

CASE

Hydraulic Excavator

Operating weight: 34 tons
Isuzu engine: 185.4 kW (248 hp)
Backhoe buckets: 740 to 2010 L

CX330



C O M M I T T E D T O Y O U R N E E D S



ENGINE

Latest generation engine, meeting future European standards (Tier II “low smoke emission” regulations applicable as of January 2003).

Make	ISUZU
Type	AA-6HK1XQB
Turbo	Yes
Injection	electronically controlled
No. of cylinders.....	6
Bore - Stroke	115 x 125 mm
Cubic capacity	7790 cm ³
EEC 80/1269 horsepower.....	185.4 kW - 248 hp
Engine speed.....	2000 rpm

Automatic engine pre-heating provides for optimum and immediate operation as soon as the working temperature is reached, a guarantee of longer life for the engine and the hydraulic components.

The injection pump is directly, electronically controlled by a special calculator which takes the hydraulic system load parameters into account. Regulation is quicker and more efficient than on conventional systems, reducing smoke and noise emissions and also significantly reducing fuel consumption.



HYDRAULIC SYSTEM

Linked to the engine power management electronic system, a second electronic system manages all the hydraulic parameters so as to obtain the highest possible available hydraulic power, under optimum conditions of efficiency and economy.

The system consists of two axial piston, variable flow pumps.

Max output	2 x 284 l/min
Max safety valve pressure	
Attachment / Power Boost	343/ 373 bar
Upperstructure swing	294 bar
Travel.....	343 bar

CONTROL VALVES

4 sections for: LH travel, boom, bucket, and dipper acceleration

5 sections for: RH travel, swing, dipper, auxiliary circuit and boom acceleration.

SWING

Axial piston, fixed flow motor

Max upperstructure swing speed 9.6 rpm

Hydraulic system gives priority to the swing when operated simultaneously with the dipper.

Hydrostatic swing brake backed up by mechanical brake during swing stopping and when machine is being transported. Hydrostatic upperstructure braking during working phases, with an “anti-bounce” valve stopping neatly and accurately over a truck body or trench.

Backhoe clamshell circuit operated by means of a manual control on the dipper.

Auxiliary circuit

Using the auxiliary section available as standard, a maximum number of different tools and assemblies can be used, to suit customer requirements (See options).

FILTRATION

Exceptionally fine protection of all hydraulic system components by means of the “**ULTRA CLEAN**” system (a special filter which removes all particles over 1 micron in size, as well as all traces of water condensation).

The use of this system means the hydraulic fluid retains all its qualities for **5000 hours**, thus reducing servicing intervals and maintenance costs. The hydraulic system is also equipped with an inlet filter, a return filter and a filter on the pilot circuit.



COOLING

Servicing of the cooling systems (engine and hydraulics) is considerably simplified due to total accessibility (hydraulic oil cooler radiator pivots).



TRAVEL

The travel circuit is equipped with two axial piston, variable flow motors.

Planetary reduction gear, automatic multi-disc brake.

Max travel speed..... 5.5 kph

Low travel speed..... 3.2 kph

Speed change is controlled from the instrument panel.

Gradeability..... 70% (35°)



ELECTRICAL SYSTEM

Circuit..... 24 volts

Batteries..... 2 x 12 v - 140 A/h

Circuit equipped with water-proof connectors

Alternator..... 24 v - 50 A/h



UNDERCARRIAGE

Type "X" design, strongly built undercarriage provides for quick travel over all types of work-site and better stability when working or travelling under load.

Perfectly protected motors and piping, a guard underneath the hydraulic swivel, high ground clearance - for easy access to the most difficult work-sites.

Spring-type track tensioning, adjustable by an easily accessible grease cylinder.

Specifications (per track set):

Upper rollers..... 2

Lower rollers..... 8

Number of track pads..... 48

Type of shoes..... Triple grouser

Standard track pad width..... 600 mm

Chain guides..... Front and central (2)



CAB

Combining comfort, safety and ergonomics, the CX330 cab has been designed to provide the best possible working conditions in a pleasant environment, thus enabling the operator to get the very best out of his machine.

