



By Appointment, to Her Majesty the Queen
Manufacturers of Construction and Agricultural Equipment
J C Bamford Excavators Ltd

JCB 4CX

4x4x4



- 4 equal sized wheels • 4 wheel drive • 4 wheel steer
- JCE Max-1tac axles • JCE Powershift transmission
- Hydraulic Speed Control • Spacious and comfortable cab
- Adjustable steering column • Contemporary styling

S P E C I F I C A T I O N

4 EQUAL SIZED WHEELS, 4 WHEEL DRIVE, 4 WHEEL STEER.

The 4CX4x4x4 brings outstanding ability to any job. It boasts the unique 4x4x4 combination, a breakthrough which only Europe's premier backhoe loader manufacturer could have perfected.

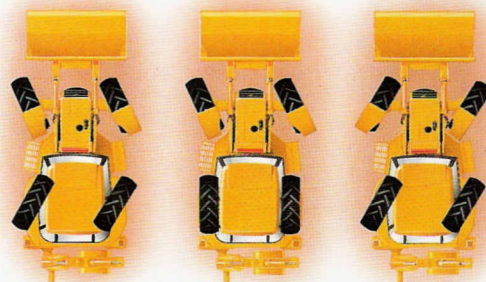
This joins many other innovative features to provide the level of performance an ever changing industry is demanding for the 90's.

- Four equal sized wheels enhance the tractive effort to give excellent loader performance. In addition, ground clearance and flotation over soft ground conditions is greatly improved.

- Four wheel drive ensures superb traction for improved stockpile penetration. Electrical disconnect

allows a quick on-the-move change to two wheel drive for roading.

- Four wheel steer provides outstanding manoeuvrability and handling in all conditions. Perfect wheel tracking ensures minimal site damage while easy changing between 4 wheel, 2 wheel and crab steer is possible with the flick of a switch.



- Servo assisted brakes dramatically reduce pedal effort and automatic selection of 4 wheel drive adds considerably to braking effectiveness and safety.

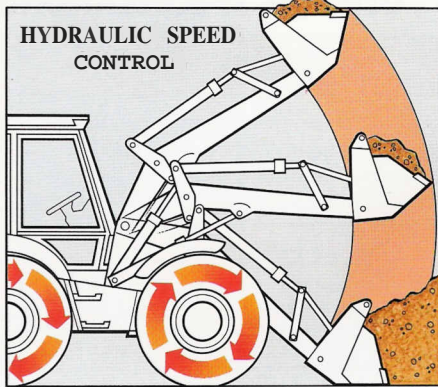
- Powerful and reliable 71.5 kW (96 hp) turbocharged engine.

- 201° excavator bucket rotation allows impressive spoil retention at maximum loadover height while providing good flat back trenching ability.

- Rack and pinion slewing force is constant throughout the 180° arc for improved over the side digging performance.

- 45° shovel roll back angle allows greater load retention when carrying spoil.



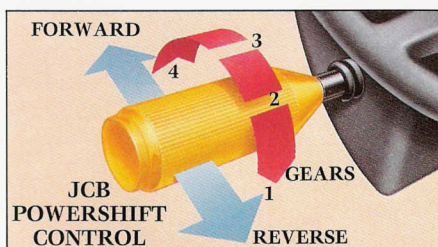


- Hydraulic Speed Control either channels all the hydraulic flow to the loader for fast speed operation or it returns flow back to the tank.. This releases greater engine power to the transmission, and allows easier and more precise loader control



- Gas strut assisted rear window which slides into roof but projects slightly to provide rain protection for the operator.

- Cabs ergonomically designed for maximum operator productivity.. All controls are easily accessible while extra leg room adds to the exceptional comfort..

