

EX40

- Rated engine HP 24.3 kW (33.0 PS)
- Operating weight Canopy: 4 050 kg (8 930 lb)
Cabin: 4 180 kg (9 220 lb)
- Backhoe bucket PCSA heaped: 0.10 — 0.16 m³
(0.13 — 0.21 cu yd)
CECE heaped: 0.09 — 0.14 m³



AUTOMATIC CONTROL OF POWER AND SPEED IS POSSIBLE

- OHS for smooth combined operations.
- Variable displacement pump permitting automatic control of power and speed.
- The maximum speed in this class realized by two-speed travel.
- Light and easily controllable hydraulic pilot-type control lever.
- Low noise design best-suited for work in urban areas.
- Small turning radius suited for narrow space.
- Bucket clearance adjustment device.
- Gate lock lever to be never left unlocked.

ENGINE

Model	Isuzu 4JC1
Type	Water-cooled, 4 cycle, 4 cylinder Direct injection type diesel engine
Rated flywheel	24.3 kW (33.0 PS)
horsepower	at 2 200 rpm
(DIN 6271, net)	
Rated flywheel	24.3 kW (32.5 HP)
horsepower	at 2 200 rpm
(SAE J1349, net)	
Maximum torque	119.6 N·m (12.2 kgf·m, 69.4 lbf·ft)
	at 1 600 rpm
Piston displacement	2.238 l (136.6 cu in)
Bore and stroke	88 mm x 92 mm (3.5" x 3.6")
Batteries	1 x 12 V, 52 AH

HYDRAULIC SYSTEM

OHS (Optimum Hydraulic System)

This system with two variable displacement pumps gives high independence to each actuator for easy and smooth combined operations, such as travel and arm operation, or travel and boom. Here, straight travel can be achieved without swerving.

Main pumps	2-variable displacement axial piston pumps
Maximum oil flow	2 x 46.0 l/min (2 x 12.2 US gpm, 2 x 10.1 Imp gpm)
Pilot pump	1-Gear pump
Maximum oil flow	11.0 l/min. (2.9 US gpm, 2.42 Imp gpm)

Relief Valve Settings

Implement circuit	21.6 MPa (220 kgf/cm ² , 3 128 psi)
Swing circuit	14.7 MPa (150 kgf/cm ² , 2 133 psi)
Travel circuit	21.6 MPa (220 kgf/cm ² , 3 128 psi)
Pilot circuit	3.9 MPa (40 kgf/cm ² , 569 psi)

Hydraulic Cylinders

High-strength piston rods and tubes. Cylinder cushion mechanisms provided in boom, arm and boom swing cylinders to absorb shocks at stroke ends.

Dimensions

	Quan.	Bore	Stroke
Boom	1	90 mm (3.5")	718 mm (2'4")
Arm	1	85 mm (3.3")	675 mm (2'3")
Bucket	1	75 mm (3.0")	550 mm (1'10")
Boom swing	1	85 mm (3.3")	620 mm (2'0")
Blade	1	100 mm (3.9")	150 mm (5'9")

CONTROLS

Pilot controls (for front and swing operations), Light touch and excellent controllability

UPPERSTRUCTURE

Swing Mechanism

High-torque, axial piston motor with planetary reduction gear is bathed in oil. Swing circle is single-row, shear-type ball bearing with induction-hardened internal gear. Internal gear and pinion gear are immersed in lubricant. Swing shockless valve built in swing motor absorbs shocks when stopping swing, ensuring smooth stops. Also counter balanceless system is employed for smooth operation when starting and stopping swing. Swing lock (pin lock type) is provided for transporting.

Swing speed	10.0 min ⁻¹ (10.0 rpm)
Boom swing angle	Canopy Left: 90°, Right: 50° Cabin Left: 90°, Right: 50°

Operator's Cab

(Factory Option)

Independent roomy cab, conforming to ISO* Standards. Reinforced glass windows on all 4 sides for all-round visibility. Front window (upper side), fully openable, are spring-assisted for easy storing in the cab and for absorbing shocks during lowering.

*International Standard Organization

UNDERCARRIAGE

Tracks

Tractor-type undercarriage. Heavy-duty track frame of all welded structure. Top-grade materials employed for heavy-duty operation. Side frames are rigidly welded to the track frame. Rugged track frame and sloped side frames for easy mud removal.

