D38E-1
D38P-1

KOMATSU

NET HORSEPOWER
80 hp @ 2500 rpm

OPERATING WEIGHT
D38E-1: 17,060 lb – 7738 kg
D38P-1: 17,800 lb – 8074 kg

D38-1

CRAWLER DOZER
D38-1

D38E-1 and D38P-1

WALK-AROUND

Designed and built to provide
maximum versatility,
reliability, and productivity.

Unique Komatsu torque converter **reduces shocks** for smooth operation.
(page 9)

Only machine in its class that can be **transported with blade attached** and not exceed 8'6" travel restrictions.
(page 7)

Six-way blade with only **two lubrication points** on entire blade system.
(page 7)

Excellent visibility of blade over front and sides provides an edge for fine grading.
(page 4)

Easy to learn and easy to operate Komatsu joystick control and T-bar blade control for accurate grading and high productivity.
(page 5)

Reduced maintenance with hydraulic reservoir sight gauge (opposite side) and spin-off filters housed in compartment on this side.
(See other reduced maintenance features on pages 6, 7, and 9)

No fade, **long-wearing Caliper**-type disc steering clutches and brakes provide smooth, accurate steering.
(page 9)

Selection
Komatsu offers more than 23 crawler dozers including 10 machines in the 70–90 hp range.
(See your Komatsu distributor.)

Lubricated track system reduces maintenance.
(page 6)

CRAWLER DOZER		FLYWHEEL HORSEPOWER	OPERATING WEIGHT	BLADE CAPACITY
	D38E	**80 hp 60 kW** @ 2500 rpm	**17,060 lb** 7738 kg	**1.9 yd³** 1.45 m³
	D38P	**80 hp 60 kW** @ 2500 rpm	**17,800 lb** 8074 kg	**1.9 yd³** 1.45 m³

Operator's Compartment

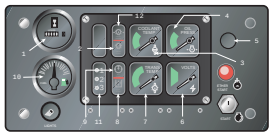
Maximum productivity can only be accomplished through the design of an efficient operator's compartment and accurate, easy-to-use controls. The D38 is designed to put the operator in control. The attention to detail in positioning of controls, instrument panel, and visibility of blade means the operator can remain at high levels of productivity while being less fatigued as the day progresses.

Operator's Compartment

- The suspension seat adjusts to the operator's weight for maximum comfort.
- Armrests can be adjusted to provide the best position for the individual operator, assuring operation of controls without awkwardness or fatigue.
- Gauges and warning lights are positioned for at-a-glance viewing.
- Controls are easily reached and operated.
- Visibility over the front of the machine is excellent and the operator can also see more of either side of the blade.

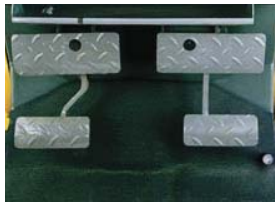
The Walk-Through Operator's Compartment Is Spacious and Comfortable

1 Hour meter
2 Transmission Filter Warning Light
3 Coolant Temperature Gauge
4 Engine Oil Pressure Gauge
5 Illumination Lamp
6 Voltmeter
7 Transmission Temperature Gauge
8 Hydraulic Filter Warning Light
9 Air Filter Warning Light
10 Fuel Gauge
11 Gear Range Indicator
12 Transmission Pressure Warning Light



INSTRUMENT PANEL

Instrument panel is mounted at an angle for easy view by the operator. It provides a full complement of easy-to-see and read analog gauges and indicator lights.



SPEED AND BRAKING CONTROL

The right pedal combines engine deceleration and primary machine braking. It also supplies parking brake function by depressing and engaging the small floor-located brake lock. The left pedal activates a spring-applied secondary brake without decelerating the engine speed.

SUSPENSION SEAT

Designed to adjust and compensate for the size and weight of the operator. Includes forward and rear adjustments as well as featuring lumbar support for lower back. Readily accessible seat belts are kept in a storage holster.