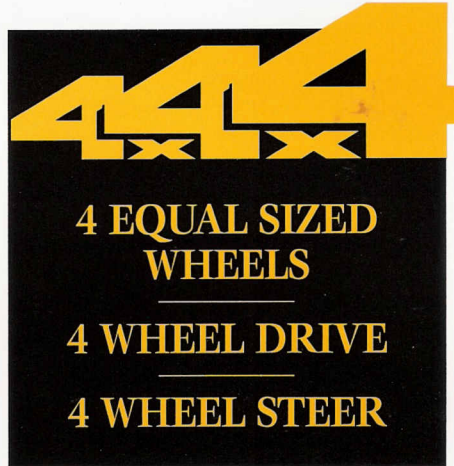


- JCB Powershift transmission provides fast gear changing without losing speed on gradients. A column-mounted, light electric twist grip allows the operator to control machine direction and change gear effortlessly.

- JCB Max-Trac axles with torque proportioning differentials distri-

bute tractive effort to the wheels which need it most for maximum traction in all site conditions .

- Steering column adjusts position to provide maximum comfort and control for any operator .
- Safe and powerful loader performance is provided by strong 4 ram geometrical arms. Selflevelling parallel lift for maximum load retention.



ADJUSTABLE
STEERING
COLUMN

- Greatly improved electrical system is completely waterproof and dustproof for trouble free operation.

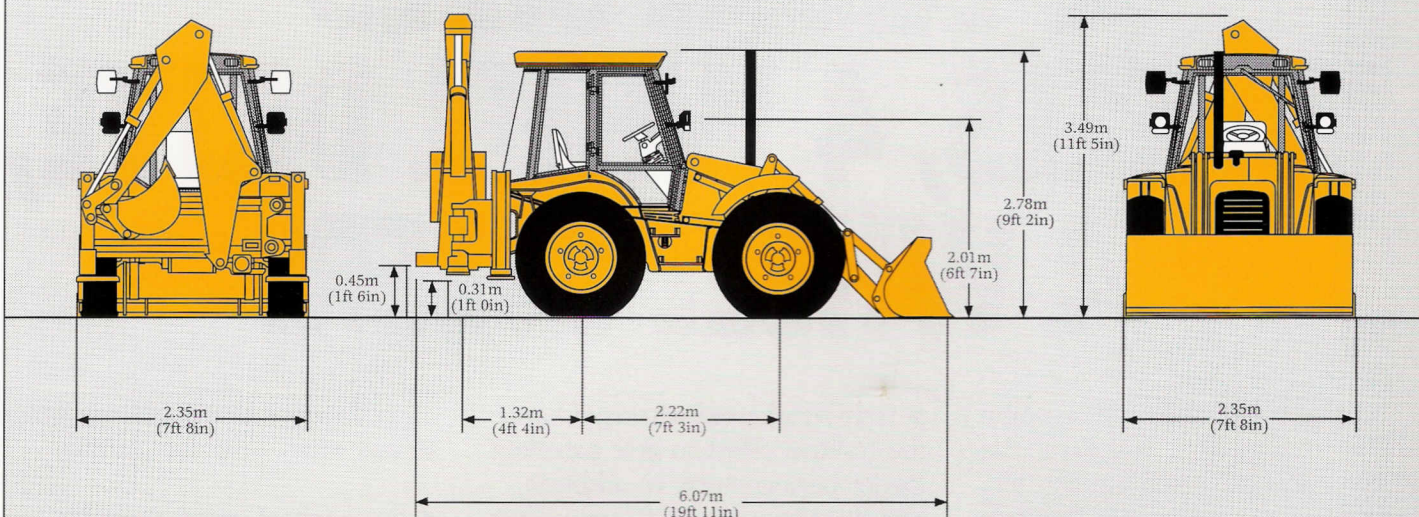
- Cab roof and wheel fenders are made from colour impregnated polyethylene which is maintenance free and resistant to impact damage, weathering and rust ensuring virtually no maintenance is needed.

- Excellent service access through hinged or removable engine cover.



