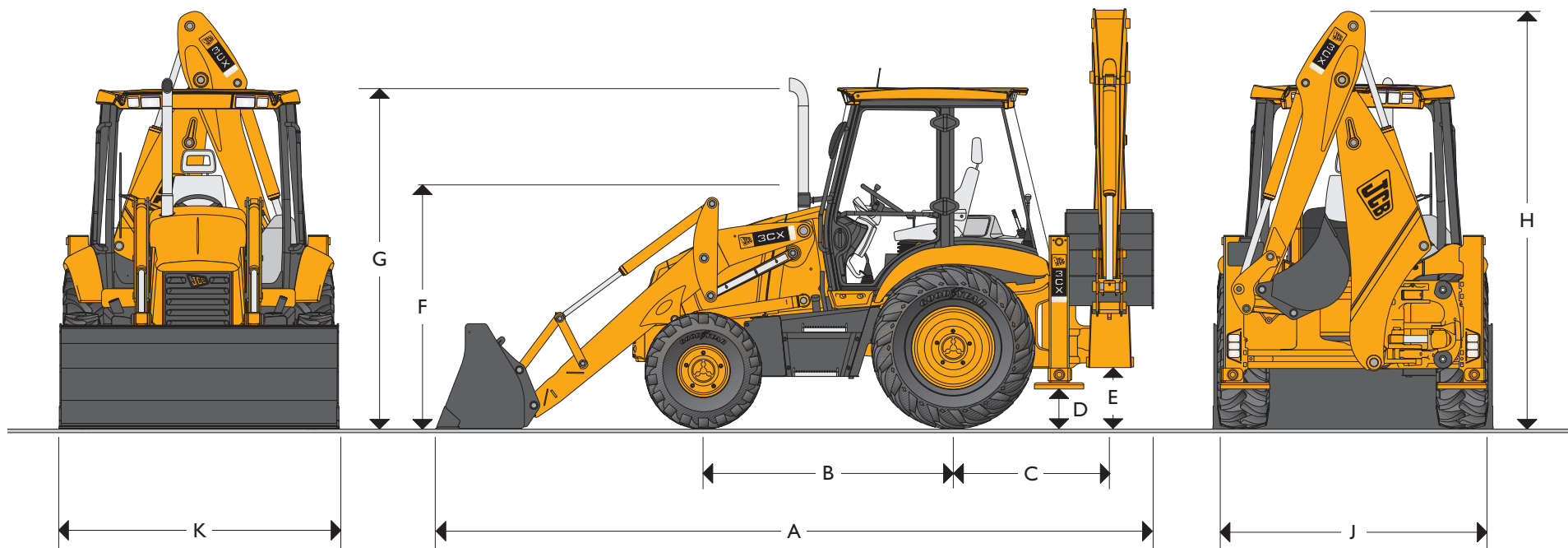




# JCB BACKHOE LOADER | 3CX



MAX. ENGINE POWER	68.5kW (92hp)
MAX. BACKHOE DIG DEPTH:	5.46 metres (17ft 11in)
MAX. LOADER CAPACITY:	1.1m <sup>3</sup> (1.44yd <sup>3</sup> )



## STATIC DIMENSIONS

JCB Backhoe Loaders feature heavy duty one piece mainframe, componentised driveline and fully enclosed engine compartment. All fluid and component compartments are lockable using the ignition key.

Machine model	3CX
	m (ft-in)
A Total travel length	5.62 (18-5)
B Axle centreline distance	2.17 (7-1)
C Slew centre to rear axle centre distance	1.36 (4-6)
D Stabiliser feet clearance	0.37 (1-2)
E Kingpost clearance	0.52 (1-8)
F Steering wheel centre height	1.94 (6-4)
G Cab roof height	2.87 (9-5)

Machine model	3CX
	m (ft-in)
H Total travel clearance	3.61 (11-10)
J Rear frame width	2.36 (7-9)
K Shovel width	2.35 (7-8)
J* Rear frame width	2.24 (7-4)
K* Shovel width	2.23 (7-4)

