# KOMATSU

**D475A-5** 

**ENGINE POWER** 671 kW / 900 HP @ 2.000 rpm

OPERATING WEIGHT 108.390 kg

**BLADE CAPACITY** 

Semi-U: 27,2 m<sup>3</sup> Full-U: 34,4 m<sup>3</sup>

D 475

Crawler Dozer



D475A-5

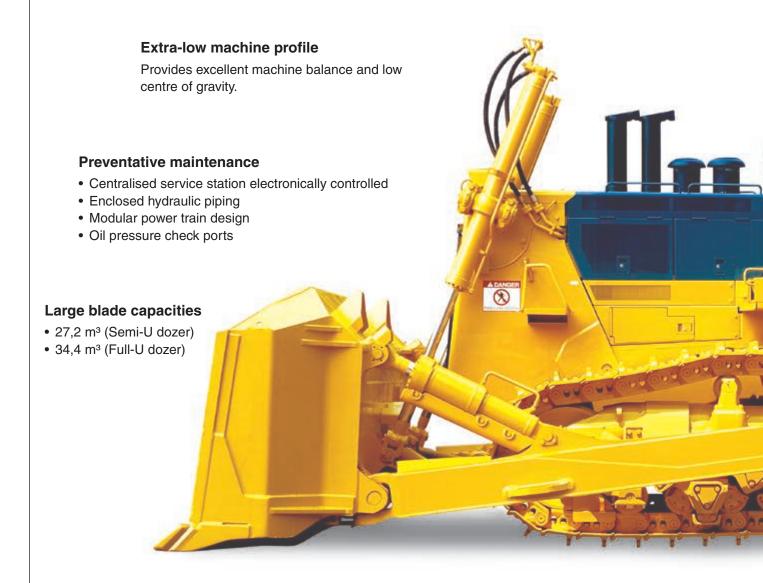
# WALK-AROUND

# Komatsu-integrated design

For the best value, reliability, and versatility. Hydraulics, power train, frame, and all other major components are engineered by Komatsu. You get a machine with components that are designed to work together to deliver higher production levels, greater reliability, and more versatility.

# Hydrostatic driven engine cooling fan

Controlled automatically, reduces fuel consumption and operating noise levels. Reverse position for cleaning radiator.



# Improved operation systems

- Track shoe slip control system (option) reduces operator fatigue
- Automatic lock-up torque converter saves fuel and increases speed and power transmission efficiency on long pushes

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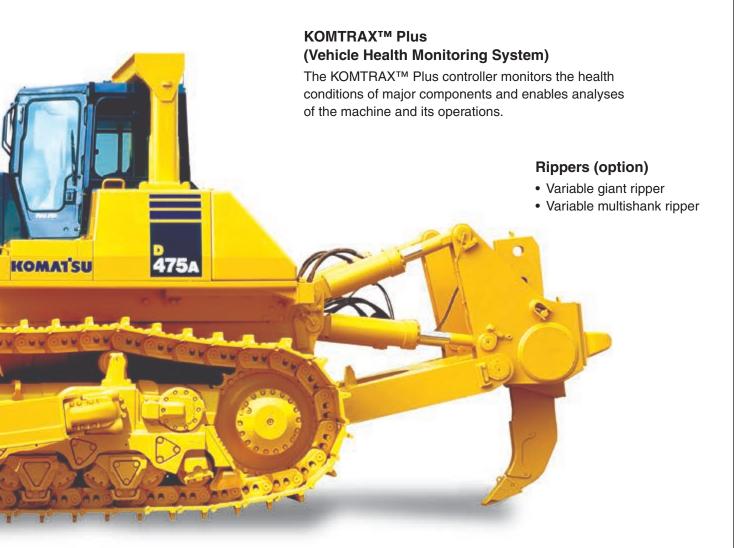
Semi-U: 27,2 m<sup>3</sup> Full-U: 34,4 m<sup>3</sup>

# New hexagonally designed cab includes:

- Spacious interior
- New cab damper for comfortable ride
- · Excellent visibility
- · High capacity air conditioning system
- PCCS (Palm Command Control System) lever for direction and blade control
- Pressurised cab
- · Adjustable armrests
- · Pre radio installation kit
- 12 V connector

# **Engine**

671 kW (900 HP) turbocharged, aftercooled engine with new electronic engine controller.