Suspended cab (6 mounting points with rubber/fluid shock absorbing mountings).

Access to the operator's compartment is facilitated by a wide door and the fact that the LH control arm can be raised completely out of the way.

Exceptional cab width (1.00 metre) providing a spacious, airy working space.

Air suspension, ergonomic seat, with multiple adjustments as standard equipment.

The windscreen can be raised and locked in the upper or lower position.

The lower portion of the windscreen can be removed and placed in a storage compartment at the rear LH side of the cab.

The windscreen wiper is mounted on the RH cab pillar. The cab floor is flush with the door sill for easy cleaning. Self-regulating air conditioning, ventilation and defrosting of the cab by adjustable outlets (windscreen, operator, rear of cab).

Radio pre-equipment with loud-speaker housings.

Double sliding window on door.

Wide foot-rest on either side of the travel pedals and levers.

Optional pedal location (hammer, offset, etc.)



COMFORT - OPERATION - SAFETY

The safety console and the control panel are located to the right of the operator.

They include:

A large back-lit LCD screen, clearly displaying messages and indicators covering the vital functions of the machine - in a choice of 14 languages.

Touch controls for work mode, travel speed, automatic mode and emergency stop are provided.

There is also a touch control to select the attachment shock absorbing function: a soft or firm mode can be selected by the operator depending on the work being done.

"Clear language text and symbol" messages, plus an audible warning, enable the operator to check that his machine is operating correctly.

ENGINE RETURN TO IDLE

The engine return to idle can be automatic or manual as required by the operator (control on RH control lever).



ANTI-THEFT PROTECTION

An anti-theft system incorporated into the machine's electronic system is standard equipment.

WORK MODES

Hydraulic power is controlled by the electronic system, which provides a continuous link between the hydraulics and the engine.

The operator has a choice of 3 **"traditional"** modes, plus one **"automatic"** mode:

H mode (Heavy) uses all the machine's available power for tough jobs, providing optimum efficiency, high working speed and maximum force.

S mode (Standard) is the "traditional" working mode. It gives 90% of H mode performance (power and speed), and greater fuel economy.

L mode (Light) is the mode to be used for finishing work (sloping banks, profiles, etc), where precision is what is required. It's also the mode used when handling loads and travelling with loads, due to the reduced flow and the continuous availability of **Power Boost** (maximum pressure applied continuously).

For higher efficiency and maximum use of the machine's resources, certain functions have been simplified for the operator. This is the case for the **Automatic Mode**.

The **AUTO mode** on the new CX330 considerably simplifies machine operation, since it enables the

working mode to be changed automatically and continuously (without any action on the part of the operator), depending on the type of work being done. Over all the cycles performed, a real reduction in fuel consumption is found compared with continuous use in one single working mode.

AUTO POWERBOOST

To simplify the operator's work even further, enabling him to get the maximum performance from his machine, CASE uses a totally automatic powerboost. Regardless of the working mode, AUTO POWERBOOST on the CX330 cuts in whenever the machine encounters a difficult obstacle.

For a period of **8 seconds** the force at the dipper and bucket is increased by 8 to 10 %, totally automatically.



 **ATTACHMENT**

For quick attachment changing, a hydraulic quick coupler is recommended. MULTI-FIT is the CASE hydraulic quick coupler which has a self-locking mechanical safety system (so the operator doesn't have to climb down from his cab).

This coupler can take buckets made by competing manufacturers, without modification, since it can accept varying centre distances (the clearance is automatically taken up).

