

Specifications

ENGINE

Model Isuzu 6BD1T
 Type Water-cooled, 4-cycle, 6-cylinder in-line, direct injection chamber type, turbo-charged diesel engine

Rated flywheel horsepower
 DIN* 6271, net 86.1 kW (117 PS) at 2 200 min⁻¹ (2 200 rpm)
 SAE**J1349, net 85.8 kW (115 HP) at 2 200 min⁻¹ (2 200 rpm)

* Deutsche Industrie Norm (German Industrial Standards)
 ** Society of Automotive Engineers (USA)

Maximum torque 490 N·m (50.0 kgf·m, 362 lbf·ft) at 1 400 min⁻¹ (1 400 rpm)

Piston displacement 5.79 l (353 cu in)
 Bore and stroke 102 mm × 118 mm (4.0" × 4.6")
 Starting system 24 V/4.5 kW electric motor starting
 Batteries 2 × 12 V/80 AH
 Air cleaner Dry type air cleaner with evacuator valve and double elements

TRANSMISSION

3-element, single-stage, single-phase torque converter. Full power-shift, countershaft type transmission.
 Modulating function assures shockless acceleration/deceleration and directional change without braking. Neutral start system prevents accidental starts.

Travel speeds with 17.5-25-12PR (L-3) tires:

	Forward	Reverse
1st	0-6.8 km/h (0-4.2 mph)	0-6.8 km/h (0-4.2 mph)
2nd	0-11.3 km/h (0-7.0 mph)	0-11.3 km/h (0-7.0 mph)
3rd	0-25.7 km/h (0-16.0 mph)	0-25.7 km/h (0-16.0 mph)
4th	0-39.5 km/h (0-24.5 mph)	

AXLE AND FINAL DRIVE

4-wheel drive system. A semi-floating front axle is fixed to the front frame.

Center-pin-supported, semi-floating rear axle provides total oscillation of ±13°. A spiral bevel gear for reduction and a single-reduction planetary gear on each wheel. Conventional differentials are standard. Optional NoSPIN differential on front axle is recommended for slippery underfoot conditions.

BRAKES

Service brakes: Power hydraulic inboard-mounted, wet disc brakes actuate all 4 wheels. 2 pedals are provided: the right for service braking and the left for braking and neutralizing.

Parking brake: Spring apply, hydraulic release dry disc brake mounted on the transmission front output shaft.

TIRES

Front and rear: 17.5-25-12PR (L-3) tubeless
 Rims: 25 × 14.00

STEERING SYSTEM

Center-pivot frame articulation. Full-hydraulic power steering. Articulation angle of 40° to each side for a minimum turning radius of 5 740 mm (18'10"), measured at the outside corner of the bucket. (with teeth)

MAIN FRAME

Front and rear high-strength frames of welded box construction, linked by hardened steel pins and upper spherical bearing and lower plane bearing.

FRONT-END ATTACHMENTS

Z-bar linkage provides superior breakout force and fast cycle times. Lift arm, linkage and bucket are made of high-tensile steel. Chrome-plated joint pins with dust seals for extended pin life and greasing intervals.

BUCKET CONTROLS

Control levers are hydraulic pilot control type, that features responsive and precise control. 2-lever type is standard and 1-lever type is optional.

Lift arm: Positions...Raise, Hold, Lower and Float.

Automatic kickout at full lift height. (Height adjustable)

Bucket: Positions...Tilt, Hold and Dump. Automatic bucket positioner adjustable to desired loading angle. No visual spotting required.

Cycle time with rated load in bucket:

Raise 5.9 sec
 Dump 1.4 sec
 Lower (empty bucket) 3.4 sec

HYDRAULIC SYSTEM

PUMP FOR LOADER AND STEERING

Pump 1 gear pump
 Max. oil flow 175 l/min (46.2 US gpm, 38.5 Imp gpm)

Relief valve setting:

Loader operations 19.6 MPa (200 kgf/cm², 2 840 psi)
 Steering 18.1 MPa (185 kgf/cm², 2 630 psi)

HYDRAULIC CYLINDERS

High-strength piston rods and tubes.

