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MINI CRANES

CRAWLER CRANES

TELESCOPIC CRANES

**PILING RIGS
AND EQUIPMENT**

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HITACHI ZAXIS 180LCT Specification

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HITACHI**ZX180LC****Telescopic Crane****CRANE SPECIFICATIONS**

TYPE	9 Ton Telescopic Crawler Crane	16580kg
MODEL	ZX180LC	
CRANE CAPACITY	9,000kg	
MAX. TOTAL RATED LOAD		
4.80M Boom	9,000kg at 1.50M Radius (6 Parts-Line) Static	
4.80M Boom	3,000kg at 2.70M Radius (6 Parts-Line) Mobile	
7.70M Boom	6,050kg at 3.50M Radius (6 Parts-Line) Static	
7.70M Boom	2,450kg at 4.00M Radius (6 Parts-Line) Mobile	
10.40M Boom	4,050kg at 5.00M Radius (4 Parts-Line) Static	
10.40M Boom	1,850kg at 5.00M Radius (2 Parts-Line) Mobile	
13.00M Boom	3,100kg at 6.00M Radius (2 Parts-Line) Static	
Hook Height		
Above Ground level	13.70 Meters Max	
Below Ground level	Max 18.00 Meters with 4 part line	
BOOM	4 Section box beam type telescoping boom	
Boom Length	4.60 Metres to 13.00 Metres	
Boom Extending Speed	8.4/14M/S	
Boom Raising Speed	~ -3 degrees ~ 76 degrees / 10s	
WINCH	Hydraulic Motor driven planetary gear reduction, with automatic mechanical brake and counterbalance valve	
Single Line Pull	16.66kN (1,698kgf)	
Hoisting Rope Speed m/min	High 97 / Low 66	
Hoisting Rope	10mm x 111Meters (Construction IWRC 6xP.Fi(29)	
Breaking Strength	83.5kN (8,510kgf)	
HOOK BLOCK	9,000 kg Capacity, 3 Sheaves with Safety latch	
Swing Speed	min-1 rpm	2.0 (2.0)
Travel Speed	km/h	3.0
ENGINE	ISUZU AA-4BG1TCG	
Rated Output	(kW(PS)/rpm)	90.2/2200 (87.4 / 2000)
Displacement	(ltr.)	4.329
Bore and stroke		105mm x 125mm
Batteries		2 x 12V / 55Ah
HYDRAULIC SYSTEM		
Main Pumps	2 variable displacement axial piston pumps	
Maximum Oil Flow	2 x 150 L/min	
Pilot Pump	1 Gear Pump	
Maximum Oil Flow	24.2 L/min	
Hydraulic Motors		
Travel	2 variable displacement axial piston motors	
Swing	1 axial piston motor	
Relief Valve Settings		
Implement circuit	34.3 MPa (350 kgf/cm ²)	
Swing circuit	33.3 MPa (340 kgf/cm ²)	
Travel circuit	34.3 MPa (350 kgf/cm ²)	
Pilot circuit	3.9 MPa (40 kgf/cm ²)	
Hydraulic Filters	Hydraulic circuits use high-quality 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. Implement Levers 2 Travel Levers with pedals 2.	
UPPER STRUCTURE		
Revolving Frame	Welded sturdy box construction, using heavy-gauge steel plates for ruggedness. D-Section frame for resistance to deformation.	
Swing Device	Axial piston motor with planetary reduction gear 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 release disc type	

Operator's Cab	Independent spacious cab, 1005mm wide by 1675mm high, conforming to ISO * Standards. Reinforced glass windows on 4 sides for visibility.
	Front windows (upper and lower) can be opened. Reclining seat with armrests; adjustable with or without control levers.
	* International Standardisation Organisation
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.
	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	7
Track Shoes	46
Track Guard	1
Travel Device	Each track driven by 2-speed axial piston motor through planetary reduction gear for counter rotation of the tracks. Sprockets are replaceable.
	Parking brake is spring-set/hydraulic release disc type. Travel shockless relief valve built in travel motor absorbs shocks when stopping travel.
Travel Speeds	Low: 0 to 3km/h / High: 0 to 5 km/h
Maximum traction force	153kN (15600 kgf)
SERVICE REFILL CAPACITIES	
Fuel Tank	Litres 280
Engine Coolant	Litres 19.2
Engine Oil	Litres 15.8
Swing Device	Litres 6.2
Travel Device (each side)	Litres 6.8
Hydraulic System	Litres 180
Hydraulic Oil Tank	Litres 100
Safety Devices	
	Wylie w2245 Safe Load Indicator (EN13000 Compliant) complete with Data Logger
	Boom Upper Angle Limit Cut Out Switch
	Boom Lower Angle Limit Cut Out Switch
	Winch Motor 3rd round end of rope Cut out Switch
	Overwinding alarm and automatic stop
	External Light Tower
	External Beacon Sounder
	Rear Camera
	Motion Alarm
	Spirit Level
	Manual Angle Indicator fitted to Boom
	Counterbalance valves for Boom Raising and Boom Telescoping cylinders and Winch Motor
	Automatic mechanical brake for winch motor
	Sprung Winch drum roller
	Steel Roof Window Guard
	Lower Front Window Guard
	Derrick Ram Steel Guard
STANDARD EQUIPMENT	
Engine	
	50 A Alternator
	Dry-type air filter with evacuator valve (with air filter restriction indicator)
	Cartridge-type engine oil filter
	Cartridge-type fuel double filters
	Air cleaner double filters
	Radiator, oil cooler and intercooler with dust protective net
	Radiator reserve tank
	Fan guard
	Isolation-mounted engine
	Auto idle system
	Fuel Cooler
	Electrical fuel feed pump
	Engine oil drain coupler
Hydraulic System	
	Control valve with main relief valve
	Extra port for control valve
	Suction filter
	Full-flow filter

