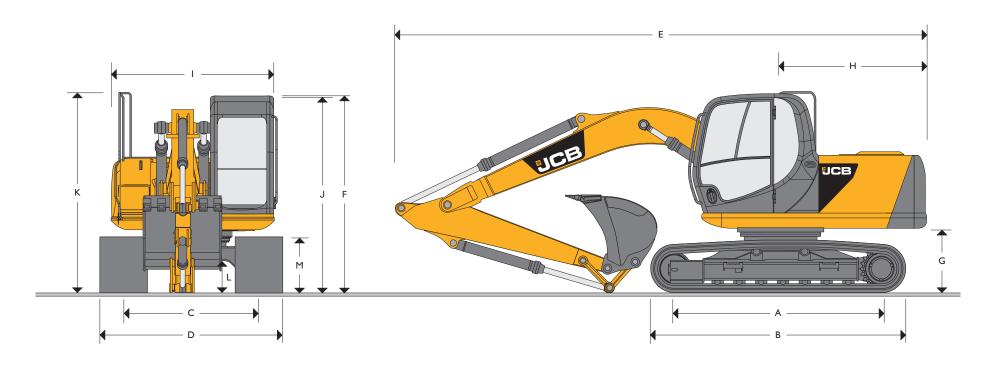


MAX OPERATING WEIGHT: 34,430 lb (15,617 kg) NET ENGINE POWER: 109 hp (81 kW)



## STATIC DIMENSIONS – JS145LC MONOBOOM

Dimensions in ft-in (millimeters)						
A Track Length on Ground	9-5 (2865)					
B Undercarriage Overall Length	11-10	(3605)				
C Track Gauge	6-6 (	1990)				
D Width Over Tracks (20 in (500 mm) trackshoes)	8-2 (2	2490)				
D Width Over Tracks (24 in (600 mm) trackshoes)	8-6 (2	2590)				
D Width Over Tracks (28 in (700 mm) trackshoes)	8-10 (2690)					
D Width Over Tracks (34 in (860 mm) trackshoes)	9-4 (2	2840)				
Dipper Lengths	8 ft 2 in (2.5 m)	9 ft 10 in* (3.0 m)				
E Transport Length with Monoboom	25-0 (7620)	24-10 (7572)				
F Transport Height with Monoboom	9-5 (2867) 10-9 (3289)					

Dimensions in ft-in (millimeters)	
G Counterweight Clearance	3-0 (905)
H Tail Swing Radius	7-0 (2135)
I Width of Superstructure	7-11 (2410)
J Height Over Cab	9-4 (2845)
K Height Over Grab Rail	9-5 (2867)
L Ground Clearance	I-5 (425)
M Track Height	2-8 (811)

<sup>\*</sup>Machine in Transport Position

<sup>\*</sup>Height with upper structure safety rails: 10-9 (2967 mm)



### **ENGINE**

Model: JCB Ecomax 444 TCA-8 I, EPA Tier 4 interim compliant

Type: Water cooled, 4-stroke, 4-cylinder in-line, common rail direct injection,

turbocharged variable geometry intercooled diesel.

**Rated Power (ISO SAE J1995 (14,399)):** 109 hp (81 kW) at 2,050 rpm. **Piston Displacement:** 268 in<sup>3</sup> (4.399 liters).

Injection: Electronic governor.

Air Filtration: Dry element with secondary safety element and in cab warning indicator.

Cooling: Large capacity radiator.

Refuelling Pump: Electric type (optional).

#### **SWING SYSTEM**

Swing Motor: Axial piston type.

Swing Brake: Hydraulic braking plus automatic spring applied disc type parking brake.

Final Drive: Planetary reduction.
Swing Speed: 12.8 rpm.

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 bellyguarding and sloping

sidemembers with dirt relief holes under top rollers.

Recovery Point: Front and rear.

Upper & Lower Rollers: Heat treated, sealed and lubricated.

Track Adjustment: Grease cylinder type.

Track Type: Sealed and lubricated.

Track Idler: Sealed and lubricated, with spring cushioned recoil.

Track Shoes: 20 in (500 mm) triple grouser

24 in (600 mm) triple grouser 28 in (700 mm) triple grouser 33 in (850 mm) triple grouser

Rollers and Shoes (each side): Upper rollers 2

Lower rollers 7
Track shoes 44

### **HYDRAULIC SYSTEM**

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: Main Pumps

2 variable displacement axial piston type.

