



HYDRAULIC EXCAVATOR | JS300 LC

Net engine power: 165kW (221hp) Operating weight: 32430kg



PERFORMANCE AND PRODUCTIVITY.

BEFORE YOU BUY AN EXCAVATOR, YOU NEED TO KNOW IT'S GOING TO BE TOUGH ENOUGH TO PERFORM ANY JOB YOU ASK OF IT. FORTUNATELY, WITH A JCB JS300, STRENGTH AND DURABILITY COME AS STANDARD.



Boom and dipper.

1 A JCB JS300 reinforced boom and dipper is made of high tensile strength steel, with internal baffle plates for long life durability. In addition we fit heavy-duty wear strips at the dipper end for increased durability.

2 Our advanced manufacturing and assembly processes produce high precision and quality assembled components.

We use Finite Element Analysis with extensive rig and endurance testing to make key components last longer.



1

Componentry.

3 JCB JS300 boast the best components in the industry, including new Berco running gear, Kawasaki pumps and Kayaba main control valves.

The JCB 6-cylinder 165kW DIESELMAX engine uses a multi-stage fuel filtration system. This consists of water separation and first stage 10 micron filtration followed by 2 micron fine filtration and finally an ultra-fine 2 micron filter. This system protects against a wide range of types of contaminants in fuel.



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Structural strength.

- 4 The high-strength undercarriage of a JCB JS300 uses a fully-welded X frame construction for long-term durability even in the most demanding applications.
- 5 A closed box section revolving frame increases strength and reduces stress. It is also highly resistant to impact damage.
- 6 The JS300's high-strength rigid upper frame provides maximum durability and support.
- 7 Our stiff, durable door design gives great strength and rigidity.



UNEARTHED: KEY FACT
The JCB JS300 turret is welded to both the upper and lower undercarriage frame.



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MAXIMUM PRODUCTIVITY, MINIMUM SPEND.

IT'S MORE IMPORTANT THAN EVER TO SAVE MONEY AND TIME; THE JCB JS300 RANGE IS DESIGNED TO MAKE THE MOST OF BOTH.

Upping output.

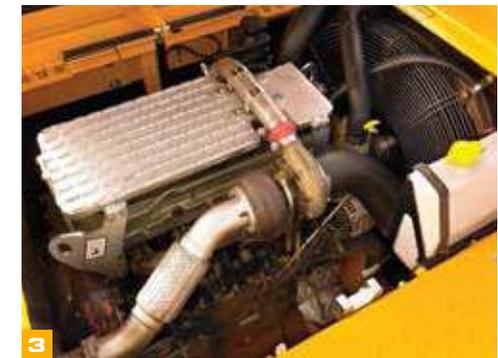
- 1 With up to a massive 245kN of bucket tearout and fast cycle times, the JS300 is extremely productive in all applications
- 2 Simultaneous tracking and excavating is smooth and fast with an intuitive multifunction operation.

Efficiency.

Advanced hydraulic technology ensures that the machines always starts in idle for maximum fuel efficiency, contributing to fuel savings.

Optimised hydraulic pump settings and a revised spool configuration within the main valve block, only delivers the required oil flow, preventing wasted energy.

- 3 The new SMART Control electronics and JCB DIESELMAX engine benefit by working together to deliver a smooth high torque power band even at low engine speed up to the max of 165kW 221hp.



The JS300's have variable power bands that allow you to tailor performance – and therefore economy – to specific tasks.



UNEARTHED: KEY FACT
 To save fuel, JCB Auto-Idle technology automatically reduces engine speed when hydraulics aren't in use.

Stability, hydraulics and attachments.

4 JCB's innovative hydraulic regeneration system means oil is recycled across the cylinders for faster cycle times and reduced fuel consumption.

5 A JCB JS300 has cushioned boom and dipper ends to prevent shock loadings, protect your machine and increase operator comfort.

6 A JCB JS300 has a solid, stable work platform for fast cycle times.

For ultra versatility, JCB offers a full list of auxiliary pipework options including hammer, auxiliary, merged and low flow.



A COMFORTABLE FAVOURITE.