	Pilot filter
	Swing dampener valve
Cab	CRES II (Centre pillar reinforced structure) cab
	OPG top guard fitted Level I (ISO 10262) compliant cab
	All-weather sound suppressed steel cab
	Equipped with reinforced, tinted glass windows
	4 fluid-filled elastic mounts
	Front windows on upper, lower and left side can be opened
	Intermitted windshield wipers
	Front window washer
	Adjustable reclining seat with adjustable armrests
	Footrest
	Spirit level
	Electric double horn
	AM-FM radio with digital clock
	Seat belt
	Drink holder
	Cigarette lighter
	Ashtray
	Storage Box
	Glove compartment
	Fire extinguisher bracket
	Floor mat
	Short wrist control lever
	Engine shut-off switch
	Auto control air conditioner
	Transparent roof with slide curtain
	Mechanical suspension seat with heater
Upper Structure	Undercover
	3000kg counterweight
	Fuel Level float
	Electric fuel refilling pump with auto stop
	Rear view camera
	Hydraulic oil level gauge
	Tool box
	Utility space
	Rear view mirror
	Swing parking brake
Undercarriage	Travel parking brake
	Travel motor covers
	1 track guard (each side) and hydraulic track adjuster
	Bolt on sprocket
	Upper and lower rollers
	Reinforced track links with pin seals
	4 tie down hooks
Miscellaneous	Standard tool kit
	Lockable machine covers
	Lockable fuel refilling cap
	Skid-resistant tapes, plates and handrails
	Travel direction mark on frame
	Onboard information controller
Optional Equipment	Bolt on Rubber Blocks
	160Meter Hoist Rope (for underground applications greater than Meters)

HITACHI**CRANE RATINGS ZX180LC****Unit: kg**

	Boom Length (Metres)							
	4.60m Boom		7.80m Boom		10.40m Boom		13.0m Boom	
	STATIC	MOBILE	STATIC	MOBILE	STATIC	MOBILE	STATIC	MOBILE
Working Radius (M)								
1.50	9000*	3000						
2.00	8000	3000						
2.50	8000	3000						
2.70	8000	3000	7700	3000				
3.00	7700	3000	7700	3000				
3.50	6050	2750	6050	2750	5390	not allowed		
4.00	5390	2450	5390	2450	5390	not allowed	4290	not allowed
4.50	4565	2075	4675	2125	4730	not allowed	4290	not allowed
4.80	4155	1885	---	---	---	---	---	---
5.00			4015	1825	4015	not allowed	4015	not allowed
6.00			3100	1410	3100	not allowed	3100	not allowed
6.50			2750	1250	2750	not allowed	2750	not allowed
7.00			2475	1125	2475	not allowed	2475	not allowed
8.00			2000	910	2000	not allowed	2000	not allowed
9.00					1700	not allowed	1700	not allowed
10.00					1450	not allowed	1450	not allowed
10.60					1340	not allowed	1340	not allowed
11.00							1280	not allowed
12.00							1120	not allowed
13.00							1000	not allowed
13.20							950	not allowed

Hooks		Number of hoist reeving and max. rated loads (kg)					
Cap.	Weight	6	5	4	3	2	1
8.0 ton	75kg	9000	8000	6400**	4800**	3200	1600

1. The rated loads are determined according to DIN 15018 part 3(lifting class H2, loading group B2).

The stability is according to EN13000 (2004).

The rated loads listed are based on the condition that the machine is stationed on firm, level ground.

The rated loads are available over 360 degrees. The rated loads shown include the weight of all lifting attachments, such as hook and bucket. The load to be actually lifted is the rated load minus the weight of all lifting attachments.