Maximum Flow  $2 \times 35.4 \text{ gpm } (2 \times 134 \text{ l/min}).$ 

Servo Pump Gear type.

Maximum Flow 5.5 gpm (21 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
 4,610 lbf/in² (318 bar)

 With Power Boost
 4,975 lbf/in² (343bar)

 Swing Circuit
 4,045 lbf/in² (279 bar)

 Travel Circuit
 4,975 lbf/in² (343 bar)

 Pilot Control
 569 lbf/in² (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.

Optional hose burst check valves available for boom and dipper 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, fibreform 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 as part of a single face cooling pack, in conjunction with the engine water cooler.

### TRACK DRIVE

Type: Fully hydrostatic, three speed with autoshift between high and medium speed.

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 -3.05 mph (4.9 km/h).

Mid – 1.80 mph (2.9 km/h). Low – 1.43 mph (2.3 km/h).

Tractive Effort: 28,800 lbf (128 kN).



### **EXCAVATOR END - MONOBOOM**

Monoboom available along with a choice of dipper lengths to suit the requirements of reach, dig-depth, loadover height, tearouts and site versatility. 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.

Strong, durable construction, large cross sections and multi plate fabrications to withstand high stress applications. The 15 ft 5 in (4.7 m) boom is designed to ensure the optimum digging envelope when matched with the three dipper lengths.

Low maintenance bronze alloy bushes with graphite plugs are fitted to boom base and boom to dipper pivots resulting in 1,000 hour greasing intervals at these points.

#### CAB

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

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

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

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

Fresh air ventilation and heater with windscreen demister. Infinitely variable blower speed, temperature and recirculation control with optional climate control. 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. 12 V 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 suns' 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 maximise 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 maximises 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.

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. Ignition key operated and seperate shut-down button.

Engine Stop: Ignition key operated and seperate shut-dow

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

Optional Blade Control: Independent lever in cab.



### **SERVICE CAPACITIES**

	Gal	Liters
Fuel Tank	67	253
Engine Coolant	5.2	19.7
Engine Oil	5.4	20.4
Swing Reduction Gear	0.6	2.2
Track Reduction Gear (each side)	0.92	3.5
Hydraulic System	32.8	124.0
Hydraulic Tank	19.3	73.0

### WEIGHTS AND GROUND BEARING PRESSURES

Machine equipped with 15 ft Monoboom, 2.5 m Dipper, 919 lb Excavating Bucket, operator and full fuel tank.

Shoe Width	Operating Weight	Bearing Pressure
20 in (500 mm)	31,440 lb (14,261 kg)	6.4 lb/in² (0.45 kg/cm²)
24 in (600 mm)	31,676 lb (14,368 kg)	5.4 lb/in² (0.38 kg/cm²)
28 in (700 mm)	31,914 lb (14,476 kg)	4.7 lb/in² (0.33 kg/cm²)
33 in (850 mm)	32,271 lb (14,638 kg)	4.0 lb/in² (0.28 kg/cm²)

## STANDARD / OPTIONAL EQUIPMENT

Standard Equipment: Engine fan guard; Cold start pre-heat; Auto engine warm up; Double element air cleaner; Heavy duty alternator; Electrics isolator; Heavy duty batteries; Cab & engine soundproofing; Cab heater & windshield defroster; Tinted glass; Interior light; Coat hook; Cigarette lighter; Ashtray; Operator's storage shelf with cargo net; Removable floormat; Windshield wash/wipe; Plug-in power socket; Automatic power boost; Auto-idle; One-touch engine speed control; Hydraulic cushion control; Plexus hydraulic oil filtration; HSP pressure test points; Auxiliary pipework mounting brackets; Work lights – boom & mainframe mounted; Undercarriage belly guarding; Upper structure under covers; Swing system cover; External mirrors; Handrail & non slip walk ways; Quick connect engine oil drain pipe; Front screen blind; Quick connect fuel tank drain pipe; Hinged engine under cover.