JCB EXCAVATORS ARE DESIGNED AROUND THE OPERATOR. THAT'S GOOD FOR THEM BUT EVEN BETTER FOR YOU; AFTER ALL, GREAT COMFORT AND EASE OF USE EQUALS GREAT PRODUCTIVITY.

Visibly better.

- 1 A 70/30 front screen split gives JCB JS300s excellent front visibility. A clear view of the front right track provides easy, safe trench digging and manoeuvring.
- 2 An innovative low-level bonnet provides excellent rearward visibility.

Comfortably in control.

- 3 The 7" display is easy to read in all light conditions, provides instant operational information, and has a customisable home screen.
- JCB's new basic tool select system (fitted as standard) allows the operator to set up the single direction auxiliary and hammer circuit to match flow the requirements. The selected flow is achieved by automatically adjusting the engine rpm when the hydraulic service is operated.



A large laminated glass roof window gives the JS300 optimum visibility for working at height.

Light, intuitive and smooth controls improve comfort and productivity. The JS300's joystick-mounted power boost button gives extra hydraulic power fast.

A balanced slew and electronic/hydraulic controlled slew braking give speed and precision.





5

The working environment.

4 The JS300 creates a quieter working environment inside and out. Because we've reduced noise levels to 74dB(A) inside and 104dB(A) outside, you can use the machine at any location, any time.

JCB JS300 cabs use 6 viscous rubber mounts to minimise noise and vibration.

The positive pressure cab keeps out dirt and dust.

5 JCB's climate control option offers a precisely controlled cab temperature with fresh or recirculated air. Demisting/defrosting functions keep a JS300's front window clear.

6 There's a spacious luggage tray behind the operator's seat.

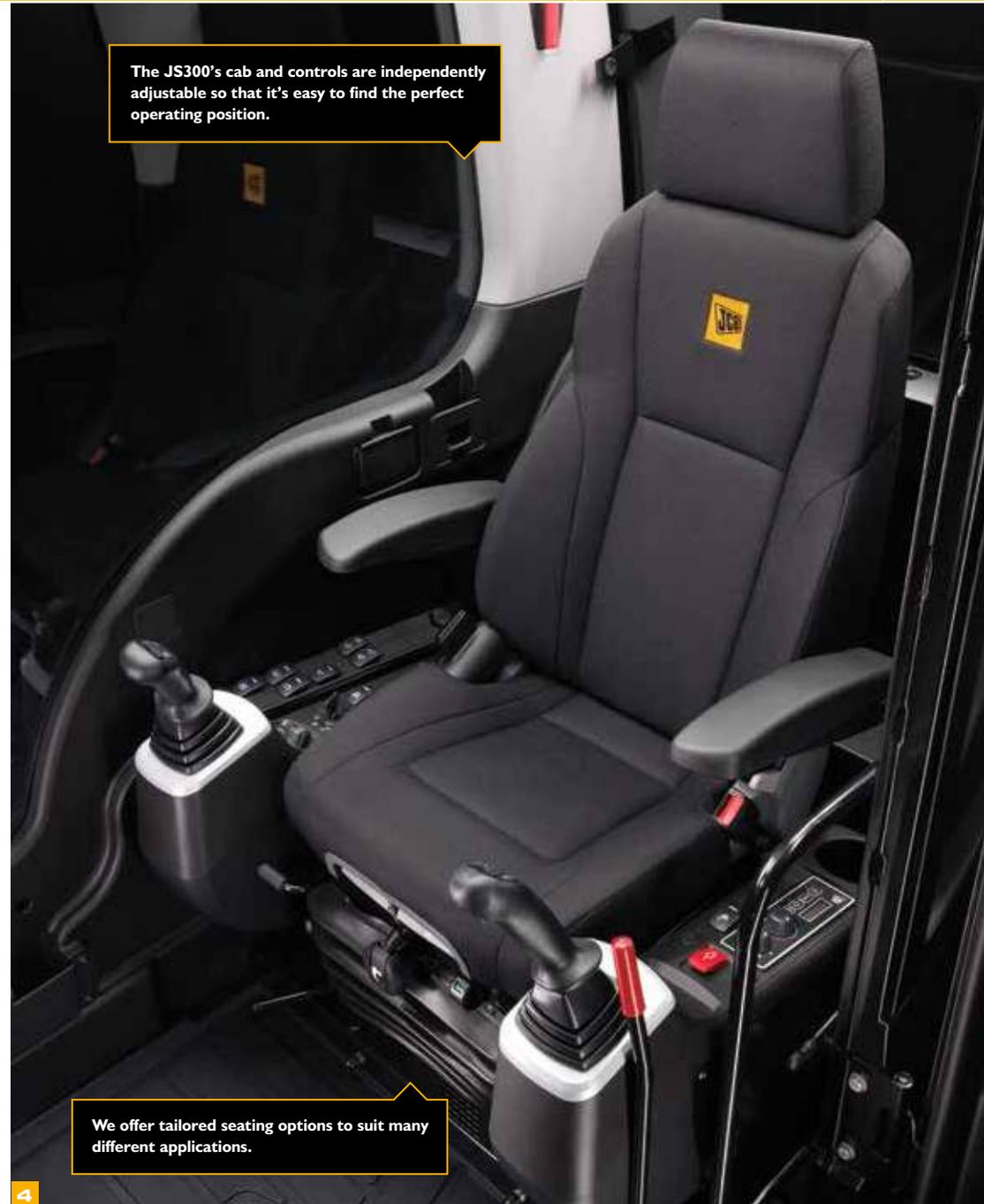
7 A large floor area with large high grip pedals gives easy and precise tracking.



