

# WA380-1

## WHEEL LOADER



Model shown may include optional equipment.

### **KOMATSU: The Quality is Standard.**

**FLYWHEEL HORSEPOWER: 196 HP @ 2200 RPM. OPERATING WEIGHT: 16550 kg (36,490 lb)  
BUCKET CAPACITY: 2.6-4.0 m<sup>3</sup> (3.4-5.25 yd<sup>3</sup>).**

- *The powerful Komatsu Dresser 614T engine provides fuel-efficient operation*
- *Z-bar loader linkage assures optimum breakout force and fast cycle times*
- *Electrically controlled transmission enables light fingertip control of all machine functions*
- *Tiltable steering wheel and adjustable suspension seat provide operator comfort and efficiency*
- *Wet disc brakes and sealed loader linkage pins account for higher performance and less maintenance*
- *An electronic display and monitoring system oversees machine operations and alerts the operator of any problems*
- *All components are designed for superior reliability and availability*

# Efficient, Comfortable Operating Equipment

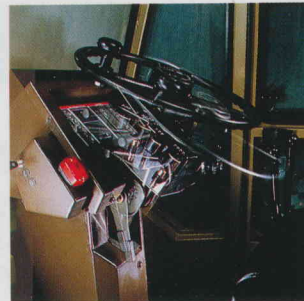


## Spacious, comfortable cab

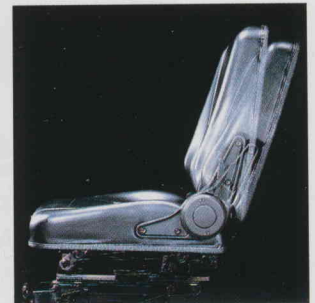
The optional cab is designed and laid out for maximum comfort and efficiency. The compartment features a wide field of vision, plenty of work space and logically arranged instruments, levers and pedals. Vibration and noise are kept to a minimum.

The transmission kick-down switch, located on top of the boom control lever, allows the operator to shift between forward first and second gear without taking his hand off the work control levers, for easier loading and unloading.

Komatsu's electrically controlled transmission allows the operator to quickly and easily shift gears. The adjustable length shift lever sends an electronic signal to a solenoid on the hydraulic control valve, so the gear change is smooth and easy.



The adjustable steering wheel tilts within a 100 mm (4") range and the length of the transmission control levers can be adjusted for operator convenience.



The oil-suspension seat is fully adjustable for maximum operator comfort.

## High performance for greater production

The WA380-1's outstanding bucket and loader performance and fast, smooth movements account for greater productivity.



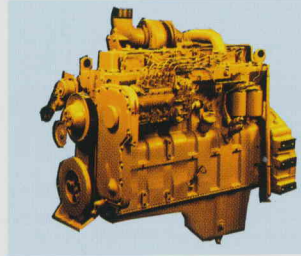
High dumping clearance, long dumping reach and excellent visibility enable easy loading of dump trucks. A center pin-supported rear axle with a  $\pm 13^\circ$  oscillation range, extra-long wheelbase, wide tread and a  $40^\circ$  articulation angle assure stability over the roughest terrain.



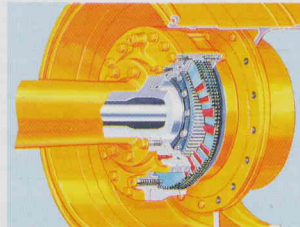
Faster cycle times are achieved with a breakout force of 15,560 kg (34,310 lb.) and a rim pull of 14,800 kg (32,630 lb.). The Z-bar loader linkage assures powerful excavation.

## Minimum maintenance means less downtime

All Komatsu components are designed and manufactured for maximum quality and reliability. Komatsu's service program also emphasizes the immediate availability of all components and parts.