ROPS CANOPY

A four-post ROPS canopy is designed specially for the D38. Extra length over the front protects operator's feet from rain or snow. A special sound-absorbing pad is mounted to the roof.

LIGHTING

Three halogen lights are included as standard equipment. One is mounted above the fuel tank and two are mounted at the front of the ROPS and protected by the roof overhang.

Easy to Learn Natural Joystick Control Is Standard

Joysticks are the logical choice for providing smooth, precise control in order to gain maximum productivity. Their operation mirrors the natural motion of the activity the operator wishes to perform. For example:

Left Hand

STEERING FUNCTIONS

- Forward and reverse
- Right and left steering
- First, to second, to third shifting

Right Hand

BLADE FUNCTIONS

- Lifting and lowering
- Tilting
- Angling

Lift, tilt, and angle are controlled hydraulically by a right-hand operator's control. Provides precise grading efficiency. The blade responds quickly by a slight move or twist of the low effort lever giving the operator a true feel for the blade.

UNDERCARRIAGE AND FRAME

Undercarriage

SPROCKETS

One-piece castings are bolted to the final-drive sprocket hubs and transmit the sprocket-tooth load through the entire sprocket bolt pattern. Replacement can be made without removing the entire track frame assembly or partial disassembly of the final drive.

REDUCED MAINTENANCE REQUIREMENTS WITH LUBRICATED TRACK SYSTEM

The track-chain elements include a patented seal assembly to keep pin and bushing surfaces lubricated with oil. Internal pin and bushing wear are virtually eliminated. Track life is extended and hourly undercarriage costs are reduced.

TOP IDLERS

For added reliability and durability top idlers incorporate long-life, heavy-duty tapered roller bearings.

Frame

Proven two-piece construction incorporating high-strength steel plate. Fenders and ROPS mounts are part of the frame weldment.

TRACK FRAME AND GAUGE

The D38E track gauge is 54 inches and the D38P track gauge is 61 inches. Track frame consists of high-strength rolled steel side channels, welded together to form a rigid foundation.

SUSPENSION SYSTEM

The D38 suspension system is a rigid or non-oscillating type proven on thousands of applications around the world.

ANGLING FRAME AND C-FRAME

Designed to eliminate or reduce stress concentrations at all critical junctures. C-frame is mounted to front undercarriage cross-beam tunnel for an easy alignment with the track and main frames after any machine reassembly.

DURABLE BLADE

The moldboard is 90,000 psi yield material providing high strength and excellent wear resistance. The contact areas between the back of the blade and the angling frame provides added durability due to the use of large contact areas and high-wear resistant, easily replaceable wear plates.

Low-Maintenance Blade

There are only two lubrication points on the blade system. All cylinder pivot connections are sealed and permanently lubricated, non-metallic bushings and chrome-plated pins.

Blade Widths and Angling for Travel

The blade width of the D38E is 7'9" and the width of the D38P is 9'3". Unique blade angling capability allows transport of the D38E within a 7' width and the D38P within an 8'6" width.

Engine and Torque Converter

Komatsu S4D102-1 239 cubic inch engine

This turbocharged engine delivers 80 hp at 2500 rpm. Designed to be rugged, provide outstanding power, excellent fuel consumption, easy to service, and highly reliable.

