

ENGINE

Model Isuzu CC-6BG1T
 Type 4-cycle water-cooled, direct injection
 Aspiration Turbocharged, intercooled
 No. of cylinders 6
 Rated power
 DIN 6271, net H/P mode : 132 kW (180 PS) at 2 150 min⁻¹ (rpm)
 P mode : 125 kW (170 PS) at 2 050 min⁻¹ (rpm)
 SAE J1349, net H/P mode : 129 kW (173 hp) at 2 150 min⁻¹ (rpm)
 P mode : 123 kW (165 hp) at 2 050 min⁻¹ (rpm)
 Maximum torque 637 N·m (65 kgf·m, 470 lbf·ft)
 at 1 800 min⁻¹ (rpm)
 Piston Displacement 6.494 L (396 in³)
 Bore and stroke 105 mm x 125 mm (4.13" x 4.92")
 Batteries 2 x 12 V / 97 AH
 Governor Mechanical speed control with stepping motor

HYDRAULIC SYSTEM

- Work mode selector
 Digging mode / Attachment mode
- Engine speed sensing system

Main pumps 2 variable displacement axial piston pumps
 Maximum oil flow 2 x 209 L/min (55.2 US gpm, 46.0 Imp gpm)
 Pilot pump 1 gear pump
 Max. oil flow 34 L/min. (9.0 US gpm, 7.5 Imp gpm)

Hydraulic Motors
 Travel 2 variable displacement axial piston motors
 Swing 1 axial piston motor

Relief Valve Settings
 Implement circuit 34.3 MPa (350 kgf/cm², 4 980 psi)
 Swing circuit 27.7 MPa (282 kgf/cm², 4 010 psi)
 Travel circuit 34.8 MPa (355 kgf/cm², 5 050 psi)
 Pilot circuit 3.9 MPa (40 kgf/cm², 570 psi)
 Power boost 36.3 MPa (370 kgf/cm², 5 260 psi)

Hydraulic Cylinders
 High-strength piston rods and tubes. Cylinder cushion mechanisms provided in boom and arm cylinders to absorb shock at stroke ends.

Dimensions			
	Qty.	Bore	Rod diameter
Boom	2	135 mm (5.31")	95 mm (3.74")
Arm	1	145 mm (5.71")	100 mm (3.94")
Bucket	1	135 mm (5.31")	90 mm (3.54")

Hydraulic Filters
 Hydraulic circuits use high-quality hydraulic filters. A suction filter is incorporated in the suction line, and full-flow filters in the return line and swing/travel motor drain lines.

CONTROLS

Pilot controls. Hitachi's original shockless valve and quick warm-up system built in the pilot circuit. Hydraulic warm-up control system for engine and hydraulic oil.
 Implement levers 2
 Travel levers with pedals 2

UPPERSTRUCTURE

Revolving Frame
 Welded sturdy box construction, using heavy-gauge steel plates for ruggedness. D-section frame for resistance to deformation.

Swing Mechanism
 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 parking brake is spring-set/hydraulic-released disc type.
 Swing speed 10.6 min⁻¹ (rpm)

Operator's Cab
 Independent roomy cab, 1 005 mm (40") wide by 1 675 mm (66") high, conforming to ISO Standards. Reinforced glass windows on 4 sides for visibility. Openable front windows (upper and lower). Adjustable, reclining seat with armrests; movable with or without control levers.
 * International Standardization Organization

UNDERCARRIAGE

Tracks
 Tractor-type undercarriage. Welded track frame using selected materials. Side frame welded to track frame. Lubricated track rollers, idlers, and sprockets with floating seals.
 Track shoes with triple grousers made of induction-hardened rolled alloy. Flat shoes are also available. Heat-treated connecting pins with dirt seals. Hydraulic (grease) track adjusters with shock-absorbing recoil springs.


Numbers of Rollers and Shoes on Each Side
 Upper rollers 2
 Lower rollers 8 : ZAXIS270
 9 : ZAXIS270LC
 Track shoes 45 : ZAXIS270
 48 : ZAXIS270LC
 Track guard 1

Traction Device
 Each track driven by 2-speed axial piston motor through planetary reduction gear for counterrotation of the tracks. Sprockets are replaceable. Parking brake is spring-set/hydraulic-released disc type. Travel shockless relief valve built in travel motor absorbs shocks when stopping travel. Automatic transmission system: High-Low.
 Travel speeds High: 0 to 4.9 km/h (3.0 mph)
 Low: 0 to 2.9 km/h (1.8 mph)
 Maximum traction force 246 kN (25 100 kgf, 55 300 lbf)
 Gradeability 35° (70%) continuous

WEIGHTS AND GROUND PRESSURE

Equipped with 6.00 m (19'8") boom, 3.10 m (10'2") arm and 1.10 m³ (1.44 yd³: SAE, PCSA heaped) bucket.