Numbers of Rollers and Shoes on Each Side

Upper roller	1
Lower rollers	5
Track shoes	38

Traction Device

Each track driven by a high-torque, axial piston 2 speed travel motor through planetary reduction gear, allowing counterrotation of the tracks. Travel shockless relief valve built in travel motor absorbs shocks when stopping travel, ensuring smooth stops.

Travel speeds	High: 0 to 4.0 km/h (2.49 mph) Low: 0 to 2.6 km/h (1.62 mph)
Maximum traction force	29.4 kN (3 000 kgf, 6 614 lbf)
Gradeability	30° (58%) continuous

WEIGHTS AND GROUND PRESSURE

Equipped with 2.78 m (9'1") boom, 1.43 m (4'8") arm and 0.15 m³ (0.20 cu yd: PCSA heaped) bucket.

Shoe type	Shoe width	Standard undercarriage	
		Operating weight	Ground pressure
*Triple grouser (canopy) (cabin)	400 mm (16")	4 050 kg (8 930 lb)	23.5 kPa (0.24 kgf/cm ² , 3.41 psi)
	400 mm (16")	4 180 kg (9 220 lb)	24.5 kPa (0.25 kgf/cm ² , 3.56 psi)
*Rubber (canopy) (cabin)	400 mm (16")	4 000 kg (8 820 lb)	22.6 kPa (0.23 kgf/cm ² , 3.27 psi)
	400 mm (16")	4 130 kg (9 110 lb)	23.5 kPa (0.24 kgf/cm ² , 3.41 psi)
Triple grouser (canopy) (cabin)	550 mm (22")	4 230 kg (9 330 lb)	17.7 kPa (0.18 kgf/cm ² , 2.56 psi)
	550 mm (22")	4 360 kg (9 610 lb)	18.6 kPa (0.19 kgf/cm ² , 2.70 psi)
Triangular (canopy) (cabin)	400 mm (16")	4 090 kg (9 020 lb)	23.5 kPa (0.24 kgf/cm ² , 3.41 psi)
	400 mm (16")	4 220 kg (9 310 lb)	24.5 kPa (0.25 kgf/cm ² , 3.56 psi)

*Standard specifications.

SERVICE REFILL CAPACITIES

	liters	US gal	Imp gal
Fuel tank	50	13.2	11.0
Engine coolant	7.5	1.98	1.65
Engine oil	8.0	2.11	1.76
Travel final device (each side)	1.2	0.32	0.26
Hydraulic tank	62	16.4	13.6

Buckets

Capacity m ³ (cu yd)		Width mm (ft in)		No. of teeth	Weight kg (lb)	Recommendation	
		Without side cutters	With side cutters			2.78 m (9'1") boom	
PCSA heaped	CECE heaped					*1.43 m (4'8") arm	1.78 m (5'10") arm
0.10(0.13)	0.09	410(16")	450(18")	3	91(201)	○	○
0.11(0.14)	0.10	460(18")	500(20")	3	95(209)	○	○
*0.15(0.20)	0.13	610(24")	650(26")	4	111(245)	○	□
0.16(0.21)	0.14	660(26")	700(28")	4	117(258)	□	△
A: Arm crowd force B: Bucket digging force						21.6 (2 200, 4 850)	19.6 (2 000, 4 409)
						28.4(2 900, 6 393)	

*Standard specifications

- Suitable for materials with density of 2 000 kg/m³ (3 370 lb/cu yd) or less
- Suitable for materials with density of 1 600 kg/m³ (2 700 lb/cu yd) or less
- △ Suitable for materials with density of 1 100 kg/m³ (1 850 lb/cu yd) or less

CANOPY TYPE

LIFTING CAPACITIES

Side: Rating over-side or 360 degrees

Front: Rating over-front

With dozer blade above ground

Unit: 1 000 kg (lb)

