoxic nitrogen gas (N₂). NOx emissions are reduced by 80% vs. EU Stage IIIB engines.

Exhaust Gas Recirculation (EGR)

Cooled EGR is a technology well-proven in current Komatsu engines. The increased capacity of the EGR cooler now ensures very low NOx emissions and a better engine performance.

Komatsu Closed Crankcase Ventilation (KCCV)

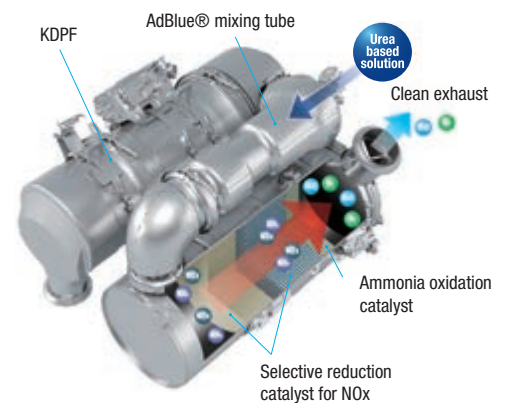
Crankcase emissions (blow-by gas) are passed through a CCV filter. The oil mist trapped in the filter is returned back to the crankcase while the filtered gas is returned to the air intake.

High-Pressure Common Rail (HPCR)

To achieve complete fuel burn and lower exhaust emissions, the heavy-duty High-Pressure Common Rail fuel injection system is computer controlled to deliver a precise quantity of pressurised fuel into the redesigned engine combustion chamber by multiple injections.

Variable Geometry Turbo (VGT)

The VGT provides optimal airflow to the engine combustion chamber under all speed and load conditions. Exhaust gas is cleaner, fuel economy is improved while machine power and performance are maintained.



Adjustable idle shutdown



Eco-gauge and Eco guidance



Fuel consumption history

First-Class Comfort

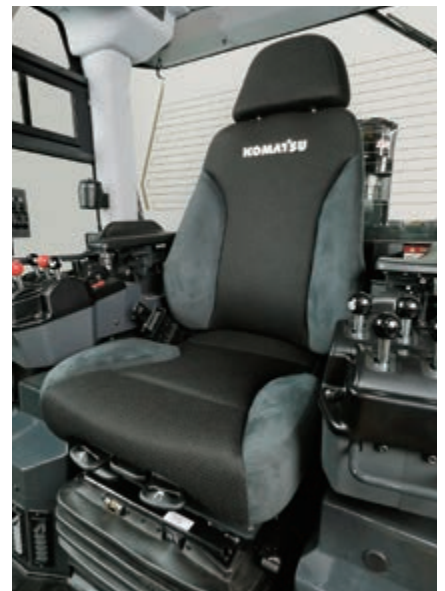


Quiet and comfortable cab

Operator comfort is essential for safe and productive work. The cab on the GD675-7 is quiet and comfortable, an ideal environment to concentrate on the job. The high capacity climate control system pressurises the cab to keep dust out. A high quality sound-absorbent lining covers the interior to minimise noise levels for the operator.

New, fully adjustable air-suspended seat

A comfortable, heavy-duty and fully adjustable heated air-suspended seat is at the centre of the operator's safe and spacious work space. The seat is equipped with an operator's presence monitoring system that prevents unexpected and unsafe machine movements.



GD675-7



Superior visibility

For a major improvement of front visibility, the control levers were moved from the steering wheel to the arm console, and the two five-section standard hydraulic control valves were also strategically relocated. The hexangular cab and rear side pillar also combine to achieve excellent overall visibility and boost the operator's confidence and productivity in all grader applications.



The low and narrow engine hood offers a clear view to the rear



Fully integrated rear-view camera system



The arm console height can be electrically adjusted



Set the steering wheel to the most comfortable position

State-of-the-Art Controls



Dual-mode transmission

This Komatsu industry-exclusive powershift transmission (8 forward, 4 reverse) can function either as a direct drive (Manual) or as a torque converter (Auto). Direct drive allows you to benefit from high travel speeds and reduced fuel consumption, and the torque converter gives you increased tractive effort and fine control at lower speeds. With this outstanding system, the GD675-7 delivers advanced productivity in any application, from fine to heavy grading.

