

CX

CASE
SERIES HYDRAULIC EXCAVATORS
CX180



P R O F E S S I O N A L P A R T N E R



ENGINE

Engine meeting European requirements for “low exhaust emission” Tier 2, in accordance with directive 97/68/EC.

Make ISUZU
Type DD-4BG1TRA
Turbo Yes
Injection electronically controlled
No. of cylinders 4
Bore - Stroke 105 x 125 mm
Cubic capacity 4329 cm³
EEC 80/1269 horsepower 79.3 kW - 106 hp
Vitesse de rotation 2200 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 electronic engine power management 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 140.8 l/min
Max safety valve pressure
Attachment / **Power Boost** 343/**363** bar
Upperstructure swing 280 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 11.4 rpm

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

Hydrostatic swing brake backed up by a 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.

TRAVEL

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

Planetary reduction gear, automatic multi-disc brake.

Max travel speed 4.0 kph

Low travel speed 2.4 kph

Speed change is controlled from the instrument panel.

Gradeability 70 % (35°)

Tractive force 11300 daN



ELECTRICAL SYSTEM

Circuit..... 24 volts
 Batteries :..... 2 x 12 v - 96 A/h
 Circuit equipped with water-proof connectors
 Alternator 24 v - 50 A/h

UNDERCARRIAGE

The LC 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 7
 Number of track pads 46
 Type of shoes Triple grouser
 Standard track pad width 600 mm
 Chain guides Front and central



CAB

Combining comfort, safety and ergonomics, the CX180 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.
 Ergonomic seat with multiple adjustments is 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. 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:

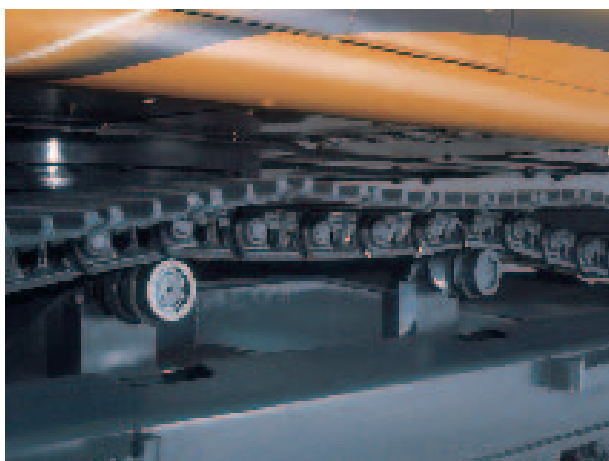
H mode (Heavy) for tough jobs, providing optimum efficiency, high working speed and maximum force.

S mode (Standard) is the “traditional” working mode. It grants high level performances while reducing fuel consumption.

L mode (Light) is the mode to be used for finishing work (sloping banks, profiles, etc), where precision 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 greater 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 CX180 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 CX180 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

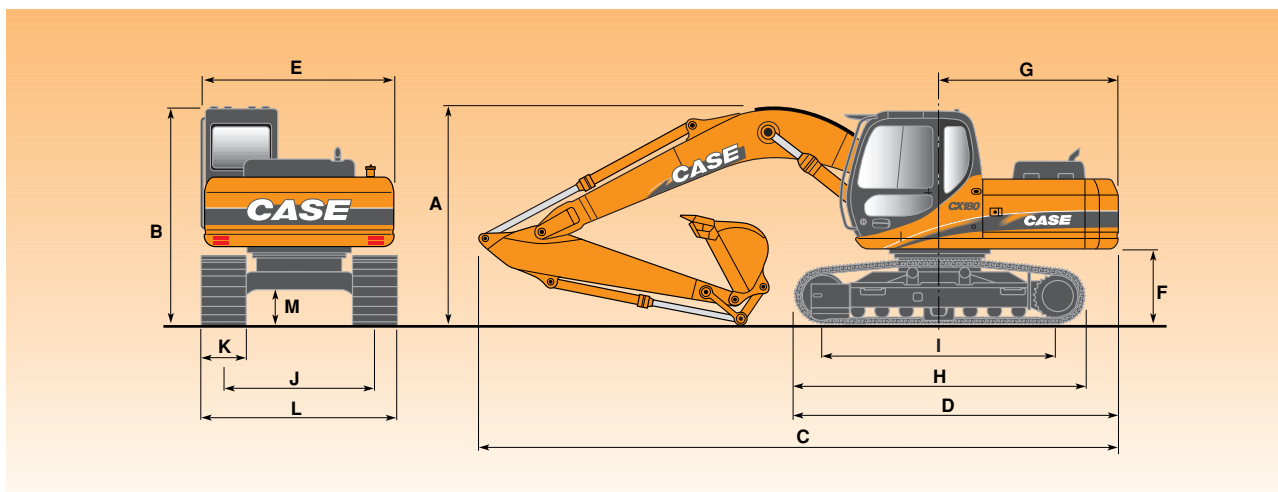
Hydraulic reservoir	73 l
Hydraulic system	148 l
Travel reduction gear (per side).....	3 l
Swing reduction gear	5 l
Engine (including filter change)	15 l
Fuel tank	250 l
Cooling system.....	17.7 l

RESPECT OF ENVIRONMENT

The CX180 respects the **European “reduced noise level”** as per directive 2000/14/EC Phase 2.



