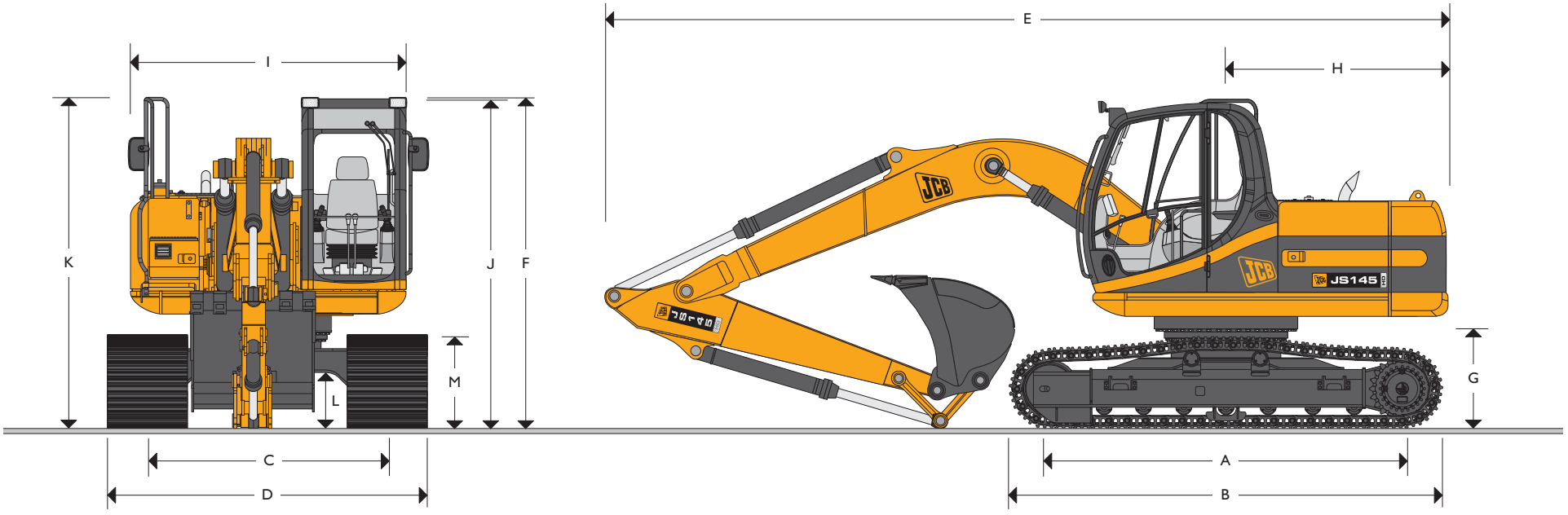
MAX. OPERATING WEIGHT: 17424 kg NETT ENGINE POWER: 70 kW (94 hp)



STATIC DIMENSIONS

Dimensions in millimetres (ft-in)			
A Track length on ground		3090 (10-2)	
B Undercarriage overall length		3940 (12-11)	
C Track gauge		2200 (7-3)	
D Width over tracks (600mm trackshoes)		2800 (9-2)	
D Width over tracks (700mm trackshoes)		2900 (9-6)	
D Width over tracks (800mm trackshoes)		3000 (9-10)	
D Width over tracks (900mm trackshoes)		3100 (10-2)	
Dipper lengths	**2.1m**	**2.5m**	**3.0m***
E Transport length with Monoboom	7630 (25-0)	7650 (25-1)	7680 (25-2)
F Transport height with Monoboom	3014 (9-11)	3014 (9-11)	3014 (9-11)

Dimensions in millimetres (ft-in)	
G Counterweight clearance	1050 (3-5)
H Tail swing radius	2050 (6-9)
I Width of superstructure	2410 (7-11)
J Height over cab	2895 (9-6)
K Height over grab rail	3014 (9-11)
L Ground clearance	470 (1-7)
M Track height	880 (2-11)

*Machine in transport position

ENGINE

Model	Isuzu A4BG1T European Tier II emissions compliant.
Type	Water cooled, 4-stroke, 4-cylinder in-line, direct injection, turbocharged diesel.
Nett power (ISO 3046-1NF)	70kW (94hp) at 2100rpm.
Piston Displacement	4.329 litres (264 cu.in.).
Injection	Mechanical governor.
Air Filtration	Dry element with secondary safety element and in cab warning indicator.
Cooling	Large capacity radiator.
Starting system	24 volt – 4.5kW.
Batteries	2 x 12 volt Heavy Duty.
Alternator	24 volt 40 amp.
Refuelling pump	Electric type.