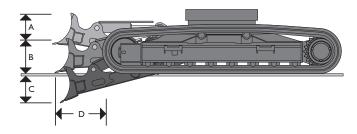
Optional Equipment: Hose burst check valves & overload warning system; Tipping link mounted lift points; General purpose buckets; Ditch/grading buckets; Quickhitch buckets; Hydraulic hammers; Auxiliary pipework (full and low flow); Climate control; Cab mounted & rear work lights; Rotating beacon; Rain guard; Biodegradeable oil; Air suspension seat with heated pad and lumbar support adjustment; Electric refuelling pump; Track guides; Lower windshield wiper. Radio; Hot and cold climate hydraulic oils; Engine air intake filters; Widecore radiator; Leveling and stabilising blade; Various track plate widths; Additional cab mounted work lights; FOPS guard cab protection; Seat belt; Cab mesh screen guard; Fire extinguisher; Cab vandal cover kit; Travel alarm.

### **BUCKET AND ARM COMBINATION**

	No Q/H	itch Fitted	Q/Hitch	Fitted*
JCB Bucket	8 ft 2 in	9 ft 10 in	8 ft 2 in	9 ft 10 in
GP 20 in wide .307 w. yd (SAE heaped)				
GP 24 in wide .412 yd³ (SAE heaped)				
GP 28 in wide .510 w. yd (SAE heaped)				
GP 30 in wide .562 yd³ (SAE heaped)				
GP 32 in wide .615 w. yd (SAE heaped)				
GP 36 in wide .719 w. yd (SAE heaped)				
GP 40 in wide .824 yd³ (SAE heaped)				
GP 44 in wide .935 w. yd (SAE heaped)				•
GP 48 in wide 1.04 yd³ (SAE heaped)			•	•
GP 52 in wide 1.15 w. yd (SAE heaped)		•	•	×

- □ = Suitable for General Excavating (Materials up to 4,409 lb/cu m)
- Suitable for Light Excavating (Materials up to 3,527 lb/cu m)
- Suitable for Grading & Loading Materials up to 2,645 lb/cu m
- X = Not Warranted
- \* BUCKET COMPATIBILITY USING JCB MECHANICAL Q/HITCH 980/89006 ONLY

### **OPTIONAL BLADE**

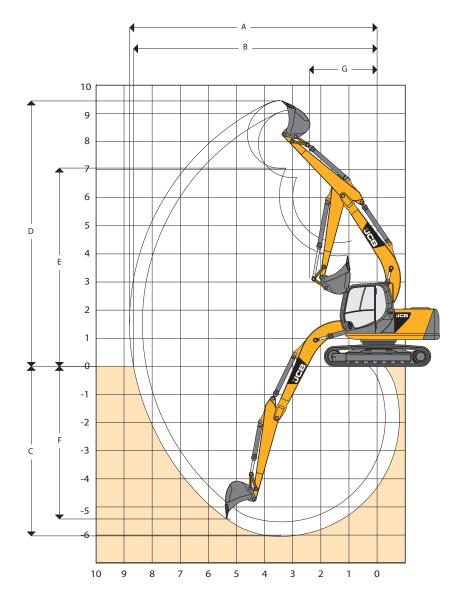


Α	Blade Height	ft (mm)	I-7 (490)
В	Blade Lift Above Ground	ft (mm)	I-5 (440)
С	Blade Cut Below Ground	ft (mm)	1-8 (510)
D	Blade Forward of Track	ft (mm)	I-5 (440)
	Dozer Width – 20 in Tracks	ft (mm)	8-3 (2510)
	Dozer Width – 24 in Tracks	ft (mm)	8-7 (2610)
	Dozer Width – 28 in Tracks	ft (mm)	8-11 (2710)
Do	ozer Addition Weight		
	20 in Tracks	lb (kg)	1647 (747)
	24 in Tracks	lb (kg)	1660 (753)
	28 in Tracks	lb (kg)	1673 (759)



