

# HYDRAULIC EXCAVATOR



## CX250C LR

### ENGINE

Type	Water-cooled, 4-cycle diesel, 4-cylinder in line, High pressure common rail system (electric control), Turbocharger with air cooled intercooler, with tier 3 emission certification.	
Model	ISUZU	GH-4HK1X
Rated flywheel horse power (SAE J1349, ISO 9249)	132.1 kW at 2000 min <sup>-1</sup> (rpm)	
(ISO 14396)	140.0 kW at 2000 min <sup>-1</sup> (rpm)	
Piston displacement	5193 cc	
Maximum torque (SAE J1349, ISO 9249)	622 N-m at 1800 min <sup>-1</sup> (rpm)	
(ISO 14396)	643 N-m at 1800 min <sup>-1</sup> (rpm)	
Bore and stroke	115 mm X 125 mm	
Voltage	24 V	
Alternator	50 Amp	
Starter	24 V 5.0 kW	

### HYDRAULIC SYSTEM

Main pumps	2 variable displacement axial piston pumps with regulating system	
Max. oil flow	2 × 234 liter/min at 2000 min <sup>-1</sup>	
Working circuit pressure	34.3 MPa	
Boom Up/Arm Out	36.8 MPa with auto power up	
Arm In	21.1 MPa	
Bucket/Boom Down	29.4 MPa	
Swing circuit	27.0 MPa	
Travel circuit	34.3 MPa	
Pilot pump	1 gear pump	
Max. oil flow	20 liter/min	
Working circuit pressure	3.9 MPa	
Control valves	With Boom/Arm holding valve	
	One 4-spool valve for Right track travel, Bucket, Boom and Arm acceleration	
	One 5-spool valve for Left track travel, Auxiliary, Swing, Boom acceleration and Arm	

### Swing device

Motor	Fixed displacement axial piston motor		
Brake	SAHR type		
Final drive	Planetary gear reduction		
Turn table bearing	Ball bearing type with internal gear		
Maximum swing speed	11.0 min <sup>-1</sup>		
Swing torque	69,900 N-m		
Cylinders	N° of	Bore X Rod Diam.	Stroke
Boom	2 –	ø 130 mm X ø 90 mm	X 1335 mm
Arm	1 –	ø 150 mm X ø 105 mm	X 1737 mm
Bucket	1 –	ø 95 mm X ø 65 mm	X 881 mm

### Cooling system

Fan	ø 650 mm with 7-blades		
Radiator capacity	105.9kW		
fin type	Corrugated fin (wavy type)		
fin space	1.75 mm		
Long life coolant	Coolant 55%, Water 45%		
Oil cooler capacity	54.1 kW		
fin type	Corrugated fin (wavy type)		
fin space	1.75 mm		
Intercooler capacity	16.7 kW		
fin type	Straight fin		
fin space	1.75 mm		
Fuel cooler capacity	1.3 kW		
fin type	Corrugated fin (wavy type)		
fin space	2.0 mm		
Filters			
Suction filter	105 µm		
Return filter	6 µm		
Pilot line filter	8 µm		

### HYDRAULIC CONTROLS

Boom/Arm/Bucket/Swing	Pilot pressure control system (ISO control pattern)	
Travel	Pilot pressure control system	
Work mode select		
SP - mode		
H - mode		
Auto - mode		
Travel mode select (2-speed travel)		
Attachment cushion control		
Hydraulic lock (gate lock, left side tilt console)		

### ELECTRICAL SYSTEM

Engine control		
Dial type throttle control		
One touch idle / Auto deceleration / Auto idle shutdown system		
Emergency stop		
Monitor system		
Message display (Caution, condition, etc...)		
Work mode display (SP, H, Auto)		
Machine condition (Power boost, etc...)		
Alarm display and buzzer		
Water temperature		
Hydraulic oil temperature		
Fuel level		
Diagnosis system		
Wire harness	Waterproof type connector	
Safety		
Travel alarm		
Double horn		
Battery	2 X 12 V 92 Ah/5HR	
Lights		
Working light		
Upper	24 V 70 W X 1	
Boom	24 V 70 W X 2	
Cab	24 V 70 W X 2	
Operator's cab room	24 V 10 W X 1	