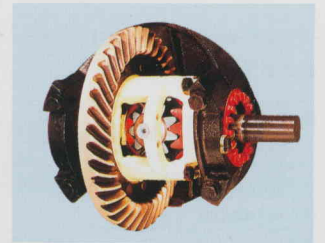


The Komatsu Dresser 614T turbo-charged diesel engine delivers **196 HP** (146 kW). At the same time, the six cylinder, water-cooled, direct injected diesel engine is fuel efficient, decreasing fuel consumption per hour of production. The full powershift, planetary type gear transmission is suited for all jobsite conditions.

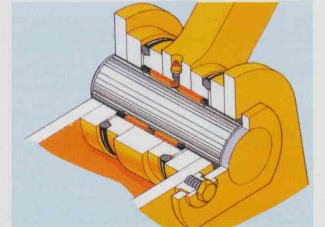


Adjustment-free, wet multiple-disc brakes assure excellent braking performance even on muddy terrain. They are sealed to remain free from dirt and other contaminants.

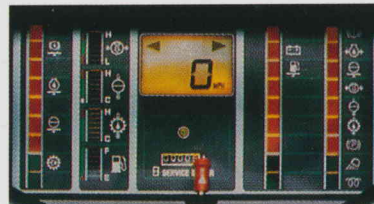
The fully hydraulic steering consists of a combination of orbitrol and pilot type steering controls for a smooth response.



The torque proportioning differentials minimize slippage, improve traction and increase the service life of tires.



Sealed loader linkage pins require less maintenance. Bucket hinges and linkage pins are protected by dust seals and cord rings so that lubrication intervals are greatly extended.



The electronic display and monitoring system monitors all important checkpoints and alerts the operator in the event of a malfunction or emergency.

# SPECIFICATIONS



## ENGINE

The Komatsu Dresser 614T is a 4-stroke, water-cooled, overhead valve, direct-injection turbocharged diesel engine. It includes six cylinders with a 114 mm (4.5") bore x 135 mm (5.3") stroke and an 8.27 ltr. (505 cu.in.) piston displacement.

### Flywheel horsepower:

**196 HP** (146 kW) at **2200 RPM** (SAE J1349)

Direct-injection fuel system. All-speed mechanical governor. Gear-pump-driven force-lubrication with full-flow filters. All filters are spin-type for easy maintenance. Dry, cyclopack air cleaner for longer element service. 24 V/7.5 kW electric starting motor. 24 V/45 A alternator. 2 x 12 V/150 Ah batteries.



## TRANSMISSION

3-element, single-stage, single-phase torque converter. Full power-shift, planetary-gear type transmission. A modulating function assures shockless speed and directional changes without braking. An electrically controlled transmission allows fingertip control with speed and directional change levers. A neutral safety circuit allows starting only when the directional control lever is in neutral. The kick-down switch allows the operator to shift between F1 and F2 without removing his hands from the work equipment control levers.

### Travel speed.

	Forward	Reverse
1st	0—7.8 km/h (4.8 MPH)	0—8.3 km/h (5.2 MPH)
2nd	0—13.5 km/h (8.4 MPH)	0—14.3 km/h (8.9 MPH)
3rd	0—22.3 km/h (13.9 MPH)	0—23.6 km/h (14.7 MPH)
4th	0—34.0 km/h (21.1 MPH)	0—35.8 km/h (22.2 MPH)



## AXLES & FINAL DRIVES

Four-wheel drive system. A full-floating front axle is fixed to the front frame. Center-pin-supported, full-floating rear axle with a large oscillation of  $\pm 13^\circ$ . A spiral bevel gear for reduction and a planetary gear for final reduction. Front and rear torque proportioning differentials minimize tire slippage on soft or wet terrain.



## BRAKES

**Service brakes:** Air-over-hydraulic, wet, multiple-disc brakes actuate all four wheels. Two brake pedals are provided. Both can be used for normal braking; however, the left pedal can be used for braking and transmission neutralizing simply by actuating a switch.

**Parking brake:** Dry disc type, air released, spring applied on front axle pinion shaft.

**Emergency brake:** The parking brake is automatically actuated as an emergency brake when air pressure goes below the rated value.