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The JS300's cab and controls are independently adjustable so that it's easy to find the perfect operating position.

We offer tailored seating options to suit many different applications.

4

LESS SERVICING, MORE SERVICE.

WE'VE DESIGNED JCB JS300 TO BE LOW MAINTENANCE AND EASILY SERVICEABLE. WHICH MAKES THEM AFFORDABLE, EFFICIENT AND HIGHLY PRODUCTIVE. HELPING YOU GET THE BEST SERVICE FROM YOUR MACHINE.



Easy does it.

1 The air filter on a JS300 is easily accessible, and a double-element construction simplifies cleaning.

2 The filters on a JCB JS300 (engine oil, hydraulic oil and fuel) are centrally located for fast, easy servicing.



(A) Hydraulics oil filters (B) Fuel filters

	SERVICE INTERVALS
Engine oil and oil filter	Every 500 hours
Hydraulic oil	Every 5000 hours
Hydraulic oil filter	Every 1000 hours

Here to help.

- 1 JCB's Smart Control automatically checks the engine oil and engine coolant level on machine start up.
- 4 Because they're mounted side by side on a JCB JS300, the engine radiator, hydraulic cooler and intercooler can be serviced individually yet cleaned easily.
- 5 Service your JCB JS300 with your local main dealer and our trained engineers can minimise downtime. Order genuine JCB parts online and, in 95% of cases, they'll be with you next day. For extra security and machine protection, opt for a package like JCB LiveLink remote machine monitoring.



UNEARTHED: KEY FACT
 JCB JS300 grease points are centralised for safe and easy access to high level pivots.

JCB JS300 bonnets open and close easily with gas-assisted cylinders, and the service bays are large and wide for good access.



THE SAFE CHOICE.

ON-SITE SAFETY IS CRUCIAL, SO WE'VE DESIGNED THE JS300 TO INCORPORATE AS MANY CUTTING EDGE SAFEGUARDS AS POSSIBLE. IN SHORT, YOUR OPERATORS ARE IN SAFE HANDS.



1 JCB JS300 bonnet opens front-to-rear for easy and safe engine service access.

2 For extra peace of mind, JCB JS300 cabs are available with an optional external ROPS and FOPS protection.

3 JCB's Safety Level Lock fully isolates hydraulic functions to avoid unintended movements. Our 2GO system means a JCB JS300 can only be started in a safe locked position via two separate inputs.

4 JCB JS300s have a large glass area and low bonnet line for superb visibility.

5 A JCB JS300's steps and platforms have anti-slip punched steel plates for optimum grip, even in wet or icy conditions. Bolt-on plates have recessed bolts to reduce trip hazard.

6 JCB's optional rear-view and optional side view camera displays an uninterrupted rearward and sideward view on the smart controller display.