# Undercarriage

- K-Bogie undercarriage system improves traction, component durability, and operator comfort
- New track link design reduces maintenance costs by making pins turn easier, and with improved pin reuse

# COMFORTABLE ERGONOMIC CONTROL

Komatsu's new cabin meets the needs of operators who work long shifts

# **PCCS (Palm Command Control System)**

Komatsu's new 'PCCS' ergonomically designed control system delivers a work environment with complete operator control.

# **Human-machine interface**

# Palm command electronic controlled travel joystick

The palm command travel joystick provides the operator with an environment that supports a comfortable posture and precise machine control, without fatigue. Shifting gears is easily carried out with the gear shift lever's push button control.

All of the signals are transmitted via an engine and transmission controller, preventing overload of the hydraulic steering system and protecting hydraulic and mechanical parts. Because the controller linkages between the engine speed dial, decelerator pedal, and the engine are electrical, there is no wear of moving linkage parts.



Left hand joystick

# **Outline of the** Fuel cont dial Auto shift Service down switch switch Monitor panel Deceleration pedal Trans Engine controller Tran Torqu Engine Lockup Electronical governor Engine Torque con

# Power train electronic control system

### Smooth and soft operation controlled by the engine and transmission controller

The D475A-5 utilises a newly designed power train electronic control system. The controller registers the amount of operator control (movement of lever and operation of switches) along with machine condition signals from each sensor, such as the engine speed and machine angle. This is then used to accurately control the torque converter, transmission, steering clutches and brakes, for optimised machine operations.

# Power train electronic Control

# **Engine controller**

By controlling the fuel injection system, the engine controller optimises fuel consumption in combination with the required power. It works on three levels:

- Passive: manages actual work condition information, provides an on-board operation manual, and reports machine history.
- Active: provides the error code and acts as a warning system, helping reduce expensive machine breakdowns.
- Measuring tool: The service technicians can see
  the various machine parameters without a need for
  special, expensive hardware and software. This also
  makes technical information immediately available,
  optimising operating time.

# e Electronic Control System rol Travel Blade Ripper control lever control lever control lever Pitch angle sensor Acceleration sensor mission controller Brake pedal Steering controller smission control potentiometer e converter control plement control Transmission Å control Auxilliary valve valve Transmission output speed Electronic controlled verter Electronic controlled sensor steering/brake system transmission



# Blade and ripper control joystick

The blade and ripper control joysticks have an ergonomic design and allow long operator work shifts with fine blade control.

# **Engine speed control dial**

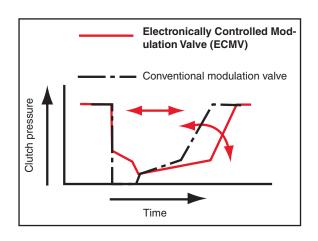
The rate of engine RPMs is continuously controlled and checked by the engine controller. This controls the fuel injection, when needed, saving on fuel. Because the controller linkages between the engine speed dial, decelerator pedal, and the engine are electronic, there is no wear of moving linkage parts.



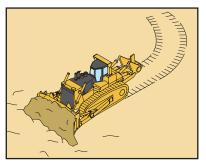
# PRODUCTIVITY FEATURES

# **ECMV** (Electronically Controlled Modulation Valve) steering clutches/brakes

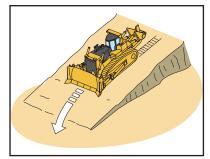
Using an innovative series of valves, the transmission controller automatically and smoothly makes each clutch engagement. The speed of each shift is based on travel conditions such as gear speed, engine RPMs and the current shifting sequence. This provides a smooth, shock-free clutch engagement, longer component life, and increased ride comfort. It also assists productivity because the ECMV manages the transmission, allowing the operator to concentrate on managing the blade position.



# Advantages of ECMV steering clutches/brake control



When dozing and turning, the ECMV automatically controls the stroke ratio of the steering clutches and brakes, depending on degree of load, enabling smooth dozing and turning.