RPM set switch

Allows you to set optimal engine speed for each application. It has 3 positions, auto, off and manual. When “auto” is selected, you can override the set engine speed with either the brake or the acceleration pedal.

Transmission mode selection

Auto mode: When the gear is set to F1-F4, the transmission remains in the desired speed range and uses the torque converter. In F5-F8 and R3-R4 the electronic control system automatically engages/ disengages the lock up torque converter, as necessary.

Manual mode: Transmission functions as a conventional direct drive with 8 forward speeds. Lock up clutch is engaged in all gears. This mode maximises the efficiency of direct shifting. In reverse, manual mode works the same as auto mode, but with less shift lever operational frequency.

Creep mode

For precise control during fine grading, the creep mode keeps a constant low speed.

Shift lever and F-N-R switch

The GD675-7 offers finger control shift lever and F-N-R switch near the right control levers. The operator can easily shift the gear and set direction during work equipment control. Gearshift preset function can set initial shift position to start, which reduces frequent shift lever operation during shuttle shifting.

Electronic over-speed protection

Prevents premature downshifting and grade-induced over speeding. Reduces travel speed to where it's safe for shifting gears.

Anti Stall

Prevents the engine from stalling while in manual mode by automatically disengaging the lock-up clutch and switching to torque converter mode.



“Stop-at-centre” articulation

This new feature increases efficiency and productivity. The grader's articulation automatically returns to center with just a movement of the articulation lever. No need to operate additional switches or levers.



Fingertip control (EPC)

Light touch, electric-hydraulic control integrated with steering lever, shift lever and F-N-R switch. More precise as light touch lever enables fine control of each lever. As it's the same lever layout as conventional control system, it is easy to switch from current graders for experienced operators.



Steering lever

A new steering lever lets you keep both hands on the low-effort work equipment levers. You can make small steering adjustments, while operating, without having to turn the steering wheel. When travelling, the steering wheel remains the safer option.



Information & Communication Technology



GD675-7 equipped with Topcon Machine Control (optional)

Lower operating costs

Komatsu ICT contributes to the reduction of operating costs by assisting to comfortably and efficiently manage operations. It raises the level of customer satisfaction and the competitive edge of our products.

Large widescreen monitor

A large user-friendly colour monitor enables safe, accurate and smooth work. Multilingual and with all essential information available at a glance, it features simple and easy-to-operate switches and multifunction keys that provide fingertip access to a wide range of functions and operating information.

Eco guidance

The monitor panel displays instant guidance messages to help promote energy saving, and the Eco-gauge indicates the actual fuel consumption: keep the Eco-gauge in the green zone for better fuel efficiency. To further improve savings, logs can be consulted for operations, Eco guidance and fuel consumption.



Information at a glance: basic dashboard LCD monitor



A multifunction monitor displays and controls a wealth of operational and maintenance information



Eco guidance supports energy saving in real time

GD675-7

KOMTRAX

The way to higher productivity

KOMTRAX uses the latest wireless monitoring technology. Compatible on PC, smartphone or tablet, it delivers insightful and cost saving information about your fleet and equipment, and offers a wealth of information to facilitate peak machine performance. By creating a tightly integrated web of support it allows proactive and preventive maintenance and helps to efficiently run a business.



Knowledge

You get quick answers to basic and critical questions about your machines – what they're doing, when they did it, where they're located, how they can be used more efficiently, and when they need to be serviced.

Performance data is relayed by wireless communication technology (Satellite, GPRS or 3G depending on model) from the machine to a computer and to the local Komatsu distributor – who's readily available for expert analysis and feedback.

Power

The detailed information that KOMTRAX puts at your fingertips 24 hours a day, 7 days a week gives the power to make better daily and long-term strategic decisions – at no extra cost. Problems can be anticipated, maintenance schedules customised, downtime minimised and machines kept where they belong: working on the jobsite.

Convenience

KOMTRAX enables convenient fleet management on the web, wherever you are. Data is analysed and packaged specifically for effortless and intuitive viewing in maps, lists, graphs and charts. You can foresee eventual maintenance issues and required spare parts, and troubleshoot a problem before Komatsu technicians arrive on site.