7 Equip your JCB JS300 with a full set of side and rear view mirrors for all round visibility and safety compliance.

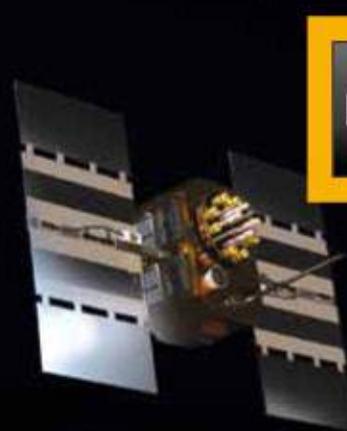


LIVELINK, WORK SMARTER.

LIVELINK IS AN INNOVATIVE SOFTWARE SYSTEM THAT LETS YOU MANAGE JCB MACHINES REMOTELY – ONLINE, BY EMAIL OR BY MOBILE PHONE. ACCESS EVERYTHING FROM MACHINE ALERTS TO FUEL REPORTS AND HISTORY INFORMATION, WITH ALL DATA STORED AT A SECURE CENTRE.

Productivity and cost benefits

By providing information like idle time monitoring and machine fuel consumption, JCB Livelink helps reduce your fuel usage, saving money and improving productivity. Machine location information can help improve efficiency and perhaps even reduce insurance costs.



Maintenance benefits

Manage machine maintenance easily – accurate hours monitoring and service alerts improve maintenance planning, while real-time location data helps you manage your fleet. Critical machine alerts and maintenance history records are also available.



Security benefits

Livelink's real-time geofencing alerts tell you when machines move out of predetermined zones, and real-time curfew alerts inform you of unauthorised usage. Further benefits include real-time location information, advanced ECU matching (pairs Livelink with the immobiliser or ECU).



VALUE ADDED.

JCB'S WORLDWIDE CUSTOMER SUPPORT IS FIRST CLASS. WHATEVER YOU NEED AND WHEREVER YOU ARE, WE'LL BE AVAILABLE QUICKLY AND EFFICIENTLY TO HELP MAKE SURE YOUR MACHINERY IS PERFORMING TO ITS FULL POTENTIAL.