2. Counterweight is 3300kg fixed to crane.

3. Travelling is allowed according and provided that:

- surface must be firm and level
- the boom is in travelling direction
- speed is not above 0.4m/s (on a firm level ground)
- the load is near the ground (0.5m) and secured against swaying
- no other movements are allowed

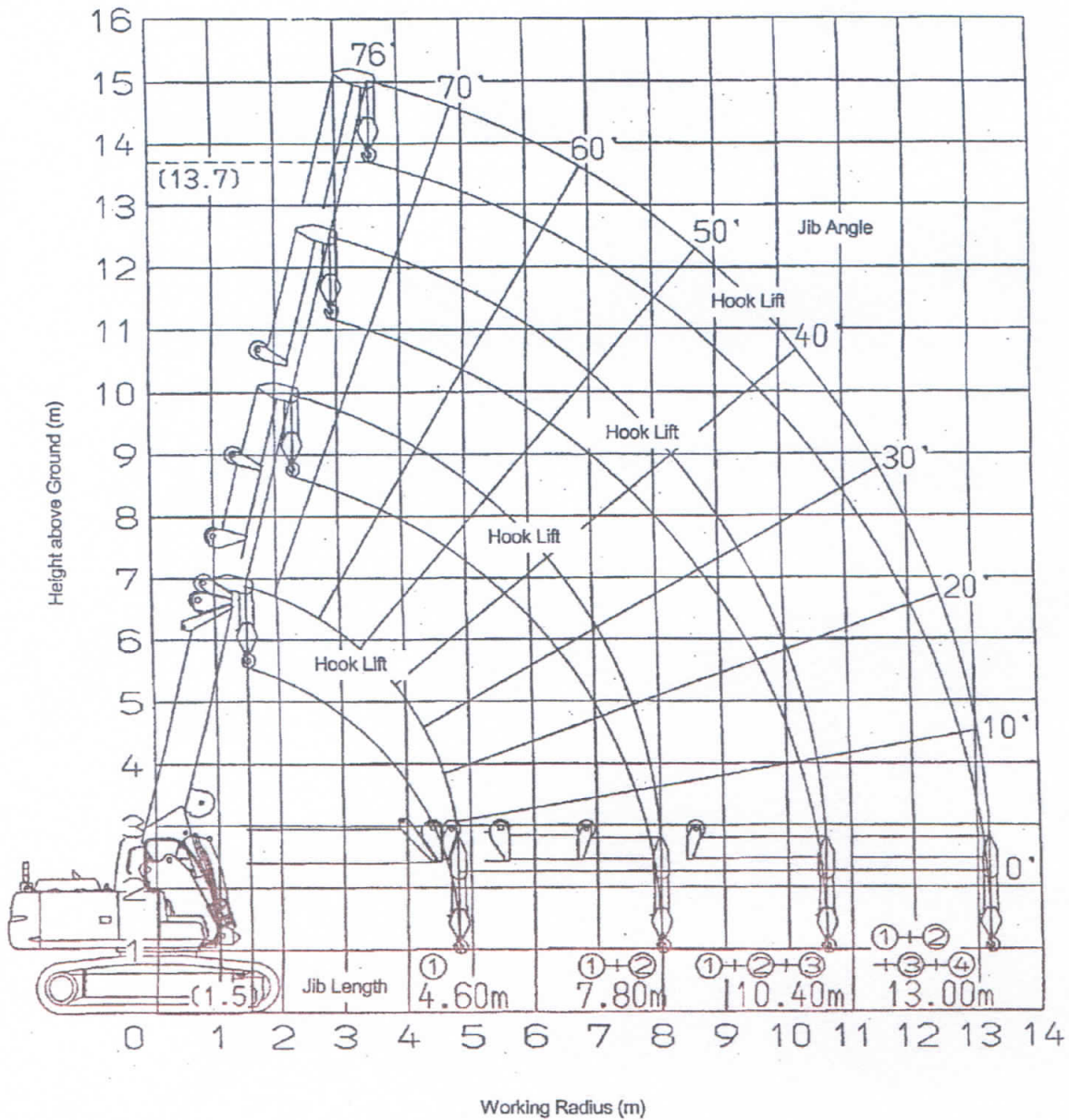
4. * Denotes use of Additional Lifting Equipment

5. ** Standard reeving for working 1-2 or 5 reeving, for special cases 3 and 4 reeving possible to work.

6. At windforce of 14m/s or more the operation must be stopped. By windforce of 15m/s or more the boom must be retracted to the minimum and lowered to the ground.

7. For the wind load area of the rated load is 1,2m² per 1000kg calculated.

Working Range Diagram



NOTE: The working ranges shown are determined with the machine under no-load condition, excluding jib deflection.

In crane operation with lifted load, jib angle range is restricted to 0° to 76°.

MACHINE DIMENSIONS (with Grouser Shoes)

Unit: mm