Easy Maintenance



Easy access to service points

Large doors give a convenient access to engine, filters and radiator. Refueling from ground level is safe and comfortable.



AdBlue® tank

For simple access, the AdBlue® tank is installed at ground access level and is equipped with a sight gauge to prevent spillage or overflow.



Komatsu CARE™

Komatsu CARE™ is a maintenance program that comes as standard with your new Komatsu machine. It covers factory-scheduled maintenance, performed with Komatsu Genuine parts by Komatsu-trained technicians. Depending on your machine's engine, it also offers extended coverage of the Komatsu Diesel Particulate Filter (KDPF) or the Komatsu Diesel Oxidation Catalyst (KDOC), and of the Selective Catalytic Reduction (SCR). Please contact your local Komatsu distributor for terms and conditions.



Serrated steps and punched metal foot plate for safe access

Reversible radiator fan

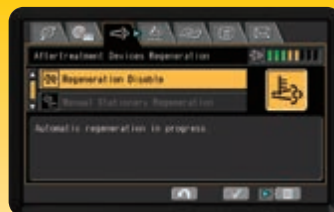
By a touch on the monitor panel, the radiator can be cleaned easily with a reversible, hydraulically driven cooling fan. A clean radiator reduces fuel consumption and increases overall machine performance.



Battery main switch



Basic maintenance screen



Aftertreatment regeneration screen



AdBlue® level guidance

Specifications

ENGINE

Model	Komatsu SAA6D107E-3	
Type	Common rail direct injection, water-cooled, emissionised, turbocharged, after-cooled diesel	
No. of cylinders	6	
Bore × stroke	107 × 124 mm	
Displacement	6,69 l	
Fan drive type	Hydraulic, reversible	
Engine power		
(Power mode ISO 14396)		
Gear 1-3	136 kW / 183 HP @ 2.000 rpm	
Gear 4-6	152 kW / 203 HP @ 2.000 rpm	
Gear 7-8	165 kW / 221 HP @ 2.100 rpm	
(Economy mode ISO 14396)		
Gear 1-6	136 kW / 183 HP @ 2.000 rpm	
Gear 7-8	165 kW / 221 HP @ 2.100 rpm	
(Power mode SAE J1349)		
Gear 1-3	134 kW / 180 HP @ 2.000 rpm	
Gear 4-6	149 kW / 200 HP @ 2.000 rpm	
Gear 7-8	162 kW / 218 HP @ 2.100 rpm	
(Economy mode SAE J1349)		
Gear 1-6	134 kW / 180 HP @ 2.000 rpm	
Gear 7-8	162 kW / 218 HP @ 2.100 rpm	
Max. torque / engine speed	941 Nm / 1.450 rpm	
Torque rise	30%	

TRANSMISSION AND TORQUE CONVERTER

Type	Full power shift transmission with integral free wheeling stator torque converter and lock-up
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MAX. TRAVEL SPEEDS

	Forward	Reverse
1st	3,8 km/h	5,0 km/h
2nd	5,5 km/h	10,2 km/h
3rd	7,7 km/h	22,3 km/h
4th	11,2 km/h	44,4 km/h
5th	16,9 km/h	-
6th	24,5 km/h	-
7th	33,7 km/h	-
8th	48,5 km/h	-

ENVIRONMENT

Engine emissions	Fully complies with EU Stage V exhaust emission regulations
Noise levels	
LwA external	106 dB(A) (2000/14/EC Stage II)
LpA operator ear	75 dB(A) (ISO 6396 dynamic test)
Vibration levels (EN 12096:1997)	
Hand/arm	≤ 2,5 m/s ² (uncertainty K = 1,36 m/s ²)
Body	≤ 0,5 m/s ² (uncertainty K = 0,17 m/s ²)
Contains fluorinated greenhouse gas HFC-134a (GWP 1430).	
Quantity of gas 1,2 kg, CO ₂ equivalent 1,72 t	

TANDEM DRIVE

Oscillating welded box section	520 mm × 202 mm
Side wall thickness	
Inner	22 mm
Outer	19 mm
Wheel axle spacing	1.525 mm
Tandem oscillation	11° forward, 13° reverse