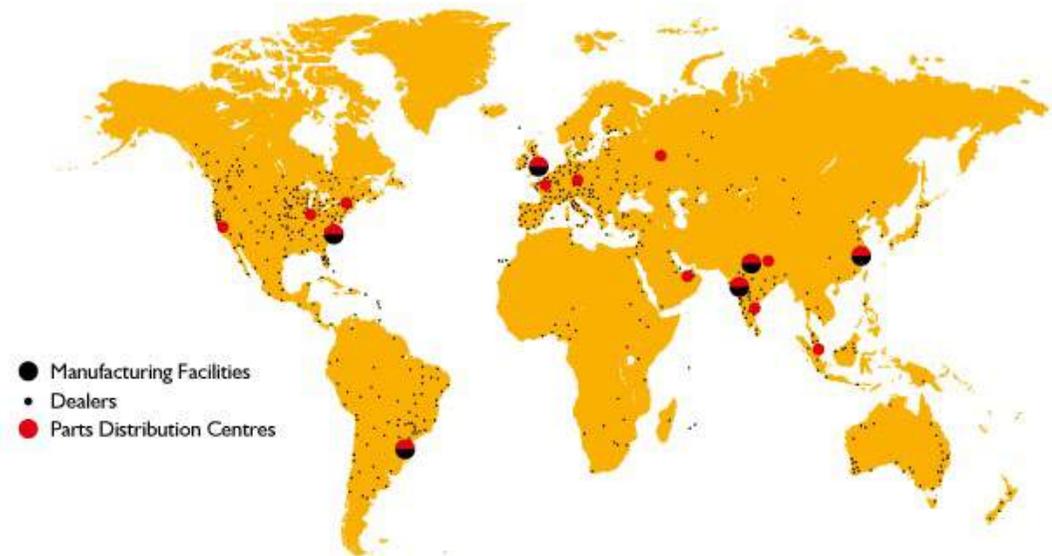
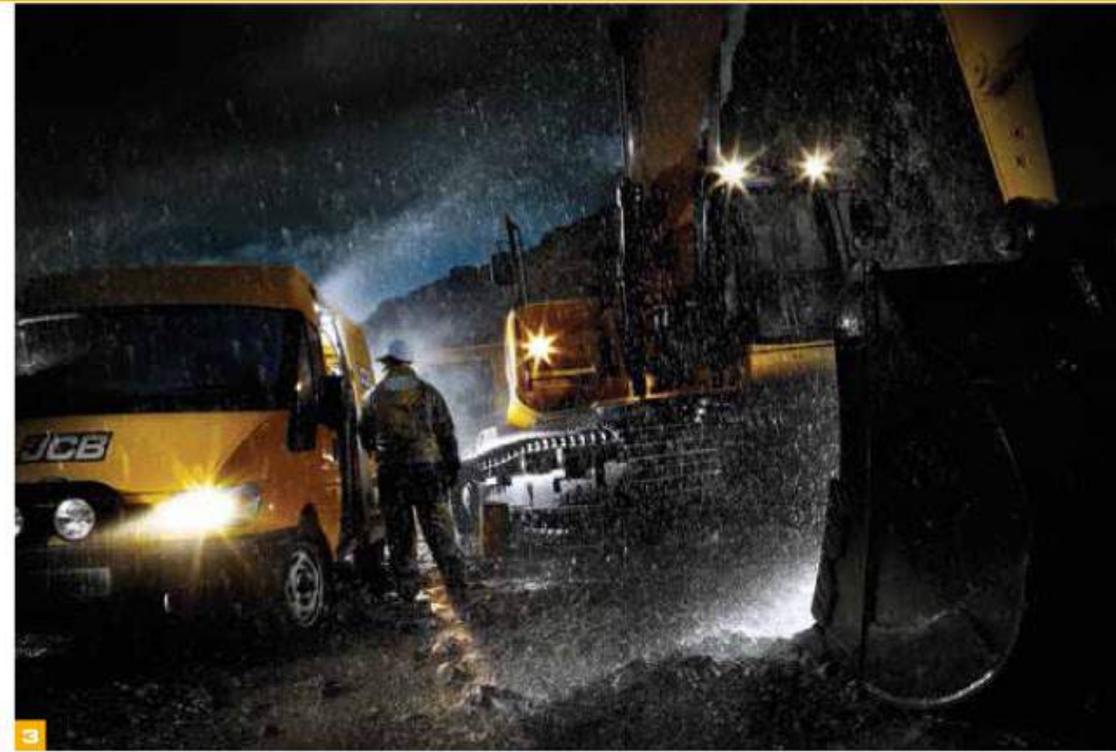
1 Our Technical Support Service provides instant access to factory expertise, day or night, while our Finance and Insurance teams are always on hand to provide fast, flexible, competitive quotes.

2 The global network of JCB Parts Centres is another model of efficiency; with 16 regional bases, we can deliver around 95% of all parts anywhere in the world within 24 hours. Our genuine JCB parts are designed to work in perfect harmony with your machine for optimum performance and productivity.

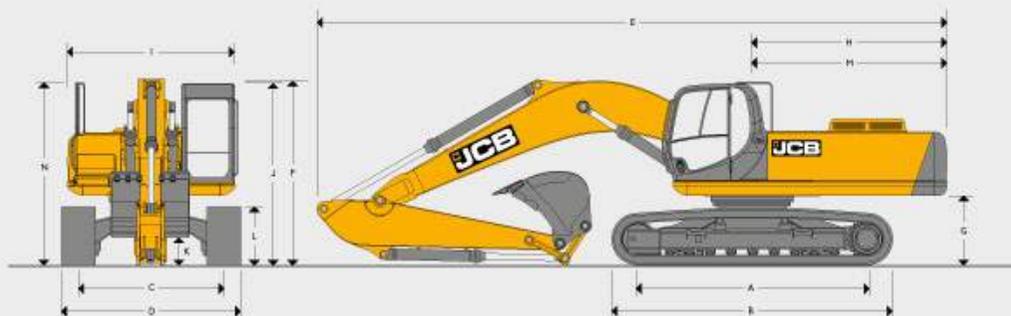


3 JCB Assetcare offers comprehensive extended warranties and service agreements, as well as service-only or repair and maintenance contracts. Irrespective of what you opt for, our maintenance teams around the world charge competitive labour rates, and offer non-obligation quotations as well as fast, efficient insurance repair work.