## WORKING RANGE – JS145LC MONOBOOM

Di	pper Length:		8 ft 2 in (2.50 m)
Α	Maximum Digging Reach	ft-in (mm)	27-4 (8340)
В	Maximum Digging Reach (on ground)	ft-in (mm)	26-11 (8197)
С	Maximum Digging Depth	ft-in (mm)	18-2 (5530)
D	Maximum Digging Height	ft-in (mm)	29-11 (9118)
Е	Maximum Dumping Height	ft-in (mm)	22-1 (6729)
F	Maximum Vertical Wall Cut Depth	ft-in (mm)	11-11 (3625)
G	Minimum Swing Radius	ft-in (mm)	7-4 (2231)
	Bucket Rotation		182°
	Maximum Dipper Tearout (ISO 6015)	lbf (kgf)	14,720 (6680)
	Maximum Bucket Tearout (ISO 6015)	lbf (kgf)	20,667 (9375)
Di	pper Length:		9 ft 10 in (3.00 m)
Α	Maximum Digging Reach	ft-in (mm)	28-10 (8796)
В	Maximum Digging Reach (on ground)	ft-in (mm)	28-5 (8660)
С	Maximum Digging Depth	ft-in (mm)	19-9 (6028)
D	Maximum Digging Height	ft-in (mm)	30-11 (9440)
Е	Maximum Dumping Height	ft-in (mm)	23-1 (7041)
F	Maximum Vertical Wall Cut Depth	ft-in (mm)	13-3 (4050)
G	Minimum Swing Radius	ft-in (mm)	8-6 (2591)
	Bucket Rotation		182°
	Maximum Dipper Tearout (ISO 5016)	lbf (kgf)	13,161 (5970)
	Maximum Bucket Tearout (ISO 5016)	lbf (kgf)	20,667 (9375)





# LIFT CAPACITIES – Dipper Length: 8 ft 2 in, 15 ft 5 in Monoboom, Trackshoes: 20 in, No Bucket.

### **JS145 LC MONO**

Reach	9 ft 10	in (3 m)	13 ft 1 in (4 m)		16 ft 5	16 ft 5 in (5 m)		in (6 m)		Capacity at Max Re	each
	Front	Side	Front	Side	Front	Side	Front	Side	Front	Side	
				1		4					
Load Point Heightlb	lb	lb	lb	lb lb	lb	lb	lb	lb	lb	ft-in (mm)	
19.8 ft (6 m)			6173	6173	6636	6636			5225	5225	18-2 (5533)
16.4 ft (5 m)			6570	6570	6658	6658	6856	6129	4938	4938	20-5 (6221)
13.1 ft (4 m)	8510	8510	7694	9678	7209	7209	6989	6085	4828	4828	22-0 (6689)
9.10 ft (3 m)	11905	11905	9370	9370	8113	7804	7430	5952	4828	4718	22-11 (6982)
6.56 ft (2 m)	15719	15719	11244	10384	9149	7540	8025	5820	4960	4519	23-5 (7121)
3.28 ft (1 m)	14043	14043	12809	9965	10053	7319	8091	5688	5203	4475	23-4 (7116)
0 ft	15058	14859	13801	9722	10384	7143	7981	5578	5600	4564	22-10 (6967)
-3.28 ft (-1 m)	19026	14793	14110	9590	10274	7055	5710	5512	6261	4828	21-10 (6663)
-6.56 ft (-2 m)	18166	14837	13757	9590	10251	7033	7937	5534	7363	5335	20-4 (6181)
-9.10 ft (-3 m)	16446	15013	11839	9678	9833	7121			8488	6349	8-0 (5474)

## LIFT CAPACITIES – Dipper Length: 9 ft 10 in, 15 ft 5 in Monoboom, Trackshoes: 20 in, No Bucket.

## **JS145 LC MONO**

Reach	9 ft 10 in (3 m)		13 ft 1 in (4 m)		16 ft 5	16 ft 5 in (5 m)		19 ft 8 in (6 m)		Capacity at Max Reach			
	Front	Side	Front	Side	Front	Side	Front	Side	Front	Side			
	===	<u></u>		<u>.[.</u>		1		4	===	<u></u>			
Load Point Heightlb	lb	lb	lb	lb	lb	lb	lb	lb	lb	ft-in (mm)			
19.8 ft (6 m)					5600	5600	5556	5556	4806	4806	20-1 (6113)		
16.4 ft (5 m)					5754	5754	5997	5997	4564	4564	22-1(6741)		
13.1 ft (4 m)			6526	6526	6371	6371	6261	6129	4475	4475	23-7 (7175)		
9.10 ft (3 m)	9833	9833	8179	8179	7297	7297	6790	5997	4497	4255	24-5 (7448)		
6.56 ft (2 m)	13691	13691	10141	10141	8422	7584	7452	5820	4608	4079	24-10 (7578)		
3.28 ft (I m)	16843	15300	11927	10009	9502	7319	8069	5666	4828	4034	24-10 (7574)		
0 ft	16557	14793	13206	9678	10340	7319	7915	5512	5181	4101	24-5 (7434)		
-3.28 ft (-1 m)	18982	14595	13845	9480	10185	6967	7826	5423	5710	4299	23-6 (7150)		
-6.56 ft (-2 m)	18585	14595	13845	9414	10119	6900	7804	5401	6592	4696	22-0 (6704)		
-9.10 ft (-3 m)	17372	14705	13162	9480	10163	6923	7871	5467	7760	5401	19-11 (6060)		

Lift Capacity Front and Rear



Lift Capacity Full Circle

Notes: I. 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.