Dimensions:

	Q'ty	Bore	Rod dia.
Lift arm	2	125 mm (4.9")	63 mm (2.5")
Bucket	1	140 mm (5.5")	63 mm (2.5")
Steering	2	70 mm (2.8")	40 mm (1.6")

SERVICE REFILL CAPACITIES

	Liter	US gal	Imp gal
Fuel tank	200	52.8	44.0
Engine coolant	26	6.87	5.72
Engine oil	21.5	5.68	4.73
Torque converter & Transmission	9.5	2.51	2.09
Front axle	16	4.23	3.52
Rear axle	16	4.23	3.52
Hydraulic tank	76	20.1	16.7
Hydraulic system	100	26.4	22.0

OPERATING WEIGHT

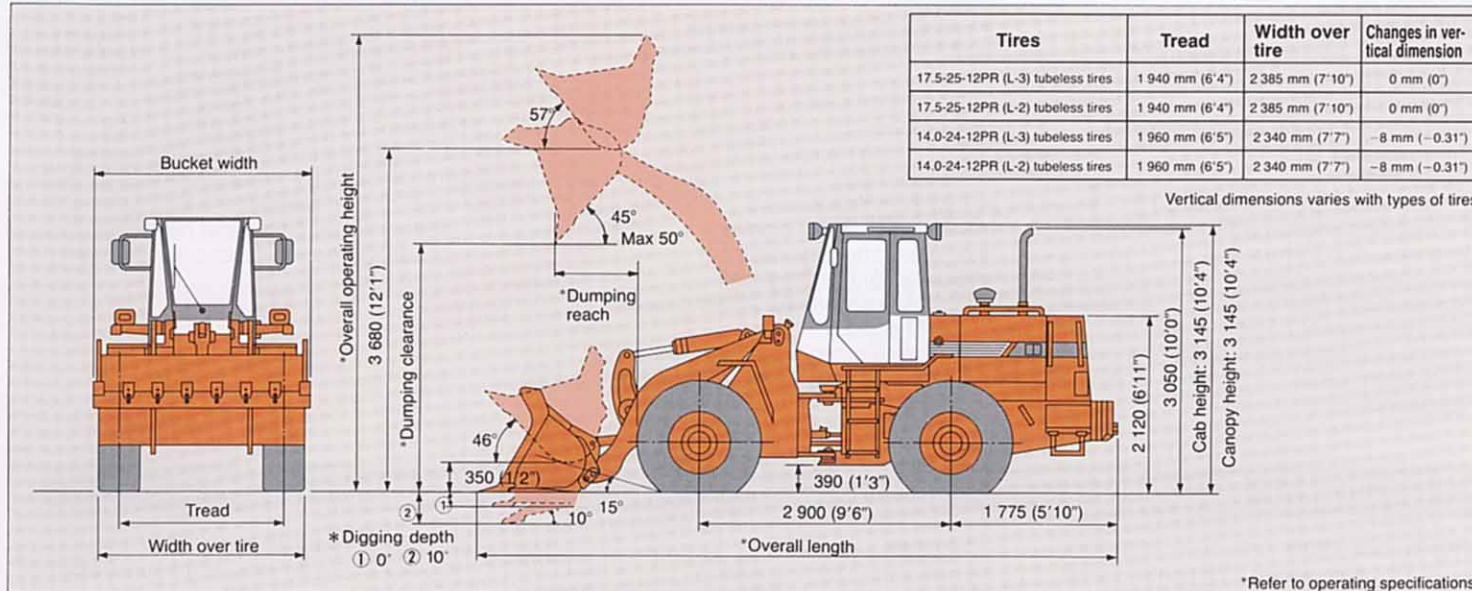
Operating weight: 10 705 kg (23 600 lb), including rated capacity of lubricants, coolant, full fuel tank, 17.5-25-12PR (L-3) tubeless tires, 1.7 m³ (2.22 cu yd) capacity bucket, ROPS canopy, operator and other standard equipment.



DIMENSIONS

Equipped with 17.5-25-12PR (L-3) tubeless tires and 1.7 m³ (2.22 cu yd) bucket

Unit: mm (ft in)



