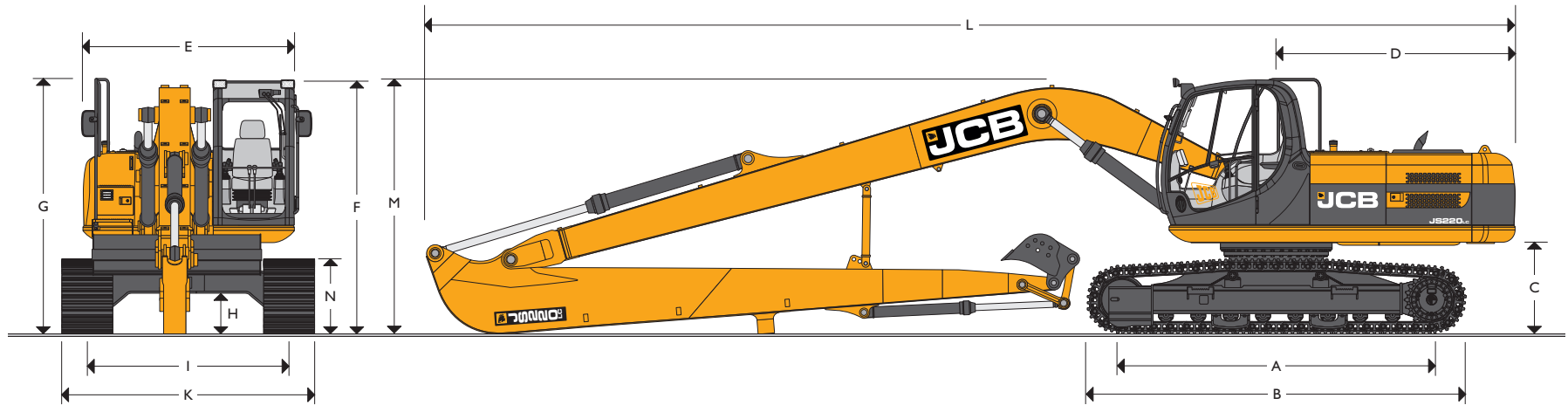




MAX OPERATING WEIGHT: 52,342 lb (23,742 kg) NET ENGINE POWER: 172 hp (128 kW)



### STATIC DIMENSIONS

Dimensions in ft-in (mm)	
A Track Length on Ground	12-0 (3660)
B Undercarriage Overall Length	14-8 (4460)
C Counterweight Clearance	3-6 (1065)
D Tail Swing Radius	9-3 (2825)
E Overall Width of Superstructure	8-4 (2549)
F Height Over Cab	9-8 (2946)
G Height Over Grab Rail	9-11 (3025)
H Ground Clearance	1-7 (486)

Dimensions in ft-in (mm)	
I Track Gauge	7-10 (2390)
K Width Over Tracks (28 in (700 mm) trackshoes)	10-2 (3090)
K Width Over Tracks (32 in (800 mm) trackshoes)	10-6 (3190)
K Width Over Tracks (36 in (900 mm) trackshoes)	10-10 (3290)
L Transport Length	41-2 (12,545)
M Transport Height	9-11 (3025)
N Track Height	2-11 (885)



## ENGINE

<b>Type:</b>	Isuzu 4HK1X. EPA Tier 3 emissions compliant.
<b>Net Power (ISO 3046-1NF):</b>	172 hp (128 kW) at 2,000 rpm.
<b>Piston Displacement:</b>	317 cu in (5.193 l).
<b>Injection:</b>	Electronic governor.
<b>Air Filtration:</b>	Dry element with secondary safety element and in cab warning indicator.
<b>Cooling:</b>	Water cooler via large capacity radiator.
<b>Starting System:</b>	24 V – 6 hp (4.5 kW).
<b>Batteries:</b>	2 x 12 V Heavy-duty.
<b>Alternator:</b>	24 V 40 amp.
<b>Refuelling Pump:</b>	Electric type.

