ENGINE

Model ..... Hino H06CTi
Type ..... 4-cycle water-cooled, direct injection
Aspiration ..... Turbocharged
No. of cylinders 6
Rated flywheel horsepower (DIN 6271, net) ..... 121 kW (165 PS) at 2 100 min^{-1} (rpm)
Rated flywheel horsepower (SAE J1349, net) ..... 120 kW (161 HP) at 2 100 min^{-1} (rpm)
Maximum torque ..... 588 N.m (60 kgf.m, 434 lbf.ft) at 1 600 min^{-1} (rpm)
Piston displacement ..... 6.485 L (396 in^3)
Bore and stroke ..... 108 mm × 113 mm (4.3" × 4.4")
Batteries ..... 2 × 12 V, 120 AH

HYDRAULIC SYSTEM

Hitachi's ETS (Electronic Total control System) designed for higher job efficiency with less fuel consumption/noise.

- E-P Control (Computer aided Engine-Pump Control system)
- OHS (Optimum Hydraulic System) assures fully independent and combined operations.
- FPS (Fuel-saving Pump System)
- Auto-idling system
- High-pressure 2-speed travel system for high traction force and travel speed

Main pumps ..... 2 variable displacement axial piston pumps
Maximum oil flow ..... 2 × 262 L/min (69.2 US gpm, 57.6 Imp gpm)
Pilot pump ..... 1 gear pump
Maximum oil flow ..... 35.3 L/min (9.3 US gpm, 7.8 Imp gpm)

Hydraulic Motors

Travel ..... 2 axial piston motors with parking brake
Swing ..... 1 axial piston motor

Relief Valve Settings

Implement circuit ..... 27.9 MPa (285 kgf/cm^2, 4 050 psi)
Swing circuit ..... 27.9 MPa (285 kgf/cm^2, 4 050 psi)
Travel circuit ..... 34.3 MPa (350 kgf/cm^2, 4 980 psi)
Pilot circuit ..... 3.9 MPa (40 kgf/cm^2, 570 psi)

Hydraulic Cylinders

Cylinder cushion mechanisms are provided for all cylinders to absorb shock when pistons reach their stroke ends.

Dimensions

	Qty	Bore	Rod diameter
Boom	2	145 mm (5.71")	95 mm (3.74")
Arm	1	150 mm (5.91")	105 mm (4.13")
Bucket	1	145 mm (5.71")	95 mm (3.74")

Hydraulic Filters

All hydraulic circuits use hydraulic filters. A suction filter is built in suction line, and 10 μm full-flow filters in return circuit and swing/travel motor drain lines.

CONTROLS

Pilot controls for all functions. Hitachi original shockless valve and quick warm-up system built in the pilot circuit. Multi rotary pilot control valve is optionally available for selection of control lever direction.

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 ..... 12.0 min^{-1} (rpm)

Operator's Cab

Independent roomy cab, 940 mm (37") wide by 1 620 mm (64") high, conforming to ISO* Standards. Reinforced glass windows on 4 sides for excellent visibility. Front windows (upper and lower) are openable and storable in the cab. Adjustable, reclining seat with armrests. Right and left control levers can be tilted fore and aft.

* International Standard Organization

UNDERCARRIAGE

Tracks

Tractor-type undercarriage. Welded track frame, using carefully selected materials for tough jobs. 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. Triangular shoes 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: EX270
9: EX270LC
Track shoes 47: EX270
50: EX270LC
Track guard 1

Traction Device

Each track driven by axial piston motor through reduction gears for counter-rotation of the tracks. Sprockets are replaceable. Parking brake is spring-set/hydraulic-released disc type.

Travel speed ..... High: 0 to 4.6 km/h (2.9 mph)
Low: 0 to 3.7 km/h (2.3 mph)
Maximum traction force ..... 196 kN (20 000 kgf, 44 000 lbf)
Gradeability ..... 35° (70%) continuous

WEIGHTS AND GROUND PRESSURE

Backhoe

Equipped with 6.20 m (20'4") boom, 3.10 m (10'2") arm and 1.15 m^3 (1.50 yd^3: PCSA heaped) bucket.

Shoe type	Shoe width	Operating weight	Ground pressure
Triple grouser	600 mm (24")	26 000 kg (57 300 lb)	53.0 kPa (0.54 kgf/cm^2, 7.68 psi)
		26 700 kg (58 800 lb)	50.0 kPa (0.51 kgf/cm^2, 7.25 psi)
	800 mm (31")	26 800 kg (59 000 lb)	41.2 kPa (0.42 kgf/cm^2, 5.97 psi)
		27 500 kg (60 600 lb)	38.2 kPa (0.39 kgf/cm^2, 5.55 pai)
Triangular	910 mm (36")	27 300 kg (60 200 lb)	37.3 kPa (0.38 kgf/cm^2, 5.40 psi)
		28 000 kg (61 700 lb)	34.3 kPa (0.35 kgf/cm^2, 4.98 psi)

Figures in ▭ are data on the EX270LC.

Note: Depending on the jobsite conditions, 800 mm (31") grouser shoe, and 910 mm (36") triangular shoes may not be recommended for rock, hard surface or forestry application.