## TIRES

Front and rear: 23.5-25-20PR (L-2), tubeless  
Rims: 17.00-25-1.7



## STEERING SYSTEM

Center-pivot frame articulation. Orbitrol type, full hydraulic steering independent of engine RPMs. A wide articulation angle of  $40^\circ$  on each side for a minimum turning radius of 6340 mm (20'9") at the outside corner of the bucket.



## BOOM & BUCKET

Z-bar loader linkages are made of high-tensile-strength steel for maximum rigidity and offer powerful excavation. Rap-out loader linkage design enables shock dumping for removing sticky materials. Sealed loader linkage pins with dust seals and cord rings extend greasing intervals. The bucket is also made of high-tensile-strength steel. Bucket corner teeth (optional) not only minimize bucket wear but also increase penetrating force.



## BUCKET CONTROLS

Light effort is required to operate the bucket and boom control levers, assuring smooth, responsive bucket/boom action. In addition, the bucket positioner and the boom kickout device facilitate repeated digging/loading operations.

### Control positions:

Boom ..... Raise, hold, lower and float  
Bucket ..... Tilt-back, hold and dump



## HYDRAULIC SYSTEM

Two-gear pumps for loader control.

**Capacity** (discharge flow) at engine 2200 RPM

Loader pump ..... 160 ltr. (42.3 U.S. gal)/min.  
Switch pump ..... 112 ltr. (29.6 U.S. gal)/min.

Steering pump ..... 72 ltr. (19.0 U.S. gal)/min.

**Relief valve setting** ..... 210 kg/cm<sup>2</sup> (2990 psi)

### Control valves:

A 2-spool type control valve and a steering valve with a demand valve.

Hydraulic cylinders	Number of cylinders	Bore	Stroke
Boom	2	160 mm (6.30")	713 mm (2'4")
Bucket	1	180 mm (7.09")	488 mm (1'7")

Hydraulic cycle time (rated load in bucket):

Raise .... 6.4 sec./Dump .... 1.7 sec./Lower (empty) .... 3.0 sec.



## SERVICE REFILL CAPACITIES

Cooling system ..... 48 ltr. (12.7 U.S. gal)

Fuel tank ..... 260 ltr. (68.7 U.S. gal)

Engine ..... 22.4 ltr. (5.9 U.S. gal)

Hydraulic system ..... 140 ltr. (37 U.S. gal)

Axle (each front and rear) ..... 48 ltr. (12.7 U.S. gal)

Torque converter and  
transmission ..... 55 ltr. (14.5 U.S. gal)

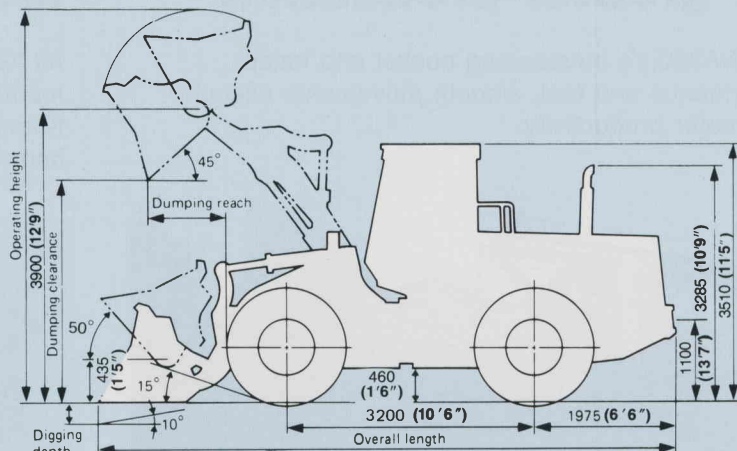


## DIMENSIONS

Unit: mm (ft.in.)