## SWING SYSTEM

<b>Swing Motor:</b>	Axial piston.
<b>Swing Brake:</b>	Hydraulic braking plus automatic spring applied disc type parking brake.
<b>Final Drive:</b>	Planetary reduction.
<b>Swing Speed:</b>	12.9 rpm.
<b>Swing Gear:</b>	Large diameter, internally toothed fully sealed grease bath lubricated.
<b>Swing Lock:</b>	Switchable brake in cab.

## UNDERCARRIAGE

<b>Carriage Options:</b>	L-Long Carriage.
<b>Construction:</b>	Fully welded, "X" frame type with central bellyguarding and sloping sidemembers with dirt relief holes under top rollers.
<b>Recovery Point:</b>	Front and rear.
<b>Track Type:</b>	Sealed and lubricated.
<b>Track Shoe Options:</b>	24 in (600 mm), 28 in (700 mm), 32 in (800 mm), 35 in (900 mm).
<b>Upper and Lower Rollers:</b>	Heat treated, sealed and lubricated.
<b>Track Adjustment:</b>	Grease cylinder type.
<b>Track Idler:</b>	Sealed and lubricated, with spring cushioned recoil.
<b>No of Track Guides:</b>	2 per side
<b>No of Lower Rollers:</b>	8 per side
<b>No of Upper Rollers:</b>	2 per side
<b>No of Track Shoes:</b>	49 per side

## HYDRAULICS

A variable flow load sensing system with flow on demand, variable power output and servo operated, multi-function open center control. Machine auto warm up standard – maximizes performance in cold conditions.

**Pumps:**

<b>Main Pumps</b>	2 variable displacement axial piston type.
<b>Maximum Flow</b>	2 x 56.6 gpm (2 x 214 l/min).
<b>Servo Pump</b>	Gear type.
<b>Maximum Flow</b>	5.3 gpm (20 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:**

<b>Boom / Arm / Bucket:</b>	4,975 psi (343 bar)
<b>Automatic Power Boost:</b>	5,410 psi (373 bar)
<b>Swing Circuit:</b>	4,190 psi (289 bar)
<b>Travel Circuit:</b>	4,975 psi (343 bar)
<b>Pilot Control:</b>	580 psi (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 bushings. End cushioning is fitted as standard on boom, dipper and bucket cylinders.

Optional hose burst check valves available for boom and dipper cylinders.

**Filtration:**

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

<b>In Tank:</b>	150 micron, suction strainer.
<b>Main Return Line:</b>	10 micron, fibreform element.
<b>Plexus Bypass Line:</b>	1.5 micron, paper element.
<b>Pilot Line:</b>	10 micron, paper element.
<b>Hydraulic Hammer Return:</b>	10 micron, reinforced microform element.

**Cooling:**

Cooling is provided via a full return line air blast cooler as part of a single face cooling pack in conjunction with the engine water cooler.

## TRACK DRIVE

<b>Type:</b>	Fully hydrostatic, three speed with autoshift.
<b>Travel Motors:</b>	Variable displacement axial piston type, fully guarded within undercarriage frame.
<b>Final Drive:</b>	Planetary reduction, bolt-on sprockets.
<b>Service Brake:</b>	Hydraulic counter balance valve to prevent overspeeding on gradients.
<b>Park Brake:</b>	Disc type, spring applied, automatic hydraulic release.
<b>Gradeability:</b>	70% (35 deg) continuous.
<b>Travel Speed:</b>	High – 3.4 mph (5.6 km/h). Mid – 2.1 mph (3.3 km/h). Low – 1.4 mph (2.3 km/h).
<b>Tractive Effort:</b>	43,144 lbf (191.9 kN, 19,570 kgf)



## EXCAVATOR END

Long reach boom and dipper is standard on the JS220 LR. This is designed for waterways maintenance applications rather than material extraction applications. Machine can be ordered with a loose standard monoboam and 7 ft 10 in (2.4 m) or 9 ft 10 in (3.0 m) dipper to increase flexibility of use.

## CAB

Excellent digging, loading and positioning visibility results from the careful design of front, side and roof lights. All windows are tinted to improve in cab conditions.

Fully opening front windshield is very smooth to operate and as the lower windshield is stored within the top windshield frame it makes complete front windshield opening easy, fast and convenient.

Fresh air ventilation available from opening door window, opening slot in front windshield and fully opening front windshield.