## OPERATOR ENVIRONMENT

### Operator's cab

- Smooth and round shape design cab, fabricated by press work
- Safety glass for all windows
- Shock-less cab suspension by 4-point fluid mounting
- Sliding front window with auto lock
- Built-in type full-color LCD monitor display
- Membrane switch on monitor display
- Windshield wiper & washer
- AM/FM Radio with auto-tuner
- Floor mat
- Polycarbonate roof hatch & Sun shade
- Auto air conditioner
- Top FOPS defense level 1 (in CAB structure)
- Roll-over protective structure (ROPS)

### Operator's seat

- Low frequency mechanical suspension with helical springs and double acting hydraulic damper. (Achieves ISO7096 in category EM6)

### With following features:

- Manual weight adjustment
- Seat height adjustment
- Adjustable headrest
- Adjustable lumbar support
- Backrest angle adjustment
- Adjustable pivoting armrests linked to consoles
- Retractable seat belt (3")
- Control consoles adjust independently of seat

### Others

- Rear view mirror (Cab side & Right side)

## UNDERCARRIAGE

Travel motor	Variable displacement axial piston motor
Brake	SAHR type
Hydraulic service brake	Brake valve
Final drive	Planetary gear reduction
Travel speeds	
High	5.5 km/h (Automatic travel speed shifting)
Low	3.5 km/h
Drawbar pull	199 KN
Number of carrier rollers	2
(each side)	
Number of track rollers	9
(each side)	
Number of shoes	51
(each side)	
Type of shoe	Triple grouser shoe
Link pitch	190 mm
Width of shoe	800 mm (S.T.D)
Grade-ability	70% (35 °)

## MASS

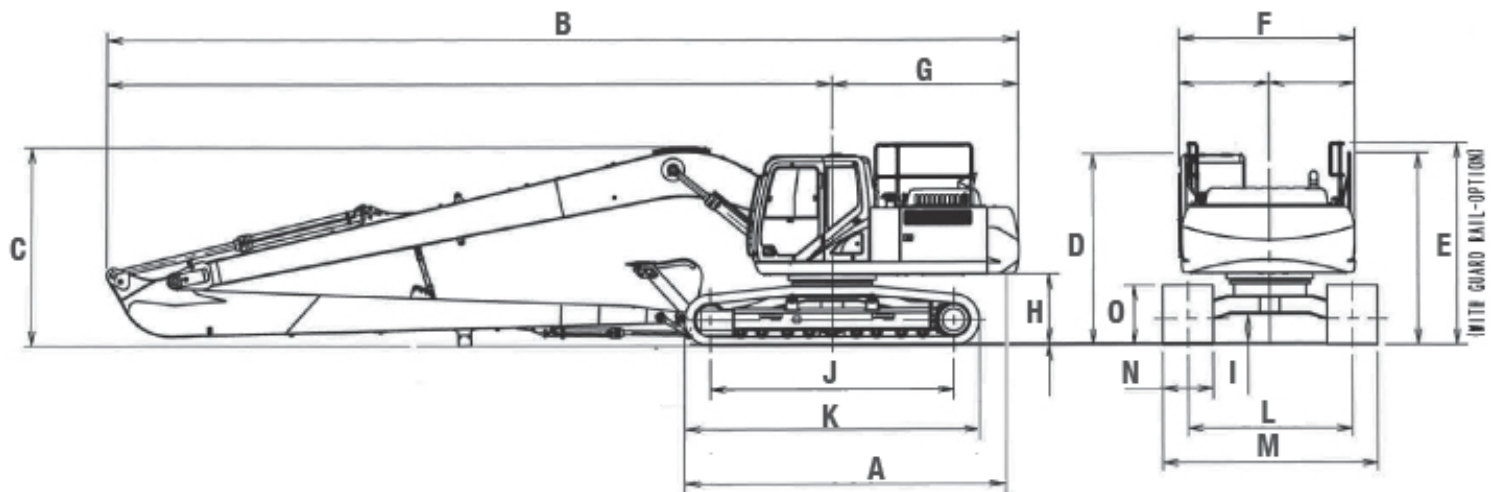
Operating weight	28,200 kg with 8.0 m Arm , 0.37 m <sup>3</sup> Sumitomo Bucket, 800 mm grouser shoe, operator, lubricant, coolant and full fuel tank
Shipping weight	27,500 kg
Operating weight - (operator weight)	(75kg) + 90 % of fuel weight + bucket weight (330kg)
Counterweight	7,500 kg
Ground pressure	0.042 MPa
	(with 8.0 m Arm, 0.37 m <sup>3</sup> Sumitomo Bucket, 800 mm grouser shoe)