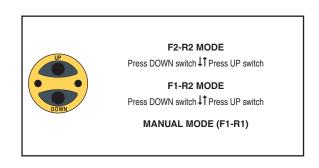
When dozing downhill, the ECMV automatically controls the steering clutches and brakes depending on incline of the machine or degree of load, reducing counter-steering and enabling smooth dozing operations.

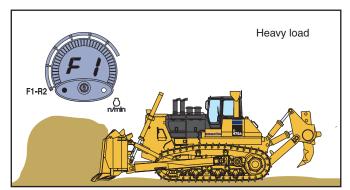
# **Transmission**

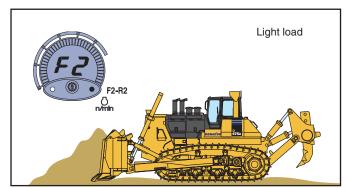
The Komatsu planetairy powershift transmission offers 3 forward speeds and 3 reverse speeds. The large-sized transmission utilises electronically controlled modulation valves. This allows the transmission to determine the optimum time to shift, depending on the application and machine operating conditions. As a result, stress on the power train is reduced, and driving comfort is increased.

# Preset travel speed selection function

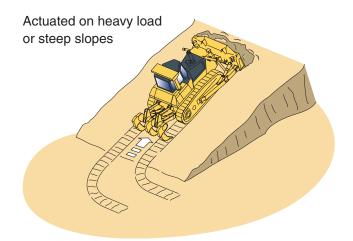
The preset travel speed selection function is standard equipment, enabling the operator to select forward and reverse travel speeds within 3 preset patterns such as F1-R2, F2-R2 and manual shift. When the F1-R2, or F2-R2 preset pattern is selected, and travel control joystick moves to a forward/reverse direction, the machine automatically travels forwards/backwards at the preset F1/R2 or F2/R2 speeds. This function reduces gear shifting time during repeated round-trip operations.







Auto-downshift function



### **Auto-downshift function**

The engine controller monitors engine speed, travel gear and travel speed. When a load is applied and the machine travel speed is reduced, the controller automatically downshifts and optimises the gear speed to provide high fuel efficiency. This function provides comfortable operations and high productivity without manual downshifting. (This function can be deactivated by a cancel switch on the monitor panel.)



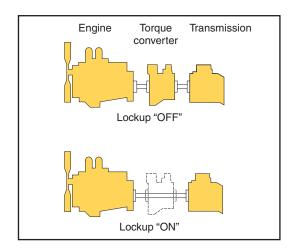
Track shoe slip control panel

# Track shoe slip control system (option)

- Eliminates the need for the operator to continuously control the engine power output with the decelerator whilst ripping. Operator fatigue is reduced substantially.
- Manoeuvrability is improved because the operator is free to concentrate on the ripping application without having to monitor track shoe slippage.
- Repair costs are significantly lowered and undercarriage life is prolonged with the reduction of track shoe slippage.
- The track shoe slip control system contributes to lower fuel costs, because the engine output is automatically controlled to optimum levels for each operation.

# **Torque converter**

The highly efficient single-stage torque converter provides a high torque increase under changing load conditions, always providing optimal dozer performance. The torque converter provides a shockless, smooth power transfer between engine and transmission, resulting in superior operator comfort and a long power train lifetime.



# Torque converter lock-up system

The torque converter is standard equipped with a lock-up system, bringing the power train efficiency of the Komatsu D475A-5 to the highest level in its class. A selection switch on the monitor panel allows the operator to make two choices: the normal torque converter working mode, used during ripping and digging operations and the torque converter lock-up mode used during dozing operations. When the "torque converter lock-up mode" is chosen, the transmission controller will automatically engage and disengage the torque converter. In this way the power train will automatically use the best mode, combining highest traction force and speed with the lowest fuel consumption.

# **E**NGINE

# Clean powerful engine

The SAA12V140E-3 engine delivers 671 kW (900 HP) at 2.000 RPM in compliance with EPA TIER 2 emissions regulations, without sacrificing power or machine productivity. It features direct fuel injection plus a turbocharger, and aftercooler to maximise fuel efficiency. To minimise noise and vibrations, the engine is mounted on the main frame with rubber cushions.