Note: JCB LIVELINK and JCB ASSETCARE may not be available in your region, so please check with your local dealer.



STATIC DIMENSIONS



STATIC DIMENSIONS

Model		LC		
A	Track length on ground	mm	3990	
B	Undercarriage overall length	mm	4843	
C	Track gauge	mm	2600	
D	Width over tracks (600mm trackshoes)	mm	3200	
D	Width over tracks (700mm trackshoes)	mm	3300	
D	Width over tracks (800mm trackshoes)	mm	3400	
D	Width over tracks (900mm trackshoes)	mm	3500	
G	Counterweight clearance	mm	1198	
H	Tail swing radius	mm	3251	
I	Overall width of superstructure	mm	3046	
J	Height over cab	mm	3181	
K	Ground clearance	mm	550	
L	Track height	mm	1011	
M	Tail length	mm	3185	
N	Height over grab rail	mm	3344	
		Monoboam 6.2m		
Dipper lengths		2.5m	3.1m	3.7m
E	Transport length	mm	10758	10630
F	Transport height	mm	3375	3344

ENGINE

Model	JCB DIESELMAX 672
Type	4-stroke, 6-cylinder in-line, common rail direct injection, turbocharged and intercooled diesel.
Rated power	165kW (221hp) at 1900 rpm.
Piston displacement	7.8 litres
Air filtration	Dry element with secondary safety element and in-cab warning indicator.
Starting system	24 volt.
Batteries	2 x 12 volt.
Alternator	24 volt, 50 ampere.

SWING SYSTEM

Swing motor	Axial piston type.
Swing brake	Hydraulic braking plus automatic spring applied disc type parking brake.
Swing torque	100.3 kNm
Swing speed	9.4rpm
Swing gear	Large diameter, internally toothed fully sealed grease bath lubricated.

UNDERCARRIAGE

Carriage options	LC - Long Carriage
Construction	Fully welded, 'X' frame type with central bellyguarding and sloping sidemembers with dirt relief holes under top rollers.
Recovery point	Front and rear.
Track shoe options	600mm.
Upper and lower rollers	Heat treated, sealed and lubricated.
Track adjustment	Grease cylinder type.
Track idler	Sealed and lubricated, with spring cushioned recoil.
Track type	Sealed and lubricated.
No. of track guides	2 per side
No. of lower rollers	9 per side
No. of upper rollers	2 per side
No. of track shoes	50 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 – 5.2 km/h Mid – 3.1 km/h Low – 2.1 km/h
Tractive effort	243kN

HYDRAULIC SYSTEM	
Open centered, negative control hydraulic system with twin variable flow piston pumps providing flow-on-demand.	
Pumps	
Main pumps	2 variable displacement axial piston type.
Maximum flow	2 x 252 l/min
Servo pump	Gear type.
Maximum flow	18l/min
Control valve	
A combined four and five spool control valve with auxiliary service spool as standard.	
Relief valve settings	
Boom/Arm/Bucket	343 bar
With power boost	372 bar
Swing circuit	290 bar
Travel circuit	343 bar
Pilot control	39 bar
Filtration	
In tank	150 micron, suction strainer.
Main return line	10 micron, glass fibre element.
Pilot line	10 micron, paper element.
Hydraulic hammer return	10 micron, reinforced microform element.

EXCAVATOR END – MONOBOOM	
6.2m Monoboom available along with a choice of dipper lengths to suit the requirements of reach, dig-depth, loadover height and tearouts. Reserve strength is built into the fully welded structures for hydraulic hammer and other arduous operations. Fabricated bucket tipping links are provided with a choice of lift points.	

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, and speed selection via machine control interface switch.
Auxiliary	Via servo operated foot pedal.
Control isolation	Via gate lock lever at cab entrance or rocker switch.
Engine speed	Dial type throttle control plus servo lever mounted one-touch idle control or separate selectable auto-idle with adjustable time delay using SMART control.
Engine stop	Ignition key operated and emergency shut down switch.
Horn	Operated via servo lever mounted button.