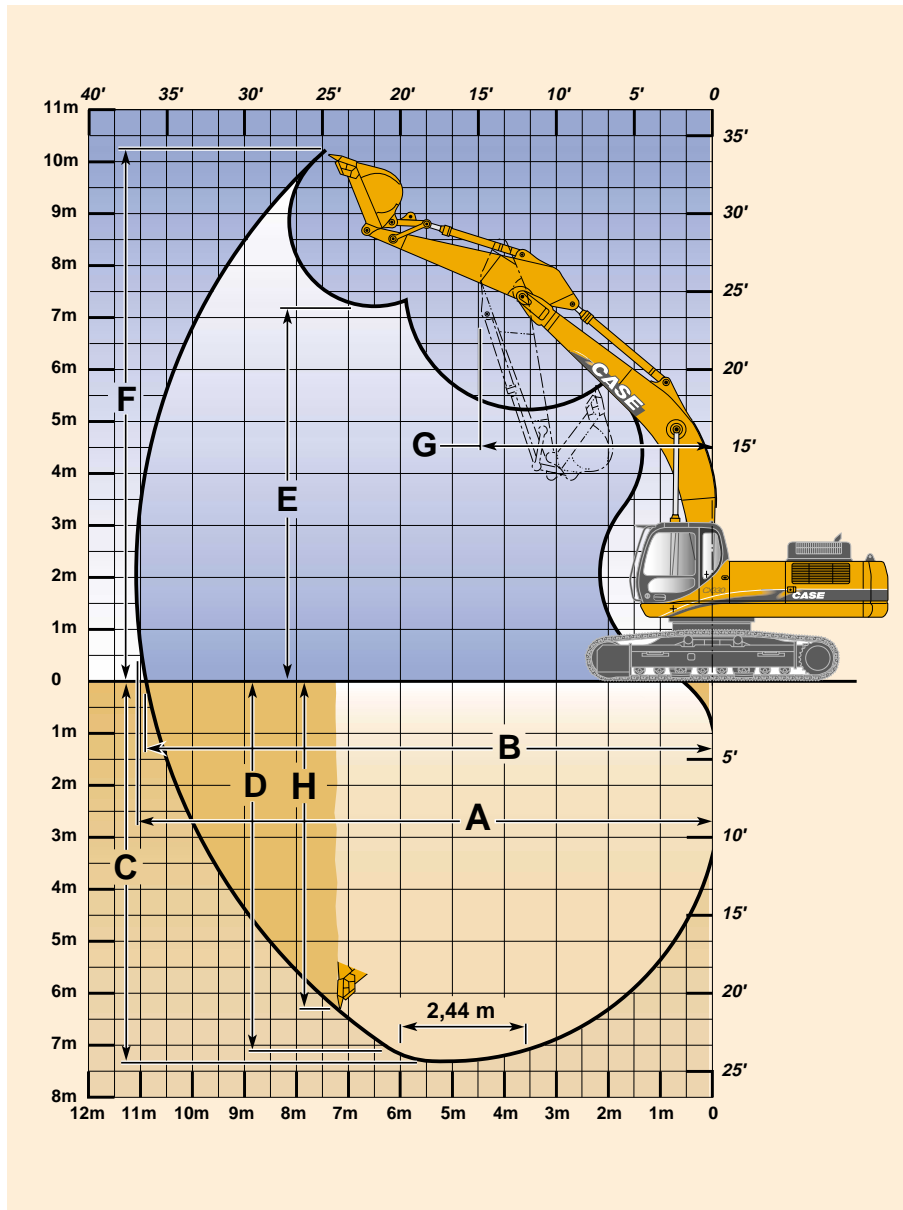
 **CIRCUIT AND COMPONENT CAPACITIES**

Hydraulic reservoir	175 L
Hydraulic system.....	350 L
Travel reduction gear (per side)	11 L
Swing reduction gear.....	6 L
Engine (including filter change)	33 L
Fuel tank.....	580 L
Engine cooling system	42 l