### Dimensions

Tire size	20.5-25	23.5-25
Tread	2160 mm (7'1")	2160 mm (7'1")
Width over tires	2695 mm (8'10")	2780 mm (9'1")
Change in vertical dimension	- 55 mm (2.2")	0
Change in reach	+ 60 mm (2.4")	0
Change in digging depth		
0°	+ 55 mm (2.2")	0
10°	+ 55 mm (2.2")	0
Change in overall length		
Bucket on ground	+ 45 mm (1.8")	0
Bucket at carry	+ 30 mm (1.2")	0



Bucket Type		General Purpose			Excavating		
		Bolt-on cutting edge	Bolt-on cutting edge	Bolt-on teeth	Bolt-on cutting edge	Bolt-on cutting edge	Bolt-on teeth
Bucket capacity	SAE rated	3.1 m <sup>3</sup> (4.0 yd <sup>3</sup> )	2.75 m <sup>3</sup> (3.5 yd <sup>3</sup> )	2.6 m <sup>3</sup> (3.4 yd <sup>3</sup> )	2.75 m <sup>3</sup> (3.5 yd <sup>3</sup> )	2.6 m <sup>3</sup> (3.4 yd <sup>3</sup> )	2.2 m <sup>3</sup> (2.88 yd <sup>3</sup> )
	Struck	2.6 m <sup>3</sup> (3.4 yd <sup>3</sup> )	2.35 m <sup>3</sup> (3.07 yd <sup>3</sup> )	2.2 m <sup>3</sup> (2.88 yd <sup>3</sup> )	2.35 m <sup>3</sup> (3.07 yd <sup>3</sup> )	2.2 m <sup>3</sup> (2.88 yd <sup>3</sup> )	2.2 m <sup>3</sup> (2.88 yd <sup>3</sup> )
Bucket width		2905 mm (9'6")	2905 mm (9'6")	2905 mm (9'6")	2905 mm (9'6")	2920 mm (9'7")	2920 mm (9'7")
Bucket weight		1590 kg (3,505 lb)	1615 kg (3,560 lb)	1565 kg (3,450 lb)	1615 kg (3,560 lb)	1565 kg (3,450 lb)	1565 kg (3,450 lb)
Static tipping load	Straight	13150 kg (28,990 lb)	14190 kg (31,290 lb)	14050 kg (30,975 lb)	14190 kg (31,290 lb)	14050 kg (30,975 lb)	14050 kg (30,975 lb)
	Full turn (40°)	10900 kg (24,030 lb)	11860 kg (26,150 lb)	11750 kg (25,900 lb)	11860 kg (26,150 lb)	11750 kg (25,900 lb)	11750 kg (25,900 lb)
Dumping clearance, max. height and 45° dump angle		2825 mm (9'3")	2870 mm (9'5")	2725 mm (8'11")	2870 mm (9'5")	2725 mm (8'11")	2725 mm (8'11")
Reach at 2130 mm (7') cut edge clearance and 45° dump angle		1565 mm (5'2")	1545 mm (5'1")	1580 mm (5'2")	1545 mm (5'1")	1580 mm (5'2")	1580 mm (5'2")
Reach at max. height and 45° dump angle		1130 mm (3'8")	1090 mm (3'7")	1200 mm (3'11")	1090 mm (3'7")	1200 mm (3'11")	1200 mm (3'11")
Reach with arm horizontal and bucket level		2395 mm (7'10")	2335 mm (7'8")	2520 mm (8'3")	2335 mm (7'8")	2520 mm (8'3")	2520 mm (8'3")
Operating height (fully raised)		5345 mm (17'6")	5200 mm (17'1")	5200 mm (17'1")	5200 mm (17'1")	5200 mm (17'1")	5200 mm (17'1")
Overall length	Bucket on ground	7695 mm (25'3")	7635 mm (25'1")	7815 mm (25'8")	7635 mm (25'1")	7815 mm (25'8")	7815 mm (25'8")
	Bucket at carry	7665 mm (25'1.5")	7615 mm (25')	7745 mm (25'5")	7615 mm (25')	7745 mm (25'5")	7745 mm (25'5")
Turning radius (bucket at carry, outside corner of bucket)		6370 mm (20'11")	6350 mm (20'10")	6405 mm (21')	6350 mm (20'10")	6405 mm (21')	6405 mm (21')
Digging depth	0°	60 mm (2.4")	60 mm (2.4")	85 mm (3.3")	60 mm (2.4")	85 mm (3.3")	85 mm (3.3")
	10°	275 mm (10.8")	265 mm (10.4")	320 mm (1'1")	265 mm (10.4")	320 mm (1'1")	320 mm (1'1")
Breakout force (bucket cylinder)		15560 kg (34,310 lb)	16100 kg (35,500 lb)	17700 kg (39,020 lb)	16100 kg (35,500 lb)	17700 kg (39,020 lb)	17700 kg (39,020 lb)
Operating weight		16730 kg (36,885 lb)	17075 kg (37,645 lb)	17025 kg (37,535 lb)	17075 kg (37,645 lb)	17025 kg (37,535 lb)	17025 kg (37,535 lb)