GENERAL SPECIFICATION

STATIC DIMENSIONS



ENGINE

Turbocharged diesel engine.

4 cylinders: bore 100mm (3.94in); stroke 127mm (5in); displacement 3.99 litres (244cu in).

Latest technology and advanced design provides low fuel consumption, reduced noise, high torque and power output, total reliability and minimal maintenance.

- Easily replaceable pre-finished dry liners.
- Sbearing, heat treated crankshaft.
- Expansion controlled pistons with Alfin inserts.
- Two stage dry type air filter with primary and safety elements and glass bowl pre-cleaner.
- Oiljet piston cooling

TRANSMISSION

For unbeatable drive power in all conditions the 4 speed JCE Powershift transmission provides fast gear changing without losing speed or momentum on gradients. With integral torque converter and electrically operated reversing shuttle the resulting fast cycles times give this backhoe loader real wheeled loader performance. Low 1st and 2nd gear ratios provide excellent tractive effort for loading and sitestripping.

- A column mounted electric switch controls both machine direction and gear changing. Coupled with automotive safety pedal layout this greatly reduces operator fatigue.
- Direction changes are modulated from forward to reverse with detented lever gates for safety. Light electric twist grip provides effortless shilling between gears.
- Torque converter stall ratio: 2.4:1.
- Electrical selection of 4WD allows easy, on-the-move changes.

AXLES

For unstoppable tractive effort, whatever the conditions the heavy duty, yet lightweight JCE epicyclic rear steer drive axle incorporates the unique Max-Trac torque proportioning differentials. The JCE Max-Trac front steer-drive axle has an oscillation angle of 16° in order to cope with the most arduous conditions and still remain stable.

TRAVEL SPEEDS

16.9 x 24 tyres and engine at 2200rev/min

Ratio	km/h	mph
1	4.87	3.03
2	8.64	5.37
3	18.12	11.26
4	32.07	19.93

BRAKES

For effective and fade free braking, the JCE braking system is a self-adjusting, multi-disc arrangement that is mounted inboard and is oil immersed for long life and cooloperation.

- Vacuum servo-assisted braking system, reduces the required pedal effort, therefore minimising operator fatigue.
- Automatically switches from 2WD to 4WD for effective transmission braking.
- No adjustment is necessary as the braking system is self adjusting.
- Compensation ensures 'straight' machine braking.
- Disc diameter: 220mm (8.7in).
- Friction area: 129,000sqmm (200sq in) per brake.
- Twin pedals and master cylinders allow spin turns.
- Parking brake is a hand operated Over-centre type, actuating a brake caliper that seizes onto a metal disc situated on the transmission output shaft. This handbrake mechanism will hold the machine on 1 in 3 gradients and is fully adjustable from within the cab. Disc diameter: 280mm (11in). Friction area: 5416sqmm (8.4sq in).

ELECTRICS

12 volt direct electric starting with 65A alternator and standard thermostat start aid.

- Heavy duty harness with secured sealed connectors for protection against both water and dust ingress. The connectors conform to IP67 (DIN 40 050) standards. A woven nylon outer covering protects the harness against abrasion and also improves its resistance to water penetration.
- Standard battery 95A hour low maintenance.
- Optional battery 128A hour low maintenance.

Turbo-charged

BSAU 141 (a) Gross Power	71.5kW (96hp) @2200rpm
Gross Torque	353Nm (260lbfft) @1400rpm
SAE J1349 Gross Power	71.5kW (96hp) @2200rpm
Gross Torque	353Nm (260lbfft) @1400rpm
EEC 80/1269 Nett Power	67.9kW (91hp) @2200rpm
Nett Torque	348Nm (256.6lbfft) @1400rpm