# Heavy duty HPCR system (High Pressure Common Rail fuel injection)

A high pressure pump pumps fuel into an accumulator or 'Common Rail'. An ECU (electronic control unit) then optimizes fuel injection from the common rail into the engine cylinders. This improves engine power and fuel efficiency, reducing emission and noise levels.

# Air-to-air charge air cooling system

By cooling the compressed air supplied by the turbocharger to the cylinders, this system optimizes combustion efficiency, reduces emissions and improves engine performance.

# Komatsus new combustion system

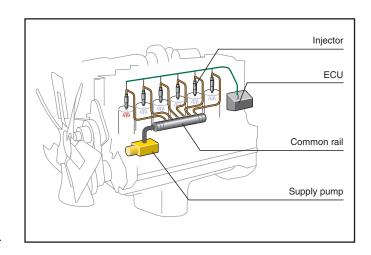
Our new combustion system optimises combustion timing and ignition. Thanks to extensive computer simulations and analyses, its specially designed combustion chamber reduces NOx and particulates emissions, fuel consumption and noise levels.

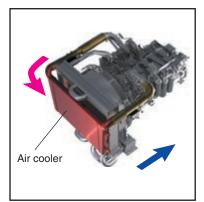
# Improved efficiency with hydrostatic-driven engine cooling fan

Fan rotation is automatically controlled, based on the coolant and hydraulic oil temperature. This saves fuel and provides great productivity with a quiet operating environment.

# Easy cleaning with hydraulic-driven engine cooling fan

The radiator core and the core on the front side of the oil cooler can be easily cleaned by running the hydraulic engine cooling fan in reverse. The cleaning intervals of these cores can therefore be increased, resulting in better cooling efficiency.









# WORK EQUIPMENT

### **Blades**

Komatsu uses a box blade design, offering the highest resistance for a low weight blade. This increases total blade manuevrability. High-tensile-strength steel has been incorporated into the front and sides of the blade for increased durability. The blade shape design makes it easy to handle a wide range of materials, offering good blade penetration, combined with a low blade rolling resistance. And finally, Komatsu blades help deliver very good, lower fuel consumption performance.

### Semi-U blade

The Komatsu Semi-U blade is designed to stand up to the toughest applications. The shape of the blade gives excellent ground penetration. Its two side wings prevent material spillage, giving class-leading dozing performance.

### U blade

The Komatsu U blade has been especially designed to doze large capacities of product with a minimum of spillage. Apart from the large capacity the excellent blade design also offers a good rolling performance, getting the best out of the dozer.



# **Rippers**

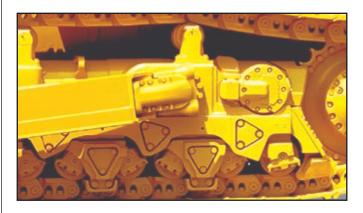
Komatsu rippers combine the highest productivity and longevity. The shank is fitted with specially designed wear parts to extend lifetimes and deliver the best penetration into any material. Komatsu's patented variable-angle rippers provide the ideal bolder removal action. Their special design allows the cylinders to work in harmony for the ideal combination of ripper-point movement and lifting-out force. What's more, you have precise control over the ripper-point angle to ensure maximum productivity.



# UNDERCARRIAGE

# Low drive undercarriage

Komatsu's design is extraordinarily tough and offers excellent grading ability and stability. Heavy-duty link assemblies with large-diameter bushings, substantial track link height, and superior oil seals increase undercarriage durability and lifetime. Serviceability is also assisted by the remote greasing of the equaliser bar centre pin. And the segmented sprockets can be replaced individually, by hand, making it possible for one mechanic to carry out replacements at the job site. The design also gives the driver a perfect view of the blade tips, making work easier and more precise.

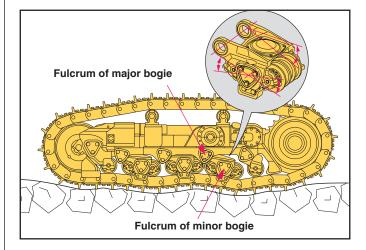


# K-Bogie undercarriage system

The K-bogie undercarriage system is constructed with a fixed idler and flexible mounted track rollers. The track rollers are mounted by pair on a twin bogie system, allowing a high vertical track roller movement.



