

STATIC DIMENSIONS

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

3CX 14 FT	2WD	4WD
	ft-in (m)	ft-in (m)
A Transport Length	23-7 (7.19)	23-7 (7.19)
B Transport Height – Standard Backhoe	11-3 (3.43)	11-3 (3.43)
B Transport Height – Extradig	11-7 (3.53)	11-7 (3.53)
C Height to Top of Cab/Canopy	9-3 (2.81)	9-3 (2.81)
D Overall Width with Bucket	7-8 (2.45)	7-8 (2.45)

3CX 14 FT	2WD	4WD
	ft-in (m)	ft-in (m)
E Ground Clearance – Mainframe	1-1 (0.33)	1-1 (0.33)
F Ground Clearance – Front Axle	1-1.4 (0.34)	0-11 (0.28)
G Front Wheel Track	7-1 (2.16)	7-4.5 (2.25)
H Rear Wheel Track	7-3 (2.21)	7-3 (2.21)
J Wheelbase	7-1 (2.17)	7-1 (2.17)



ENGINE SUPPORT SYSTEM

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

Fuel Type	Diesel.
Fuel Filter	Replaceable cartridge plus water/sediment separator prefilter.
Air Cleaner	Dual, dry element type with self cleaning internal air intake precleaner.
Oil Filter and Lubrication	Full flow, spin-on type filter.
Cooling System	Hot climate specification, pressurised 14.5 psi (1.0 bar) suction fan. Pressurised recovery tank with integral filler neck.

ENGINE

The JCB Ecomax engine is so efficient that it complies with Stage I II b/Tier 4i without the need for exhaust after-treatment systems: Diesel Particulate Filter (DPF) or Selective Catalytic Reduction (SCR). This is because it's high pressure common rail combustion system, produces virtually no particulate matter in its exhaust gases.

High pressure Common Rail Fuel Injection - Injects fuel at high pressure, up to 29, 010 psi (2000bar.) with extremely precise control.

Variable Geometry Turbo Charger (VGT) Allows precise control of the quantity of air entering the engine, to match the fuel injected in order to optimise combustion efficiency.

Exhaust Gas Recirculation (EGR) - is a controlled recirculation of a portion of exhaust gases back into the combustion chamber, reducing NOx emissions.

Machine models	3CX-14	
Manufacturer	JCB	
Aspiration	Turbocharged	
Displacement	4.4 Ltr	
No. of Cylinders	4	
Bore	(inch)	(4.05)
Stroke	(inch)	(5.0)
Rated engine RPM	2200	
Power ratings		
Gross HP- SAE J1995 (ISO 14396)	HP (kW)	74 (55)
Net HP - SAE J1349	HP (kW)	71 (53)
Maximum torque		
Rated ISO 14396 (SAE J1995) lbf ft (Nm)	295 (400)	
Max. Torque RPM	1200	

STEERING

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

Machine Model	3CX	
Steering Turns – Lock to Lock	2 ¾	
Curb – Curb Turning Circle – Unbraked	ft-in (m)	26-5 (8.1)
Loader Clearance Circle – Unbraked	ft-in (m)	34-1 (10.4)
Curb – Curb Turning Circle – Braked	ft-in (m)	22-8 (6.9)
Loader Clearance Circle – Braked	ft-in (m)	31-2 (9.5)

(Depending on tire size, ground conditions, etc.)

OPERATING WEIGHTS

Operating weight includes machine equipped with standard loader bucket, 24" HD backhoe bucket, full fluid levels and SAE operator.

3CX	14FT-2WD	14FT-4WD
	lb (kg)	lb (kg)
Base Unit – Standard Backhoe	15,053 (6830)	15,439 (7005)
Add for: Cab	540 (245)	540 (245)
Add for: Extradig	998 (453)	998 (453)

ELECTRICAL AND INSTRUMENTATION

12 V negative ground, utilizing wiring and connectors meeting IP69 water ingress test standard. Central fuse panel.

Gauges	Tachometer, engine coolant temp, fuel level, hourmeter, clock.
Warning System	Audible and visual system for engine oil, water in fuel, transmission oil temperature and pressure, park brake, air cleaner, alternator.
Battery	12 V, 900 CCA./110 A/hr
Pre-wire	Radio speakers (cab), beacon (cab and canopy).
Horn	Controlled from both front and rear.
Reverse Alarm	Standard.
Alternator	95 amp.



TRANSMISSION

The JCB Transmissions are designed and built specifically for JCB Backhoe Loaders. They feature synchronized shifting in all gears. Powershuttle between forward and reverse. Ground speeds are designed to maximize production.