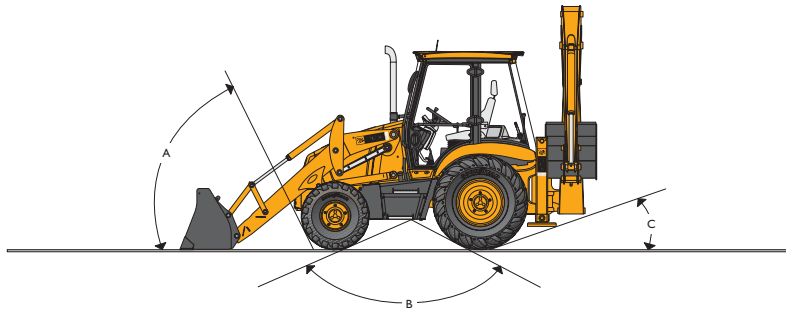
\* Narrow option



# JCB BACKHOE LOADER | 3CX



## GROUND LINE ANGLES



- A Approach angle 66°
- B Interference angle/ramp to ground plane 120°
- C Departure angle 20°

## OPERATING WEIGHTS

Operating weight includes machine equipped with cab, 610mm excavator bucket and full fuel tank.

Machine model	3CX
	kg (lb)
Standard dipper and GP shovel	7370 (16250)
Extradig and 6-in-1 shovel with forks	8070 (17800)

## ENGINE

Four cylinder, direction injection diesel. Gear driven water pump, cast iron engine sump, spin-on oil and fuel filters, water separator; dual element air cleaner, thermostart cold start aid.

Machine model		Naturally aspirated	Turbo
Manufacturer		JCB 1004-42	JCB 1004-40T
Displacement		4.23 Ltr	3.99 Ltr
No. of cylinders		4	4
Bore size	mm	103	100
Stroke	mm	127	127
Rated engine RPM		2200	2200
<b>Power ratings</b>			
Gross ISO/TR 14396 and SAE J1995	kW (HP)	56 (75)	68.5 (92)
SAE Net ISO 9249 (EEC 80/1269 and SAE J1349)	kW (HP)	53.3 (71.5)	63.1 (84.5)
<b>Torque rating</b>			
Gross ISO/TR 14396 and SAE J1995	Nm (lbf ft)	290 (214)	370 (233)
SAE Net ISO/TR 9249 (EEC 80/1269) and SAE J1349	Nm (lbf ft)	284 (210)	361 (266)
Max. torque RPM		1400	1400

## STEERING

Full power hydrostatic system utilising the main hydraulic pump via a steering priority valve. In the event of engine failure, emergency steering is maintained.

Machine model	3CX – 2	3CX – 4
Axles	Steer only	Steer drive
Steering turns – lock to lock	2¾	2¾
	<b>m (ft-in)</b>	<b>m (ft-in)</b>
Kerb – kerb turning circle – unbraked	8.1 (26-7)	8.1 (26-7)
Loader clearance circle – unbraked	10.4 (34-1)	10.4 (34-1)
Kerb – kerb turning circle – braked	6.9 (22-8)	6.9 (22-8)
Loader clearance circle – braked	9.5 (31-2)	9.5 (31-2)

(Depending on tyre size, ground conditions etc.)

## ENGINE SUPPORT SYSTEM

Engine support system is designed for ease of daily checks, routine maintenance and longer service intervals.

<b>Fuel type</b>	Diesel.
<b>Fuel filter</b>	Replaceable spin-on cartridge plus water/sediment separator.
<b>Air cleaner</b>	Dual, dry element cyclonic type.
<b>Oil filter and lubrication</b>	Full flow, spin-on type filter.
<b>Cooling system</b>	Hot climate specification, pressurised 7 psi (0.5 bar) suction fan. Pressurised recovery tank with integral filler neck.

## ELECTRICAL AND INSTRUMENTATION

12 volt negative ground, utilising wiring and connectors meeting IP69 water ingress test standard. Central fuse panel supplemented with main circuit breakers at battery positive terminal.

<b>Gauges</b>	Tachometer; engine coolant temp, fuel level, hourmeter; clock.
<b>Warning system</b>	Audible and visual system for engine oil, transmission, park brake, battery, air cleaner; alternator.
<b>Battery</b>	115 A/hr.
<b>Pre-wire</b>	Radio speakers (cab), beacon (all).
<b>Horn</b>	Controlled from both front and rear.
<b>Alternator</b>	75 amp. 85 amp option on turbocharged engine.
<b>Front working lights</b>	2 twin beam fixed position.
<b>Rear working lights</b>	4 adjustable.