## LIFT CAPACITIES – Dipper Length: 8 ft 2 in, 15 ft 5 in Monoboom, Trackshoes: 20 in, No Bucket, Dozer.

**JS145 LC MONO** 

Reach	9 ft 10 in (3 m)		13 ft I in (4 m)		16 ft 5 in (5 m)		19 ft 8 in (6 m)		Capacity at Max Reach			
	Front	Side	Front	Side	Front	Side	Front	Side	Front	Side		
						<u></u>				1		
Load Point Heightlb	lb	lb	lb	lb lb	lb	lb	lb	lb	lb	ft-in (mm)		
19.8 ft (6 m)			6173	6173	6636	6636			5225	5225	18-2 (5533)	
16.4 ft (5 m)			6570	6570	6658	6658	6856	6371	4938	4938	20-5 (6221)	
13.1 ft (4 m)	8510	8510	7694	7694	7209	7209	6989	6327	4828	4828	22-0 (6689)	
9.10 ft (3 m)	11905	11905	9370	9370	8113	8113	7430	6217	4828	4828	22-11 (6982)	
6.56 ft (2 m)	15719	15719	11244	10781	9149	7848	8025	6063	4960	4718	23-4 (7121)	
3.28 ft (1 m)	14043	14043	12809	10384	10119	7628	8576	5930	5203	4674	23-4 (7116)	
0 ft	15058	15058	13801	10141	10803	7452	8466	5820	5600	4762	22-10 (6967)	
-3.28 ft (-1 m)	19026	15410	14110	10009	10913	7363	8422	5776	6261	5027	21-10 (6663)	
-6.56 ft (-2 m)	18166	15476	13757	10009	10891	7341	8422	5776	7363	5578	20-3 (6181)	
-9.10 ft (-3 m)	16446	15631	12632	10097	9833	7430			8488	6614	18-0 (5474)	

## LIFT CAPACITIES – Dipper Length: 9 ft 10 in, 15 ft 5 in Monoboom, Trackshoes: 20 in, No Bucket, Dozer.

**JS145 LC MONO** 

Reach	9 ft 10 in (3 m)		13 ft 1 in (4 m)		16 ft 5	16 ft 5 in (5 m)		3 in (6 m)	Capacity at Max Reach			
	Front	Side	Front	Side	Front	Side	Front	Side	Front	Side		
		1				<u> </u>		<u> </u>	<del></del>			
Load Point Heightlb	lb	lb	lb	lb	lb	lb	lb	lb	lb	ft-in (mm)		
19.8 ft (6 m)					5600	5600	5556	5556	4806	4806	20-1 (6113)	
16.4 ft (5 m)					5754	5754	5997	5997	4564	4564	22-1 (6741)	
13.1 ft (4 m)			6526	6526	6371	6371	6261	6261	4475	4475	23-7 (7175)	
9.10 ft (3 m)	9833	9833	8179	8179	7297	7297	6790	6239	4497	4453	24-5 (7448)	
6.56 ft (2 m)	13691	13691	10141	10141	8422	7893	7452	6063	4608	4277	24-10 (7578)	
3.28 ft (1 m)	16843	15939	11927	10428	9502	7628	8113	5908	4828	4211	24-10 (7574)	
0 ft	16557	15432	13206	10097	10362	7408	8422	5776	5181	4277	24-5 (7434)	
-3.28 ft (-1 m)	18982	15234	13845	9899	10825	7275	8333	5666	5269	4497	23-6 (7150)	
-6.56 ft (-2 m)	18585	15212	13845	9833	10759	7209	8289	5644	6592	4894	22-0 (6704)	
-9.10 ft (-3 m)	17372	15322	13162	9877	10362	7231	8091	5710	7915	5644	19-10 (6060)	

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.