3CX	
Manufacturer	JCB
Type	JCB Syncroshuttle
Torque Converter	Single Stage Dual Phase
Torque Converter Ratio	2.52:1 asis
Gears Forward/Reverse	4F/4R
Gear Selection	Manual
Shuttle Control – F/R	asis OK
Travel Speeds	mph (km/h)
Tires Equipped	19.5-24 tires
Gear 1	3.0 (4.9)
Gear 2	8.6 (5.3)
Gear 3	12.3 (19.8)
Gear 4	22.8 (36.7)

FRONT AXLE

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

3CX	14FT-2WD	14FT-4WD
Type	Flame Cut Bar w/ Fixed Tread	JCB Max-Trac Torque Proportioning
Axle Ratings	lb (kg)	lb (kg)
Static Load Rating	36,376 (16,499)	36,376 (16,499)
Dynamic Load Rating	18,300 (8303)	18,300 (8303)
SAE J43 Rating	24,200 (11,000)	26,083 (11,856)
Oscillational angle	16°	16°
Steering	Powered track rod	

REAR AXLE

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

3CX	2WD	4WD
Type	JCB Limited Slip Differential with Outboard Planetary Drive	
Axle Ratings	lb (kg)	lb (kg)
Static Load Rating	55,125 (25,011)	55,125 (25,011)
Dynamic Load Rating	27,562 (12,505)	27,562 (12,505)
SAE J43 Rating	18,650 (8477)	24,150 (10,977)

POWER BRAKES

The JCB class leading hydraulic power brakes system is fitted as standard and ensures low effort, effective, fade-free braking. The self-adjusting, multi-disk arrangement is inboard mounted and is oil immersed for minimum maintenance and a long operating life.

- A three 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.
- Twin brake pedals provide tighter turning circle and enhanced steering control on slippery ground.
- Automatic compensation ensures 'straight' machine braking.
- Accumulator back-up provides maximum safety under all conditions and in the case of dead engine applies 4 wheel braking.
- Transmission logic and spring on / hydraulic release 4WD clutch means that the emergency brake is always applied to the front and rear axles for effective breaking.
- Increased back off in the brake packs reduces friction and saves fuel.
- Uses the main hydraulic system oil which eliminates need for a separate brake oil reservoir which also reduces service costs.
- Disc diameter: 220 mm (8.7 in). Friction area: 129,000 sq.mm (200 sq.in) per brake.
- The park brake will hold the machine on 1:3 gradients. It is an over-center type, adjustable within the cab, with transmission disconnect to prevent premature brake pad wear.

TIRES

Tires listed are most popular sizes. See your JCB Dealer for a full listing of available tire sizes and tread designs. Tires are listed in as front and rear combinations that are compatible with axle availability.

3CX	2WD	4WD
11L-16, F3, – Front	●	
14-17.5, FWD, – Front		●
19.5L-24, R4, – Rear	●	●
12.5-18L – Front		●
21L x 24, R4, – Rear		●



CAB

Excellent visibility (and safety) is provided by the extra large tinted class areas of 70 sq.ft (6.5 sq m). 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 industry at 72 dBA
- A radio location is provided as standard plus twin speakers for stereo sound, (in Cab options).
- Cab provides easy access through a two door. 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, and flat easy-clean floor.
- The instrument panel is positioned to the right-hand side for ease of viewing from either the loading or excavating position. Engine speed, fuel and coolant temperature gauges.
- A high performance air conditioning system is optionally available providing the operator with a cool working environment when working in high temperatures.
- 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.
- An optional in-cab hot drinks machine provides the operator with a hot beverage where site facilities don't exist.
- Optional heated front windscreen removes built up frost in minutes.

HYDRAULIC SYSTEM

Side mounted hydraulic tank with sight glass. JCB cylinders with hose protection, structural steel tubing. Return line filter with magnet and replaceable cartridge in tank.