Condition	Load point height m (ft in)	Load radius m (ft in)						At max. reach		
		3 m (9'10")		4 m (13'10")		5 m (16'5")				
		Side	Front	Side	Front	Side	Front	Side	Front	@m (ft in)
Boom: 2.78 m (9'1")	3 (9'10")	*0.77 (1 700)	*0.77 (1 700)	0.66 (1 460)	*0.78 (1 720)			0.42 (930)	0.53 (1 170)	5.17 (17')
	2 (6'7")	1.03 (2 270)	*1.13 (2 490)	0.64 (1 410)	0.80 (1 760)	0.43 (950)	0.54 (1 190)	0.37 (820)	0.46 (1 010)	4.53 (18')
Arm: 1.43 m (4'8")	1 (3'3")	0.94 (2 070)	1.20 (2 650)	0.61 (1 340)	0.77 (1 700)	0.42 (930)	0.53 (1 170)	0.35 (770)	0.45 (990)	5.53 (18'2")
Bucket	0	0.90 (1 980)	1.15 (2 540)	0.58 (1 280)	0.74 (1 630)	0.41 (900)	0.52 (1 150)	0.37 (820)	0.47 (1 040)	5.32 (17'5")
PCSA: 0.15 m ³ (0.2 cu yd)	-1 (-3'3")	0.89 (1 960)	1.15 (2 540)	0.57 (1 260)	0.73 (1 610)			0.44 (970)	0.56 (1 230)	4.81 (15'9")
CECE: 0.13 m ³	-2 (-6'7")	0.91 (2 010)	1.17 (2 580)	0.58 (1 280)	0.74 (1 630)					
Grouser shoe 400 mm (16")										

With dozer blade on ground

Unit: 1 000 kg (lb)

Condition	Load point height m (ft in)	Load radius m (ft in)						At max. reach		
		3 m (9'10")		4 m (13'2")		5 m (16'5")		Side	Front	@m (ft in)
		Side	Front	Side	Front	Side	Front			
Boom: 2.78 m (9'1") Arm: 1.43 m (4'8")	3 (9'10")	*0.77 (1 700)	*0.77 (1 700)	0.66 (1 460)	*0.78 (1 720)			0.42 (930)	*0.74 (1 630)	5.17 (17')
	2 (6'7")	1.03 (2 270)	*1.13 (2 490)	0.64 (1 410)	*0.90 (1 980)	0.43 (950)	0.80 (1 760)	0.37 (820)	*0.75 (1 650)	5.48 (18')
Bucket	1 (3'3")	0.94 (2 070)	*1.67 (3 680)	0.61 (1 340)	*1.08 (2 380)	0.42 (930)	0.85 (1 870)	0.35 (770)	*0.76 (1 680)	5.53 (18'2")
PCSA: 0.15 m ³ (0.2 cu yd)	0 (Ground)	0.90 (1 980)	*1.85 (4 080)	0.58 (1 280)	*1.20 (2 650)	0.41 (900)	0.88 (1 940)	0.37 (820)	*0.77 (1 700)	5.32 (17'5")
CECE: 0.13 m ³	-1 (-3'3")	0.89 (1 960)	*1.69 (3 730)	0.57 (1 260)	*1.16 (2 560)			0.44 (970)	*0.75 (1 650)	4.81 (15'9")
Grouser shoe 400 mm (16")	-2 (-6'7")	0.91 (2 010)	*1.29 (2 840)	0.58 (1 280)	*0.86 (1 900)					

Notes: 1. Rating are based on SAE J1097.

2. Lifting capacity does not exceed 75% of tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.

3. The load point is a hook (not standard equipment) located on the back of the bucket.

4. *Indicates load limited by hydraulic capacity.

CABIN TYPE

LIFTING CAPACITIES

Side: Rating over-side or 360 degrees

Front: Rating over-front

With dozer blade above ground

Unit: 1 000 kg (lb)

Condition	Load point height m (ft in)	Load radius m (ft in)						At max. reach		
		3 m (9'10")		4 m (13'2")		5 m (16'5")				
		Side	Front	Side	Front	Side	Front	Side	Front	@m(ft/in)
Boom: 2.78 m (9'1") Arm: 1.43 m (4'8")	3 (9'10")	*0.77 (1 700)	*0.77 (1 700)	0.70 (1 540)	*0.78 (1 720)			0.44 (970)	0.55 (1 210)	5.17 (17')
	2 (6'7")	1.08 (2 380)	*1.13 (2 490)	0.68 (1 500)	0.84 (1 850)	0.46 (1 010)	0.57 (1 260)	0.39 (860)	0.49 (1 080)	5.48 (18')
	1 (3'3")	0.99 (2 180)	1.26 (2 780)	0.64 (1 410)	0.80 (1 760)	0.44 (970)	0.56 (1 230)	0.38 (840)	0.47 (1 040)	5.53 (18'2")
Bucket PCSA: 0.15 m ³ (0.2 cu yd)	0	0.95 (2 090)	1.21 (2 670)	0.62 (1 370)	0.78 (1 720)	0.43 (950)	0.55 (1 210)	0.39 (860)	0.50 (1 100)	5.32 (17'5")
CECE: 0.13 m ³ Grouser shoe 400 mm (16")	-1 (-3'3")	0.94 (2 070)	1.21 (2 670)	0.61 (1 340)	0.77 (1 700)			0.47 (1 040)	0.59 (1 300)	4.81 (15'9")
	-2 (-6'7")	0.96 (2 120)	1.22 (2 690)	0.62 (1 370)	0.78 (1 720)					