Loading shovel

Equipped with 1.8 m^3 (2.35 yd^3) bottom dump bucket

Shoe type	Shoe width	Operating weight	Ground pressure
Triple grouser	600 mm (24")	27 600 kg (60 800 lb)	55.9 kPa (0.57 kgf/cm^2, 8.11 psi)

Equipped with 2.0 m^3 (2.62 yd^3) tilt dump bucket

Shoe type	Shoe width	Operating weight	Ground pressure
Triple grouser	600 mm (24")	26 700 kg (58 700 lb)	54.9 kPa (0.56 kgf/cm^2, 8.0 psi)

Operating weight implies total weight of the basic machine plus 5 400 kg (11 900 lb) counterweight and triple grouser shoes, excluding front-end attachement.

EX270 ..... 21 000 kg (46 300 lb) with 600 mm (24") shoes

EX270LC ..... 22 500 kg (49 600 lb) with 800 mm (31") shoes

SERVICE REFILL CAPACITIES

	liters	US gal	Imp gal
Fuel tank	310.0	81.9	68.2
Engine coolant	29.0	7.7	6.4
Engine oil	27.0	7.1	5.9
Pump drive	0.8	0.2	0.2
Swing mechanism	10.0	2.6	2.2
Travel final device (each side)	7.5	2.0	1.7
Hydraulic system	300.0	79.3	66.0
Hydraulic tank	142.0	37.5	31.2

BACKHOE ATTACHMENTS

Boom and arms are of all-welded, low-stress, full-box section design. 6.20 m (20'4") boom, and 2.00 m (6'7"), 2.40 m (7'10"), 3.10 m (10'2") and 3.75 m (12'4") arms are available.
Bucket of all-welded, high-strength steel structure. Side clearance adjust mechanism provided on the bucket joint bracket.

LOADING SHOVEL ATTACHMENTS

Boom and arm are of all-welded, low-stress full-box section design. Efficient, automatic horizontal crowding achieved by one-lever control because the parallel link mechanism keeps the bucket digging angle constant, and bucket height constant.

Loading shovel buckets

Capacity	Width	Weight	Type
1.6 m^3 (2.09 yd^3)	1 600 mm (5'3")	2 230 kg (4 920 lb)	Bottom dump type rock bucket
1.8 m^3 (2.35 yd^3)	1 660 mm (5'6")	2 110 kg (4 640 lb)	Bottom dump type general-purpose bucket
1.6 m^3 (2.09 yd^3)	1 670 mm (5'6")	1 560 kg (3 400 lb)	Tilt dump type rock bucket
2.0 m^3 (2.60 yd^3)	1 760 mm (5'10")	1 240 kg (2 730 lb)	Tilt dump type general-purpose bucket

Backhoe buckets

Capacity		Width		No. of teeth	Weight	Recommendation							
						EX270				EX270LC			
PCSA heaped	CECE heaped	without side cutters	With side cutters			2.00 m (6'7") arm	2.40 m (7'10") arm	3.10 m (10'2") arm	3.75 m (12'4") arm	2.00 m (6'7") arm	2.40 m (7'10") arm	3.10 m (10'2") arm	3.75 m (12'4") arm
0.92 m^3 (1.20 yd^3)	0.80 m^3	1 120 mm (44")	—	4	985 kg (2 170 lb)	●	●	●	◎	●	●	●	◎
1.05 m^3 (1.37 yd^3)	0.90 m^3	1 160 mm (46")	1 300 mm (51")	5	804 kg (1 770 lb)	◎	◎	◎	◎	◎	◎	◎	◎
1.15 m^3 (1.50 yd^3)	1.00 m^3	1 220 mm (48")	1 350 mm (53")	5	880 kg (1 940 lb)	◎	◎	◎	○	◎	◎	◎	◎
1.39 m^3 (1.82 yd^3)	1.20 m^3	1 420 mm (56")	1 550 mm (61")	5	1 020 kg (2 250 lb)	—	○	○	—	—	○	○	□
1.62 m^3 (2.12 yd^3)	1.40 m^3	1 620 mm (64")	—	5	1 000 kg (2 200 lb)	—	□	□	—	—	□	□	—
Ripper bucket: 0.70 m^3 (0.92 yd^3: CECE heaped) Width 1 000 mm (39")				3	1 300 kg (2 860 lb)	●	●	●	—	●	●	●	—
One-point ripper				1	850 kg (1 880 lb)	—	●	●	—	—	●	●	—
Clamshell bucket: 0.60 m^3 (0.78 yd^3: CECE heaped) Width 940 mm (37")				8	1 220 kg (2 690 lb)	—	◎	◎	◎	—	◎	◎	◎

◎ Suitable for materials with density of 2 000 kg/m^3 (3 370 lb/yd^3) or less
○ Suitable for materials with density of 1 600 kg/m^3 (2 700 lb/yd^3) or less
□ Suitable for materials with density of 1 100 kg/m^3 (1 850 lb/yd^3) or less
● Heavy-duty service
— Not recommended