Shoe type	Shoe width	Operating weight	Ground pressure
Triple grouser	600 mm (24")	27 000 kg (59 500 lb)	55 kPa (0.56 kgf/cm ² , 7.96 psi)
		27 500 kg (60 600 lb)	52 kPa (0.53 kgf/cm ² , 7.54 psi)
	700 mm (28")	27 600 kg (60 800 lb)	48 kPa (0.49 kgf/cm ² , 6.97 psi)
Flat	600 mm (24")	28 100 kg (61 900 lb)	45 kPa (0.46 kgf/cm ² , 6.54 psi)
		28 000 kg (61 700 lb)	42 kPa (0.43 kgf/cm ² , 6.11 psi)
Flat	600 mm (24")	28 500 kg (62 800 lb)	40 kPa (0.41 kgf/cm ² , 5.83 psi)
		27 900 kg (61 500 lb)	56 kPa (0.57 kgf/cm ² , 8.11 psi)
	28 500 kg (62 800 lb)	53 kPa (0.54 kgf/cm ² , 7.68 psi)	

Figures in  are data on the ZAXIS270LC.
 Weights of the basic machines [including 6 100 kg (13 400 lb) counterweight and triple grouser shoes, excluding front-end attachment, fuel, hydraulic oil, engine oil and coolant etc.] are:
 ZAXIS270 21 100 kg (46 500 lb) with 600 mm (24") shoes
 ZAXIS270LC 21 600 kg (47 600 lb) with 600 mm (24") shoes

Capacity		Width		No. of teeth	Weight	Recommendation					
SAE, PCSA heaped	CECE heaped	Without side cutters	With side cutters			ZAXIS270			ZAXIS270LC		
						2.40 m (7'10") arm	3.10 m (10'2") arm	3.75 m (12'4") arm	2.40 m (7'10") arm	3.10 m (10'2") arm	3.75 m (12'4") arm
1.00 m ³ (1.31 yd ³)	0.90 m ³	1 160 mm (3'10")	1 290 mm (4'3")	5	870 kg (1 920 lb)	○	○	○	○	○	○
1.10 m ³ (1.44 yd ³)	1.00 m ³	1 220 mm (4'0")	1 340 mm (4'5")	5	930 kg (2 050 lb)	○	○	○	○	○	○
1.39 m ³ (1.82 yd ³)	1.20 m ³	1 440 mm (4'9")	1 560 mm (5'1")	5	1 030 kg (2 270 lb)	○	○	—	○	○	□
1.62 m ³ (2.12 yd ³)	1.40 m ³	1 640 mm (5'5")	—	5	1 030 kg (2 270 lb)	□	□	—	□	□	—
*1 1.10 m ³ (1.44 yd ³)	1.00 m ³	1 220 mm (4'0")	1 340 mm (4'5")	5	1 070 kg (2 360 lb)	○	○	○	○	○	○
*1 1.39 m ³ (1.82 yd ³)	1.20 m ³	1 440 mm (4'9")	1 560 mm (5'1")	5	1 190 kg (2 620 lb)	○	○	—	○	○	□
*2 0.92 m ³ (1.20 yd ³)	0.80 m ³	1 160 mm (3'10")	1 210 mm (4'0")	5	1 000 kg (2 200 lb)	●	●	○	●	●	○
*3 0.80 m ³ (1.05 yd ³)	0.70 m ³	1 000 mm (3'3")	—	3	1 220 kg (2 690 lb)	●	●	—	●	●	—
One-point ripper				1	680 kg (1 500 lb)	●	●	—	●	●	—
Clamshell bucket: 0.80 m ³ (1.05 yd ³ : CECE heaped), Width 975 mm (3'2")				9	1 360 kg (3 000 lb)	○	○	—	○	○	—