# JCB BACKHOE LOADER | 3CX



## TRANSMISSION

The JCB Transmissions are designed and built specifically for JCB Backhoe Loaders. They feature synchronised shifting in all gears. Powershuttle between forward and reverse. Ground speeds are designed to maximise production. An optional 4 speed powershift transmission enables effortless and fast gear changes. Gears are selected through a twist grip control on the column mounted forward/reverse level

Machine model	3CX	3CX
Manufacturer	JCB	JCB
Type	Syncroshuttle	Powershift
Torque converter	305mm (12")	305mm (12")
Torque converter ratio	3.0:1	2.54:1
Gears forward/reverse	4/4	4/4
Gear selection	Manual	Powershift
Shuttle control – F/R	Power shuttle	Power shuttle
<b>Travel speeds</b>	<b>kph (mph)</b>	<b>kph (mph)</b>
<b>Tyres equipped</b>	<b>Front 12.5 x 18 Rear 18.4 x 26</b>	
Gear 1	5.5 (3.4)	5.2 (3.2)
Gear 2	8.9 (5.5)	9.7 (5.9)
Gear 3	19.1 (11.9)	22.4 (13.8)
Gear 4	36.1 (22.4)	40 (24.7)

## FRONT AXLE

JCB front axles are designed and built specifically for backhoe loaders and accept a wide variety of tyre combinations.

Machine model	3CX – 2	3CX – 4
Type	JCB steer drive with torque proportional	
<b>Axle ratings</b>	<b>kg (lb)</b>	<b>kg (lb)</b>
Static load rating		16500 (36375)
Dynamic load rating		5500 (12125)
Oscillation angle	16°	16°
Steering ram	Powered track rod	Powered track rod

## REAR AXLE

JCB rear axles are designed and built specifically for backhoe loaders and accept a wide variety of tyre combinations.

Machine model	3CX
Type	JCB Epicyclic hub reduction with torque proportional
Limited slip	Option
<b>Axle ratings</b>	<b>kg (lb)</b>
Static load rating	21000 (46296)
Dynamic load rating	7000 (15435)

## CAB

Excellent visibility (and safety) is provided by the extra large tinted glass areas of 6.4 sq m (70 sq ft). Cab frame is ROPS and FOPS approved for maximum operator protection. ISO standard 3471 and 3449 (SAE J1040 and J231).

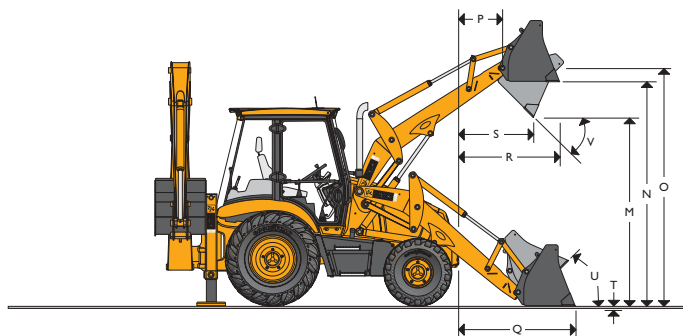
- A fully adjustable seat with lumbar support combines with ergonomically positioned controls to minimise operator fatigue.
- The in-cab noise levels are the lowest in the business for maximum operator comfort.
- A radio location is provided as standard plus twin speakers for stereo sound.
- Cab provides easy access through either a single door or two door frame. Rear side windows open either partially or fully for extra ventilation. Standard features include: lap seat belt, 3 speed fresh air/recycle heater; front and rear screen wash/wipers, front and rear horn, exterior mirrors, and flat easy-clean floor mat.
- The instrument panel is positioned to the right-hand side for ease of viewing from either the loading or excavating position and has an optional lockable cover for vandal proofing. Engine speed, fuel and coolant temperature gauges, (and clock on cab builds) are mounted in the panel.
- A high performance air conditioning system is optionally available on turbo builds providing the operator with a cool working environment when working in high temperatures.
- Optional JCB Precision Controls give the operator the ultimate in operator comfort with low effort controls mounted in the arm rests of an air suspension seat.
- Static or mechanical suspension seat gives the operator a comfortable operating position.
- An optionally available heated air suspension seat gives the operator the ultimate comfort with automatic compensation for weight.