Parallelogram wiper for upper windshield ensuring good wiped area for maximum visibility. Wiper motor is fitted in the left hand side of the sun roof so as not to affect bucket visibility when loading. Optional lower windshield wiper available.

Fresh air ventilation and heater with windshield defroster. Infinitely variable blower speed, temperature and recirculation control. Air conditioning or climate control incorporating chilled cool box available as option. Fully adjustable deluxe suspension seat with arm rest adjustment and backrest recline. Optional radio with digital tuner fitted into the roof lining for maximum protection. Conveniently placed radio mute button incorporated into lower console. 12v power point and mobile phone holder built into the right hand console. Courtesy light can be operated from ground level and is illuminated for five minutes or until switched off improving operator access at night. Cab mounted roller blind protects operator from sun's glare through front or top windshields.

## AMS – ADVANCED MANAGEMENT SYSTEM

Four selectable working modes link the operators control movements with the engine and hydraulic systems to maximize productivity and efficiency.

**A (Auto):** Up to 100% engine power and 100% flow. 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 in after a period of inactivity (between 5 and 30 seconds as set by the operator)

**E (Economy):** 80% engine power. 95% of hydraulic flow maximizes economy while maintaining excellent output.

**P (Precision):** 55% engine power. 90% of hydraulic flow for fine control of grading operations.

**L (Lifting):** 55% engine power. 63% of hydraulic flow with 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 and the job being carried out.

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 maintenance indicator warns of imminent service needs, and all servicing and basic checks can be carried out using only the in cab display.

## CONTROLS

**Excavator:** All servo lever operated to ISO control pattern, independently adjustable to the seat. Dual pattern control switch, in the fuse box, makes it convenient to switch from ISO to SAE control pattern.

**Tracks:** Individually servo operated by foot pedal or hand lever. Speed selection via joystick button.

**Auxiliary:** Via servo operated foot pedal.

**Control Isolation:** Via gate lock lever at cab entrance or panel 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 AMS.

**Engine Stop:** Ignition key operated and separate shut-down button.

**Horn:** Operated via servo lever mounted button.

## SERVICE CAPACITIES

Fuel Tank	gal (l)	90.6 (343)
Engine Coolant	gal (l)	6.7 (25.5)
Engine Oil	gal (l)	5.6 (21.5)
Swing Reduction Gear	gal (l)	1.3 (5.0)
Track Reduction Gear (each side)	gal (l)	1.2 (4.7)
Hydraulic System	gal (l)	52.8 (200)
Hydraulic Tank	gal (l)	31.7 (120)

## WEIGHTS AND GROUND BEARING PRESSURES

Machine equipped with 49 ft 3 in (15 m) Long Reach Boom and Dipper, Counterweight, bucket, operator and full fuel tank.

Shoe Width	Operating Weight	Bearing Pressure
28 in (700 mm)	51,240 lb (23,242 kg)	6.26 psi (0.44 kg/sq cm)
32 in (800 mm)	51,791 lb (23,492 kg)	5.55 psi (0.39 kg/sq cm)
35 in (900 mm)	52,342 lb (23,742 kg)	4.98 psi (0.35 kg/sq cm)



**ATTACHMENTS**

Bucket Type	Width in (mm)	Capacity
General Purpose	24 (600)	0.36 cu yd (0.28 cu m)
General Purpose	30 (750)	0.50 cu yd (0.38 cu m)
General Purpose	35 (900)	0.64 cu yd (0.49 cu m)
Ditch / Silt Cleaning	71 (1800)	0.65 cu yd (0.50 cu m)
Ditch / Silt Cleaning	79 (2000)	0.72 cu yd (0.55 cu m)
Weed Mowing	98 (2500)	–
Weed Mowing	118 (3000)	–