BACKHOE SPECIFICATION

BACKHOE DIMENSIONS

		STANDARD DIPPER	EXTRADIG DIPPER
A SAE Maxdig depth	Ext	—	5.45m (17ft. 10in)
	Ret	4.24m (13ft. 11in)	4.24m (13ft. 11in)
SAE 2ft flat bottom	Ext	—	5.41 m (17ft. 9in)
	Ret	4.19m (13ft. 9in)	4.19m (13ft. 9in)
Maximum dig depth	Ext	—	5.93m (19ft. 5in)
	Ret	4.80m (15ft. 9in)	4.80m (15ft. 9in)
B Reach-ground level to rear wheel centre	Ext	—	7.82m (25ft. 8in)
	Ret	6.71 m (22ft. 0in)	6.69m (21ft. 11in)
C Reach-ground level to slew centre	Ext	—	6.53m (21 ft 5in)
	Ret	5.38m (17ft. 8in)	5.38m (17ft. 8in)
D Reach-at full height to slew centre	Ext	—	3.25m (10ft. 8in)
	Ret	2.37m (7ft. 9in)	2.16m (7ft. 1in)
E Side reach-to centre line of machine	Ext	—	7.11 m (23ft. 4in)
	Ret	5.97m (19ft. 7in)	5.97m (19ft. 7in)
F SAE operating height	Ext	—	6.40m (21ft. 0in)
	Ret	5.54m (18ft. 2in)	5.54m (18ft. 2in)
G Maximum loadover height	Ext	—	5.00m (16ft. 5in)
	Ret	4.13m (13ft. 6in)	4.11m (13ft. 6in)
SAE load over height	Ext	—	4.30m (14ft. 1in)
	Ret	3.43m (11ft. 3in)	3.43m (11ft. 3in)
H Total kingpost travel		1.17m (3ft. 10in)	1.17m (3ft. 10in)
J Bucket rotation	Speed	201°	201°
	Power	185°	185°

BACKHOE PERFORMANCE

Bucket tearout	Speed	4922kgf (10851lbf)	4880kgf (10758lbf)
	Power	5677kgf (12516lbf)	5600kgf (12346lbf)
Dipper tearout	Ext	—	2091kgf (4610lbf)
	Ret	2998kgf (6609lbf)	3017kgf (6651lbf)
Lift capacity of bucket pivot at full reach (no bucket)	Ext	—	825kg (1819lb)
	Ret	1485kg (3274lb)	1243kg (2740lb)

BACKHOE ATTACHMENTS

STANDARD PROFILE BUCKET

WIDTH mm (in)	CAPACITY SAE	
	RATED m ³ (ft ³)	STRUCK m ³ (ft ³)
305 (12)	0.06 (2 ¹ / ₈)	0.05 (13 ¹ / ₄)
400 (16)	0.09 (3)	0.07 (2 ¹ / ₄)
457 (18)	0.12 (4 ¹ / ₄)	0.09 (3)
plO (24)	0.17 (6)	0.13 (4 ¹ / ₄)
800 (32)	0.24 (8 ¹ / ₄)	0.17 (6)
950 (37)	0.30 (10 ¹ / ₄)	0.21 (7 ¹ / ₄)

DEEP PROFILE BUCKET

WIDTH mm (in)	CAPACITY SAE	
	RATED m ³ (ft ³)	STRUCK m ³ (ft ³)
305 (12)	0.09 (3)	0.07 (2 ¹ / ₄)
457 (18)	0.16 (5 ¹ / ₄)	0.13 (4 ¹ / ₄)
610 (24)	0.23 (8)	0.18 (6 ¹ / ₄)
800 (32)	0.30 (10 ¹ / ₄)	0.24 (8 ¹ / ₄)
950 (37)	0.38 (13 ¹ / ₄)	0.30 (10 ¹ / ₄)
1100 (43)	0.48 (17 ¹ / ₄)	0.34 (12)



DITCH CLEANING BUCKET

WIDTH mm (in)	CAPACITY m ³	RATED (ft ³)
1525 (60)	0.22	(8)
1830 (72)	0.30	(10)