BUILT TO BE RUGGED AND RELIABLE

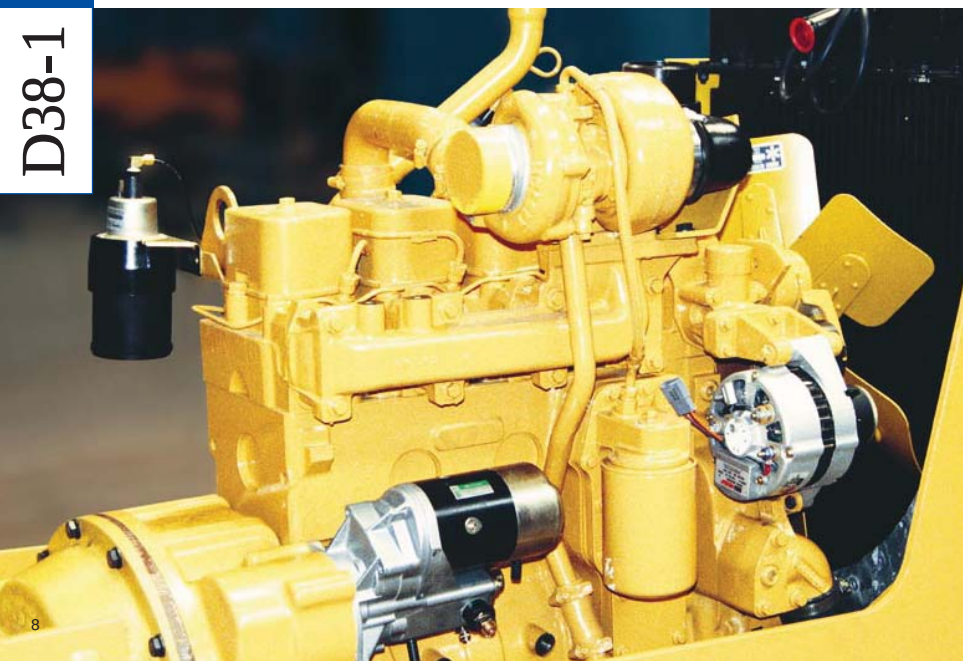
Features include an alloy cast iron, deep-skirted block with main bearing supports between each cylinder. Provides maximum strength and rigidity, low weight, and excellent crankshaft support.

Potential gasket problems are reduced and high air flow efficiency achieved through a one-piece cross-flow cylinder head with integral intake manifold.

Forged steel crankshaft is designed for low stresses and high torsional stiffness. Provides outstanding reliability.

MOUNTED ON RESILIENT ENGINE MOUNTS

Mounts are located close to the roll center of the engine allowing natural vibrations to dissipate, reducing transmission of vibrations to the crawler frame and the operator.



Engine-Mounted Torque Converter

The torque converter is attached directly to the flywheel housing of the engine providing easy access for servicing without removal of the transmission.

SMOOTHER OPERATION

Komatsu torque converter allows the operator to throttle down so he can finely control track speed while still providing good hydraulic flow to the dozer blade. Helps operator perform complicated tasks with greater ease because torque converter:

- Absorbs shocks
- Multiplies engine torque
- Reduces engine lugging
- Eliminates need for a clutch
- Provides better control of power

TRANSMISSION

Provides three forward and three reverse speeds and is mounted directly to the front wall of the rear main frame.

EXCELLENT LOAD CAPACITY

Helical cut gears are in constant mesh and are hydraulically selected by a pilot valve located in the shift tower. The pilot valve signals the main transmission control valve that activates the selected clutch pack. The simple, reliable pilot control system replaces the need for complex transmission control linkages or push-pull cables.

BUILT FOR EASY SERVICE AND LONG LIFE

Simple construction with fewer engine components. The oil and water pump housings, oil filter head, and alternator mountings are incorporated into the block, reducing potential leak points and allowing faster rebuilding.

- Engine block is rebuildable, cylinder walls can be rebored twice.
- Oversized pistons and rings are available.
- Dry sleeves available for engine rebuilds after the first two.

SMOOTH SHIFTING

Rate of oil flow is automatically controlled providing smooth, low shock shifting. Provides less shock to the power train and good dozing results with the blade.

EASY SERVICE

The modular location in front of the rear main frame provides good service access.

COUNTERSHAFT DESIGN REDUCES COSTS

Countershaft designs use up to one-third fewer components than competitive planetary designs, reducing the time and expense of rebuilding.

