

R390LC-9 HYUNDAI Hydraulic Excavator

ENGINE

MODEL	HYUNDAI D6AC-C		
Type	Water cooled, 4 cycle Diesel, 6-cylinders in line, direct injection, turbocharged, charger air cooled, low emission		
Rated flywheel horse power	SAE	J1995 (gross)	276 HP (206 kW) at 1,900 rpm
		J1349 (net)	261 HP (195 kW) at 1,900 rpm
	DIN	6271/1 (gross)	280 PS (206 kW) at 1,900 rpm
		6271/1 (net)	265 PS (195 kW) at 1,900 rpm
Max. torque	120.0kgf.m (868lbf.ft)/1,400rpm		
Bore X stroke	130mm X 140mm (9.56" X 10.3")		
Piston displacement	11,149cc (680 in ³)		
Batteries	2 X 12V X 160AH		
Starting motor	24V, 5.5 kW		
Alternator	24V, 70 Amp		

HYDRAULIC SYSTEM

MAIN PUMP	
Type	Variable displacement tandem axis piston pumps
Rated flow	2 X 280 L/min (74.0 US gpm / 61.6 UK gpm)
Sub-pump for pilot circuit	Gear pump

Cross-sensing and fuel saving pump system.

HYDRAULIC MOTORS	
Travel	Two speed axial pistons motor with brake valve and parking brake
Swing	Axial piston motor with automatic brake

RELIEF VALVE SETTING	
Implement circuits	330 kgf/cm ² (4,690 psi)
Travel	360 kgf/cm ² (5,120 psi)
Power boost (boom, arm, bucket)	360 kgf/cm ² (5,120 psi)
Swing circuit	290 kgf/cm ² (4,125 psi)
Pilot circuit	40 kgf/cm ² (569 psi)
Service valve	Installed

HYDRAULIC CYLINDERS	
No. of cylinder bore X stroke	Boom: 2-160 X 1,500 mm (6.3" X 59.1")
	Arm: 1-170 X 1,760 mm (6.7" X 69.3")
	Bucket: 1-150 X 1,295 mm (5.9" X 51.0")

DRIVES & BRAKES

Drive method	Fully hydrostatic type
Drive motor	Axial piston motor, in-shoe design
Reduction system	Planetary reduction gear
Max. drawbar pull	32,000 kgf (70,550 lbf)
Max. travel speed(high) / (low)	5.0 km/hr (3.1 mph) / 3.1 km/hr (1.9 mph)
Gradeability	35° (70 %)
Parking brake	Multi wet disc

CONTROL

Pilot pressure operated joysticks and pedals with detachable lever provide almost effortless and fatiguesless operation.

Pilot control	Two joysticks with one safety lever (LH): Swing and arm, (RH): Boom and bucket (ISO)
Traveling and steering	Two levers with pedals
Engine throttle	Electric, Dial type

SWING SYSTEM

Swing motor	Fixed displacement axial pistons motor
Swing reduction	Planetary gear reduction
Swing bearing lubrication	Grease-bathed
Swing brake	Multi wet disc
Swing speed	9.7 rpm

COOLANT & LUBRICANT CAPACITY

	liter	US gal	UK gal
Refilling			
Fuel tank	550	145.3	121.0
Engine coolant	52.0	13.7	11.4
Engine oil	27.3	7.2	6.0
Swing device-gear oil	8.0	2.1	1.8
Final drive(each)-gear oil	4.3	1.1	0.9
Hydraulic system(including tank)	410.0	108.3	90.2
Hydraulic tank	210.0	55.5	46.2

UNDERCARRIAGE

The X-leg type center frame is integrally welded with reinforced box-section track frames. The undercarriage includes lubricated rollers, idlers, track adjusters with shock absorbing springs and sprockets, and a track chain with double or triple grouser shoes.

Center frame	X - leg type
Track frame	Pentagonal box type
No. of shoes on each side	51 EA
No. of carrier roller on each side	2 EA
No. of track roller on each side	9 EA
No. of rail guard on each side	3 EA

OPERATING WEIGHT (APPROXIMATE)

Operating weight, including 6,500mm (21' 4") boom, 2,900mm (9' 6") arm, SAE heaped 1.44m³ (1.88 yd³) HD bucket, lubricant, coolant, full fuel tank, full hydraulic tank, and all standard equipments.

MAJOR COMPONENT WEIGHT	
Upperstructure	8,750 kg (19,290 lb)
Boom (with arm cylinder)	3,780 kg (8,330 lb)
Arm (with bucket cylinder)	2,140 kg (4,720 lb)

OPERATING WEIGHT			
Shoes		Operating weight	Ground pressure
Type	Width mm (in)		
Triple grouser	600 (24")	38,995 (85,970)	0.70 (9.95)
	700 (28")	39,445 (86,960)	0.61 (8.67)
	750 (30")	39,670 (87,460)	0.57 (8.11)
	800 (32")	39,895 (87,950)	0.54 (7.68)
	900 (36")	40,345 (88,950)	0.48 (6.83)
Triple grouser (Heavy Duty)	600 (24")	39,335 (86,760)	0.71 (10.10)
	700 (28")	39,855 (87,870)	0.61 (8.67)
Double grouser	600 (24")	39,265 (86,560)	0.71 (10.10)
	700 (28")	39,765 (87,670)	0.61 (8.67)