PERFORMANCE DATA

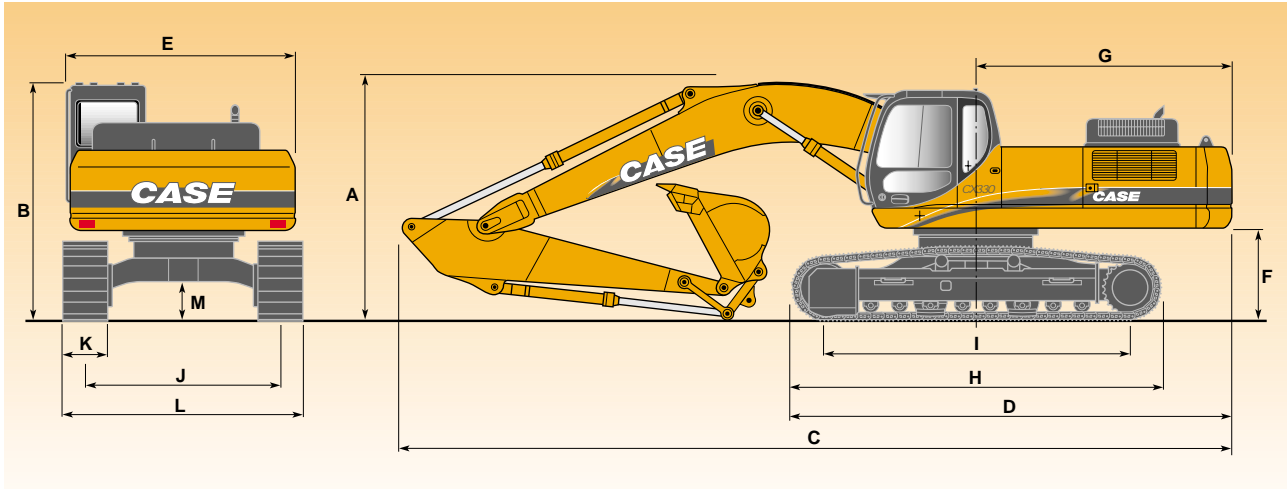


With 6.45 m monobloc boom

	Dipper :			
	2.20 m	2.60 m	3.20 m	4.00 m
A Maximum digging reach	10.20 m	10.67 m	11.17 m	11.90 m
B Maximum digging reach at ground level	9.99 m	10.47 m	10.98 m	11.72 m
C Maximum digging depth	6.30 m	6.73 m	7.34 m	8.14 m
D Digging depth - 2.44 m (8') level bottom	-	6.55 m	7.19 m	8.01 m
E Maxi dump height	6.77 m	7.14 m	7.23 m	7.54 m
F Overall reach height	9.85 m	10.32 m	10.37 m	10.67 m
G Minimum swing radius	-	4.63 m	4.50 m	4.56 m
H Vertical straight wall dig depth	-	5.97 m	6.35 m	7.15 m
Digging force	24600 daN	21100 daN	17800 daN	15260 daN
Breakout force	24840 daN	24840 daN	24840 daN	24840 daN



GENERAL DIMENSIONS



A Overall height	(6.45 m - 2.20 m)	3.60 m
	(6.45 m - 2.60 m)	3.53 m
	(6.45 m - 3.25 m)	3.29 m
	(6.45 m - 4.00 m)	3.51 m
B Cab height		3.13 m
C Overall length	(6.45 m - 2.20 m)	11.25 m
	(6.45 m - 2.60 m)	11.13 m
	(6.45 m - 3.25 m)	11.05 m
	(6.45 m - 4.00 m)	11.09 m
D Overall length (wo/attachment)		5.91 m
E Width of upperstructure		3.04 m

F Upperstructure ground clearance		1.21 m
G Swing (rear end) radius		3.45 m
H Track overall length		4.98 m
I Centre/centre (idler to sprocket)		4.04 m
J Track gauge		2.60 m
K Track shoes width (std)	600 mm	
L Track overall width	Shoes 600 mm	3.20 m
	Shoes 700 mm	3.30 m
	Shoes 800 mm	3.40 m
M Ground clearance		0.48 m



WEIGHT AND GROUND PRESSURE

With 6.45 m monobloc boom - 3.25 m dipper - 1400 l bucket - operator and full fuel tank	Weight (kg)	Ground pressure (bar)
Shoes 600 mm steel	34 000	0.64