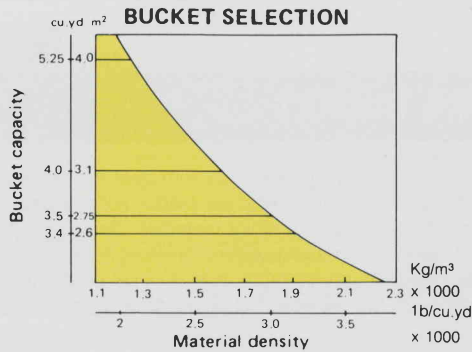
- All dimensions, weights and performance values based on SAE J-732C and J-742b standards.
- Static tipping load and operating weight shown include lubricants, coolant, full fuel tank, steel cab, ROPS canopy (option), operator and 23.5-25-20 PR (L-2) tubeless tires with additional counterweight. Machine stability and operating weight are affected by counterweight, tire size and other attachments. Use either tire ballast or counterweight, not both. Add the following weight changes to operating weight and static tipping load.

## Weight changes

Tires and options (All tires are tubeless)	Change in operating weight		Change in tipping load			
	No Ballast	Ballast	Straight		Full turn	
			No Ballast	Ballast	No Ballast	Ballast
20.5-25-16PR (L-2) tires	- 850 kg (1875 lb)	- 480 kg (1060 lb)*	- 655 kg (1445 lb)	- 365 kg (805 lb)*	- 580 kg (1280 lb)	- 310 kg (685 lb)*
20.5-25-16PR (L-3) tires	- 655 kg (1445 lb)	- 285 kg (630 lb)*	- 505 kg (1115 lb)	- 215 kg (475 lb)	- 450 kg (990 lb)	- 175 kg (385 lb)
23.5-25-12PR (L-2) tires	- 105 kg (230 lb)	+ 645 kg (1420 lb)**	- 80 kg (175 lb)	+ 795 kg (1750 lb)**	- 75 kg (165 lb)	+ 715 kg (1575 lb)**
23.5-25-12PR (L-3) tires	+ 200 kg (440 lb)	+ 950 kg (2095 lb)**	+ 155 kg (340 lb)	+ 1030 kg (2270 lb)**	+ 135 kg (300 lb)	+ 925 kg (2040 lb)**
23.5-25-16PR (L-2) tires	- 65 kg (145 lb)	+ 685 kg (1510 lb)**	- 50 kg (110 lb)	+ 825 kg (1820 lb)**	- 45 kg (100 lb)	+ 745 kg (1640 lb)**
23.5-25-16PR (L-3) tires	+ 310 kg (685 lb)	+ 1060 kg (2335 lb)**	+ 235 kg (520 lb)	+ 1110 kg (2450 lb)**	+ 205 kg (450 lb)	+ 995 kg (2195 lb)**
23.5-25-20PR (L-2) tires	0	+ 750 kg (1650 lb)**	0	+ 875 kg (1930 lb)**	0	+ 785 kg (1730 lb)**
23.5-25-20PR (L-3) tires	+ 310 kg (685 lb)	+ 1060 kg (2335 lb)**	+ 240 kg (530 lb)	+ 1115 kg (2460 lb)**	+ 210 kg (460 lb)	+ 1000 kg (2205 lb)**
Additional counterweight, removed	- 300 kg (660 lb)		- 740 kg (1630 lb)		- 640 kg (1410 lb)	
ROPS canopy, removed	- 475 kg (1045 lb)		- 530 kg (1170 lb)		- 490 kg (1080 lb)	
Steel cab, removed	- 285 kg (630 lb)		- 260 kg (570 lb)		- 255 kg (560 lb)	