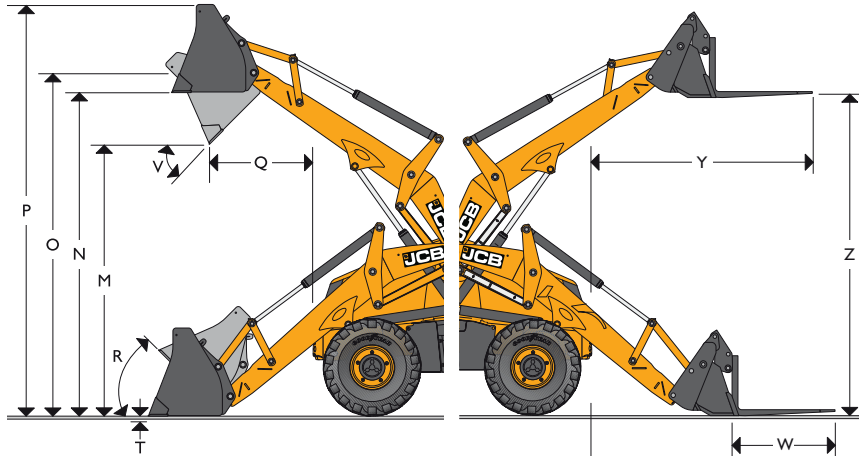
Control type		Manual
Circuit type		Open center
Excavator valve block type		Full flow
Loader valve block type		Full flow
Pump type		Gear (x3)
Total Pump output	gpm (lpm)	39 (148)
System Relief Pressure	psi (bar)	3650 (252)
Filter rating	micron	5/12

SERVICE CAPACITIES

3CX

	gal (l)
Cooling system	4.9 (19)
Fuel tank	42.5 (160)
Engine oil with Filter	4 (15)
Transmission with Filter	4.2 (16)
Rear Axle	4.2 (16)
Front Drive Axle	4.2 (16)
Drive Axle Hubs - Each	0.4 (2)
Hydraulic Tank	18 (68)
Hydraulic System Including Tank	31 (117)

LOADER DIMENSIONS



LOADER DIMENSIONS

3CX	14FT
	ft-in (m)
Overall Width with Bucket	7-8 (2.35)
M Dump Height	9-0 (2.74)
N Load Over Height	10-8 (3.25)
O Loader Hinge Pin Height	11-4 (3.45)
P Maximum Operating Height	13-7 (4.14)
Q Dump Reach at Full Height	2-8 (0.81)
R Rollback @ Ground	45°
T Digging Depth	0-2 (0.05)
V Dump Angle	43°

LOADER PERFORMANCE – GP Bucket

JCB loaders provide parallel lift self leveling 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 maximize productivity. Optional heavy lift loader cylinders increase overall lift capacity.

3CX	14FT
	lb (kg)
Bucket Breakout Force	13,603 (6170)
Lift Capacity to Full Height	7670 (3479)

LOADER PERFORMANCE – 6-in-1 Bucket

JCB loaders provide parallel lift self leveling 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 maximize productivity. Optional heavy lift loader cylinders increase overall lift capacity.

3CX	14FT
	lb (kg)
Bucket Breakout Force	14,398 (6531)
Lift Capacity to Full Height (standard configuration)	7119 (3229)
6-in-1 Bucket Clamp Force	6486 (2943)
Fork Lift Capacity – 24" Center	4000 (1815)

LOADER ATTACHMENTS – Direct Mount

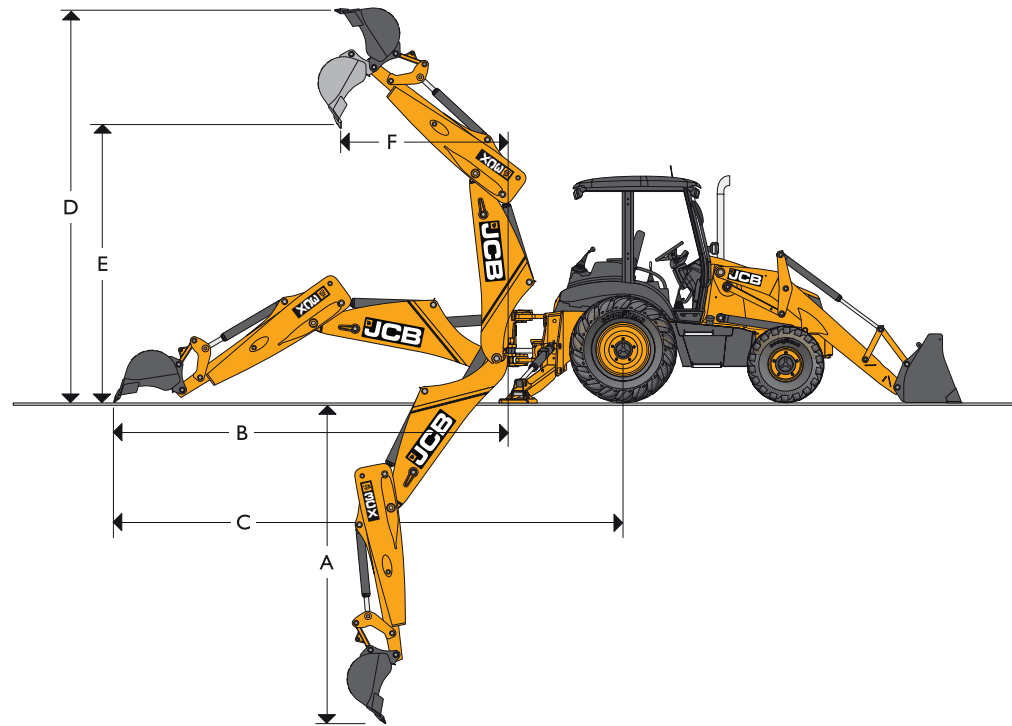
Loader buckets are listed according to size and application. Numbers listed below models are bucket shipping weights. All buckets are drilled to accept optional auxiliary cutting edge or teeth. Flat top box section provides rigity and assists in bucket leveling.