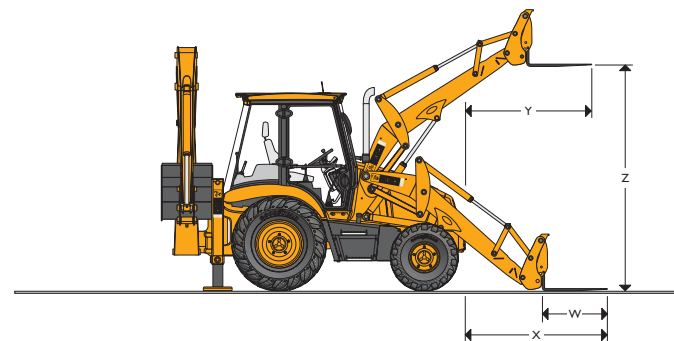
# JCB BACKHOE LOADER | 3CX



## LOADER DIMENSIONS



## LOADER ATTACHMENTS



## LOADER DIMENSIONS

	GP shovel m (ft-in)	6-in-I shovel m (ft-in)
Overall width with bucket		
M Dump height	2.74 (9-0)	2.72 (8-11)
N Load over height	3.23 (10-7)	3.20 (10-6)
O Loader hinge pin height	3.45 (11-4)	3.45 (11-4)
P Pin forward reach	0.36 (1-2)	0.36 (1-2)
Q Reach at ground (toe plate horizontal)	1.42 (4-8)	1.37 (4-6)
R Max. reach at full height	1.20 (3-11)	1.15 (3-9)
S Reach at full height fully dumped	0.83 (2-9)	0.78 (2-7)
T Dig depth	0.07 (0-3)	0.10 (0-4)
U Roll back at ground	45°	45°
V Dump angle	43°	43°
Jaw opening width	–	0.95 (3-1)

## LOADER ATTACHMENTS – Direct Mount

Loader buckets are listed according to size and application. Numbers listed below models are bucket shipping weights. All buckets are drilled to accept optional auxiliary cutting edge or teeth. Flat top box section provides rigidity and assists in bucket levelling.

G.P. Shovel		
Width mm (ft-in)	Capacity SAE	
	Rated m <sup>3</sup> (yd <sup>3</sup> )	Struck m <sup>3</sup> (yd <sup>3</sup> )
2235 (7-4)	1.0 (1.32)	0.83 (1.09)
2350 (7-8)	1.1 (1.44)	0.91 (1.19)
6-in-I Clamshovel		
Width mm (ft-in)	Capacity SAE	
	Rated m <sup>3</sup> (yd <sup>3</sup> )	Struck m <sup>3</sup> (yd <sup>3</sup> )
2235 (7-4)	1.0 (1.32)	0.76 (1.00)
2350 (7-8)	1.0 (1.32)	0.76 (1.00)

## LOADER DIMENSIONS – Forklift Performance Data

	6-in-I shovel mounted forks	Quickhitch mounted forks
	m (ft-in)	m (ft-in)
W Forks – tine length	1.1 (3-7)	1.1 (3-7)
Forks – tine width	0.08 (0-3.1)	0.08 (0-3.1)
X Forks reach at ground level	2.66 (8-9)	2.03 (6-8)
Y Forks reach at full height	2.25 (7-5)	1.72 (5-8)
Z Forks lift height – max.	2.92 (9-7)	3.27 (10-9)
Fork spacing – min	0.2 (0-8)	0.2 (0-8)
Fork spacing – max	2.17 (7-3)	1.03 (3-4)
SWL @ 500mm load centres	kg (lb) 1000 (2205)	2000 (4410)

## LOADER

JCB loaders provide parallel lift self levelling on the up and down cycle enhancing load retention and use of optional pallet forks. High capacity buckets combined with high lift and breakout forces maximise productivity.

		G.P. Shovel	6-in-I Clamshovel
Bucket breakout force	kgf (lbf)	6010 (13250)	6500 (14340)
Loader arm breakout force	kgf (lbf)	5300 (11685)	4850 (10690)
Lift capacity to full height (2235mm wide)	kg (lb)	3320 (7320)	2980 (6555)
Lift capacity to full height (2350mm wide)	kg (lb)	3300 (7270)	2930 (6445)
6-in-I bucket clamp force	kg (lb)	–	2940 (6480)



# JCB BACKHOE LOADER | 3CX



## BRAKES

The JCB braking system ensures effective, fade-free braking. The self-adjusting, multi-disc arrangement is inboard mounted and is oil immersed for minimum maintenance and a long operating life.