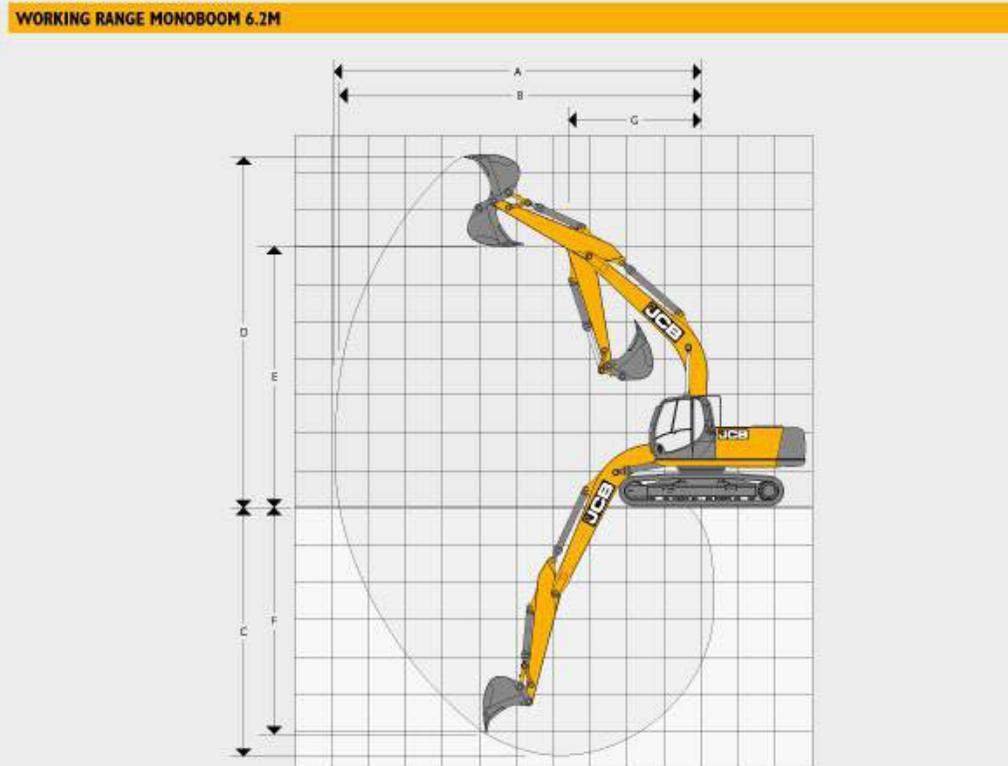
BUCKET AND ARM COMBINATION								
Bucket width	mm	900	1000	1200	1350	1500	1600	1800
Bucket capacity	m ³	0.85	0.98	1.245	1.45	1.49	1.61	1.845
Bucket weight	kg	827	871	979	1046	1090	1133	1217
Dipper length								
2.5	m	□	□	□	□	□	●	●
3.1	m	□	□	□	●	●	■	-
3.7	m	□	□	●	■	■	-	-

□ = Suitable for general excavating (materials up to 2000kg/m³) ■ = Suitable for light excavating (materials up to 1600kg/m³)
 ● = Suitable for grading & loading (materials up to 1200kg/m³) * Bucket capacity recommendations with no quick hitch fitted
 - = Not recommended

SERVICE CAPACITIES			
Fuel tank	Litres	590	
Engine coolant	Litres	45	
Engine oil	Litres	25	
Swing reduction gear	Litres	14.5	
Track reduction gear (each side)	Litres	3.5	
Hydraulic system	Litres	430	
Hydraulic tank	Litres	239	

WEIGHTS AND GROUND BEARING PRESSURES					
Figures include 1.8m ³ (1145 kg) bucket, operator, full fuel tank and 3.1 m dipper.					
		600mm shoes	700mm shoes	800mm shoes	900mm shoes
LC					
Machine weight	kg	31140	31490	32278	32687
Ground bearing pressure	kg/cm ²	0.61	0.52	0.47	0.42

