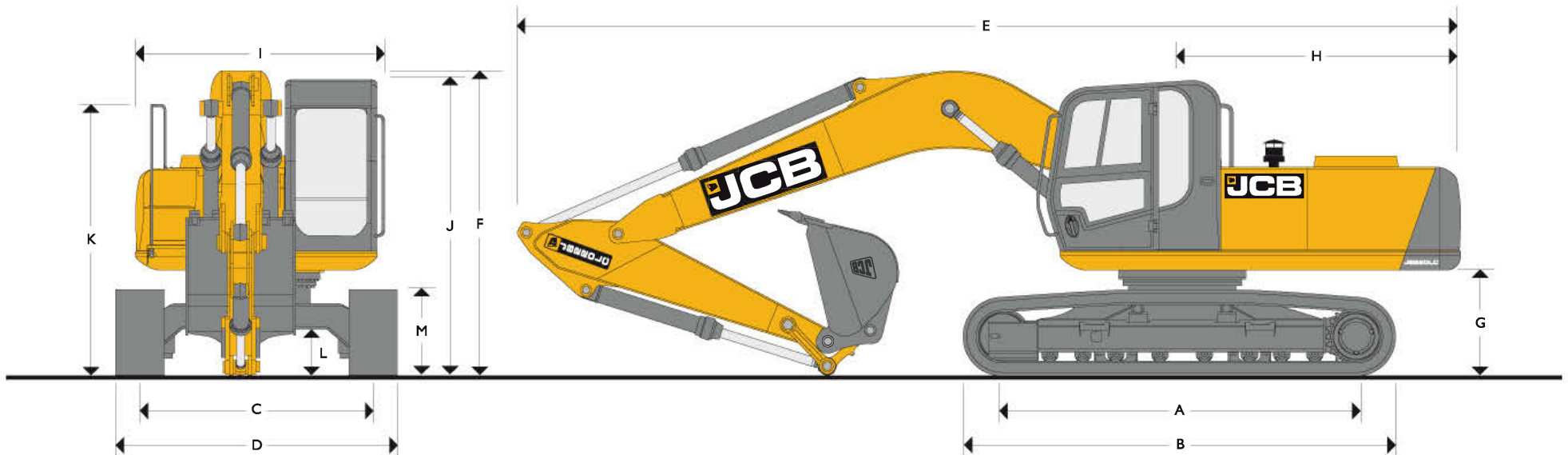


Powered by
JCB ENGINE
 ecoMAX

GROSS ENGINE POWER : 167 hp
MAX. OPERATING WEIGHT : 21750 kg



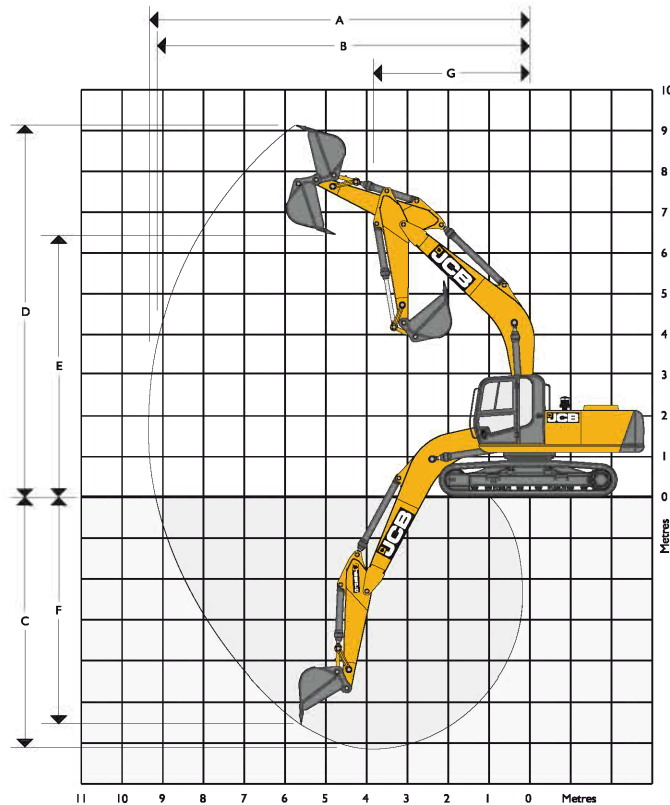
STATIC DIMENSIONS

	mm
A Track length on ground	3660 mm
B Undercarriage overall length	4460 mm
C Track gauge	2390 mm
D Width over tracks	2990 mm
E Transport length with Monoboom and 2.4 m dipper	9634 mm
F Transport height with Monoboom and 2.4 m dipper	3122 mm

	mm
G Counterweight clearance	1079 mm
H Tailswing radius	2825 mm
I Width of superstructure*	2549 mm
J Height over cab	3060 mm
K Height over handrail	2780 mm
L Ground clearance	435 mm
M Track height	885 mm

* All dimensions, weights and timings are variable within 1.5% JCB reserves the right to change specifications without prior notice.