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	13.6 rpm.
Swing gear	Large diameter, internally toothed fully sealed grease bath lubricated.
Swing lock	Multi position switchable brake.

UNDERCARRIAGE

Carriage options	HD undercarriage with large size track chain.
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	L carriage – 600mm (24in), 700mm (28in), 800mm (31in), 900mm (35in).
Upper & 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.

	LC
Quantity of track guides	1 per side
Quantity of lower rollers	7 per side
Quantity of upper rollers	2 per side
Quantity of track shoes	43 per side

HYDRAULIC SYSTEM

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

Pumps

Main pumps	2 variable displacement axial piston type.
Maximum flow	2 x 128 L/min (2 x 28 UK GPM).
Servo pump	Gear type.
Maximum flow	21 L/min (4.6 UK GPM).

Control valve

A combined 10 spool control valve with auxiliary service spool as standard. When required twin pump flow is combined to boom and dipper services for greater speed and efficiency.

Relief valve settings

Boom/Arm/Bucket	318 bar (4610lbf/sq.in)
With power boost	343 bar (4975lbf/sq.in)
Swing circuit	279 bar (4045lbf/sq.in)
Travel circuit	343 bar (4975lbf/sq.in)
Pilot control	40 bar (569lbf/sq.in)

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.
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 – 5.5 km/h (3.4 mph). Mid – 3.3 km/h (2.1 mph). Low – 2.3 km/h (1.4 mph).
Tractive effort	137.3kN (14000kgf, 30865lbf).

EXCAVATOR END

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 4.7m (15ft 5in) 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 1000 hour greasing intervals at these points.

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.

CAB

Excellent digging, loading and positioning visibility results from the careful design of front, side and roof lights. All screens are tinted to improve in cab conditions.
Fully opening front screen is very smooth to operate and as the lower screen is stored within the top screen frame it makes complete front screen opening easy, fast and convenient.
Fresh air ventilation available from opening door window, opening slot in front screen and fully opening front screen.
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 screen so as not to affect bucket visibility when loading. Optional lower screen wiper available.
Fresh air ventilation and heater with windscreen demister. 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. Radio cassette player 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 suns' glare through front or top screens.

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.
Engine stop	Ignition key operated and seperate shut-down button.
Horn	Operated via servo lever mounted button.

SERVICE CAPACITIES

	Litres	UK Gal
Fuel tank	253	55.6
Engine coolant	16.4	3.8
Engine oil	13.2	2.9
Swing reduction gear	2.2	0.5
Track reduction gear (each side)	3.0	0.7
Hydraulic system	124.0	27.3
Hydraulic tank	73.0	16.1

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 & screen demister; Tinted glass; Radio & cassette player; Interior light; Coat hook; Cigarette lighter; Ashtray; Operator's storage box; Removable floormat; Windscreen 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); Air conditioning or 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 screen wiper.

WEIGHTS AND GROUND BEARING PRESSURES

Shoe Width	Operating Weight	Bearing Pressure
600mm (24in.)	16650kg (36706lb)	0.41kg/sq. cm. (5.83lb/sq. in.)
700mm (28in.)	16950kg (37386lb)	0.36kg/sq. cm. (5.12lb/sq. in.)
800mm (31in.)	17250kg (38029lb)	0.32kg/sq. cm. (4.55lb/sq. in.)
900mm (35in.)	17594kg (38788lb)	0.29kg/sq. cm. (4.12lb/sq. in.)