## DIGGING FORCE (with 0.37 m<sup>3</sup> Sumitomo Bucket)

(ISO 6015)	(8.0 m Arm)
Arm digging force	40 kN
Bucket digging force	77 kN

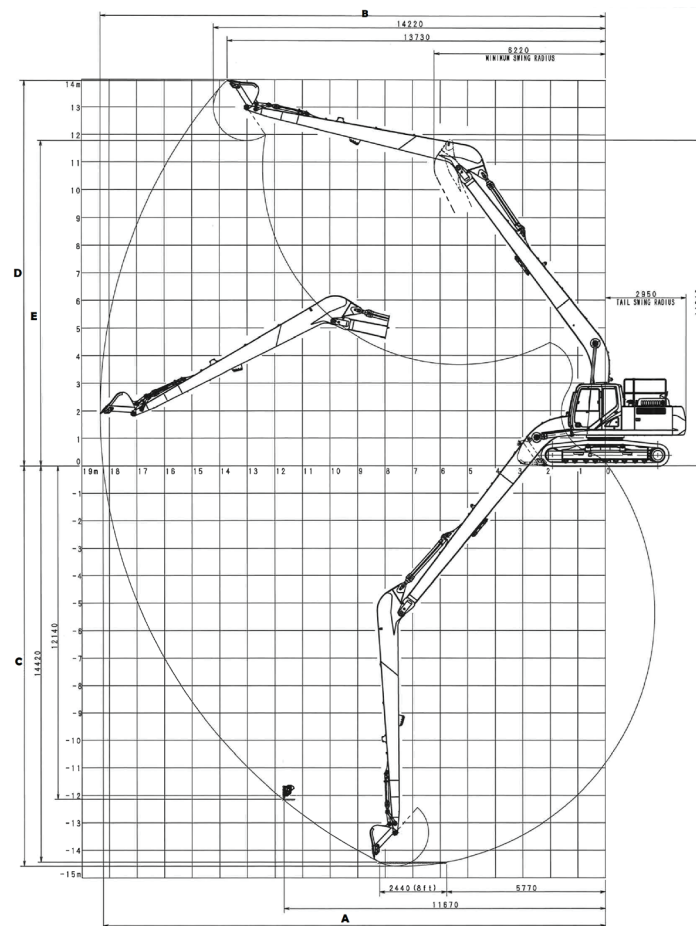
## SYSTEM FLUID CAPACITIES AND SPECIFICATIONS

	Capacities	Specifications
Hydraulic system	250 liter	ISO VG 46
Hydraulic sump tank	147 liter	ISO VG 46
Fuel tank	410 liter	Light oil (Diesel)
Cooling system	30.2 liter	Coolant 55%, Water 45 %
Final drive case (per side)	5.0 liter	API GL-4 90
Swing drive case	9.7 liter	API GL-5 90
Engine crank case (With Remote Oil Filter)	23.1 liter	API CD SAE 10W-30