- The K-bogie system provides an excellent support on the link assembly, even under difficult working conditions
- The link assembly is always in contact with the ground, offering the best transfer of traction force
- Impact loading of the undercarriage components is reduced and the durability of the components is largely increased
- Riding comfort is improved by reducing vibration and shocks, even when travelling over rough terrain
- The new 8 track roller design with flexible mounted idler and track rollers gives the dozer an important net track length on ground, combined with a smooth drive over rough underground



# Pin press fitting force + wedge ring holding force Track guiding guard Wedge ring

# Track link with wedge ring

New D475A-5 track links feature reduced press-fit force and a wedge ring. This results in easier service with reduced pin damage when turning pins and bushings. The result is improved undercarriage life and reduced maintenance costs resulting from reduced wear, greater pin reusability, and reduced maintenance man-hours.

# **OPERATOR COMFORT**

# **Operator comfort**

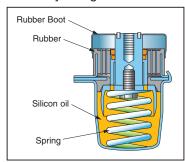
Operator comfort is essential for safe and productive work. The D475A-5 provides a quiet, comfortable environment where the operator can concentrate on the work at hand.



# Comfortable ride with new cab damper mounting

D475A-5's cab mounts use a newly designed cab

damper that provides an excellent shock and vibration absorbtion capacity with its long stroke. Cab damper mounts soften shocks and vibrations that conventional mounting systems are unable to absorb, whilst travelling



over adverse ground conditions. The cab damper spring isolates the cab from the machine body, suppressing vibrations and providing a quiet, comfortable operating environment.

# Pressurised hexagonal cab

- The cab's new hexagonal design and large tinted glass windows provide excellent front, side, and rear visibility
- Superior cab sealing, air filters and increased internal air pressure prevent dust from entering the cab
- The high quality cab interior is fully lined with sound-absorbent material

# Superior blade visibility

The slim engine bonnet and well-located operator seat provide excellent blade visibility. This greatly increases grading efficiency and operator performance. Finish grading and rough grading can both



be performed easily, significantly reducing cycle times.



# Fully-adjustable suspension seat and travel control console

The comfortable, heavy-duty ergonomic seat gives the operator a secure and comfortable work environment. During dozing operations, the seat faces straight forward, resulting in the best blade visibility to the left and right. For reverse and ripping operations, the operator's seat can be turned 15° to the right, significantly improving rear visibility and reducing neck strain. The travel control joystick, with its complete console, can be moved forward, backward, and up and down, so that it's fitted to each operator. It's also linked to the turn function of the seat. As a result it's always located in the optimum position for the operator.

# EASY MAINTENANCE

### Preventative maintenance

Preventative maintenance is the only way to ensure long service life from your equipment. That's why Komatsu designed the D475A-5 with conveniently located maintenance points, to make required inspections and maintenance quick and easy.

### Centralised service station

To assure convenient maintenance, all hydraulic and lubrication oil filters have been centralised to make access to all service points safe and easy.



# Monitor with self-diagnostic function

The monitor panel has a multifunction purpose. It offers:

- Hour meter, engine RPM, fuel gauge and water coolant temperature information, in real time
- Preventative maintenance information such as the timing for the replacement of oil filters
- Service information to inform the operator when abnormalities occur
- Komatsu mechanics receive all available detailed information, without the use of any external service tools

# Gull wing engine side covers

Gull wing engine side covers facilitate easy engine maintenance and filter replacement. The side covers are a solid structure with a bolt-on latch to improve durability and repairability.

# Highly reliable electric circuit

Electrical circuit reliability is increased by utilising dust, vibration and corrosion resistant "DT connectors". The reinforced electrical wiring harnesses include a circuit breaker, and are covered with a heat-resistant material to increase mechanical strength, provide longer life, and protect the system from damage.

# O-ring face seal

The hydraulic hose connections use high quality O-ring face seals. They provide improved sealing performance against vibrations and load shocks.



# **Enclosed hydraulic piping**

The hydraulic piping for the blade tilt cylinder is completely housed in the push arm, ensuring damage protection.

# Modular power train design

Power train components are sealed in a modular design that allows them to be dismounted and mounted without oil spillage. This makes servicing work clean, smooth, and easy.