BUCKETS

General purpose

SAE capacity	Litres	740	940	1150	1360	1580	1800	2010
Width	mm	750	900	1050	1200	1350	1500	1650

Heavy duty

SAE capacity	Litres	740	940	1150	1360	1550	1800	2010
Width	mm	750	900	1050	1200	1350	1500	1650

Extra heavy duty

SAE capacity	Litres	1360
Width	mm	1200

Ditchcleaning with blade

SAE capacity	Litres	1210	1260
Width	mm	2400	2500

V. Type 500 mm 3300 mm

Other types of bucket on application.

Quarry

2010		
1650		

Ditchcleaning with teeth

1210	1260	
2400	2500	



LIFTING CAPACITY

With 6.45 m boom - 2.20 m dipper, 600 mm shoes and 1400 l bucket

Reach Height	3 m		4.5 m		6 m		7.5 m		9 m		maxi		Maxi reach m
	front	360°	front	360°	front	360°	front	360°	front	360°	front	360°	
7.5 m											8850*	8450	6.3
6 m					9450*	9000	8650*	6050			8650*	5850	7.7
4.5 m			13600*	13300	10600*	8450	9100*	5850			7950	4900	8.3
3 m			16650*	11850	12000*	7800	9050	5500			7250	4400	8.6
1.5 m			18450*	10950	12400	7250	8750	5200			7050	4200	8.6
0			18500*	10650	12050	6950	8500	5050			7200	4300	8.4
-1.5 m	18750*		17550*	10700	11950	6850	8450	5000			7950	4700	7.8
-3 m	20050*		15600*	10950	12000*	7000					9650	5650	7.0
-4.5 m			12050*	11400							9800*	8300	5.5
-6 m													

With 6.45 m boom - 2.60 m dipper, 600 mm shoes and 1400 l bucket

Reach Height	3 m		4.5 m		6 m		7.5 m		9 m		maxi		Maxi reach m
	front	360°	front	360°	front	360°	front	360°	front	360°	front	360°	
7.5 m											8100*	7400	6.9
6 m							8150*	6150			6650*	5050	8.3
4.5 m					10000*	8550	8650*	5850			6750*	4350	8.9
3 m			15750*	12200	11500*	7900	9100	5550	6700	4050	6550	3950	9.1
1.5 m			18000*	11150	12450	7300	8750	5200	6550	3900	6350	3750	9.2
0			18600*	10700	12050	6950	8500	5000			6500	3800	9.0
-1.5 m	15950*		18000*	10650	11900	6800	8400	4900			7000	4150	8.5
-3 m	22050*		16350*	10800	11950*	6850	8450	5000			8250	4850	7.6
-4.5 m	17350*		13300*	11200	9950*	7150					9100*	6600	6.4
-6 m													

With 6.45 m boom - 3.25 m dipper, 600 mm shoes and 1400 l bucket

Reach Height	3 m		4.5 m		6 m		7.5 m		9 m		maxi		Maxi reach m
	front	360°	front	360°	front	360°	front	360°	front	360°	front	360°	
7.5 m								6350*			6000*		7.6
6 m							7400*	6250			4500*		8.8
4.5 m					9150*	8750	8050*	5950	6550*	4250	4600*	3900	9.4
3 m	13700*		14400*	12700	10750*	8050	8900*	5600	6700	4050	4850*	3550	9.6
1.5 m	7150*		17150*	11500	12250*	7450	8800	5250	6500	3850	5350*	3400	9.7
0	10550*		18450*	10850	12150	7000	8500	5000	6350	3750	5900	3450	9.4
-1.5 m	15450*		18400*	10650	11900	6800	8300	4850			6300	3650	9.0
-3 m	21450*		17300*	10700	11850	6750	8300	4850			7250	4250	8.2
-4.5 m	20350*		14850*	10950	11150*	6950					8950*	5450	7.1
-6 m			10250*								8600*		5.2