WORKING RANGE: JS220LC



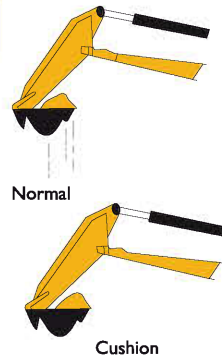
Boom Length 5.7m	Arm length		
Dipper	unit	2.40m	3.00m
A Maximum digging reach	m	9.30	9.79 m
B Maximum digging reach (on ground)	m	9.10	9.61
C Maximum digging depth	m	5.98	6.59
D Maximum digging height	m	9.03	9.12
E Maximum dumping height	m	6.46	6.57
F Maximum vertical wall cut depth	m	5.47	6.14
G Minimum swing radius	m	3.85	3.74
Bucket rotation	deg.	183	182
Dipper tearout (ISO6015)	kgf	11700	9842
Dipper tearout with boost	kgf	12723	10703
Bucket tearout (ISO6015)	kgf	13205	13205
Bucket tearout with boost	kgf	14360	14360

Cushion Control

An additional valve in the servo system slows engagement/disengagement of boom and dipper services when the control lever is moved suddenly.

This has the effect of cushioning the ram action, reducing the shock load on the excavator (and on the operator) and gives a smooth feel to the controls (for the skilled operator who wants the fastest response time from the controls - or to shake free sticky material from the bucket, it can be deselected). It is automatically reselected after an engine keyswitch stop/restart - but not if other engine stop systems are used.

Quick warm-up for the servo services is provided by the Cushion Control valve. Oil flows around the valve on the heat exchanger principle, achieving faster control response and maximum operating efficiency in the system much more quickly than allowing the oil to warm-up naturally.



Advance Management System

The heart of the system is the in-cab monitor unit. This gives a graphical display of fuel level and engine and hydraulic oil temperatures, in addition to audio-visual warnings of machine errors and function selection. The unit also controls the work mode and one touch idle facility. Four selectable working modes link the operators control movements with the engine and hydraulic systems to maximise productivity and efficiency.

A (Auto) Gives variable power and speed depending on the operator's input, matching the demand for output and efficiency to the job. Power boost is automatically activated in this mode, should hard conditions be encountered. Auto idle cuts after 5 and 30 seconds as set by the operator.

E (Economy) Maximises economy while maintaining excellent output.

P (Precision) For fine control of grading operations.

L (Lifting) Permanent power boost for maximum lifting power and control.

The auto mode allows the AMS processor to select the optimum operational performance to match the demands of the job, while the three alternative modes give precise matching of application when specific tasks are undertaken. The adjustable position monitor mounted on the front right hand pillar of the cab gives the operator a constant read out of mode, tracking range, operating temperature and a host of other information, while retaining excellent visibility of the monitor. The required flow for hammer applications can be set and stored in the AMS memory and is automatically activated whenever the hammer pedal is depressed.

A Can Bus link allows high speed data transmission between the monitor and diagnostic equipment which can be used to check the function of pressure switches, solenoids and actual values on monitor gauges.

A maintenance indicator illuminates at the required service interval to make the operator aware of an imminent service. All servicing and basic checks can be carried out using the cab monitor display, the diagnostic link is only required for more detailed diagnostics and machine history analysis.

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JS220LC TRACKED EXCAVATOR SPECIFICATION

ENGINE

Model	: JCB ecoMAX 448T2.
Type	: Turbo-Charged, 4-Cylinder, Water-Cooled, Common rail injection System
Gross power	: 125KW(167HP) @ 1800 RPM.
Piston displacement	: 4.765 liters.
Air filtration	: Dry element with secondary safety element and in cab warning indicator.
Cooling	: Water cooler via large capacity radiator with anti-block "wavy" fins.
Starting system	: 24volt.
Batteries	: 2x12 volt heavy-duty.
Alternator	: 24 volt, 55 amp.
Refuelling pump	: Electric type.

CAB + CAB GUARD

Pressed steel construction with high strength rolled sections. Excellent all round visibility during digging, loading & positioning. Removable front lower glass and sliding rear window. Excellent ergonomic positioning of operator comfort. Windscreen wiper, mobile phone charging point & document holders provided. Optional cab guards for cab front & top available for protection against flying objects. Additional cab top lights for illumination.