SPECIFICATIONS

Bucket type	Stockpiling		Stockpiling/Excavation	
	With teeth	With Bolt-on cutting edges	With teeth	With Bolt-on cutting edges
Bucket capacity	SAE heaped (2 : 1) 1.9 m ³ (2.49 cu yd)	2.0 m ³ (2.62 cu yd)	1.7 m ³ (2.22 cu yd)	1.8 m ³ (2.35 cu yd)
	Struck 1.62 m ³ (2.12 cu yd)	1.70 m ³ (2.22 cu yd)	1.44 m ³ (1.88 cu yd)	1.52 m ³ (1.99 cu yd)
Dumping clearance at max. height and 45° dump angle	2 610 mm (8'7")	2 675 mm (8'9")	2 660 mm (8'9")	2 730 mm (8'11")
Reach at 2 130 mm (7'0") height and 45° dump angle	1 545 mm (5'1")	1 510 mm (4'11")	1 525 mm (5'0")	1 490 mm (4'11")
Reach at max. height and 45° dump angle	1 195 mm (3'11")	1 125 mm (3'8")	1 145 mm (3'9")	1 040 mm (3'5")
Reach with arm horizontal and bucket level	2 400 mm (7'10")	2 295 mm (7'6")	2 325 mm (7'8")	2 220 mm (7'3")
Digging depth	Bucket horizontal 106 mm (4.2")	131 mm (5.2")	106 mm (4.2")	106 mm (4.2")
	10° digging angle 370 mm (1'3")	340 mm (1'1")	350 mm (1'2")	320 mm (1'1")
Overall operating height	4 940 mm (16'2")	4 940 mm (16'2")	4 900 mm (16'1")	4 900 mm (16'1")
Overall length	Bucket on ground 7 200 mm (23'7")	7 030 mm (23'1")	7 125 mm (23'5")	7 025 mm (23'1")
	Bucket in carry position 7 130 mm (23'5")	6 990 mm (22'11")	7 080 mm (23'3")	7 000 mm (23'0")
Turning radius (outside corner of bucket carry position)	5 760 mm (18'11")	5 745 mm (18'10")	5 740 mm (18'10")	5 710 mm (18'9")
Static tipping load*	Straight 7 640 kg (16 800 lb)	7 580 kg (16 700 lb)	7 670 kg (16 900 lb)	7 610 kg (16 800 lb)
	Full 40° turn 6 560 kg (14 500 lb)	6 500 kg (14 300 lb)	6 590 kg (14 500 lb)	6 530 kg (14 400 lb)
Breakout force	102 kN (10 380 kgf, 22 900 lbf)	94.5 kN (9 640 kgf, 21 300 lbf)	109 kN (11 150 kgf, 24 600 lbf)	101 kN (10 300 kgf, 22 700 lbf)
Operating weight*	10 740 kg (23 680 lb)	10 780 kg (23 770 lb)	10 705 kg (23 600 lb)	10 745 kg (23 690 lb)

Notes: 1. All dimensions, weight and performance data based on SAE J732 FEB80 and J742 FEB85 Standards.

2. Static tipping load and operating weight marked with * include 17.5-25-12PR (L-3) tires (no ballast) with lubricants, coolant, full fuel tank, ROPS canopy and operator. Machine stability and operating weight depend on counterweight, tire size and other attachments. Compensate operating weight and static tipping load with weight changes listed below.

WEIGHT CHANGES

Tires and options	Change in operating weight	Change in tipping load	
		Straight	Full 40° turn
17.5-25-12PR (L-3) tubeless tires	0	0	0
17.5-25-12PR (L-2) tubeless tires	-60 kg (-130 lb)	-40 kg (-90 lb)	-35 kg (-80 lb)
14.0-24-12PR (L-3) tubeless tires	-170 kg (-375 lb)	-115 kg (-255 lb)	-110 kg (-240 lb)
14.0-24-12PR (L-2) tubeless tires	-170 kg (-375 lb)	-115 kg (-255 lb)	-110 kg (-240 lb)
ROPS cab (in lieu of ROPS canopy)	+145 kg (+320 lb)	+140 kg (+310 lb)	+130 kg (+290 lb)
Bucket teeth (removed)	-110 kg (-240 lb)	+130 kg (+285 lb)	+125 kg (+275 lb)
Bolt-on cutting edges (in lieu of bolt-on teeth)	+40 kg (+90 lb)	-45 kg (-100 lb)	-40 kg (-90 lb)
2nd counterweight	+420 kg (+925 lb)	+950 kg (+2 095 lb)	+780 kg (+1 720 lb)

STANDARD EQUIPMENT

Since standard equipment may vary by country, so please consult your Hitachi dealer for details.