TAPERED DITCHING BUCKET

ANGLE	TAPER WIDTH mm (in)	CAPACITY RATED m ³ (ft ³)	ANGLE	TAPER WIDTH mm (in)	CAPACITY RATED m ³ (ft ³)
30°	381-1676 (15-66)	0.07 (2 ¹ / ₄)	60°	305-1067 (12-42)	0.12 (4)



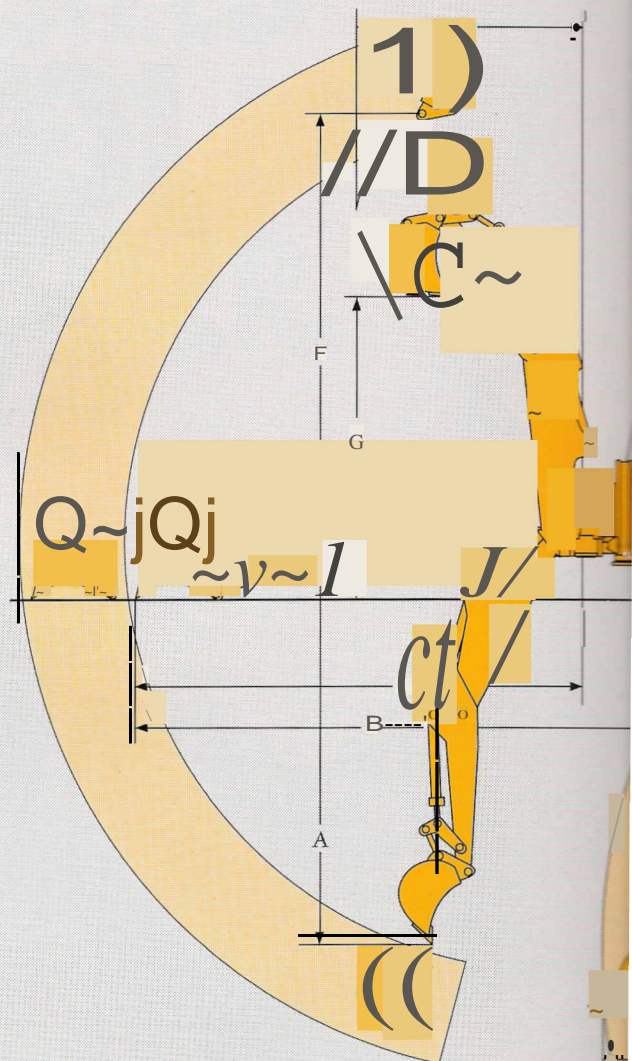
JCB JAW

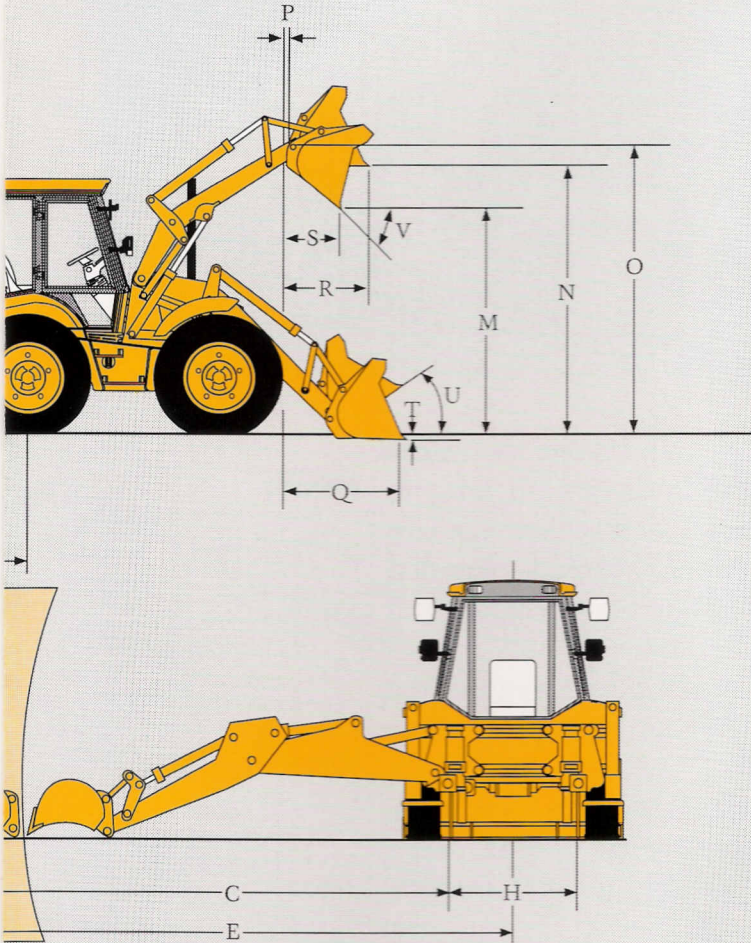
WIDTH mm (in)	CAPACITY SAE RATED m ³ (ft ³)	STRUCK m ³ (ft ³)
305 (12)	0.07 (2 ¹ / ₄)	0.06 (2)
460 (18)	0.14 (5)	0.12 (4)
600 (24)	0.20 (7)	0.15 (5)

*Including sidecutters. Width less sidecutters deduct 25mm (1in) Capacity in Cu yd

*Excluding sidecutters. With sidecutters add 511111(2in) to sm-ber dimension.

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





LOADER DIMENSIONS

	GP SHOVEL	6-IN-1 SHOVEL
M Dumpeight	2.63m (8ft 7in)	2.65m (8ft 8in)
N Loadover height	3.15m (10ft 4in)	3.13m (10ft 3in)
O Pin height	3.37m (11ft 1in)	3.37m (11ft 1in)
P Pin forward reach	0.43m (1ft 5in)	0.43m (1ft 5in)