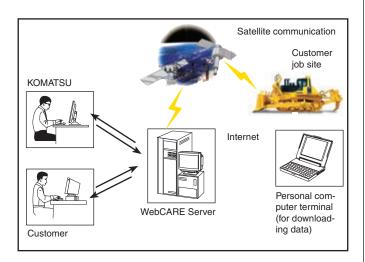
# Maintenance-free disc brakes

Wet disc brakes require less maintenance.

# SERVICEABILITY AND CUSTOMER SUPPORT

# KOMTRAX™ Plus (Vehicle Health Monitoring System)

The KOMTRAX™ Plus controller monitors the health conditions of major components and enables analysis of the machine and its operations. The KOMTRAX™ Plus controller monitors and stores all data received from the engine and transmission controller and various additional sensors on the major components. This way, it's possible to record the evolution of the machine's health condition. This data can be downloaded via a portable computer or via satellite communication. In both cases, customers and Komatsu specialists can analyse this downloaded data and follow up trends in the machine's condition. When using the optional satellite communications, the Komatsu specialist can inform you whenever an abnormal condition occurs. This way, repair and maintenance costs can be optimised, and maximum machine availability can be maintained.



# **Serviceability and Customer Support**

The Komatsu dealer network guarantees you the lowest operating costs.

When you purchase Komatsu equipment, you gain access to a broad range of programmes and services that have been designed to help you get the most from your investment. These all support substantial productivity, long and useful equipment lifetime, low operating costs, and a high trade-in or resale value.

- Many of the vital components in the D475A-5 have been installed and proven totally reliable in other heavy-duty Komatsu earthmoving equipment.
- Komatsu's extensive parts warehouses and logistics system across Europe and around the globe ensure unparalleled parts availability.
- Continuous training programmes for Komatsu service personnel guarantee that your equipment is serviced properly and maintained in top running condition.
- The Komatsu Oil Wear Analysis (KOWA) programme offers sophisticated oil analysis to identify problems to be followed up during preventative, scheduled maintenance.
- KFWP (Komatsu's Flexible Warranty Programme) is available, providing a range of extended warranty options on the machine and its components. These can be chosen, based on individual needs and activities. This programme is designed to help reduce total operating costs.
- A Komatsu Repair & Maintenance Contract is a way to establish a fixed operating cost and ensure optimal machine availability for the duration of the contract.



# **S**PECIFICATIONS



### ENGINE

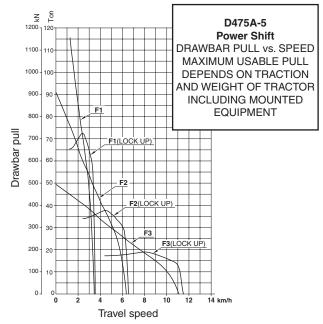
ModelCommon emissionised,	
Engine power	
at rated engine speed	2.000 rpm
ISO 14396	671 kW / 900 HP
ISO 9249 (net engine power)	664 kW / 890 HP
No. of cylinders	12
Bore × stroke	
Displacement	30,48 ltr
Governor	All-speed, electronic
Lubrication system	
Method	Gear pump, force lubrication
Filter	Full flow and bypass combined



# TORQFLOW TRANSMISSION

Туре	Komatsu TORQFLOW
	ment, 1-stage, 1-phase, water-cooled
	with lock-up clutch
Transmission	Planetary gear, multiple-disc clutch
h	hydraulically actuated, force-lubricated
Gearshift lock lever and neutral	safety switch prevent accidental starts.

Max. travel speeds	Forward	Reverse
1st	3,3 km/h	4,2 km/h
2nd	6,2 km/h	8,0 km/h
3rd	11,2 km/h	14,0 km/h





Туре	Spur gear, single-reduction and
	planetary gear, single-reduction
Sprocket	Segmented sprocket teeth
	are bolt-on for easy replacement



# STEERING SYSTEM

TypeClutch and brake steeri	ng system
Steering control	CCS-lever
Steering brakes Wet, multiple-disc, pedal-/hand	controlled,
spring-actuated and hydraulically	y released
Interconnected with steel	ring clutch
Steering clutch Wet multiple-disc clutch. Spring loaded, hy	draulically
released, hand operated, interconnected with stee	ering brake
Service brakes Steering brakes function as serv	ice brake,
pedal-	-controlled
Minimum turning radius (counter-rotation)	
(as measured by track marks on ground)	4,6 m