GENERAL DIMENSIONS



A Overall height	(2.70 m dipper)	2.92 m
	(3.10 dipper)	3.09 m
B Cab height		2.89 m
C Overall length	(2.70 m dipper)	8.40 m
	(3.10 m dipper)	8.44 m
D Overall length (wo/attachment)		4.45 m
E Width of upperstructure		2.54 m
F Upperstructure ground clearance		1.04 m
G Swing (rear end) radius		2.37 m

H Track overall length		4.15 m
I Centre/centre (idler to sprocket)		3.37 m
J Track gauge		2.20 m
K Track shoes width (std)		600 mm
L Track overall width	Shoes 500 mm	2.70 m
	Shoes 600 mm	2.80 m
	Shoes 700 mm	2.90 m
M Ground clearance		0.46 m



WEIGHT AND GROUND PRESSURE

With 5.15 m monobloc boom - 2.70 m dipper - bucket - operator and full fuel tank	Weight (kg)	Ground pressure (bar)
Shoes 600 mm steel	17500	0.40



BUCKETS

General purpose

SAE capacity	Litres	270	390	570	660	750	850	950
Width	mm	500	600	800	900	1000	1100	1200
Weight	kg	350	385	455	495	525	550	590

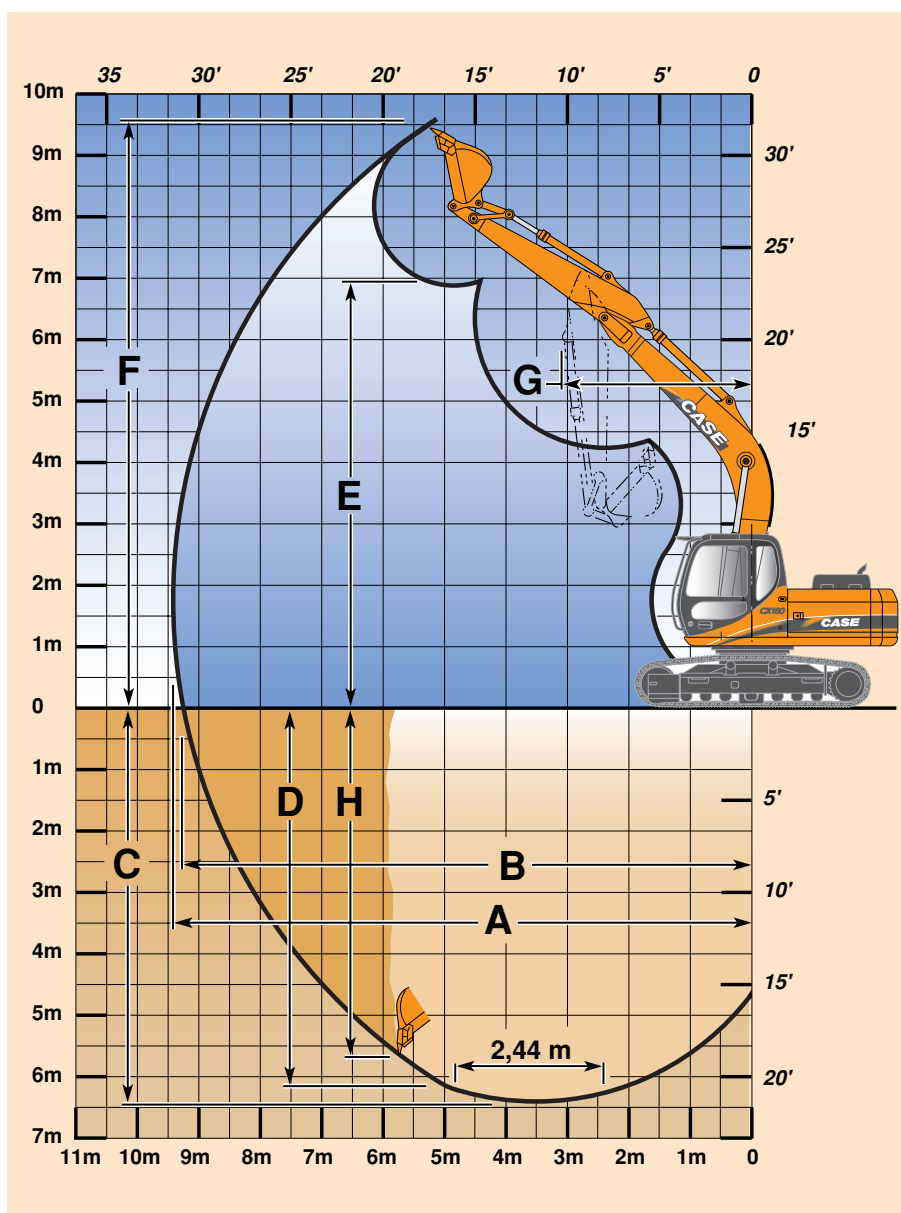
Heavy duty

SAE capacity	Litres				660	750	850	950
Width	mm				900	1000	1100	1200
Weight	kg				555	590	625	665

Other types of bucket on application.



PERFORMANCE DATA



With 5.15 m monobloc boom

	Dipper :		
	2.20 m	2.70 m	3.10 m
A Maximum digging reach	8.68 m	9.13 m	9.48 m
B Maximum digging reach at ground level	8.49 m	8.96 m	9.31 m
C Maximum digging depth	5.58 m	6.10 m	6.43 m
D Digging depth - 2.44 m (8') level bottom	5.39 m	5.91 m	6.25 m
E Maxi dump height	6.45 m	6.68 m	6.96 m
F Overall reach height	9.08 m	9.31 m	9.61 m
G Minimum swing radius	-	2.99 m	3.00 m
H Vertical straight wall dig depth	4.75 m	5.18 m	5.66 m
Digging force	9050 daN	8010 daN	7400 daN
Breakout force	11800 daN	11800 daN	11800 daN



LIFTING CAPACITY

With 5.15 m boom, 2.20 m dipper, 600 mm shoes and bucket

Reach	3 m		4.5 m		6 m		7.5 m		Max reach		
Height	front	360°	front	360°	front	360°	front	360°	front	360°	m
6 m											
					2670*				2600*		6.02
4.5 m				5100*	4670*	3360			2550*		6.85
3 m	10210*	9530	6530*	5010	5050	3190			2670*	2310	7.28
1.5 m		5290*	7730	4630	4860	3020			2950*	2180	7.39
0		7270*	7470	4400	4720	2890			3490*	2220	7.18