- *1 Reinforced bucket
- *2 Rock bucket
- *3 Ripper bucket
- Suitable for materials with density of 1 800 kg/m³ (3 030 lb/yd³) or less
- Suitable for materials with density of 1 600 kg/m³ (2 700 lb/yd³) or less
- Suitable for materials with density of 1 100 kg/m³ (1 850 lb/yd³) or less
- Heavy-duty service
- Not applicable

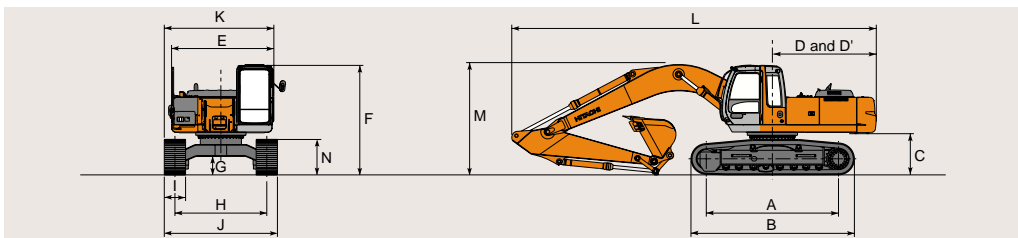
SERVICE REFILL CAPACITIES

	liters	US gal	Imp gal
Fuel tank	380.0	100.0	83.6
Engine coolant	23.0	6.1	5.1
Engine oil	25.0	6.6	5.5
Swing mechanism	17	4.5	3.7
Travel final device (each side)	9.2	2.4	2.0
Hydraulic system	307.0	81.1	67.5
Hydraulic tank	148.0	39.1	32.6

BACKHOE ATTACHMENTS

Boom and arms are of welded, box-section design. 6.00 m (19'8") boom, and 2.40 m (7'10"), 3.10 m (10'2") and 3.75 m (12'4") arms are available. Bucket is of welded steel structure. Side clearance adjust mechanism provided on the bucket joint bracket.

DIMENSIONS

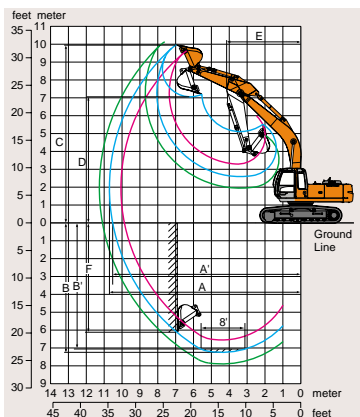


Unit: mm (ft in)

	ZAXIS270	ZAXIS270LC
A Distance between tumblers	3 730 (12'3")	4 050 (13'3")
B Undercarriage length	4 640 (15'3")	4 940 (16'2")
*C Counterweight clearance	1 180 (3'10")	1 180 (3'10")
D Rear-end swing radius	2 940 (9'8")	2 940 (9'8")
D' Rear-end length	2 930 (9'7")	2 930 (9'7")
E Overall width of upperstructure	2 890 (9'6")	2 890 (9'6")
F Overall height of cab	3 110 (10'2")	3 110 (10'2")
*G Min. ground clearance	510 (1'8")	510 (1'8")
H Track gauge	2 590 (8'6")	2 590 (8'6")
I Track shoe width	G 600 (24")	G 600 (24")
J Undercarriage width	3 190 (10'6")	3 190 (10'6")
K Overall width	3 190 (10'6")	3 190 (10'6")
L Overall length		
With 2.40 m (7'10") arm	10 370 (34'0")	10 370 (34'0")
With 3.10 m (10'2") arm	10 290 (33'9")	10 290 (33'9")
With 3.75 m (12'4") arm	10 340 (33'11")	10 340 (33'11")
M Overall height of boom		
With 2.40 m (7'10") arm	3 420 (11'3")	3 420 (11'3")
With 3.10 m (10'2") arm	3 170 (10'5")	3 170 (10'5")
With 3.75 m (12'4") arm	3 350 (11'0")	3 350 (11'0")
N Track height		
With triple grouser shoes	1 000 (3'3")	1 000 (3'3")

* Excluding track shoe lug. G: Triple grouser shoe

WORKING RANGES

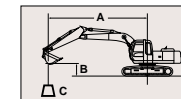


Unit: mm (ft in)