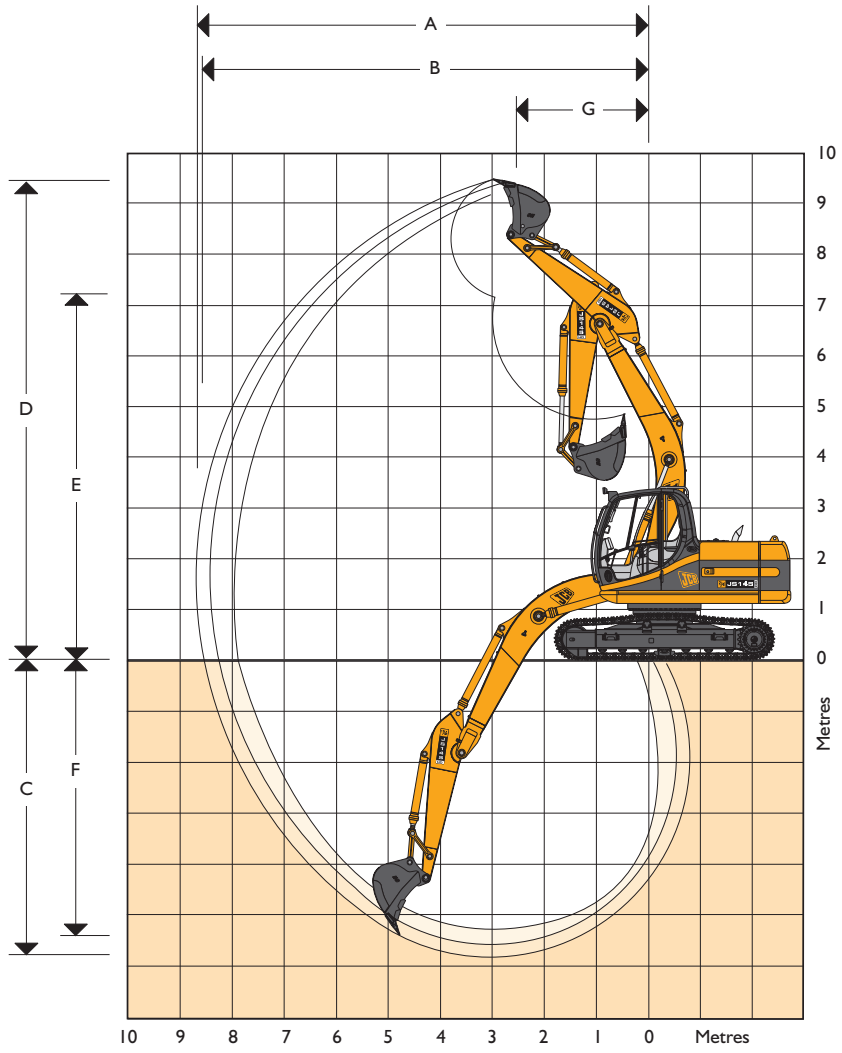
STANDARD EXCAVATING BUCKETS

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

Max Width	Capacity (SAE heaped)	Weight
600mm (24in.)	0.32cu.m (0.42cu.yd)	369kg (814lb)
750mm (30in.)	0.43cu.m (0.56cu.yd)	423kg (933lb)
900mm (36in.)	0.55cu.m (0.72cu.yd)	468kg (1032lb)
1000mm (40in.)	0.63cu.m (0.82cu.yd)	507kg (1118lb)
1100mm (44in.)	0.72cu.m (0.94cu.yd)	537kg (1184lb)
1200mm (48in.)	0.80cu.m (1.05cu.yd)	576kg (1270lb)