With 6.45 m boom - 4.00 m dipper, 600 mm shoes and 1400 l bucket

Reach Height	3 m		4.5 m		6 m		7.5 m		9 m		maxi		Maxi reach m
	front	360°	front	360°	front	360°	front	360°	front	360°	front	360°	
7.5 m											4400*		8.6
6 m									5350*	4400	3350*		9.6
4.5 m							7050*	6000	6600*	4250	3400*	3250	10.1
3 m			12300*		9450*	8200	8000*	5600	6700	4000	3600*	3000	10.4
1.5 m	12100*		15500*	11750	11150*	7500	8750	5200	6450	3800	3900*	2850	10.4
0	11400*		17500*	10800	12100	6950	8400	4850	6200	3600	4350*	2850	10.2
-1.5 m	14250*		18200*	10350	11700	6600	8150	4650	6100	3450	5150*	3000	9.8
-3 m	18550*		17700*	10250	11550*	6450	8050	4550	6050	3450	5950	3350	9.1
-4.5 m	23050* 21850		16050*	10400	11650	6550	8100	4650			7300	4150	8.1
-6 m	17750*		12750*	10850	9300*	6850					8150*	6050	6.5

- Machine in «LIGHT» mode

- Lift capacities are taken in accordance with SAE J 1097 / ISO 10567 / DIN 15019-2.

- Lift capacities shown in kg do not exceed 75% of the tipping load or 87% of the hydraulic lift capacity.

- Capacities that are marked with an asterisk are hydraulic limited.

- If the machine is equipped with a quick coupler, subtract the weight of the quick coupler from the load shown in the tables to calculate the real lifting capacity.

STANDARD EQUIPMENT

Hydraulic control

- 4 working modes (3 manual + 1 auto)
- 2 travel speeds with automatic speed change
- Swing brake control
- Load-holding valves on boom and dipper
- Power control - automatic powerboost
- Hydraulic control lever locking, lever position adjustment
- Auxiliary circuit control valve section
- High performance "Ultra Clean" filtration system (1 µ)

Engine control

- Engines to Tier II standard
- Calculator on injection pump
- Automatic / manual engine return to idle
- Fuel level check
- Emergency stop
- Automatic engine pre-heating

System Monitor, with 14 language display

- Messages (Function, safety, etc.)
- Working modes (H-S-L and auto)
- Operating modes (travel mode, swing locking, etc.)
- Audible warning device
- Digital clock
- Water temperature
- Hydraulic oil temperature
- Diagnostic system

Electrical system

- Leak-proof connectors
- Double horn

Lighting

- 1 working light on the fuel tank
- 1 working light on the boom
- 1 working light on the cab

Operator environment

- Modern cab, 1 metre wide
- Safety glass
- Suspended cab (6 mounting points with rubber/fluid shock absorbing mountings)
- Windscreen with lockable opening
- "LCD" display
- Water and dust-proof membrane type touch controls
- Windscreen washer and wiper
- Adjustable heater
- Floor mat
- Sun-visor
- Rear-view mirror and safety mirrors
- Self-adjusting air conditioning
- Anti-theft device

Operator seat

- Air suspension
- Height and tilt adjustment
- Adjustable head-rest
- Adjustable seat-back angle
- Adjustable arm-rests
- Reel-type safety belt

OPTIONS

- Auxiliary hydraulic circuit
Possible options and combinations:
 - Hammer circuit with pedal control
 - 2nd auxiliary circuit for clamshell rotation, etc.
 - Dual-acting circuit (shears type)
 - Multi-purpose circuit (hammer or shears)
 - Multi-purpose circuit + 2nd circuit
- MULTI-FIT quick coupler

Standard and optional equipment can vary from country to country

Conforms to directive 98/37/CE



NOTE: Standard and optional attachments and equipment may vary according to requirements and regulations from country to country. The photos given may show non standard or unmentioned items. Furthermore CASE reserves its right to modify specifications of its machines without prior warning, without incurring any obligation whatsoever that might result from such modifications.



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