FRONT AXLE

Type	Solid bar construction welded steel sections
Ground clearance at pivot	620 mm
Wheel lean angle, right or left	16°
Oscillation, total	32°

REAR AXLE

Type	Alloy steel, heat treated, full floating axle with lock/unlock differential
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WHEELS, FRONT AND REAR

Bearings	Tapered roller
Tyres	17.5R25, tubeless
Tyre rims (demountable)	13" one-piece rims

STEERING SYSTEM

Type	Hydraulic power steering providing stopped engine steering meeting ISO 5010
Minimum turning radius	7,4 m
Maximum steering range	49°
Articulation	25°

BRAKE SYSTEM

Service brake	Foot operated, sealed oil disc brakes, hydraulically actuated on four tandem wheels
Parking brake	Manually actuated, spring applied, hydraulically released caliper

FRAME

Front frame structure	
Height	300 mm
Width	300 mm
Side	16 / 32 mm
Upper, Lower	25 mm

Specifications

CIRCLE

Single piece rolled ring forging. Six circle support shoes with replaceable wear surface. Circle teeth hardened on front 180° of circle

Diameter (outside)	1.530 mm
Circle reversing control hydraulic rotation	360°

DRAWBAR

A-shaped, u-section press formed and welded construction for maximum strength with a replaceable drawbar ball.

Drawbar frame	210 × 22 mm
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MOLDBOARD

Hydraulic power shift fabricated from high carbon steel. Includes replaceable metal wear inserts, cutting edge and end bits. Cutting edge and end bits are hardened.

Dimensions	4.270 × 580 × 25 mm
Arc radius	432 mm
Cutting edge	152 × 16 mm
Replaceable/Reversible side edges	156 × 16 × 456 mm
Blade pull (with ripper)	11.360 kgf
Blade down pressure (with ripper)	8.760 kgf

BLADE RANGE

Moldboard side shift	
Right	625 mm
Left	625 mm
Maximum shoulder reach outside rear tyres (frame straight)	
Right	2.480 mm
Left	2.590 mm
Maximum lift above ground	480 mm
Maximum cutting depth	615 mm
Maximum blade angle, right or left	90°
Blade tip angle	40° forward, 5° backward

SERVICE REFILL CAPACITIES

Fuel tank	390 l
AdBlue® tank	36 l
Cooling system	30 l
Crank case	23 l
Transmission	45 l
Final drive	16 l
Tandem housing (each)	57 l
Hydraulic system	69 l
Circle reverse housing	7 l

HYDRAULIC SYSTEM

Load-sensing closed center hydraulics with variable displacement piston pump. Short stroke/low effort direct acting control valves with preselected maximum flow setting to each function. Double acting anti-drift check valves on blade lift, tip, circle shift, articulation, and leaning wheels.

Output (at rated speed)	203 l/min
Max. system pressure	20,6 MPa / 210 kg/cm ²

OPERATING WEIGHT

Includes 17.5R24 tyres, 4,3 m moldboard, lubricants, coolant, full fuel tank and operator

Total	17.350 kg
On rear wheels	12.875 kg
On front wheels	4.475 kg
Front push block - total	+ 1.075 kg
On rear wheels	-100 kg
On front wheels	+ 1.180 kg
Front dozer blade - total	+ 840 kg
On rear wheels	-195 kg
On front wheels	+ 1.035 kg
Scarifier, middle - total	+ 735 kg
On rear wheels	+ 110 kg
On front wheels	+ 625 kg
Ripper - total	+ 1.030 kg
On rear wheels	+ 1.440 kg
On front wheels	-410 kg

FRONT DOZER BLADE

Dimensions (width × height)	2.500 mm × 860 mm
Max. lifting height	565 mm
Max. digging depth	138 mm