# **UNDERCARRIAGE**

Suspension Oscillating equaliser bar and pivot shaft
Track roller frameMonocoque, large section, durable construction
Rollers and idlersLubricated track rollers
K-Bogie undercarriageLubricated track rollers are resiliently
mounted on the track frame with a bogie suspension system with
oscillating motion that is cushioned by rubber pads.
TracksLubricated tracks, fully sealed
Track tensionCombined spring and hydraulic unit
Number of shoes (each side)41
Grouser height (single grouser)105 mm
Shoe width (standard)710 mm
Ground contact area
Track rollers (each side)8
Carrier rollers (each side)2

Extreme service shoes	Additional weight	Ground contact area
810 mm	920 kg	73.290 cm <sup>2</sup>
910 mm	1.830 kg	82.340 cm <sup>2</sup>



# COOLANT AND LUBRICANT CAPACITY (REFILLING)

Fuel tank	1.670 ltr
Radiator	210 ltr
Engine oil	121 ltr
Torque converter, transmission,	
bevel gear and steering system	210 ltr
Final drive (each side)	75 ltr
Dozer blade hydraulics	180 ltr
Giant ripper (additional capacity)	130 ltr
Multishank ripper (additional capacity)	130 ltr



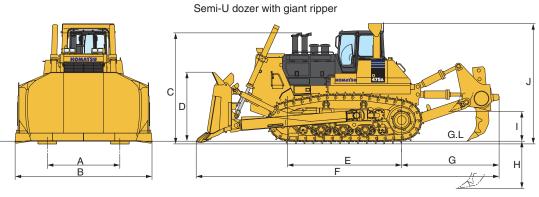
# ENVIRONMENT

Engine emissions Fully complies with EPA Tier II exhaust emission regulations
Noise levels
LpA operator ear
Vibration levels (EN 12096:1997)
Hand/arm $\leq 2.5 \text{ m/s}^2$ (uncertainty K = 0.82 m/s <sup>2</sup> )
Body $\leq 0.5 \text{ m/s}^2 \text{ (uncertainty K = 0.29 m/s}^2\text{)}$
Contains fluorinated greenhouse gas HFC-134a (GWP 1430).
Quantity of gas 1,1 kg, CO <sub>2</sub> equivalent 1,57 t



# **DIMENSIONS**

	D475A-5
Α	2.770 mm
В	5.265 mm
С	4.546 mm
D	2.690 mm
E	4.524 mm
F	11.565 mm
G	3.720 mm
Н	1.744 mm
I	1.196 mm
J	4.646 mm



Ground clearance: 655 mm



# **OPERATING WEIGHT (APPR.)**

Including strengthened semi-U tilt dozer, giant ripper, steel cab, ROPS, operator, standard equipment, rated capacity of lubricant, coolant, and full fuel tank, 710 mm shoes.

Operating weight ...... 108.390 kg



### **HYDRAULIC SYSTEM**

Type CLSS (closed-centre load sensing system)
All spool valves externally mounted beside the hydraulic tank.
Main pump Variable displacement piston pump
Maximum pump flow542 ltr/min
Relief valve setting
Spool control valve positions semi-U tilt dozer and full-U tilt dozer
Blade lift
Blade tilt Right, hold, and left
Additional control valve positions for rippers
Ripper liftRaise, hold, and lower
Ripper tiltIncrease, hold, and decrease
Hydraulic cylinders Double-acting, piston
No. of cylinders × bore
Blade lift
Blade tilt
Ripper lift2 × 225 mm
Ripper tilt2 × 225 mm



Multichank rinner

### RIPPER EQUIPMENT

Multishank ripper
Type Hydraulically controlled variable ripper
No. of shanks
Weight (including hydraulic control unit)9.720 kg
Beam length
Maximum lift above ground
Maximum digging depth 1.124 mm
Giant ripper
Type Hydraulically controlled variable ripper
Ripping depth is adjustable in three stages by a hydraulically
controlled pin puller
No. of shanks1
Weight (including hydraulic control unit)
Beam length 1.477 mm
Maximum lift above ground
Maximum digging depth



# DOZER EQUIPMENT

Blade capacities are based on the SAE recommended practice J1265.