Plus additional 800kg HD counterweight



WORKING RANGE MONOBOOM 6.2M					
Dipper length		2.5m	3.1m	3.7m	
A	Maximum digging reach	mm	10091	10655	11291
B	Maximum digging reach (on ground)	mm	9871	10447	11096
C	Maximum digging depth	mm	6477	7062	7637
D	Maximum digging height	mm	9769	10130	10719
E	Maximum loadover height	mm	6980	7298	7815
F	Maximum vertical wall cut depth	mm	3397	4229	5297
G	Minimum swing radius	mm	4183	4137	4046
	Bucket rotation	deg	185°	185°	185°
	Bucket tearout	kgf	23774	23774	23774
	Bucket tearout with boost	kgf	25853	25853	25853
	Dipper tearout	kgf	16240	13116	11303
	Dipper tearout with boost	kgf	17644	14249	12303

LIFT CAPACITIES – Dipper length: 2.5m, Boom: 6.2m, Trackshoes: 600mm.

JS300 LC MONO

Load Point	Reach from Swing Centre															
	1.5m		3m		4.5m		6m		7.5m		9m		Max Reach			
																
Height	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	mm
7.5m							7700*	7700*						7810*	7090	6535
6m							8070*	78070*	7770*	5520				7780*	7810*	7565
4.5m					11580*	11580*	9180*	7660	8120*	5370				7330	4620	8190
3m					14730*	10770	10590*	7150	8240	5140				6750	4210	8501
1.5m							1230	6730	7990	4910				6580	4060	8533
0m					17610*	9820	10960	6490	7830	4770				4150	4240	8146
- 1.5m			13200*	13200*	16620*	9830	10880	6430	7800	4740				7450	4550	7748
- 3m			20440*	20440*	15140*	10020	11010	6540						9080	5500	6830
- 4.5m					11970*	10460								9890	8140	5338

LIFT CAPACITIES – Dipper length: 3.1m, Boom: 6.2m, Trackshoes: 600mm.

JS300 LC MONO

Load Point	Reach from Swing Centre															
	1.5m		3m		4.5m		6m		7.5m		9m		Max Reach			
																
Height	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	mm
7.5m																
6m							7230*	7230*	7010*	5640				5190*	4770	8210
4.5m					10220*	10220*	8390*	7820	7510*	5450				5230*	4130	8787
3m					13410*	11160	9890*	7290	8270*	5180	6100*	3840		5460*	3790	9077
1.5m					15920*	10240	11280*	6810	8010	4930	6050	3720		5900*	3650	9108
0m					16990*	9820	10970	6490	7800	4740				6080	3710	8882
- 1.5m			12280*	12280*	16930*	9730	10820	6360	7710	4650				6580	4000	8378
- 3m	14130*	14130*	19190*	19190*	15890*	9840	10860	6400	7780	4720				7730	4690	7540
- 4.5m			18680*	18680*	13530*	10170	9900*	6650						9350*	6330	6227

LIFT CAPACITIES – Dipper length: 3.7m, Boom: 6.2m, Trackshoes: 600mm.

JS300 LC MONO

Load Point	Reach from Swing Centre															
	1.5m		3m		4.5m		6m		7.5m		9m		Max Reach			
																
Height	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	mm
7.5m										5780*	5300			3960*	3960	8089
6m										6270*	5230			3800*	3710	8937
4.5m							7520*	7250	6860*	5010	5860*	3600		3780*	3250	9469
3m					11970*	10340	9080*	6690	7690*	4720	6160	3460		3890*	2980	9738
1.5m					14850*	9270	10610*	6160	7980	4420	5990	3310		4140*	2870	9766
0m			6720*	6720*	16470*	8680	10900	5770	7720	4190	5860	3180		4550*	2900	9556
- 1.5m	7090*	7090*	10710*	10710*	16890*	8460	10660	5570	7570	4060	5800	3140		5250*	3090	9091
- 3m	11350*	11350*	15890*	15890*	16310*	8490	10630	5540	7560	4050				6480*	3540	8327
- 4.5m	16540*	16540*	20780*	17380	14570*	8720	10810	5690						8300	4500	7165



Lift capacity front and rear.

Notes:

- Lifting capacities are based on ISO 10567, that is: 75% of minimum tipping load or 87% of hydraulic lift capacity, whichever is the less. Lifting capacities marked* are based on hydraulic capacity.
- Lift capacities assume that the machine is on firm, level ground.
- Lift capacities may be limited by local regulations. Please refer to your dealer.



Lift capacity full circle.



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