- A 3 position switch allows the selection of 2 wheel drive with two wheel braking; 2 wheel drive with four wheel braking or 4 wheel drive with four wheel braking.
- All machines are fitted with servo assisted brakes as standard for low effort braking.
- Twin brake pedals provide tighter turning circle and enhanced steering control on slippery ground.
- Automatic compensation ensures 'straight' machine braking.
- Disc diameter: 220 mm (8.7 in). Friction area: 129,000 sq.mm (200 sq. in) per brake.
- The independent parking brake is mounted on the transmission output shaft and will hold the machine on 1:3 gradients. It is an over-centre type, adjustable within the cab, with transmission disconnect to prevent premature brake pad wear. Park brake disc diameter: 280 mm (11 in). Friction area: 5416 sq.mm (8.4 sq. in).

## TYRES

<b>Front</b>	12.0 x 18, I2PR Industrial 12.5 x 18, I0PR Industrial 335/80 x 18, Radial Traction 400/70 x 18, Radial Industrial 12.5 x 20, I0PR Industrial
<b>Rear</b>	16.9 x 28, I2PR Traction or Industrial 18.4 x 26, I2PR Traction or Industrial 16.9 x 28, Radial Traction 480/80 x 26, Radial Industrial

## SMOOTH RIDE SYSTEM (Optional)

The JCB Smooth Ride System (SRS) consists of a dry nitrogen and oil filled accumulator installed in line with the loader lift cylinders. When activated, the Smooth Ride System allows the loader arms to float. This action counteracts variations in road or site surfaces and provides the operator with a smooth ride.

**Activation** Electric Switch on Instrument Panel. Manually controlled by the operator for maximum benefit and user flexibility.

## JCB POWERSLIDE

Exclusive to JCB, this option enables the excavator's sideshift carriage to be hydraulically powered across the rearframe by the operation of a pedal in the cab.

With this feature there is no need to "push" the carriage across with the bucket avoiding ground damage and the need to relocate the whole machine.

## HYDRAULIC SYSTEM

The Open Centre system uses twin gear pumps and Hydraulic Speed Control (HSC) with a power modulation valve that automatically varies hydraulic power to match digging conditions for extra performance and power.

- Open centre hydraulic system using simple and reliable high efficiency gear pumps.
- A Power Modulation Valve automatically varies the hydraulic power to match digging conditions to improve performance and efficiency – automatically dumps one pump when 4th gear selected on powershift models.
- The HSC switch enables controlled use of hydraulic response depending upon application.
- Easily used, ergonomically positioned levers give excellent control of the loader and backhoe, thus reducing operator fatigue.
- An independent pump powers the Extradig dipper so that it can extend or retract without breaking the digging cycle. This allows faster cycle times and simultaneous use of the telescopic and normal excavator actions in operations such as grading and bank dressing.
- A full flow 10 micron filter ensures that oil stays free of contaminants.

Engine	Naturally aspirated	Turbo
	l/min (gal/min)	l/min (gal/min)
Main pump output	73 (16)	79 (17.5)
Second pump output	51 (11.5)	57 (12.5)
	bar (lbf/sq in)	bar (lbf/sq in)
System relief pressure	227 (3300)	227 (3300)

## SERVICE CAPACITIES

Machine model	3CX
	ltr (gal)
Cooling system	23 (5)
Fuel tank	160 (34.5)
Engine oil with filter	10 (2.2)
Gearbox with filter	16 (3.5)
Rear axle	16 (3.5)
Front drive axle	16 (3.5)
Hydraulic system incl. tank	132 (29)



