

CASE

Hydraulic Excavator

Operating weight: 24 tons
Isuzu engine: 124,5 kW (167 hp)
Backhoe buckets: 460 to 1430 L

CX240



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 BB-6BGIT
 Turbo Yes
 Injection electronically controlled
 No. of cylinders 6
 Bore - Stroke 105 x 125 mm
 Cubic capacity 6494 cm³
 EEC 1289 horsepower 124.5 kW - 167 hp
 Engine speed 2150 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 212 l/min
 Max safety valve pressure
 Attachment / **Power Boost** 343/373 bar
 Upperstructure swing 290 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 10,4 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..... 3.4 kph

Speed change is controlled from the instrument panel.

Gradeability..... 70% (35°)

ELECTRICAL SYSTEM

Circuit.....24 volts

Batteries2 x 12 v - 112 A/h

Circuit equipped with water-proof connectors

Alternator.....24 v - 40 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 9

Number of track pads 51

Type of shoes..... Triple grouser

Standard track pad width 600 mm

Chain guides Front and central



CAB

Combining comfort, safety and ergonomics, the CX240 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 CX240 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 CX240 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).

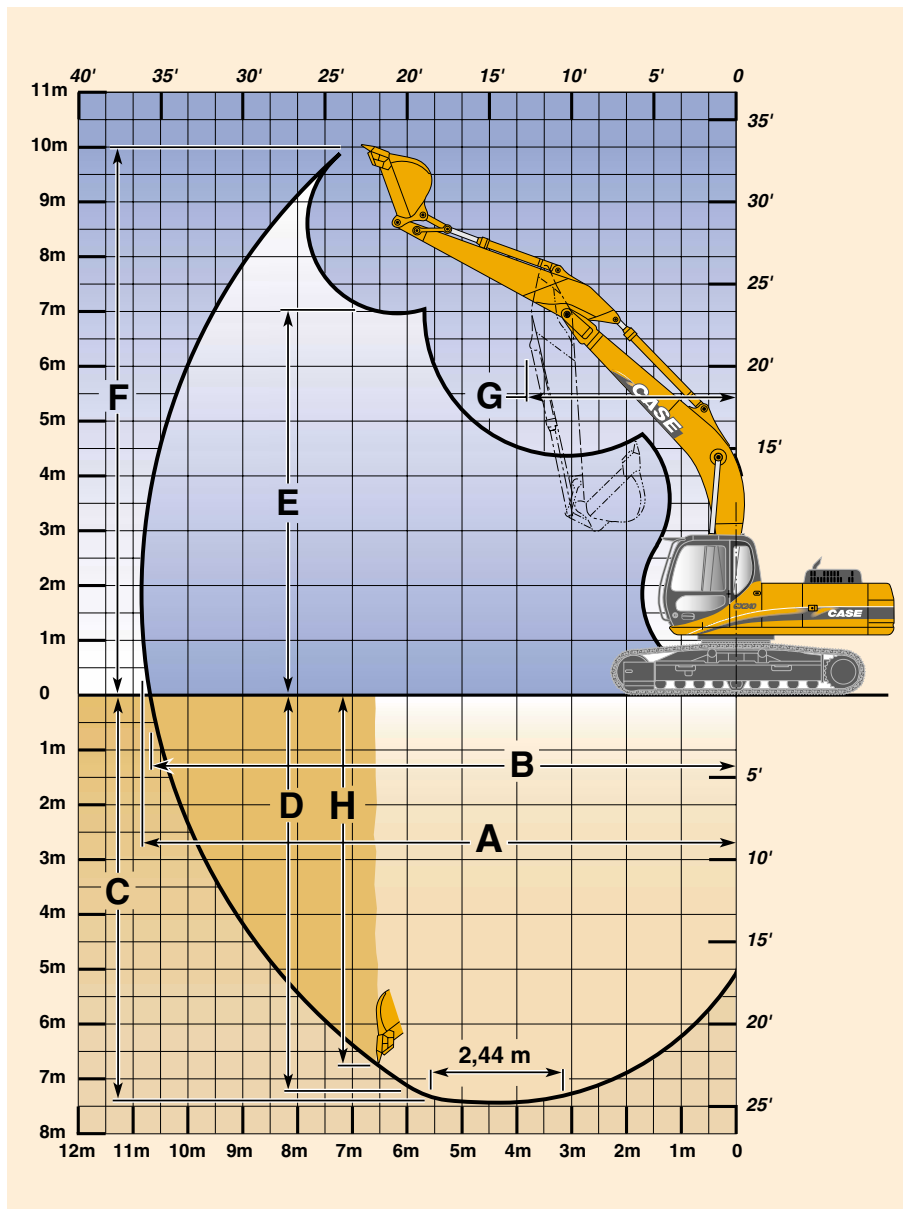


CIRCUIT AND COMPONENT CAPACITIES

Hydraulic reservoir	120 L
Hydraulic system.....	225 L
Travel reduction gear (per side).....	4.7 L
Swing reduction gear.....	6 L
Engine (including filter change)	24 L
Fuel tank.....	340 L



PERFORMANCE DATA



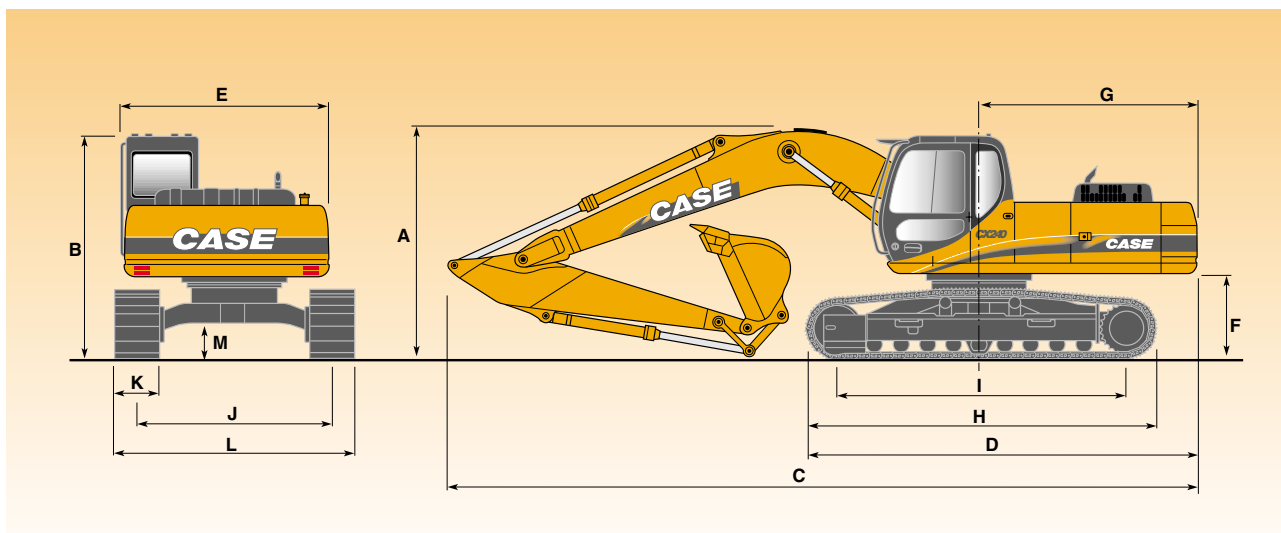
With 5.85 m monobloc boom

Dipper :

	2.50 m	3.10 m	3.50 m
A Maximum digging reach	9.90 m	10.42 m	10.84 m
B Maximum digging reach at ground levell	9.72 m	10.26 m	10.68 m
C Maximum digging depth	6.37 m	6.97 m	7.39 m
D Digging depth - 2.44 m (8') level bottom	6.19 m	6.80 m	7.25 m
E Maxi dump height	6.55 m	6.76 m	7.00 m
F Overall reach height	9.61 m	9.81 m	10.07 m
G Minimum swing radius	4.01 m	3.85 m	3.90 m
H Vertical straight wall dig depth	5.65 m	6.21 m	6.66 m
Digging force	-	12500 daN	-
Breakout force	17300 daN	17300 daN	17300 daN