**STANDARD EQUIPMENT**

Engine Fan Guard	Std
Cold Start Pre-heat	Std
Auto Engine Warm Up	Std
Double Element Air Cleaner	Std
Electric Refuelling Pump	Std
Heavy Duty Alternator	Std
Electrics Isolator	Std
Heavy Duty Batteries	Std
Cab & Engine Soundproofing	Std
Cab Heater & Window Defroster	Std
Tinted Glass	Std
Interior Light	Std
Coat Hook	Std
Cigarette Lighter	Std
Ashtray	Std
Operator's Storage Box	Std
Removable Floor mat	Std
Windshield Washer/Wiper	Std
Plug-in Power Socket	Std
Automatic Power Boost	Std
Auto-idle	Std
One-touch Engine Speed Control	Std
Hydraulic Cushion Control	Std
Boom/swing Priority Switch	Std
Plexus Hydraulic Oil Filtration	Std

**STANDARD EQUIPMENT (Continued)**

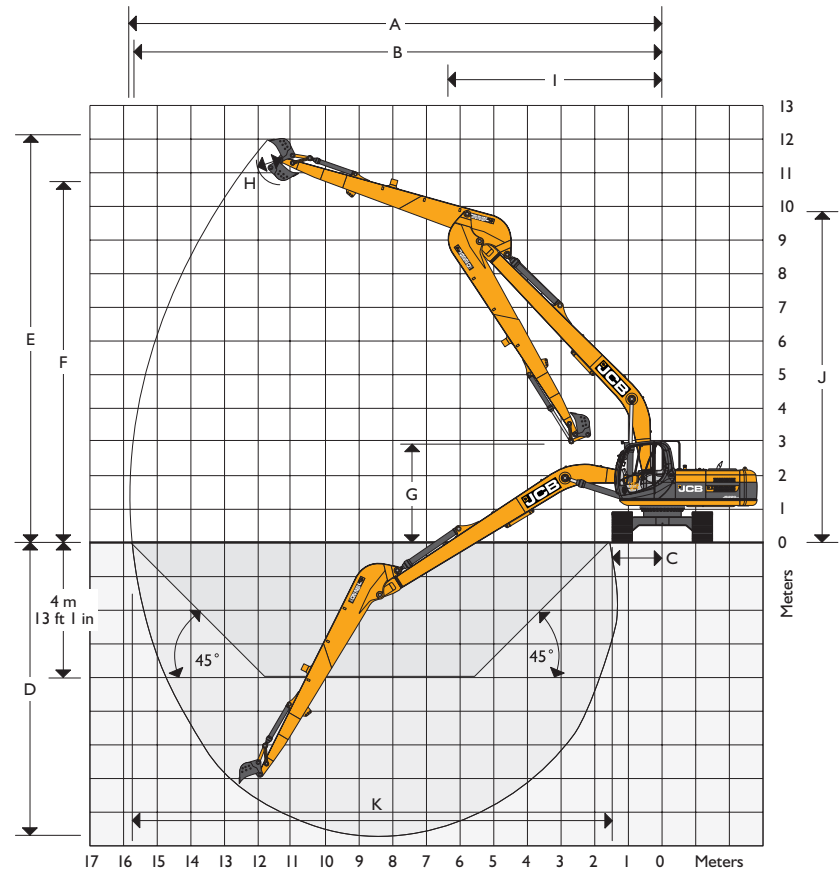
HSP Pressure Test Points	Std
Auxiliary Pipework Mounting Brackets	Std
Work Lights – Boom & Mainframe Mounted	Std
Undercarriage Belly Guarding	Std
Upper Structure Under Covers	Std
Swing System Cover	Std
Twin Track Guides	Std
External Mirrors	Std
Handrail & Non Slip Walk Ways	Std
Quick Connect Engine Oil Drain Pipe	Std
Front Windshield Blind	Std
Quick Connect Fuel Tank Drain Pipe	Std
Hinged Engine Under Cover	Std
Lap Seat Belt	Std
ISO/SAE Control Pattern Switch	Std
Air Conditioning	Std

**OPTIONAL EQUIPMENT**

Hose Burst Check Valves & Overload Warning System	Opt
Tipping Link Mounted Lift Points	Opt
General Purpose Buckets	Opt
Ditch/Grading Buckets	Opt
Quickhitch Buckets	Opt
Low Flow Pipework	Opt
Cab Mounted & Rear Work Lights	Opt
Rotating Beacon	Opt
Rain Guard	Opt
Biodegradable Oil	Opt
Air Suspension Seat with Heated Pad and Lumbar Support Adjustment	Opt
Lower Windshield Wiper	Opt
Radio	Opt
High and Low Temperature Hydraulic Oil Option	Opt