	Overall length with dozer	Blade capacity	Blade width × height	Maximum lift above ground	Maximum drop below ground	Maximum tilt adjustment	Additional weight
Strenghtened single tilt semi-U blade	8.705 mm	27,2 m³	5.265 × 2.690 mm	1.620 mm	1.010 mm	770 mm	16.500 kg
Strenghtened single tilt U blade	9.205 mm	34,4 m³	6.205 × 2.610 mm	1.620 mm	1.010 mm	905 mm	18.800 kg
Strenghtened dual tilt semi-U blade	8.705 mm	27,2 m³	5.265 × 2.690 mm	1.620 mm	1.010 mm	1.145 mm	16.950 kg
Strenghtened dual tilt U blade	9.205 mm	34,4 m³	6.205 × 2.610 mm	1.620 mm	1.010 mm	1.350 mm	19.250 kg

# CRAWLER DOZER

# STANDARD EQUIPMENT

### Cab

- Suspension seat: fabric, reclining, high backrest, turnable
- Seat belt
- Headrest
- High mount footrest
- Palm lever steering control (PCCS)
- Mono lever blade control
- Air conditioner
- Pre radio installation kit (12 V, antenna, loudspeakers)
- Decelerator pedal
- Electronic monitor panel
- Fenders
- Rear-view mirror (inside cab)
- Sun visor

### Undercarriage

- Single grouser heavy-duty shoes 710 mm
- Heavy-duty link assembly, sealed and lubricated
- · Segmented sprockets
- K-Bogie system
- Flexible idler
- K-Bogie roller guards
- Hydraulic track adjusters

### **Control systems**

- PM service connectors
- Torque converter lock-up
- KOMTRAX™ Plus (Vehicle Health Monitoring System)
- Satellite communication system for KOMTRAX™ Plus

### **Attachments**

- Front pull hook
- Wiper rear window
- Wiper front window
- Wipers doors
- Tool kit

### **Engine related parts**

- Cooling fan, hydrostatic driven
- Water separator
- Hard water area arrangement incl. corrosion resistor
- Poor fuel area arrangement
- Hot area arrangement
- Intake pipe with rain cap
- Dry type air cleaner, double element with dust indicator and evacuator
- Locks, filter caps and covers
- Starter motor 24 V/2x 7,5 kW

- Alternator 24 V/100 A
- Batteries 2 × 12 V/170 Ah
- Gull wing engine side covers
- Hvdroshift transmission
- Damper
- C&B wet steering system
- Provision for fuel quick charge

### Work equipment

- Hydraulics for ripper
- · Hydraulics for dozing blades

### Safety equipment

- · Back-up alarm
- Warning horn
- Steel cab, meets ISO 3449 FOPS standards.
- ROPS canopy for cab, meets ISO 3471 and SAE J1040, APR88 ROPS standards

# **OPTIONAL EQUIPMENT**

### Cab

Lunch box holder

### Undercarriage

- Single grouser heavy-duty shoes (810 mm, 910 mm)
- Full length track roller guard for K-bogie

# **Control systems**

- Track shoe slip control system
- Radiator site gauge
- Sensor hydraulic tank level
- Sensor engine oil level

### Engine related parts

- Electric type engine oil and coolant heater
- Intake pipe with pre-cleaner
- Provision for oil and coolant quick charge
- Engine prelubrification

### Attachments

- Counterweight
- Ripper working light
- Additional cab lights, front and rear
- Inspection light

### Work equipment

- Strenghtened semi-U blade dual tilt 27.2 m³
- Strenghtened semi-U blade single tilt 27,2 m³
- Strenghtened U blade single tilt 34,4 m³
- Strenghtened U blade dual tilt 34,4 m³
- Push plate weld on
- Spill guard for semi-U dozer
- Spill guard for U dozer
- Multishank variable angle ripper
- Giant variable angle ripper

### Safety equipment

- Fire extinguisher
- First aid kit
- Emergency steering

KOMATSU

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