UNIQUE LONG-WEARING CLUTCH/BRAKE SYSTEM

Provides excellent steering modulation over any range of quick or broad steering. Provides smooth, non-jerky steering. The steering clutches and brakes are caliper/disc-type of the same design principle found in the automotive industry. Cooling and lubrication are achieved by immersing in oil. Advantages of disc brakes include:

- Longer life
- Lack of fade
- Lower maintenance because of partial self-adjustment capabilities
- Consistent operation

FINAL DRIVES

Are housed in modular cast housings. Final drives employ a pinion and bull gear speed reduction to increase torque for high drawbar pull.

D38E-1 and D38P-1 SPECIFICATIONS

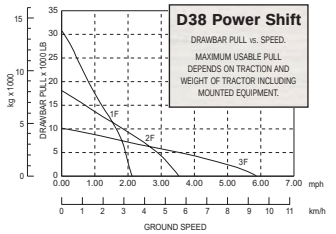
ENGINE

Model . . . . . Komatsu S4D102-1
Type . . . . . Water-cooled, 4-cycle, overhead valve, direct-injection, turbocharged diesel engine
No. of cylinders 4
Bore . . . . . **4.02"** 102 mm
Stroke . . . . . **4.72"** 120 mm
Piston displacement . . . . . **239 in³** 3.9 ltr
Gross horsepower* . . . . . **85 hp** 63 kW/2500 rpm
Net Flywheel horsepower** . . . . . **80 hp** 60 kW/2500 rpm
Net maximum torque . . . . . **232 ft lb** 313 Nm/1200 rpm
*Gross horsepower output for complete engine operating under SAE J1995 conditions.
**Net flywheel horsepower output for standard engine (SAE J1349) including air cleaner, alternator (not charging), water pump, lubricating oil pump, fuel pump, muffler, and fan.

TRANSMISSION

Torque converter . . . . . **10.6"** 269 mm single stage with 2.1:1 stall ratio
Transmission . . . . . Countershaft with multiple disc clutches, hydraulically controlled and actuated, forced lubrication, power shift, 3 forward and 3 reverse speeds
Bevel gear . . . . . Spiral bevel gear

Travel speeds:		
	Forward	Reverse
1st	**2.1 mph** 3.3 km/h	**2.5 mph** 4.0 km/h
2nd	**3.5 mph** 5.6 km/h	**4.1 mph** 6.7 km/h
3rd	**5.8 mph** 9.3 km/h	**6.9 mph** 11.2 km/h



STEERING SYSTEM

Steering system . . . . . Single lever control for steering/directional/speed change
Steering clutch . . . . . Wet, single-disc, hydraulically loaded and released
Steering brake . . . . . Wet, single-disc, full hydraulic actuation
Brakes . . . . . Right foot pedal applies decelerator and mechanical brakes, left foot pedal applies spring applied brakes only

HYDRAULIC CONTROL UNIT

Pump, tandem gear, driven from torque converter.
Output @ **1000 psi** 6.9 MPa and 1977 engine rpm . . . . . **20.0 gal/min** 75.6 ltr/min
Relief valve setting
blade lift and ripper . . . . . **2,250 psi** 15512 KPa
tilt . . . . . **2,250 psi** 15512 KPa
Cylinders, bore and stroke:
lift (2) . . . . . **3.5" x 17.7"** 89 x 449 mm
angle (2) . . . . . **3.0" x 13.9"** 76 x 352 mm
tilt (1) . . . . . **3.5" x 5.7"** 89 x 144 mm
Reservoir with sight gauge, system capacity, right fender mounted, includes cylinders and lines . . . . . **13.5 U.S. gal** 51 ltr

FINAL DRIVE

Final drive . . . . . Spur gear, single reduction 5.67:1 Ratio

UNDERCARRIAGE

Suspension . . . . . Rigid
No. of carrier rollers . . . . . 1 (each side)
No. of track rollers: D38E/D38P . . . . . 6 (each side)
Track gauge: D38E . . . . . **4'6"** 1372 mm
D38P . . . . . **5'1"** 1549 mm
Shoe . . . . . Single grouser
Grouser height . . . . . **2.1"** 53 mm
No. of shoes: D38E/D38P . . . . . 37 (each side)
Shoe width: D38E . . . . . **15.0"** 381 mm
D38P . . . . . **24.0"** 610 mm