Q Reach at ground (toe plate horizontal)	1.48m (4ft 10in)	1.43m (4ft 8in)
R Max reach at full height	1.24m (4ft 1in)	1.19m (3ft 11in)
S Reach at full height - fully dumped	0.84m (2ft 9in)	0.79m (2ft 7in)
T Digdepth (toe plate horizontal)	0.19m (0ft 7in)	0.21m (0ft 8in)
U Rollback at ground	45°	45°
V Dump angle SAE	45°	53°
Jaw opening width	-	0.946m (3ft 1in)

LOADER PERFORMANCE

	GP SHOVEL	6-IN-1 SHOVEL
Loader breakout - bucket	5658kgf (12471lbf)	6120kgf (13497lbf)
Loader breakout - arms	5922kgf (13058lbf)	5582kgf (12306lbf)
Lift capacity to full height	3875kg (8544lb)	3422kg (7544lb)
Clamping force	-	2942kgf (6486lbf)

Diagrams show telescopic JCB Extradig at its maximum 1.22m of extension.

LOADER ATTACHMENTS

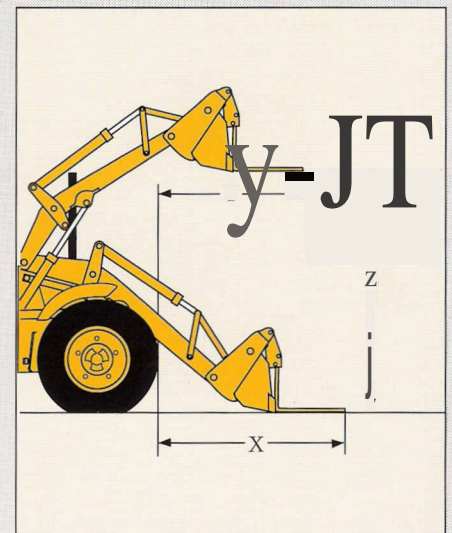
JCB QUICKHITCH LOADER SHOVELS				
GENERAL PURPOSE	CAPACITY RATED	SAE STRUCK		
mm WIDTH (ft in)	m ³ (yd ³)	m ³ (yd ³)		
2438 (8-0)	1.1 (1.32)	0.91 (1.16)		