-1.5 m	11430*	8410	7400	4340	4670	2850			4040	2480	6.62
-3 m	11520*	8590	7490	4420					5250	3210	5.62
-4.5 m									6340*	6030	3.82

With 5.15 m boom, 2.70 m dipper, 600 mm shoes and bucket

Reach	3 m		4.5 m		6 m		7.5 m		Max reach		
Height	front	360°	front	360°	front	360°	front	360°	front	360°	m
6 m											
					3050*				1910*		6.59
4.5 m					4160*	3400			1870*		7.35
3 m		8570*	5880*	5120	4860*	3220	2840*	2200	1940*		7.76
1.5 m		8430*	7460*	4690	4870	3030	3400	2110	2130*	1950	7.86
0		7770*	7480	4410	4700	2870	3330	2040	2480*	1980	7.66
-1.5 m	10430*	8320	7350	4300	4620	2800			3160*	2170	7.14
-3 m	12340*	8440	7390	4330	4650	2830			4410	2690	6.23
-4.5 m	9600*	8760	6430*	4530					6100*	4280	4.67

With 5.15 m boom, 3.10 m dipper, 600 mm shoes and bucket

Reach	3 m		4.5 m		6 m		7.5 m		Max reach		
Height	front	360°	front	360°	front	360°	front	360°	front	360°	m
6 m											
					3070*				1650*		7.03
4.5 m					3770*	3450		2250*	1600*		7.75
3 m		7580*	5460*	5210	4610*	3270	3220*	2230	1650*		8.13
1.5 m	10330*	9010	7130*	4770	4910	3060	3420	2130	1780*		8.23
0		7740*	5730	4450	4720	2890	3330	2050	2030*	1830	8.04
-1.5 m	9700*	8310	7360	4310	4620	2800	2790*	2010	2490*	1990	7.55
-3 m	12780*	8390	7360	4300	4620	2800			3470*	2410	6.69
-4.5 m	10450*	8650	7060*	4450					5690*	3530	5.28

- 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
- Anti-theft device

Operator seat

- Multi-adjustment, low frequency suspension with springs and dual-acting shock absorber
- 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
- Self-adjusting air conditioning

Standard and optional equipment can vary from country to country

NOTE: Standard and optional fittings can vary according to the demands and specific regulations of each country. The illustrations may include optional rather than standard fittings - consult your Case dealer. Furthermore, CNH reserves the right to modify machine specifications without incurring any obligation relating to such changes.

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Conforms to directive 98/37/CE



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