With dozer blade on ground

Unit: 1 000 kg (lb)

Condition	Load point height m (ft in)	Load radius m (ft in)						At max. reach		
		3 m (9'10")		4 m (13'2")		5 m (16'5")				
		Side	Front	Side	Front	Side	Front	Side	Front	@m (ft in)
Boom: 2.78 m (9'1")	3 (9'10")	*0.77 (1 700)	*0.77 (1 700)	0.70 (1 540)	*0.78 (1 720)			0.44 (970)	*0.74 (1 630)	5.17 (17')
	2 (6'7")	1.08 (2 380)	*1.13 (2 490)	0.68 (1 500)	*0.90 (1 980)	0.46 (1 010)	*0.80 (1 760)	0.39 (860)	*0.75 (1 650)	5.48 (18')
Arm: 1.43 m (4'8")	1 (3'3")	0.99 (2 180)	*1.67 (3 680)	0.64 (1 410)	*1.08 (2 380)	0.44 (970)	*0.85 (1 870)	0.38 (840)	0.76 (1 680)	5.53 (18'2")
Bucket	0 (Ground)	0.95 (2 090)	*1.85 (4 080)	0.62 (1 370)	*1.20 (2 650)	0.43 (950)	*0.88 (1 940)	0.39 (860)	0.77 (1 700)	5.32 (17'5")
PCSA: 0.15 m ³ (0.2 cu yd)	-1 (-3'3")	0.94 (2 070)	*1.69 (3 730)	0.61 (1 340)	*1.16 (2 560)			0.47 (1 040)	0.75 (1 650)	4.81 (15'9")
CECE: 0.13 m ³	-2 (-6'7")	0.96 (2 120)	*1.29 (2 840)	0.62 (1 370)	*0.86 (1 900)					
Grouser shoe 400 mm (16")										

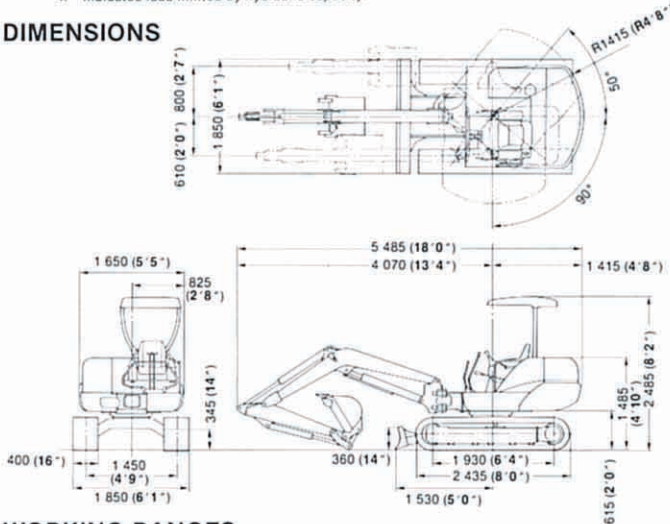
Notes: 1. Rating are based on SAE J1097.

2. Lifting capacity does not exceed 75% of tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.

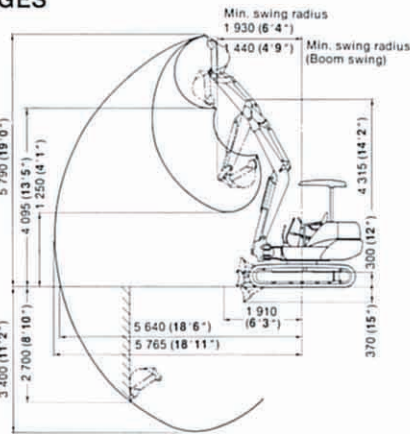
3. The load point is a hook (not standard equipment) located on the back of the bucket.

4. *Indicates load limited by hydraulic capacity.