3CX	14FT
	lb (kg)
HD Bucket - 92", 1.1 cu yd	948 (430)
6-in-1, 92" - 1.3 cu yd	1940 (880)



BACKHOE PERFORMANCE

		14FT
Bucket Breakout Force	lbf (kgf)	13,730 (6228)
Dipper Breakout Force Retracted	lbf (kgf)	8605 (3903)
Dipper Breakout Force Extended	lbf (kgf)	6027 (2733)



STATIC DIMENSIONS

3CX	14FT			
		Standard Backhoe	Extradig – Retracted	Extradig – Extended
A SAE Dig Depth – Max	ft-in (m)	14-7 (4.45)	14-7 (4.45)	18-6 (5.63)
A SAE Dig Depth – 2' Flat Bottom	ft-in (m)	14-5 (4.39)	14-5 (4.39)	18-4 (5.59)
B Reach from Swing Pivot	ft-in (m)	17-10 (5.44)	17-10 (5.44)	21-6 (6.55)
C Reach from Rear Axle Center	ft-in (m)	21-9 (6.63)	21-9 (6.63)	25-6 (7.77)
D Max Operating Height	ft-in (m)	17-8 (5.38)	17-8 (5.38)	20-6 (6.25)
E Loading Height	ft-in (m)	11-2 (3.40)	11-2 (3.40)	14-0 (4.27)
F Loading Reach	ft-in (m)	5-3 (1.68)	5-5 (1.73)	9-1 (2.77)
Swing Arc	degrees	180°	180°	180°
Stabilizers – Transport	ft-in (m)	7-6 (2.29)	7-6 (2.29)	7-6 (2.29)
Stabilizers – Operating	ft-in (m)	10-10 (3.30)	10-10 (3.30)	10-10 (3.30)
Leveling Angle	degrees	15°	15°	15°
Bucket Rotation	degrees	185° Max Power / 201° Max Rotation		



BACKHOE BUCKETS

JCB Backhoe Loader buckets are designed specifically for use on JCB machines. Dual position tipping link provides positions to maximize tearout force or to maximize rotation for straight wall digging and improved load retention. All JCB buckets include heavy-duty features consisting of a 1"x18" cutting edge, back straps, box section cross member, and full length, chamfered side cutters.

Bucket Width	in	12	18	24	24	30	36
Bucket Width	mm	305	455	610	610	760	910
Number of Teeth		3	4	4	5	5	6
Heavy-duty Trenching Buckets							
Capacity	cu ft	2.8	4.9	7.1	7.1	9.2	11.3
Capacity	cu m	0.08	0.14	0.20	0.20	0.26	0.32
Weight	lb	293	359	408	419	478	544
Weight	kg	100	128	145	190	166	189
Heavy-duty High Capacity Trenching Buckets							
Capacity	cu ft	5.3	8.5	8.5	11.3	14.1	
Capacity	cu m	0.15	0.24	0.24	0.32	0.40	
Weight	lb	430	509	514	588	668	
Weight	kg	195	231	233	267	303	

See your JCB Dealer for availability of other backhoe buckets and attachments.

JCB HYDRAULIC BREAKERS

JCB hydraulic breakers are designed for use on JCB Backhoe Loaders. They feature constant blow energy, pressure damping, heavy-duty side plates and high impact frequency for maximum production. Coupled with factory installed hydraulic breaker circuit, the JCB breakers and backhoe loader make a perfect demolition combination. All models are equipped with sound insulation for quiet operation as standard.

Breaker Model		HM385Q
Energy Class	ft/lb	634 (859)
Impact Frequency	bpm	480-960
Oil Flow Range	gpm (lpm)	13-21 (50-80)
Operating Weight	lb (kg)	688 (312)
Operating Pressure	psi (bar)	1450-2175 (100-150)
Tool Diameter	in (mm)	3.1 (80)

A wide variety of tools are available for JCB breakers. See your JCB Dealer for details.



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.



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