CONTROLS

Excavator	: All servo lever operated, to ISO control pattern, independently adjustable to the seat.
Tracks	: Individually servo operated by foot pedal or hand lever. Speed selection via joystick button.
Auxiliary	: Via servo operated foot pedal.
Low flow	: Via switch in RH servo lever.
Controls isolation	: Gate lock lever at cab entrance.
Engine speed	: Dial type throttle control plus servo lever mounted. One-touch control and separate selectable auto-idle with adjustable time delay using AMS.
Engine stop	: Ignition key operated and separate shutdown button.
Power boost	: Automatic.
Horn	: Operated via servo lever mounted button.

EXCAVATOR END

Monoboom is available on the JS 220LC with a 2.40 m dipper as a standard fitment. Reserve strength is built into the fully welded structures for hydraulic hammer and other arduous operations.

EXCAVATOR BUCKET

All buckets are JCB type fully welded steel, with sealed, hardened steel pivot pins and replaceable wear parts.

Bucket size	Capacity
Max. width toe plate	
1224 mm	0.90 cu.m.
1376 mm	1.02 cu.m.
1120 mm	0.8 cu.m.(Rock)

POWER BOOST

The digging force can be further boosted by a new Power Boost System

Dipper tearout Max.	12723 kg
Bucket tearout Max.	14360 kg

HYDRAULIC SYSTEM

A variable flow system with flow on demand, variable power output and servo operated, multi-function open centre control. Machine auto warm up maximises performance in cold/startup conditions.

Pumps

Main pumps: 2 variable displacement axial piston type.
Maximum flow: 2x194 L/min.
Servo pump: Gear type.
Maximum flow: 18 L/min.

Control valve

A combined four and five spool control valve with auxiliary service spool as standard. When required, twin pump flow is combined to boom, dipper and bucket services for greater speed and efficiency.

Relief valve settings

Boom/Arm/Bucket	343 bar
With power boost	373 bar
Swing circuit	289 bar
Travel circuit	343 bar
Pilot control	40 bar

A separate Cushion Control valve in the servo system provides cushioning of the boom and dipper spools selection and quick warm-up of the servo system.

Hydraulic cylinders

Double acting type, with bolt-up end caps and hardened steel bearing bushes. End cushioning is fitted as standard on boom, dipper and bucket rams.

Filtration

The hydraulic components are protected by the highest standard of filtration, to ensure long hydraulic fluid and component life.

In tank: 150 micron, suction strainer.
Main return line: 10 micron, fibre form element.
Plexus Bypass line: 1.5 micron, paper element.
Plot line: 10 micron, paper element.
Hydraulic hammer return: 10 micron, reinforced microform element.

Cooling

Worldwide cooling is provided via a full return line air blast cooler with anti-block wavy cooling fins.

AUTOMATIC TRAVEL SPEED SHIFT

Three-speed travel motor automatically shifts high mode down to medium mode depending on a terrain condition.

High mode	Medium mode
5 km/h	3.3 km/h

SWING SYSTEM

Swing motor : Axial piston type.
Swing brake : Hydraulic braking plus automatic spring applied disc type parking brake.
Final drive : Planetary reduction.
Swing gear : Large diameter, internally toothed fully sealed grease bath lubricated.
Swing lock : Multi position switchable brake.

UNDERCARRIAGE

Construction : Fully welded. "X" frame type with central belly guarding and sloping sidemembers with dirt relief holes under top rollers.

Track Shoe : 600mm (Standard)
Upper & lower rollers : Heat treated, sealed and lubricated.

Track adjustment : Grease cylinder type.
Track idler : Sealed and lubricated, with spring enhanced recoil.

No. of track guides : 2 per side
No. of lower rollers : 8 per side
No. of upper rollers : 2 per side
No. of track shoes : 49 per side

TRACK DRIVE

Type : Fully hydrostatic, three speed with autoshift.
Travel motors : Variable swash axial piston type, fully guarded within undercarriage frame.

Final Drive : Planetary reduction, bolt-on sprockets
Service brake : Hydraulic counter balance valve to prevent overspeeding on gradients.

Park brake : Disc type, spring applied, automatic hydraulic release.

Gradeability : 70% (35 deg.) continuous
Travel Speed : High - 5 km/h, Mid - 3.3 km/h, Low - 2.3 km/h

Tractive effort : 197.8 KN (20170 kgf)

WEIGHT AND GROUND BEARING PRESSURE

Standard machine with bucket, operator

Full capacity lubes and fuel

Max. Operating Weight	21750 kg
Ground bearing pressure	0.49 kg/sq.cm

FILTRATION SYSTEM

The hydraulic components are protected by the highest standard of filtration to ensure long hydraulic fluid life upto 5000 hrs (subject to SOS & recommended maintenance practices) and component life.