FORK LIFT PERFORMANCE	
X Reach at ground	2.54m (8ft 4in)
Y Reach at full height	2.16m (7ft 1in)
Z Fulllift height	2.95m (9ft 8in)
Minimum fork spacing	0.19m (0ft 7 1/2in)
Maximum fork spacing	2.17m (7ft 1in)

GENERAL PURPOSE	CAPACITY RATED	SAE STRUCK		
mm WIDTH (ft in)	m ³ (yd ³)	m ³ (yd ³)		
2350 (7-8)	1.1 (1.44)	0.89 (1.16)		

6 in 1 SHOVEL	CAPACITY RATED	SAE STRUCK		
mm WIDTH (ft in)	m ³ (yd ³)	m ³ (yd ³)		
2350 (7-8)	1.0 (1.32)	0.76 (1.00)		

FORK LIFT TYPE	
Fork length	1067mm (42in)
Section width	80mm (3in)
Assembly weight	139kg (306lb)
SWL at 500mm load centres	1000kg (2205lb)



GENERAL SPECIFICATION

TYRES

STANDARD

16.9/14 x 24 x 12PR (ISG)..

OPTIONAL

16.9 x 28 x 1OPR INDUSTRIAL (SGI).

16.9 x 28 XM27 Traction Radial

16.9/14 x 28 x 12PR (ISG).

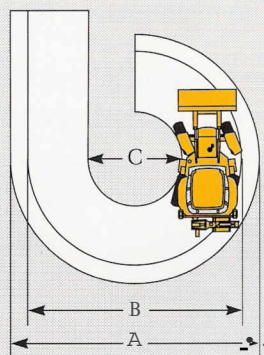
15.5 x 25 XGLA (Industrial Radial).

TURNING CIRCLES

JCB 4WS backhoe loaders incorporate full power hydrostatic steering. In the event of engine failure, emergency steering is still available.

The JCB 4WS backhoe loaders offer three different modes of steering, 2WS, 4WS and Crabsteer.

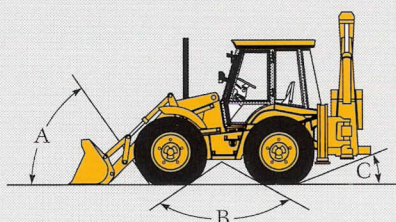
2WS, generally used for road use, 4WS, for improved manoeuvrability in loading applications and confined areas and Crabsteer for parallel drive when digging up close to walls and other obstacles.



Inner wheel unbraked	4WS/4WD
A Outside shovel	10.65m (34ft 11in)
B Outside wheels	9.09m (29ft 10in)
C Inside wheels	4.47m (14ft 8in)
Inner wheel braked	4WS/4WD
A Outside shovel	9.46m (31ft 2in)
B Outside wheels	7.92m (26ft 2in)
C Inside wheels	3.48m (11ft 5in)

Machine fitted with standard tyres 16.9 x 24.

GROUND LINE ANGLES



A Approach angle	74°
B Interference angle ramp to ground plane	118°
C Departure angle	19°

HYDRAULICS

JCB Vari-matic hydraulics, incorporating Hydraulic Speed Control (HSC).

- A unique hydraulic system using simple, reliable, high efficiency gear pumps.
- A Power Modulation Valve automatically varies the hydraulic power to match digging conditions giving high performance and efficiency.
- HSC switch to enable controlled use of hydraulic response depending upon application.
- Ergonomically positioned levers combined with 10 lever efforts give excellent control of loader and backhoe reducing operator fatigue to a minimum.
- An independent pump powers the optional Extradig dipper so that it can extend or retract without breaking the digging cycle for faster cycle times and simultaneous use of 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.