- Engine
- Alternator (24 V-50 A)
- Dry type air cleaner (dual element)
- Powershift transmission (4 fwd/3 rev)
- Conventional differentials
- Full hydraulic power steering
- Front and rear fenders
- ROPS canopy
- Front and rear working lights (4)
- Turn signals and hazard lamps
- Rearview side mirrors
- Tilt type steering wheel
- Standard tool kit
- Electric starter (4.5 kW)
- Engine preheater (glow plug)
- Shift-down switch
- Torque converter
- 4-wheel drive system
- Wet disc type service brakes
- 17.5-25-12PR (L-3) tubeless tires
- Horn
- Suspension seat
- Headlights (2)
- Stop and tail lamps (2)
- Drawbar hitch
- 2-spool hydraulic valve
- Automatic lift arm kickout
- Automatic bucket positioner
- Monitoring/alarm system
 - Audible and visible warning system
 - "Stop group"
 - Engine oil pressure, engine coolant temperature, brake pressure, and parking brake.

"Caution group"

Alternator charge, air cleaner clogging, parking brake, engine oil filter clogging, hydraulic oil filter clogging and transmission oil pressure.

○ Gauges and pilot lamps

Engine coolant temperature gauge, transmission oil temperature gauge, fuel level gauge, hourmeter (right console), speedometer, turn signal pilot lamps, headlight pilot lamps and working light pilot lamps.

OPTIONAL EQUIPMENT

- ROPS cab (front and rear windshield washers and wipers, cigarette lighter, astray, floor mat, interior rearview mirror, cab-mounted working lights, heater, defroster and cab pressurizer)
- Air conditioner (factory option) (Not attachable with ROPS canopy)
- Seat belt
- Emergency steering system
- Lockable covers (Not attachable with ROPS cab)
- Backup alarm
- 2nd counterweight (Not applicable with ballasted tires)
- Additional hydraulic equipments
3-spool hydraulic valve kit (3-spool valve, control lever, hoses and pipings)

WORKING EQUIPMENT

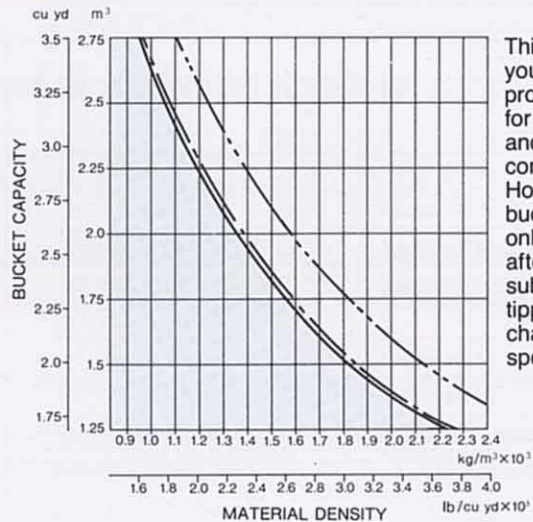
- Bucket (with skid shoes)

Bucket type	Capacity*	Width	Weight
Stockpiling w/bolt-on teeth	1.9 m ³ (2.49 cu yd)	2 460 mm (8'1")	960 kg (2 120 lb)
Stockpiling w/bolt-on cutting edges	2.0 m ³ (2.62 cu yd)	2 460 mm (8'1")	1 000 kg (2 200 lb)
Stockpiling/Excavation w/bolt-on teeth	1.7 m ³ (2.22 cu yd)	2 460 mm (8'1")	924 kg (2 040 lb)
Stockpiling/Excavation w/bolt-on cutting edges	1.8 m ³ (2.35 cu yd)	2 460 mm (8'1")	964 kg (2 130 lb)

*SAE heaped

- Light-duty bucket: 2.3 m³ (3.01 cu yd)
- Multi-purpose bucket: 1.5 m³ (1.96 cu yd)
- Bucket teeth
- Log grapple
- Dumping fork
- Tires: 17.5-25-12PR (L-3) tubeless
17.5-25-12PR (L-2) tubeless
14.0-24-12PR (L-3) tubeless
14.0-24-12PR (L-2) tubeless
- Cutting edges (not applicable with bucket teeth)
- Lumber grapple
- Lumber fork

BUCKET SELECTION GUIDE



This guide will help you in selecting proper bucket size for material density and loader configurations. However, specific bucket size should only be determined after adding or subtracting all the tipping load changes due to specifications.

— : Standard ROPS canopy
 - - - : ROPS cab in lieu of ROPS canopy
 ····· : ROPS cab in lieu of ROPS canopy & 2nd counterweight

These specifications are subject to change without notice. Illustrations may or may not include optional equipment and accessories, and all standard equipment.