GENERAL DIMENSIONS



A Overall height*	3.08 m
B Cab height	2.96 m
C Overall length*	9.88 m
D Overall length (wo/attachment)	5.22 m
E Width of upperstructure	2.75 m
F Upperstructure ground clearance	1.10 m
G Swing (rear end) radius	2.91 m
H Track overall length	4.64 m

I	Centre/centre (idler to sprocket)	3.84 m	
J	Track gauge	2.59 m	
K	Track shoes width (std)	600 mm	
L	Track overall width	Shoes 600 mm	3.19 m
		Shoes 700 mm	3.29 m
		Shoes 800 mm	3.39 m
M	Ground clearance	0.46 m	

* With 5.85 m monobloc boom - 3.10 m dipper and 1060 l bucket.

* With 5.85 m monobloc boom - 3.10 m dipper and 1060 l bucket.



WEIGHT AND GROUND PRESSURE

With 5.85 m monobloc boom - 3.10 m dipper - 1060 l bucket - operator and full fuel tank	Weight (kg)	Ground pressure (bar)
Shoes 600 mm steel	23500	0,48
Shoes 700 mm steel	-	-
Shoes 800 mm steel	-	-



BUCKETS

General purpose

SAE capacity	Litres	460	620	780	940	1060	1180	1300	1430
Width	mm	600	750	900	1000	1100	1200	1300	1400

Heavy duty

SAE capacity	Litres					1060	1180	1300	1430
Width	mm					1100	1200	1300	1400

Other types of bucket on application.



LIFTING CAPACITY

With 5.85 m boom - 2.50 m dipper, 600 mm shoes and 1300 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°	
7.50 m											5010*		6.04
6 m					5260*						4800*	4210	7.18
4.50 m					5870*	5590	5370*	3770			4880*	3440	7.87
3 m			8960*	8220	6790*	5210	5630	3600			4800	3050	8.23
1.5 m			10760*	7490	7710*	4850	5430	3420			4600	2880	8.31
0		8350*	11630*	7130	7520	4610	5290	3280			4690	2920	8.10
-1.5 m		14170*	11590*	7040	7410	4510	5240	3240			5150	3190	7.60
-3 m	15150*	14820	10700*	7140	7480	4560					6280	3880	6.72
-4.5 m		11850*	8550*	7450							7100*	5810	5.29
-6 m													

With 5.85 m boom - 3.10 m dipper, 600 mm shoes and 1060 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°	
7.50 m											3310*		6.76
6 m							4120*	3980			3170*		7.80
4.50 m					5300*		4930*	3860			3200*	3080	8.44
3 m	12890*		8070*		6290*	5340	5410*	3660			3370*	2750	8.77
1.5 m	8450*		10120*	7730	7330*	4950	5480	3460			3700*	2600	8.84
0	9470*		11370*	7240	7590	4660	5300	3300			4230	2620	8.65
-1.5 m	13060*		11710*	7060	7420	4510	5210	3210			4560	2820	8.18
-3 m	16440*	14640	11190*	7080	7400	4500					5370	3320	7.38
-4.5 m	13720*		9630*	7280	6900*	4660					6730*	4550	6.10
-6 m													

With 5.85 m boom - 3.50 m dipper, 600 mm shoes and 940 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°	
7.50 m											2820*		7.34
6 m							4260*	4030			2690*		8.30
4.50 m							4560*	3890			2690*		8.90
3 m			7340*		5850*	5400	5090*	3680	3690*	2620	2810*	2490	9.22
1.5 m	10880*		9510*	7850	6950*	4990	5490	3460	4030	2500	3050*	2360	9.29
0	9640*		11010*	7270	7590	4660	5280	3270	3930	2410	3460*	2360	9.11
-1.5 m	12230*		11610*	7010	7370	4470	5160	3160			4120	2520	8.66
-3 m	16410*	14420	11350*	6970	7320	4420	5140	3150			4750	2910	7.91
-4.5 m	14740*		10140*	7120	7360*	4520					6200	3810	6.74
-6 m			7190*								6520*		4.85

- 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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