## DIMENSIONS

	(8.00 m Arm)
A. Overall length (without attachment)	5270 mm
B. Overall length (with attachment)	14380 mm
C. Overall height (to top of boom)	3130 mm
D. Overall height (to top of cab)	3010 mm
E. Overall height (to top of guardrail)	3180 mm
F. Upper structure overall width	2770 mm
G. Swing (rear end) radius	2950 mm
H. Clearance height under upper structure	1100 mm
I. Minimum ground clearance	440 mm
J. Wheel base (Center to center of wheels)	3840 mm
K. Crawler overall length	4650 mm
L. Track gauge	2590 mm
M. Undercarriage overall width (with 800 mm shoes)	3390 mm
N. Track width	800 mm
O. Crawler tracks height	940 mm



## WORKING RANGES

	(8.00 m Arm)
Boom length	10300 mm
Bucket radius	1200 mm
Bucket wrist action	178 °
A. Maximum reach at GRP	18230 mm
B. Maximum reach	18330 mm
C. Max. digging depth	14570 mm
D. Max. digging height	13960 mm
E. Max. dumping height	11770 mm

## STANDARD EQUIPMENT

### Operator's Compartment

Round shaped and smoothly designed cabin  
Safety glass on all windows  
Shock-less cab suspension by 4-point fluid mounting  
Sliding front window with automatic block  
Full color LCD screen included  
Membrane switch on the display screen  
Windscreen wipers and washer  
AM/FM radio with automatic tuner  
Floor carpet  
Ceiling hatch of polycarbonate and sun protection  
Automatic air conditioning  
Top FOPS defense level 1 (on the cabin's chassis)  
Rollover protection structure (ROPS)  
Operator's seat with low frequency mechanical suspension with helical spring and double acting hydraulic damper, manual weight adjustment, back angle adjustment, adjustable armrest height attached to the consoles, adjustable headrest, self retracting seatbelt (3") and adjustable back support.  
The control consoles are adjusted independently from the seat  
Back mirror  
Double horn  
Movement alarm  
Joystick-like levers to control hydraulic functions  
Safety levers to neutralize hydraulic functions and engine start

### Engine

4-stroke engine, water-cooled, 4 cylinder  
Common rail injection system, turbocharged with air-cooled intercooler, with tier 3 emission certification.

### Hydraulic System

With ISO standardized control system  
Work mode selection Auto, H and SP  
Auxiliary accessory mode  
Auto power up  
2 variable flow pumps  
Electronic flow control  
Cylinders with end cushioning  
1 pump for the pilot system  
8.000 mm long arm  
10.300 mm boom length

### Undercarriage

Travel speeds  
High 5,5 km/h Automatic speed change  
Low 3,5 km/h  
Quantity of upper roller 2 (on each side)  
Quantity of rollers on each track 9 (on each side)  
Number of shoes 51 (on each side)  
Shoes width 800 mm  
Type of shoes triple grousers  
Track width 3390 mm  
Track length 4650 mm  
Track guide simple  
Sealed and lubricated chains

### Electric System

Wiring with waterproof connectors  
Battery 2x 12V 92 Ah/5HR  
Voltage 24V  
Alternator 50 Amp  
Starter engine 24V 5,0 kW



### ISO Conformities

ROPS	12117-2:2008
FOPS level 1	10262:1998
Seat belt	6683:2005
Operator's seat	11112:1995
Seat vibration	7096:2000
Operator's primary controls, functional information, symbols for operator controls and other displays	10968:2004 / 6011:2003 6405-1:2004 / 6405-2:1993 / 6682:1995
Machine-control systems	15998:2008
Visibility	5006:2006 14401-1:2004 / 14401-2:2004
Sound level	
Internal	6396:2008
External	6395:2008
Ground contact pressure	16754:2008
Digging force	6015:2006
Terminology and commercial specifications	7135:2009
Lift capacity	10567:2007

## OPTIONAL EQUIPMENT

### Cabin

Seat with air suspension  
2 options for front stone protection  
Level 2 FOPS superior protection  
Rain deflector  
Sun screen

### Accessories

Bucket and link with hook  
Tropical cooling  
Hydraulic auxiliary double action  
Additional handrails Rh + Lh  
Safety valve for boom

### Undercarriage

Shoes of 700 mm  
Triple track guide

### Others

Rear view camera  
Side view camera  
Refueling pump



Fleet monitoring and management system by satellite or cell phone tracking.

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