Arm length	ZAXIS270 / ZAXIS270LC			
	2.40 m (7'10")	3.10 m (10'2")	3.75 m (12'4")	
A Max. digging reach	10 060 (33'0")	10 710 (35'2")	11 270 (37'0")	
A' Max. digging reach (on ground)	9 860 (32'4")	10 520 (34'6")	11 090 (36'5")	
B Max. digging depth	6 540 (21'5")	7 230 (23'9")	7 880 (25'10")	
B' Max. digging depth (8' level)	6 320 (20'9")	7 050 (23'2")	7 720 (25'4")	
C Max. cutting height	9 640 (31'8")	9 980 (32'9")	10 150 (33'4")	
D Max. dumping height	6 750 (22'2")	7 070 (23'2")	7 250 (23'9")	
E Min. swing radius	4 310 (14'2")	4 410 (13'7")	4 120 (13'6")	
F Max. vertical wall	5 280 (17'4")	6 110 (20'1")	6 660 (21'10")	
Bucket digging force*	193 kN (19 700 kgf, 43 400 lbf)			
	167 kN (17 000 kgf, 37 500 lbf)			
Arm crowd force*	ISO	153 kN (15 600 kgf, 34 400 lbf)	121 kN (12 300 kgf, 27 100 lbf)	105 kN (10 800 kgf, 23 800 lbf)
	SAE : PCSA	147 kN (15 000 kgf, 33 100 lbf)	116 kN (11 800 kgf, 26 000 lbf)	102 kN (10 400 kgf, 22 900 lbf)

Excluding track shoe lug * At power boost

METRIC MEASURE



A: Load radius
B: Load point height
C: Lifting capacity

Rating over-side or 360 degrees Rating over-front Unit: 1 000 kg

ZAXIS270

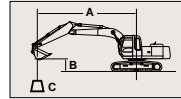
Conditions	Load point height	Load radius										At max. reach			
		4 m	5 m	6 m	7 m	8 m	9 m	10 m	meter	meter	meter				
Arm 2.40 m	6 m					*5.24	*5.24					3.43	*4.04	8 944	
Bucket	4 m			*7.77	*7.77	*6.64	*6.64	5.15	*6.01	4.07	*5.68		2.90	*4.12	9 569
SAE, PCSA :	2 m					6.07	*8.65	4.79	7.20	3.85	5.80	3.13	4.76		9 681
1.10 m ³	0 (Ground)			7.54	11.9	5.72	8.82	4.53	6.91	3.67	5.61		2.88	4.43	9 302
CECE : 1.00 m ³	- 2 m	*11.0	*11.0	7.55	11.9	5.65	8.74	4.45	6.83	3.63	5.56		3.46	5.28	8 353
Shoe 600 mm	- 4 m	11.3	*12.9	7.75	*10.9	5.80	8.91	4.61	7.00						

Conditions	Load point height	Load radius										At max. reach					
		4 m	5 m	6 m	7 m	8 m	9 m	10 m	meter	meter	meter						
Arm 3.10 m	6 m									4.28	*4.42			*2.40	*2.40	9 647	
Bucket	4 m					*5.78	*5.78	5.24	*5.34	4.13	*5.08	3.29	*4.41		*2.45	*2.45	10 222
SAE, PCSA :	2 m			8.18	*9.96	6.19	*7.89	4.85	*6.71	3.88	5.83	3.14	4.77		2.41	*2.66	10 326
1.10 m ³	0 (Ground)			7.58	12.0	5.74	8.86	4.53	6.93	3.66	5.60	3.00	4.62		2.51	*3.05	9 975
CECE : 1.00 m ³	- 2 m	10.8	*12.4	7.45	11.8	5.58	8.68	4.39	6.77	3.56	5.49	2.95	4.57		2.93	*3.81	9 109
Shoe 600 mm	- 4 m	11.1	*14.2	7.58	*11.6	5.65	8.76	4.44	6.83						4.15	*5.48	7 512