WORKING RANGE

Boom length: 4.70m			
Dipper length:			2.10m
A	Maximum digging reach	mm (ft-in)	7970 (26-2)
B	Maximum digging reach (on ground)	mm (ft-in)	7750 (25-5)
C	Maximum digging depth	mm (ft-in)	5010 (16-5)
D	Maximum digging height	mm (ft-in)	8960 (29-5)
E	Maximum dumping height	mm (ft-in)	6570 (21-7)
F	Maximum vertical wall cut depth	mm (ft-in)	4440 (14-7)
G	Minimum swing radius	mm (ft-in)	2050 (6-9)
	Bucket rotation		182°
	Maximum dipper tearout (ISO 6015)	kgf (lbf)	7515 (16569)
	Maximum bucket tearout (ISO 6015)	kgf (lbf)	9375 (20667)
Dipper length:			2.50m
A	Maximum digging reach	mm (ft-in)	8340 (27-4)
B	Maximum digging reach (on ground)	mm (ft-in)	8130 (26-8)
C	Maximum digging depth	mm (ft-in)	5410 (17-9)
D	Maximum digging height	mm (ft-in)	9230 (30-3)
E	Maximum dumping height	mm (ft-in)	6840 (22-4)
F	Maximum vertical wall cut depth	mm (ft-in)	4840 (15-10)
G	Minimum swing radius	mm (ft-in)	2050 (6-9)
	Bucket rotation		182°
	Maximum dipper tearout (ISO 6015)	kgf (lbf)	6680 (14720)
	Maximum bucket tearout (ISO 6015)	kgf (lbf)	9375 (20667)
Dipper length:			3.00m
A	Maximum digging reach	mm (ft-in)	8790 (28-10)
B	Maximum digging reach (on ground)	mm (ft-in)	8590 (28-2)
C	Maximum digging depth	mm (ft-in)	5910 (19-4)
D	Maximum digging height	mm (ft-in)	9550 (31-3)
E	Maximum dumping height	mm (ft-in)	7160 (23-6)
F	Maximum vertical wall cut depth	mm (ft-in)	5300 (17-5)
G	Minimum swing radius	mm (ft-in)	2410 (7-11)
	Bucket rotation		182°
	Maximum dipper tearout (ISO 5016)	kgf (lbf)	5970 (13161)
	Maximum bucket tearout (ISO 5016)	kgf (lbf)	9375 (20667)



LIFT CAPACITIES – Dipper Length: 2.10m, 4.70m Monoboom, Trackshoes: 600mm, No bucket. JS145 HD

Reach	2m (6ft 6in)		3m (9ft 10in)		4m (13ft 0in)		5m (16ft 5in)		6m (19ft 8in)		Capacity at Max Reach		
													
Load Point Ht.	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	mm
7.0m (22.11ft)											3320*	3320*	3906
6.0m (19.8ft)					2920*	2920*	3120*	3120*			2940*	2940*	5046
5.0m (16.5ft)					3050*	3050*	3010*	3010*			2740*	2740*	5794
4.0m (13.0ft)	5420*	5420*	4090*	4090*	3500*	3500*	3200*	3200*	3080*	3080*	2660*	2660*	6294
3.0m (9.10ft)			5550*	5550*	4170*	4170*	3550*	3550*	3220*	3220*	2660*	2660*	6605
2.0m (6.6ft)					4900*	4900*	3940*	3940*	3420*	3200	2730*	2700	6752
1.0m (3.3ft)					5450*	5450*	4280*	4040	3620*	3140	2880*	2670	6746
0m			6110*	6110*	5740*	5440	4500*	3970	3730*	3100	3120*	2740	6588
– 1.0m (– 3.3ft)	4740*	4740*	7620*	7620*	5750*	5410	4540*	3940	3700*	3090	3480*	2920	6266
– 2.0m (– 6.6ft)	8280*	8280*	7130*	7130*	5490*	5420	4330*	3950			3570*	3290	5750
– 3.0m (– 9.10ft)	8300*	8300*	6260*	6260*	4840*	4840*					3610*	3610*	4981

LIFT CAPACITIES – Dipper Length: 2.50m, 4.70m Monoboom, Trackshoes: 600mm, No bucket. JS145 HD

Reach	1m (3ft 3in)		2m (6ft 6in)		3m (9ft 10in)		4m (13ft 0in)		5m (16ft 5in)		6m (19ft 8in)		7m (22ft 11in)		Capacity at Max Reach		
																	