Tractor dimensions:		
	D38E	D38P
Ground contact area:	**2463 in²** 15900 cm²	**3941 in²** 25400 cm²
Ground clearance:	**12.7"** 323 mm	**12.7"** 323 mm
Ground pressure:	**6.9 psi** 0.48 kg/cm²	**4.5 psi** 0.32 kg/cm²

COOLANT AND LUBRICANT CAPACITY (refill)

Coolant . . . . . **7.0 U.S. gal** 26.5 ltr
Fuel tank . . . . . **37.0 U.S. gal** 140.3 ltr
Engine oil . . . . . **2.75 U.S. gal** 10.4 ltr
Transmission and steering drive . . . . . **18.5 U.S. gal** 70 ltr
Final drive (each side) . . . . . **2.5 U.S. gal** 9.5 ltr

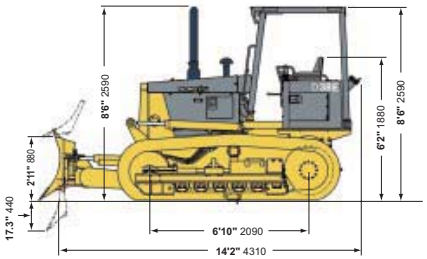
OPERATING WEIGHT (approximate)

Including power-angle-tilt-dozer, ROPS canopy, operator, standard equipment, rated capacity of lubricant, coolant and full fuel tank.

D38E	**17,060 lb** 7738 kg
D38P	**17,800 lb** 8074 kg

DIMENSIONS

D38E-1 / D38P-1

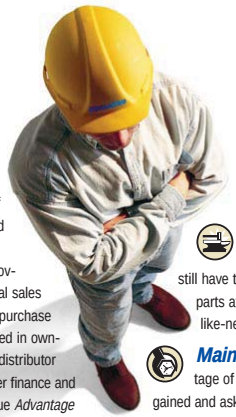


POWER ANGLE-TILT-DOZER

	Overall length with dozer	Blade capacity (SAE)	Blade length x height	Max. lift above ground	Max. dig below ground	Max. tilt adjustment	Angling angle	Width with blade angled
D38E	**14'2"** 4310 mm	**1.9 yd³** 1.45 m³	**7'9" x 3'1"** 2365 mm x 940 mm	**2'11"** 889 mm	**17.3"** 439 mm	**R.H. 14"** 356 mm **L.H. 14"** 356 mm	25°	**7'0"** 2134 mm
D38P	**14'2"** 4310 mm	**1.9 yd³** 1.45 m³	**9'3" x 2'9"** 2822 mm x 840 mm	**2'11"** 889 mm	**17.3"** 439 mm	**R.H. 16.7"** 424 mm **L.H. 16.7"** 424 mm	25°	**8'5"** 2565 mm

SUPPORT

Count on Komatsu and your local distributor for the support you deserve. Our success depends on satisfying your need for productive equipment and supporting that equipment. That's why we have one of the largest and strongest heavy-equipment distributor organizations in North America. Their personnel are not only trained to help you select the equipment that is best-matched for your business but to support that equipment.



Finance Through its finance company, Komatsu can offer you a wide variety of financing alternatives designed to meet your needs. Programs include municipal leases for governmental agencies, conditional sales contracts, and leases with $1 purchase options for customers interested in owning their equipment. Ask your distributor about Komatsu leasing. We offer finance and operating leases and the unique *Advantage Lease* which offers you predetermined purchase, return, and renewal options.

Parts Three computer-linked parts distribution centers provide fast access to anywhere in the U.S. and Canada. Most parts are available overnight. Plus, Komatsu distributors keep a large assortment of commonly used parts in stock for immediate access.

Remanufactured parts Save money and still have the same warranty as new parts at a fraction of the cost with like-new remanufactured parts.