Conditions	Load point height	Load radius										At max. reach						
		4 m	5 m	6 m	7 m	8 m	9 m	10 m	meter	meter	meter							
Arm 3.75 m	6 m									*3.95	*3.95	*2.78	*2.78		*1.90	*1.90	10 254	
Bucket	4 m							*4.68	*4.68	4.20	*4.53	3.34	*4.32		*1.95	*1.95	10 793	
SAE, PCSA :	2 m	11.9	*12.1	8.45	*8.78	6.34	*7.11	4.93	*6.13	3.92	*5.51	3.16	4.80	2.56	*3.55	*2.12	10 890	
1.10 m ³	0 (Ground)	*7.50	*7.50	7.66	*11.5	5.80	8.92	4.55	6.96	3.66	5.61	2.98	4.61	2.46	*3.74	2.22	*2.46	10 561
CECE : 1.00 m ³	- 2 m	10.7	*11.8	7.40	11.8	5.55	8.65	4.35	6.74	3.51	5.44	2.89	4.51		2.55	*3.08	9 756	
Shoe 600 mm	- 4 m	10.9	*15.0	7.44	11.8	5.54	8.64	4.34	6.73	3.52	5.45				3.42	*4.39	8 309	
	- 6 m	11.3	*12.0	7.75	*9.82	5.79	*8.01											

- Notes: 1. Ratings are based on SAE J1097.
2. Lifting capacity of the ZAXIS Series does not exceed 75% of tipping load with the machine on firm, level ground or 87% 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.

METRIC MEASURE



A: Load radius
B: Load point height
C: Lifting capacity

ZAXIS270LC

Rating over-side or 360 degrees Rating over-front Unit: 1 000 kg

Conditions	Load point height	Load radius												At max. reach				
		4 m		5 m		6 m		7 m		8 m		9 m		10 m		meter		
Arm 2.40 m Bucket SAE, PCSA : 1.10 m ³ CECE : 1.00 m ³ Shoe 600 mm	6 m							*5.24	*5.24							3.51	*4.04	8 944
	4 m			*7.77	*7.77	*6.64	*6.64	5.26	*6.01	4.16	*5.68					2.98	*4.12	9 569
	2 m					6.20	*8.65	4.90	*7.28	3.94	*6.45	3.21	5.48			2.82	*4.44	9 681
	0 (Ground)			7.71	*12.6	5.85	*9.98	4.64	7.99	3.77	6.47					2.96	*5.07	9 302
	-2 m	*11.0	*11.0	7.72	*12.3	5.78	10.2	4.56	7.91	3.72	6.42					3.55	6.08	8 353
	-4 m	11.5	*12.9	7.92	*10.9	5.93	*9.06	4.72	*7.40									

Conditions	Load point height	Load radius												At max. reach					
		4 m		5 m		6 m		7 m		8 m		9 m		10 m		meter			
Arm 3.10 m Bucket SAE, PCSA : 1.10 m ³ CECE : 1.00 m ³ Shoe 600 mm	6 m									4.37	*4.42					*2.40	*2.40	9 647	
	4 m					*5.78	*5.78	*5.34	*5.34	4.22	*5.08	3.37	*4.41			*2.45	*2.45	10 222	
	2 m			8.35	*9.96	6.33	*7.89	4.96	*6.71	3.97	*5.98	3.22	5.49			2.48	*2.66	10 326	
	0 (Ground)					7.75	*12.1	5.88	*9.55	4.64	*7.92	3.75	6.46	3.08	5.34		2.58	*3.05	9 975
	-2 m	11.1	*12.4	7.62	*12.5	5.72	10.1	4.50	7.85	3.65	6.35	3.03	*4.86			3.01	*3.81	9 109	
	-4 m	11.3	*14.2	7.75	*11.6	5.79	*9.58	4.56	7.91							4.25	*5.48	7 512	

Conditions	Load point height	Load radius												At max. reach				
		4 m		5 m		6 m		7 m		8 m		9 m		10 m		meter		
Arm 3.75 m Bucket SAE, PCSA : 1.10 m ³ CECE : 1.00 m ³ Shoe 600 mm	6 m									*3.95	*3.95	*2.78	*2.78			*1.90	*1.90	10 254
	4 m							*4.68	*4.68	4.29	*4.53	3.42	*4.32			*1.95	*1.95	10 793
	2 m	*12.1	*12.1	8.62	*8.78	6.47	*7.11	5.04	*6.13	4.01	*5.51	3.24	*5.10	2.64	*3.55	*2.12	*2.12	10 890
	0 (Ground)	*7.50	*7.50	7.83	*11.5	5.93	*9.04	4.67	*7.51	3.75	6.47	3.07	5.33	2.53	*3.74	2.29	*2.46	10 561
	-2 m	10.9	*11.8	7.57	*12.4	5.68	*10.0	4.46	7.82	3.60	6.31	2.97	5.22			2.62	*3.08	9 756
	-4 m	11.1	*15.0	7.61	*12.0	5.68	*9.85	4.45	7.80	3.61	6.31					3.51	*4.39	8 309
	-6 m	11.5	*12.0	7.92	*9.82	5.93	*8.01											

Notes: 1. Ratings are based on SAE J1097.
2. Lifting capacity of the ZAXIS Series does not exceed 75% of tipping load with the machine on firm, level ground or 87% 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.