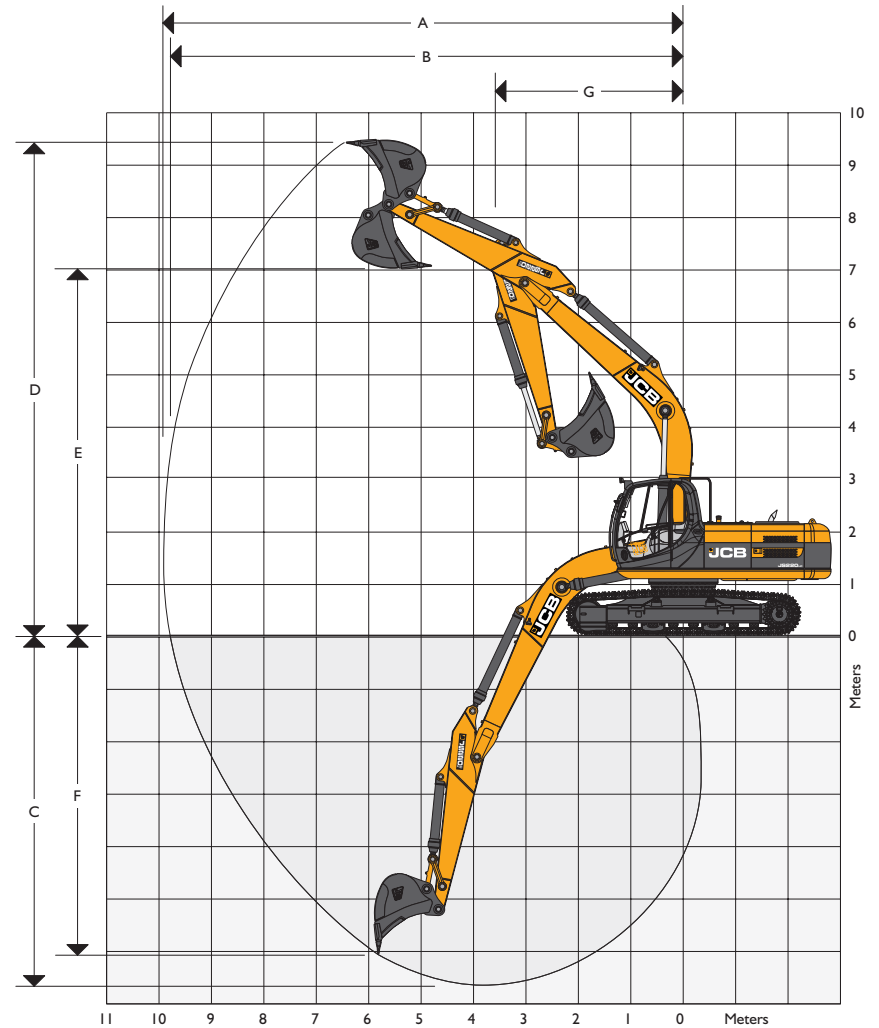
WORKING RANGE

Boom Length: 28 ft 7 in (8.7 m)		
Dipper Length		21 ft 0 in (6.4 m)
A	Maximum Reach	ft-in (mm) 51-2 (15600)
B	Maximum Reach (on ground)	ft-in (mm) 50-10 (15490)
C	Minimum Reach (on ground)	ft-in (mm) 4-11 (1495)
D	Maximum Depth	ft-in (mm) 39-4 (11,990)
E	Maximum Height	ft-in (mm) 41-6 (12,660)
F	Maximum Dumping Height	ft-in (mm) 34-3 (10,450)
G	Minimum Dumping Height	ft-in (mm) 6-3 (1910)
H	Bucket Struck Radius	ft-in (mm) 3-11 (1200)
I	Minimum Swing Radius	ft-in (mm) 17-11 (5450)
J	Minimum Swing Radius Height	ft-in (mm) 33-8 (10,270)
K	Maximum Ground Level Span	ft-in (mm) 45-11 (13,995)
	Bucket Rotation	degrees 182°
	Dipper Tearout with Boost (ISO 6057)	lbf (kgf) 9900 (4500)
	Bucket Tearout with Boost (ISO 6057)	lbf (kgf) 12,980 (5900)