PUMPFLOWS

Main pump:

731/min (16gal/min) at 2200 rpm.

Second pump:

651/min (14gal/min) at 2200 rpm.

MAIN RELIEF VALVE SETTING

Backhoe & Loader: 227bar (3300lbf/sq in).

CAB

Revolutionary curved glass cab with maximum possible glass area (5.6sq m, 61sq ft) for excellent visibility of work area and maximum safety of on-site personnel. Cab structure conforms fully to the ROPS and FOPS safety standards, giving maximum protection to the operator.

- Fully adjustable suspension seat and ergonomically positioned controls minimise fatigue and optimise productivity.
- Easy walk-through two door access. Side window can be opened either partially or fully for maximum ventilation. Appointments include purpose designed JCB suspension seat, lap seat belt, large convex rear view mirrors, interior light, 3-speed variable heater/demister unit, front and rear screen wiper together with screen wash, horn, hazard warning system, radio console, in cab tool tray, steering wheel tilt adjustment, steering wheel lock and in cab storage box.
- Instruments include engine speed, engine hours, fuel level, water temperature.
- Audible and visual fault warning instrumentation system for alternator charge, coolant temperature, engine oil pressure, blocked air filter, transmission oil pressure and temperature and handbrake on.
- Taillight lights for main beam on, hazard warning on and direction indicators. A warning light test button is provided as a safety check.
- Luxurious cab trim is standard fitment.

WEIGHT

Operational weight with 610mm (24in) excavator bucket, General Purpose shovel, and full fuel:
7715kg (17008lb).

CAPACITIES

Hydraulic system (inc. tank)	127lts (28gal)
Fuel tank	103.5lts (23gal)
Engine coolant	15lb's (3.3gal)
Engine oil	10.75lts (2.3gal)
JCB Powershift Transmission Torque converter, oil cooler and gearbox	16lts (3.52gal)
Rear axle	23lts (5.06gal)
Front axle (4WD)	16lts (3.5gal)

STANDARD OPTIONAL EQUIPMENT

Turbocharged engine	Std
4 Speed Powershift gearbox	Std
3Dgpm hydraulic pump	Std
Lifting shackle	Std
610mm (24in) excavator bucket	Std
Road lights, direction indicators	Std
3 spool loader valve	Std
Loader arm safety strut	Std
Front and rear working lights	Std
Interior trim	Std
Suspension seat	Std
Return to dig	Std
Air filter pre-cleaner	Std
Refuelling pump	Std
Tinted glass	Std
Arm rests	Std
Sunvisor	Std
Radio speakers	Std
Seatbelt	Std
Rear window washer	Std
Rear demister	Std
Face level demister vents	Std
Tilt steel column	Std
In cab storage box	Std
Front mudguards	Std
Extradig dipper	Opt
6-in-1 shovel	Opt
Shovel mounted forks	Opt
Rear fog light	Opt
Number plate light	Opt
Beacon	Opt
Excavator Quickhitch	Opt
Ditch cleaning bucket	Opt
Fork mounted crane hook	Opt
Heavy duty battery	Opt
Street pads	Opt
Supplementary tool kit	Opt
Loader Quickhitch (mech. or hydraulic)	Opt
Exterior toolbox	Opt
Dipper mounted rockbreakers	Opt

Standard and optional equipment may vary according to region.

SETTING THE STANDARDS BY WHICH OTHERS ARE JUDGED.



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, tractors, crawler excavators, telescopic handlers, wheeled loaders, rough terrain fork lifts, articulated dump trucks and mini excavators.

By making constant and massive investments in the latest production technology, the JCB factory has become one 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.



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Illustrations shown may include optional equipment and accessories.

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