\* 670 kg (1480 lb) ballast used instead of additional counterweight

\*\* 1050 kg (2315 lb) ballast used instead of additional counterweight



**3.1m<sup>3</sup>**  
**(4.0 cu.yd.)**

**General purpose bucket with bolt-on cutting edge:** (Loading and excavating soil, sand and a variety of other commonly handled materials.)

**2.75m<sup>3</sup>**  
**(3.5 cu.yd.)**

**Excavating bucket with bolt-on cutting edge:** (Loading and excavating crushed or blasted rock.)

**2.6m<sup>3</sup>**  
**(3.4 cu.yd.)**

**Excavating bucket with bolt-on teeth:** (Loading and excavating crushed or blasted rock.)

**4.0m<sup>3</sup>**  
**(5.25 cu.yd.)**

**Light material bucket with bolt-on cutting edge:** (A lighter-weight, large capacity bucket.)

## STANDARD EQUIPMENT

- 45A alternator
- Axles, full floating
- Back-up alarm
- Batteries (2x12V, 150Ah)
- Bucket positioner, automatic
- Cooling fan, blower type
- Drive pulley for air conditioner
- Engine cut-off switch (Electrical)
- Electronic display/monitoring system, includes:
  - Caution items:** battery charge, fuel level, brake oil pressure, engine oil pressure, coolant level, air pressure, coolant temperature, torque converter oil temperature, parking brake applied, working light pilot, engine preheating
  - Level Check Displays:** brake fluid level, engine oil level, coolant level, transmission cut-off brake
  - Gauges:** air pressure, coolant temperature, transmission oil temperature, fuel level, speedometer, service meter.

- Ether starting aid
- Handrails, rear (LH and RH)
- Hardened V-belt pulley
- Ladders (LH and RH)
- Lift (Boom) kickout, automatic
- Lights:
  - stop and tail lights
  - turn signals, 2 front and 2 rear
  - working lights, 2 front and 2 rear
  - Back-up light
- Radiator, staggered core type
- ROPS Canopy
- Suspension seat with seat belt
- Starter, 24V, 7.5 kW direct electric
- Steering, full hydraulic power
- Steps with rear fenders, LH and RH
- Tilt steering wheel
- Transmission control levers, electric
- Transmission cut-off switch

## ATTACHMENTS AND OPTIONAL EQUIPMENT

- Additional counterweight 300 kg (660 lb)
- Air conditioner
- Air dryer
- Counterweight for logging 1620 kg (3,570 lb)
- Emergency steering
- Front fenders (RH and LH)
- Glasswool exhaust pipe
- Heater and defroster
- Hydraulic adapter kit (includes 3-spool valve, pipings and linkages)
- Steel cab, includes:
  - floor mat, sunvisor, room mirror, rear view mirror, ashtray, cigarette lighter, cab mount flood lights, front and rear windshield wiper and washer, fan.
- Tire inflation kit
- Vandalism protection kit

### Work Equipment:

- Bucket tip teeth
- Bucket corner teeth
- Bolt-on cutting edge
- Light material bucket, 4.0m<sup>3</sup> (5.25) cu.yd.

### Tires:

- 20.5-25-16PR (L-2)
- 20.5-25-16PR (L-3)
- 23.5-25-12PR (L-2)
- 23.5-25-12PR (L-3)
- 23.5-25-16PR (L-2)
- 23.5-25-16PR (L-3)
- 23.5-25-20PR (L-2)
- 23.5-25-20PR (L-3)
- Rims for 20.5-25 tires
- Rims for 23.5-25 tires

AESS352-01

Materials and specifications are subject to change without notice.

**KOMATSU**  
KOMATSU MARKETING DIVISION

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