STANDARD EXCAVATOR END WORKING RANGE

Boom Length: 18 ft 8 in (5.7 m)			
Dipper Length		7 ft 10 in (2.40 m)	9 ft 10 in (3.0 m)
A	Maximum Digging Reach	ft-in (m)	30-8 (9.34)      32-5 (9.87)
B	Maximum Digging Reach (on ground)	ft-in (m)	30-1 (9.16)      31-10 (9.70)
C	Maximum Digging Depth	ft-in (m)	19-9 (6.02)      21-8 (6.60)
D	Maximum Digging Height	ft-in (m)	30-2 (9.20)      30-2 (9.40)
E	Maximum Dumping Height	ft-in (m)	21-5 (6.53)      22-2 (6.75)
F	Maximum Vertical Wall Cut Depth	ft-in (m)	17-11 (5.47)      19-11 (6.07)
G	Minimum Swing Radius	ft-in (m)	12-2 (3.71)      11-10 (3.60)
	Bucket Rotation	degrees	183°      183°
	Dipper Tearout with Boost (ISO6057)	lbf (kgf)	27,670 (12,550)      23,040 (10,450)
	Bucket Tearout with Boost (ISO6057)	lbf (kgf)	34,835 (15,800)      34,835 (15,800)





LIFT CAPACITIES – Dipper length: 21 ft 0 in (6.40 m), Boom: 28 ft 6 in (8.7 m), Trackshoes: 32 in (800 mm), No Bucket.