STANDARD EQUIPMENT

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

ENGINE

- H/P mode control
- E mode control
- 50 A alternator
- Dry-type air filter with evacuator valve (with safety element)
- Cartridge-type engine oil filter
- Cartridge-type fuel filter
- Air cleaner double filters
- Radiator and oil cooler with dust protective net
- Radiator reserve tank
- Fan guard
- Isolation-mounted engine
- Auto-idle system
- Auto acceleration system

CAB

- CRES (Center pillar Reinforced Structure) cab
- OPG top guard fitted level I (ISO) compliant cab.
- All-weather sound-suppressed steel cab
- Reinforced, tinted (bronze color) glass windows
- 4 fluid-filled elastic mounts
- Openable front windows-upper, and lower and left side windows
- Intermittent windshield retractable wipers
- Front window washer
- Adjustable reclining seat with adjustable armrests
- Footrest
- Electric double horn
- AM - FM radio with digital clock
- Auto-idle / acceleration selector
- Seat belt
- Drink holder
- Cigar lighter
- Ashtray
- Storage box
- Glove compartment
- Floor mat
- Heater
- Pilot control shut-off lever
- Engine stop knob

HYDRAULIC SYSTEM

- Work mode selector
- Engine speed sensing system
- E-P control system
- Power boost
- Auto power lift
- Quick warm-up system for pilot circuit
- Shockless valve in pilot circuit
- Boom-arm anti-drift valve
- Control valve with main relief valve
- Extra port for control valve
- Suction filter
- Full-flow filter
- Pilot filter

MONITOR SYSTEM

- Meters:
Hourmeter and trip-meter, engine coolant temperature gauge and fuel gauge.
- Warning lamps:
Alternator charge, engine oil pressure, engine overheat, air filter restriction and minimum fuel level.
- Pilot lamps:
Engine preheat, work light, auto-idle, auto-acceleration, digging mode and attachment mode
- Alarm buzzers:
Engine oil pressure and engine overheat

LIGHTS

- 2 working lights

UPPERSTRUCTURE

- Undercover
- 6 100 kg (13 400 lb) counterweight
- Fuel level float
- Hydraulic oil level gauge
- Tool box
- Utility space
- Rearview mirror (right & left side)
- Swing parking brake

UNDERCARRIAGE

- Travel parking brake
- Travel motor covers
- Track guards and hydraulic track adjuster
- Bolt-on sprocket
- Upper rollers and lower rollers
- Reinforced track links with pin seals
- 600 mm (24") triple grouser shoes

FRONT ATTACHMENTS

- HN bushing
- WC thermal spraying
- Reinforced resin thrust plate
- Flanged pin
- Bucket clearance adjust mechanism
- Monolithically cast bucket link A
- Centralized lubrication system
- Dirt seal on all bucket pins
- 3.10 m (10'2") arm
- 1.10 m³ (1.44 yd³) : SAE, PCSA heaped) bucket

MISCELLANEOUS

- Standard tool kit
- Lockable machine covers
- Lockable fuel filling cap
- Skid-resistant tapes, plates and handrails.
- Travel direction mark on track frame

OPTIONAL EQUIPMENT

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

- Auto control air conditioner
- Suspension seat
- Hose rupture valves
- Electric fuel refilling pump
- Swing motion alarm device with lamps
- Travel motion alarm device
- Additional pump
- Transparent roof
- Auto-lubrication system
- Pre-cleaner
- Fuel double filters
- Tropical cover
- Large-capacity battery
- Attachment basic piping
- Accessories for breaker
- Accessories for breaker & crusher
- Accessories for 2 speed selector
- 400 kg (880 lb) added heavier counterweight
- Front glass lower guard
- Front glass upper guard
- Track guard (3 units each side)
- Full track guard
- Additional light (on the top of Cab)
- Rear light