# JCB BACKHOE LOADER | 3CX



## BACKHOE ATTACHMENTS – Standard Profile Bucket

Width*	Capacity SAE		Weight (+ Teeth)	
	Rated m <sup>3</sup> (ft <sup>3</sup> )	Struck m <sup>3</sup> (ft <sup>3</sup> )	kg (lb)	Teeth
305 (12)	0.06 (2 <sup>1</sup> / <sub>8</sub> )	0.05 (1 <sup>3</sup> / <sub>4</sub> )	102 (225)	3
400 (16)	0.09 (3)	0.07 (2 <sup>1</sup> / <sub>2</sub> )	109 (240)	3
457 (18)	0.12 (4 <sup>1</sup> / <sub>4</sub> )	0.09 (3)	116 (256)	3
610 (24)	0.17 (6)	0.13 (4 <sup>1</sup> / <sub>2</sub> )	140 (310)	4
800 (32)	0.24 (8 <sup>1</sup> / <sub>2</sub> )	0.17 (6)	162 (355)	5
950 (37)	0.30 (10 <sup>1</sup> / <sub>2</sub> )	0.21 (7 <sup>1</sup> / <sub>4</sub> )	198 (435)	5

\* Including sidecutters. Width less sidecutters deduct 25mm (1in).

## BACKHOE ATTACHMENTS – Deep Profile Bucket

Width*	Capacity SAE		Weight (+ Teeth)	
	Rated m <sup>3</sup> (ft <sup>3</sup> )	Struck m <sup>3</sup> (ft <sup>3</sup> )	kg (lb)	Teeth
305 (12)	0.09 (3)	0.07 (2 <sup>1</sup> / <sub>2</sub> )	102 (225)	3
457 (18)	0.16 (5 <sup>1</sup> / <sub>2</sub> )	0.13 (4 <sup>1</sup> / <sub>2</sub> )	122 (269)	3
610 (24)	0.23 (8)	0.18 (6 <sup>1</sup> / <sub>4</sub> )	142 (314)	4
800 (32)	0.30 (10 <sup>1</sup> / <sub>2</sub> )	0.24 (8 <sup>1</sup> / <sub>2</sub> )	163 (359)	5
950 (37)	0.38 (1 <sup>1</sup> / <sub>2</sub> ) <sup>†</sup>	0.30 (10 <sup>1</sup> / <sub>2</sub> )	183 (403)	5
1100 (43)	0.48 (1 <sup>3</sup> / <sub>8</sub> ) <sup>†</sup>	0.34 (12)	203 (448)	6

\* Including sidecutters. Width less sidecutters deduct 25mm (1in). <sup>†</sup> Capacity in cu.yd.

## BACKHOE DIMENSIONS

		Standard Dipper	Extradig
		m (ft-in)	m (ft-in)
A SAE max dig depth	Ext	–	5.46 (17-11)
	Ret	4.24 (13-11)	4.24 (13-11)
SAE 2ft flat bottom	Ext	–	5.43 (17-10)
	Ret	4.21 (13-10)	4.21 (13-10)
Maximum dig depth with deep profile bucket	Ext	–	5.97 (19-7)
	Ret	4.75 (15-7)	4.75 (15-7)
B Reach – ground level to rear wheel centre	Ext	–	7.87 (25-10)
	Ret	6.72 (22-1)	6.72 (22-1)
C Reach – ground level to slew centre	Ext	–	6.52 (21-5)
	Ret	5.37 (17-7)	5.37 (17-7)
D Reach – at full height to slew centre	Ext	–	3.66 (12-0)
	Ret	2.74 (9-0)	2.74 (9-0)
E Side reach – to centre line of machine	Ext	–	7.09 (23-3)
	Ret	5.94 (19-6)	5.94 (19-6)
F SAE operating height	Ext	–	6.35 (20-10)
	Ret	5.53 (18-2)	5.53 (18-2)
G Maximum loadover height	Ext	–	4.72 (15-6)
	Ret	3.84 (12-7)	3.84 (12-7)
SAE loadover height	Ext	–	4.32 (14-2)
	Ret	3.4 (11-3)	3.4 (11-3)
H Total kingpost travel		1.16 (3-10)	1.16 (3-10)
	Narrow rear frame option	1.05 (3-5)	1.05 (3-5)
J Bucket rotation	Speed	201°	201°

## BACKHOE PERFORMANCE

		Standard Dipper	Extradig
		kgf (lbf)	kgf (lbf)
Bucket tearout	Speed	4940 (10870)	4940 (10870)
	Power	5700 (12540)	5700 (12540)
Dipper tearout	Ext	–	2085 (4590)
	Ret	3010 (6620)	3010 (6620)
Lift capacity of bucket pivot at full reach		kg (lb)	kg (lb)
	Ext	–	990 (2108)
	Ret	1490 (2740)	1250 (2750)



# JCB BACKHOE LOADER | 3CX