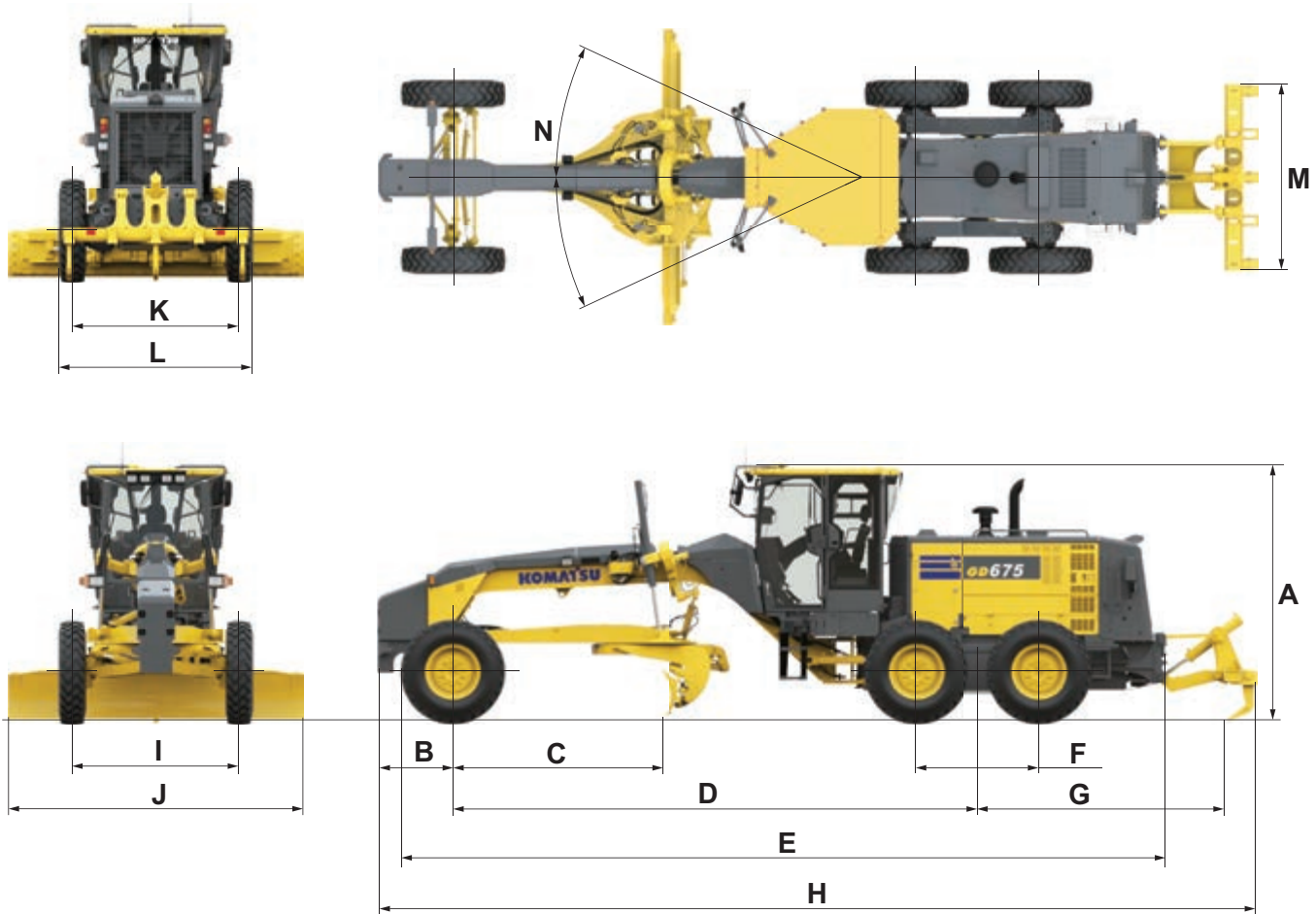
RIPPER

Ripping depth, maximum	425 mm
Ripper shank holders	5
Ripper shank holder spacing	534 mm
Penetration force	8.750 kgf
Pryout force	6.915 kgf
Machine length increase, beam raised	690 mm

SCARIFIER

Middle, V-type	
Working width	1.430 mm
Scarifying depth, maximum	190 mm
Scarifier shank holders	11
Scarifier shank holders spacing	138 mm
Rear	
Working width	2.186 mm
Scarifying depth, maximum	165 mm
Scarifier shank holders	9
Scarifier shank holders spacing	267 mm