JS220 LR

Reach	Reach from swing center																Max Reach		Max Reach	
	9 ft 10 in (3 m)		14 ft 9 in (4.5 m)		19 ft 8 in (6 m)		24 ft 7 in (7.5 m)		29 ft 6 in (9 m)		34 ft 5 in (10.5 m)		39 ft 4 in (12 m)		44 ft 3 in (13.5 m)		lb (kg)	lb (kg)		
																				ft-in (mm)
Load Point Height	lb (kg)	lb (kg)	lb (kg)	lb (kg)	lb (kg)	lb (kg)	lb (kg)	lb (kg)	lb (kg)	lb (kg)	lb (kg)	lb (kg)	lb (kg)	lb (kg)	lb (kg)	lb (kg)	lb (kg)	lb (kg)	ft-in (mm)	
34.5ft (10.5m)																		2932 (1330)*	2932 (1330)*	37-7 (11,464)
29.6ft (9.0m)																		2822 (1280)*	2822 (1280)*	40-10 (12,466)
24.7ft (7.5m)																		2778 (1260)*	2778 (1260)*	43-4 (13,222)
19.8ft (6.0m)																		2800 (1270)*	2800 (1270)*	45-1 (13,774)
14.9ft (4.5m)																				
9.10ft (3.0m)	20,503 (9300)*	20,503 (9300)*			9414 (4270)*	9414 (4270)*	7782 (3530)*	7782 (3530)*	6790 (3080)*	6790 (3080)*	5600 (2540)*	5423 (2460)	5335 (2420)*	4255 (1930)	4960 (2250)*	3351 (1520)	2844 (1290)*	2844 (1290)*	46-5 (14,144)	
4.11ft (1.5m)	7937 (3600)*	7937 (3600)*	16,314 (7400)*	15,807 (7170)	11,486 (5210)*	10,781 (4890)	9061 (4110)*	7937 (3600)	7650 (3470)*	6107 (2770)	6724 (3050)*	4806 (2180)	6107 (2770)*	3858 (1750)	5093 (2310)	3131 (1420)	3109 (1410)*	2756 (1250)	47-2 (14,393)	
0m	8003 (3630)*	8003 (3630)*	17,747 (8050)*	14,198 (6440)	13,206 (5990)*	9789 (4440)	10,207 (4630)*	7297 (3310)	8422 (3820)*	5688 (2580)	7275 (3300)	4542 (2060)	5975 (2710)	3682 (1670)	4982 (2260)	3020 (1370)	3307 (1500)*	2734 (1240)	46-10 (14,280)	
- 4.11ft (- 1.5m)	9965 (4520)*	9965 (4520)*	16,865 (7650)*	13,448 (6100)	14,374 (6520)*	9149 (4150)	11,089 (5030)*	6834 (3100)	8730 (3960)	5357 (2430)	7033 (3190)	4321 (1960)	5820 (2640)	3527 (1600)	4894 (2220)	2932 (1330)	3594 (1630)*	2756 (1250)	45-11 (14,005)	
- 9.10ft (- 3.0m)	12,434 (5640)*	12,434 (5640)*	18,387 (8340)*	13,184 (5980)	15,013 (6810)*	8818 (4000)	10,935 (4960)	6548 (2970)	8510 (3860)	5137 (2330)	6878 (3120)	4145 (1880)	5710 (2590)	3417 (1550)	4365 (1980)*	2888 (1310)	4012 (1820)*	2866 (1300)	44-5 (13,558)	
- 14.9ft (- 4.5m)	15,256 (6920)*	15,256 (6920)*	20,481 (9290)*	13,206 (5990)	14,947 (6780)	8708 (3950)	10,803 (4900)	6437 (2920)	8378 (3800)	5027 (2280)	6790 (3080)	4079 (1850)	5666 (2570)	3395 (1540)			4608 (2090)*	3086 (1400)	42-4 (12,922)	
- 19.8ft (- 6.0m)	18,475 (8380)*	18,474 (8380)*	19,709 (8940)*	13,426 (6090)	14,859 (6740)*	8774 (3980)	10,803 (4900)	6437 (2920)	8378 (3800)	5027 (2280)	6812 (3090)	4101 (1860)	5732 (2600)	3461 (1570)			5512 (2500)*	3439 (1560)	39-6 (12,066)	
- 24.7ft (- 7.5m)	22,201 (10,070)*	22,201 (10,070)*	18,320 (8310)*	13,823 (6270)	14,043 (6370)*	8995 (4080)	10,979 (4980)	6592 (2990)	8510 (3860)	5159 (2340)	6967 (3160)	4233 (1920)					6614 (3000)	4034 (1830)	35-10 (10,937)	
- 29.6ft (- 9.0m)	22,289 (10,110)*	22,289 (10,110)*	16,094 (7300)	14,418 (6540)	12,478 (5660)*	9392 (4260)	9987 (4530)*	6878 (3120)	7959 (3610)*	5445 (2470)							7386 (3350)*	5137 (2330)	30-11 (9440)	
- 34.5ft (- 10.5m)			12,478 (5660)*	12,478 (5660)*	9700 (4400)*	9700 (4400)*											7628 (3460)*	7628 (3460)*	24-1 (7346)	

Lift Capacity Front and Rear

Lift Capacity Full Circle

Notes:

1. For lifting capacity including bucket, subtract total weight of bucket or bucket and quickhitch from above values.
2. 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.
3. Lift capacities assume that the machine is on firm, level ground.
4. Lift capacities may be limited by local regulations. Please refer to your dealer.



## A GLOBAL COMMITMENT TO QUALITY

JCB's total commitment to its products and customers has helped it grow from a one-man business into one of the world's largest manufacturers of backhoe loaders, crawler excavators, wheeled excavators, telescopic handlers, wheeled loaders, dump trucks, rough terrain fork lifts, industrial fork lifts, mini/midi excavators, skid steer loaders and tractors.

By making constant and massive investments in the latest production technology, the JCB factories have become some of the most advanced in the world.

By leading the field in innovative research and design, extensive testing and stringent quality control, JCB machines have become renowned all over the world for performance, value and reliability.

And with an extensive dealer sales and service network in over 150 countries, we aim to deliver the best customer support in the industry.

Through setting the standards by which others are judged, JCB has become one of the world's most impressive success stories.



JCB Headquarters Savannah, 2000 Bamford Blvd, Savannah, GA 31322 Tel: (912) 447-2000 Fax: (912) 447-2299 [www.jcb.com](http://www.jcb.com)

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