Maintenance Take advantage of the experience we have gained and ask your distributor about our factory-supported programs including: regular scheduled maintenance, oil and wear analysis, diagnostic inspections, undercarriage inspections, training, special service tools, parts programs, and even a special software program to help your distributor keep track of and manage service-related data.

STANDARD EQUIPMENT FOR BASE MACHINE

ENGINE AND ITS RELATED ITEMS:
- Air cleaner, dry, double element with dust indicator
- Anti-freeze, **–34°F** –37°C
- Decelerator pedal, foot operated, right location with brake
- Engine, KOMATSU S4D102-1, **80 hp** 60 kW, direct injection, turbocharged diesel
- Fan, blower
- Fuel hose, general purpose
- Muffler, underhood with exhaust pipe and elbow
- Radiator, armored core with bottom tank cooler
- Resonator, exhaust
- Strainer, fuel
- Throttle control, left hand location
- Water separator, fuel system

DOZER ASSEMBLY:
- Power angle tilt dozer assembly, inside arms
  D38E: **7'9"** 2365 mm blade width
  D38P: **9'3"** 2822 mm blade width

ELECTRIC SYSTEM:
- Alternator, 62 Ampere, (12V)
- Back-up alarm
- Battery, 1 x 12V, maintenance free, 700 cca
- Horn
- Hour meter
- Instruments, modular assembly
- Lights, halogen, (2 front and 1 rear)
- Key starting switch

POWER TRAIN AND CONTROLS:
- Brake, secondary, left location
- Mono-lever steering, left hand location
- Transmission, F3–R3, full power shift
- Torque converter, single stage, 2.1:1 stall ratio

HYDRAULICS AND CONTROLS:
- For inside PAT dozer, 3 valves
- Blade cylinder hoses, standard
- "T" lever controls for blade

UNDERCARRIAGE:
- Track adjusters, hydraulic
- Track frames
  D38E: 6 roller, **54"** 1372 mm gauge, rigid, Lifespan lubricated rollers and idlers, front and rear chain guides, **82"** 2085 mm track on ground
  D38P: 6 roller, **61"** 1549 mm gauge, rigid, Lifespan lubricated rollers and idlers, front and rear chain guides, **82"** 2085 mm track on ground
- Track shoe assembly
  D38E: **15"** 381 mm single grouser shoes with sealed and lubricated link assembly, 37 links
  D38P: **24"** 610 mm single grouser shoes with sealed and lubricated link assembly, 37 links

GUARDS AND COVERS:
- Crankcase guard with pull hook
- Engine hood, solid and side doors, perforated
- Fan guard
- Fuel tank bottom guard
- Instrument panel cover
- Light(s) guard
- Track frame covers
- Transmission guard
- ROPS mounting brackets

OPERATOR ENVIRONMENT:
- Canopy, ROPS, and roofliner
- Floor mat, black rubber
- Mirror
- Seat, suspension with adjustable armrests
- Seat belt

OTHER STANDARD EQUIPMENT:
- Counterweight, front idler
- Drawbar, rigid
- Fuel gauge
- Toolbox

OPTIONAL EQUIPMENT

- Batteries (1 x 12V, 950 cca)
- Ether start
- Exhaust pipe for forestry
- Perforated engine hood
- Fan, reversible
- Radiator guard door, heavy-duty
- Ripper
- Screen, rear
- Shoes:
  D38E: **15.0"** 381 mm single grouser with mud relief
  17.0" 432 mm single grouser
  D38P: **24.0"** 609 mm swamp shoe
- Sweeps, front
- Track roller guards, full length, and heavy-duty
- Valve, 4-spool
- Vandalism protection package
- Multi-Shank Ripper:
  Type . . . . . Parallelogram linkage
  Digging depth . . . . . Adjustable to 2 stages

Additional weight:	
Ripper equipment	**1120 lb** 510 kg
Hydraulic control unit	**22.2 lb** 10 kg
Max. digging depth	**14.3"** 363 mm
Max. lift above ground	**14.2"** 361 mm

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