DIMENSIONS



A	Height: Low profile cab	3.200 mm
B	Center of front axle to counterweight (Pusher)	930 mm
C	Cutting edge to center of front axle	2.580 mm
D	Wheelbase to center of tandem	6.495 mm
E	Front tyre to rear bumper	9.510 mm
F	Tandem wheelbase	1.525 mm
G	Center of tandem to back of ripper	3.065 mm
H	Overall length	10.875 mm
I	Tread (Front)	2.170 / 2.070 mm*
J	Width of standard moldboard	4.270 mm
K	Tread (Rear)	2.160 / 2.060 mm*
L	Width over tyres	2.680 / 2.485 mm*
M	Ripper beam width	2.305 mm
N	Articulation, left or right	25°

* dimensions with narrow tyres 14.00R24

Standard and Optional Equipment

ENGINE AND RELATED PARTS

Komatsu SAA6D107E-3 turbocharged common rail direct injection diesel engine	●
EU Stage V compliant	●
Alternator 24 V/90 A	●
Batteries 2 × 12 V/140 Ah	●
Cooling fan, hydrostatic driven with reversing function	●
Fuel pre-filter	●
Locks, filter caps and covers	●
Cyclone type air cleaner	●
Alternator 24 V/140 A	○

TRANSMISSION AND BRAKES

Automatic powershift transmission	●
Torque converter with lock-up	●
Engine stall prevention function	●
Transmission under guard	●
Fully hydraulic brake system	●
Differential lock/unlock	●

SERVICE AND MAINTENANCE

Dry type air cleaner, double element with dust indicator and evacuator	●
Multifunction video compatible colour monitor with Equipment Management and Monitoring System (EMMS) and efficiency guidance	●
Water separator	●
KOMTRAX – Komatsu wireless monitoring system (3G)	●
Komatsu CARE™ – a maintenance program for Komatsu customers	●
Tool kit	●

CABIN

Heated air-suspended seat: fabric, reclining, high backrest	●
Seat belt with visible alert	●
Air conditioner	●
Radio	●
Auxiliary input (MP3 jack)	●
2 × 12 Volt power supply (120 W)	●
1 × 24 Volt power supply	●
Viscous cab mounts	●
Wiper front and rear window	●
Wipers doors	●
Rear-view mirror (inside cab)	●
Heated rear window	●
Sun visor (rear)	●
Cup holder	●
Lunch box holder	●

SAFETY EQUIPMENT

Steel cab, meets ISO 3471 and SAE J1040, APR88 ROPS standards, as well as ISO 3449 FOPS standards	●
Back-up alarm	●
Warning horn	●
Rear-view camera system	●
Rear-view mirrors	●

LIGHTING SYSTEM

Working lights: 4 front and 2 rear lights	●
4 working lights, cab-mounted, front	●
Rotating beacon	○

HYDRAULIC SYSTEM

Closed-centre load sensing (CLSS) hydraulic system	●
10 section hydraulic control valve	●
Anti-shock accumulators for blade lift	●
Drawbar-mounted circle, 360° rotation, hydraulic blade lift and circle side shift	●
Circle slip clutch	●
Hydraulics for ripper	●

CHASSIS AND TYRES

Heavy-duty axles	●
Tyres 17.5R25	●
Tyres 14.00R24	○

ATTACHMENTS

Provision for Machine Control	●
Front blade	○
Additional pusher plate	○
Scarifier, assembly, 11-shank type	○
Multishank parallelogram ripper	○

MOLDBOARD

Moldboard 4.270 mm × 580 mm × 25 mm with replaceable end bits, through hardened cutting edges 152 mm × 16 mm, hydraulic blade side shift and hydraulic tilt with anti-drift check valves. Maximum moldboard angle position 90° right & left	●
Moldboard 3.660 mm × 580 mm × 25 mm with replaceable end bits, through hardened cutting edges 152 mm × 16 mm, hydraulic blade side shift and hydraulic tilt with anti-drift check valves. Maximum moldboard angle position 90° right & left	○

Further equipment on request

- standard equipment
- optional equipment

Your Komatsu partner:

KOMATSU

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