Load Point Ht.	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	mm
7.0m (22.11ft)															2680*	2680*	4521
6.0m (19.8ft)							2530*	2530*	2710*	2710*					2380*	2380*	5533
5.0m (16.5ft)							2690*	2690*	2710*	2710*	2790*	2790*			2240*	2240*	6222
4.0m (13.0ft)					3500*	3500*	3150*	3150*	2940*	2940*	2840*	2840*			2180*	2180*	6690
3.0m (9.10ft)					4870*	4870*	3820*	3820*	3310*	3310*	3030*	3030*			2190*	2190*	6982
2.0m (6.6ft)					6410*	6410*	4580*	4580*	3730*	3730*	3260*	3210	3000*	2560	2250*	2250*	7121
1.0m (3.3ft)					6380*	6380*	5220*	5220*	4120*	4050	3490*	3140	3100*	2530	2360*	2360*	7116
0m					6840*	6840*	5610*	5440	4400*	3970	3660*	3090			2540*	2520	6967
– 1.0m (– 3.3ft)			4790*	4790*	7750*	7750*	5740*	5390	4510*	3920	3710*	3060			2840*	2670	6663
– 2.0m (– 6.6ft)	5780*	5780*	7430*	7430*	7400*	7400*	5600*	5380	4420*	3920	3530*	3070			3340*	2960	6181
– 3.0m (– 9.10ft)			9210*	9210*	6690*	6690*	5130*	5130*	3990*	3950					3440*	3440*	5474
– 4.0m (– 13.0ft)					5410*	5410*	4060*	4060*							3440*	3440*	4433

 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.

LIFT CAPACITIES – Dipper Length: 3.00m, 4.70m Monoboom, Trackshoes: 600mm, No bucket. **JS145 HD**

Reach	1m (3ft 3in)		2m (6ft 6in)		3m (9ft 10in)		4m (13ft 0in)		5m (16ft 5in)		6m (19ft 8in)		7m (22ft 11in)		Capacity at Max Reach		
																	
Load Point Ht.	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	mm
8.0m (26ft)															2740*	2740*	3869
7.0m (22.11ft)									2490*	2490*					2390*	2390*	5217
6.0m (19.8ft)									2280*	2280*	2510*	2510*			2170*	2170*	6113
5.0m (16.5ft)									2340*	2340*	2430*	2430*			2070*	2070*	6741
4.0m (13.0ft)							2670*	2670*	2590*	2590*	2540*	2540*	2570*	2570*	2030*	2030*	7175
3.0m (9.10ft)					4020*	4020*	3340*	3340*	2970*	2970*	2760*	2760*	2650*	2570	2040*	2040*	7448
2.0m (6.6ft)					5590*	5590*	4130*	4130*	3420*	3420*	3020*	3020*	2790*	2530	2090*	2090*	7578
1.0m (3.3ft)					6860*	6860*	4860*	4860*	3860*	3860*	3290*	3100	2940*	2490*	2180*	2180*	7574
0m					7510*	7510*	5370*	5370*	4210*	3910	3510*	3040	3050*	2450	2340*	2260	7434
– 1.0m (– 3.3ft)	3170*	3170*	4560*	4560*	7730*	7730*	5630*	5290	4410*	3850	3640*	2990	3070*	2430	2590*	2370	7150
– 2.0m (– 6.6ft)	4970*	4970*	6590*	6590*	7570*	7570*	5630*	5260	4430*	3820	3610*	2980			2980*	2580	6704
– 3.0m (– 9.10ft)	7030*	7030*	9210*	9210*	7070*	7070*	5350*	5280	4200*	3840	3270*	3010			3210*	2970	6060
– 4.0m (– 13.0ft)			8520*	8520*	6110*	6110*	4640*	4640*	3470*	3470*					3290*	3290*	5141

 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 Britain's largest privately owned manufacturer 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 Europe.

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 a global sales and service network of over 400 distributors and agents, the company exports over 70% of its production to all five continents.

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

JCB cares for the environment. This paper has been produced without the use of elemental chlorine chemicals in the bleaching process.

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