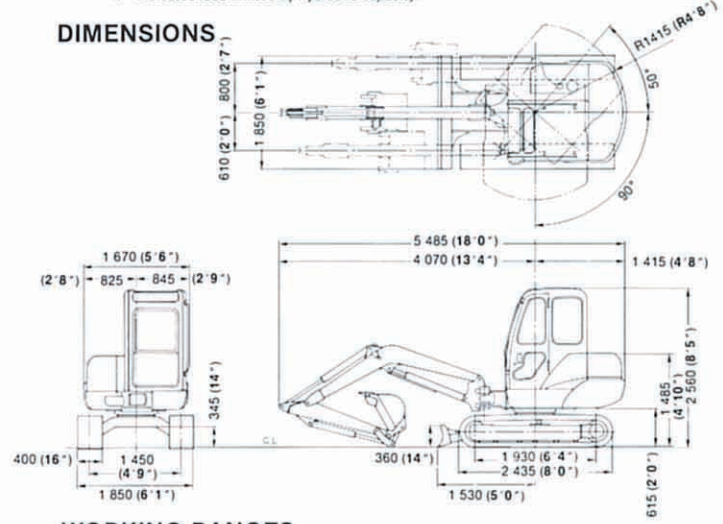
DIMENSIONS



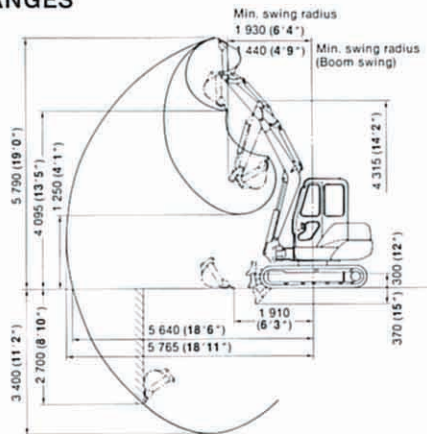
WORKING RANGES

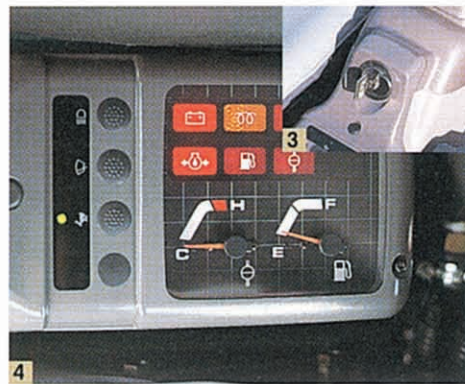


DIMENSIONS



WORKING RANGES





1 Fail-safe gate lock lever

With the fail-safe gate lock levers, the control levers can be locked without fail, allowing access to the operator's seat.

1 Hydraulic pilot control levers

Front and swing control levers are hydraulically pilot-controlled for light and comfortable operation. What's more, ergonomically designed lever grip enhances operating ease and comfort.

2 Body protector weight

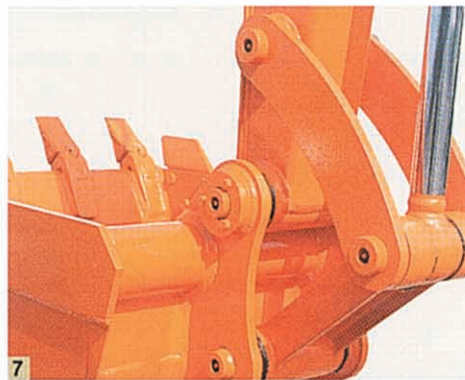
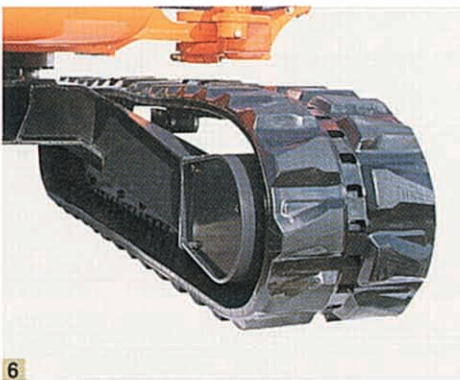
The body is protected from damage from external shock during operation.

3 Car-like engine key stop

With the adoption of stop motor, an engine may be stopped only by turning the key off. Moreover the engine hood or fuel cap can be locked and unlocked with the engine key.

4 Easy-to-read monitor panel

With the monitor panel, the operator can check machine conditions at a glance from his seat.



5 Easy engine access

The engine cover opens completely to allow easy access during engine maintenance.

6 Compact traction mechanism

Compact yet sturdy travel mechanism, with travel piping provided within track frame.

7 Bucket clearance adjust mechanism

It can easily eliminate loose movement of the bucket by merely replacing the shim. O-ring seal is provided at the pin, located at the arm top, to seal out dirt, extending lubricating intervals.

These specifications are subject to change without notice.

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