In tank: 150 micron, suction strainer.
Main return line : 10 micron, fibre form element.
Plexus Bypass line: 1.5 micron, paper element.
Pilot line: 10 micron, paper element.

Hydraulic hammer return : 10 micron, reinforced microform element.

Cooling

Worldwide cooling is provided via a full return line air blast cooler with anti-block wavy cooling fins.

STANDARD / OPTIONAL EQUIPMENT

Equipment	Standard/Optional
Auto-Idler & one touch idler	Standard
Work lights: 1 each on boom and main frame	Standard
Additional lights; 2 nos. on cab & 1 no. on Counterweight	Standard
Windscreen wiper	Standard
Engine Fan Guard	Standard
Undercarriage belly guarding	Standard
Turbo II pre-cleaner	Standard
Suspension Seat	Standard
Removable front lower cab glass	Standard
Rock breaker pipe mounting brackets	Standard
Tool Kit	Standard
Handrail and nonslip walk ways	Standard
Radiator fly screen	Standard
Fully ducted air conditioner unit with heater	Standard
Cab sun screen	Standard
Electric Re-fuelling Pump	Standard
Tool Box and Storage Space	Standard
Power Boost	Standard
Hydraulic Cushion Control	Standard
Cold Start & Pre-Heat	Standard
Air Conditioning	Standard
Interior Light	Standard
FM Radio and USB music player with speakers	Optional
Cabin Guard (Front and Top)	Optional
Rock breaker	Optional
Rock breaker pipe Work	Optional
General purpose buckets (0.9 cum, 1.02 cum)	Optional
Heavy-Duty Buckets (0.8 cum, 0.9 cum)	Optional
First aid kit	Optional
Long reach attachment (15m)	Optional
3 m arm	Optional

SERVICE CAPACITIES

Fuel tank	343 lt
Engine coolant	17.5 lt
Engine oil	21.0 lt
Swing reduction gear	5.0 lt
Track reduction gear (each side)	2x5.2 lt
Hydraulic system	200 lt
Hydraulic tank	120 lt

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JS220LC LIFT CAPACITIES : JS220LC, 2.4 m arm, 49X600 tracks, without bucket

Reach	3 m		4.5 m		6.0 m		7.5 m		Capacity at Max. Reach	
Load Point Height										

LIFT CAPACITIES: JS220LC, 2.4 m arm, 49X600 tracks, without bucket

Reach	3m		4.5m		6m		7.5m		Max. Reach		Max. Reach
Load Point Ht.	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	mm
7.5m									5731*	5299	5577
6m					6626*	4711			5289*	3828	6782
4.5m			8352*	7060	7208*	4555	5233*	3192	5205*	3189	7504
3-0m			10556*	6506	7285	4323	5160	3111	4778	2880	7876
1.5m			11090	6065	7034	4103	5049	3011	4633	2769	7950
0m			10843	5864	6872	3962	4975	2944	4767	2829	7735
-1.5m	11428*	11185	10807	5835	6823	3920			5265	3104	7202
-3.0m	16254*	11382	10928	5933	6916	4001			6498	3790	6273
-4.5m			8756*	6231					8203*	5855	4711

JS220LC LIFT CAPACITIES : JS220LC, 3.0 m arm, 49X600 tracks, without bucket

Reach	3 m		4.5 m		6.0 m		7.5 m		Capacity at Max. Reach	
Load Point Height										

LIFT CAPACITIES: JS220LC, 2.4 m arm, 49X600 tracks, without bucket

Reach	3m		4.5m		6m		7.5m		Max. Reach		Max. Reach
Load Point Ht.	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	mm
7.5m									5026*	4387	6450
6m							4719*	3383	4646*	3370	7515
4.5m					6618*	4789	5230	3342	4523	2875	8171
3-0m			9642*	6949	7252	4527	5101	3223	4165	2622	8514
1.5m			11064	6417	6959	4268	4959	3094	4046	2527	8583
0m			10701	6117	6750	4083	4851	2995	4137	2568	8383
-1.5m	9849*	9849*	10583	6019	6654	3999	4812	2961	4490	2776	7896
-3.0m	16530*	11849	10640	6066	6683	4024			5310	3269	7059
-4.5m	14541*	12214	10423*	6271	---	---			7422	4505	5721

- Life capacity front and rear
- Lift capacity full circle

Notes: • For lifting capacity including bucket, subtract total weight of bucket or bucket and quickhitch from above value • The above loads are in compliance with SAE and ISO standards i.e. 75% of minimum tipping load or 87% of hydraulic lift capacity, whichever is less. Lifting capacities marked * are based on hydraulic capacity

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