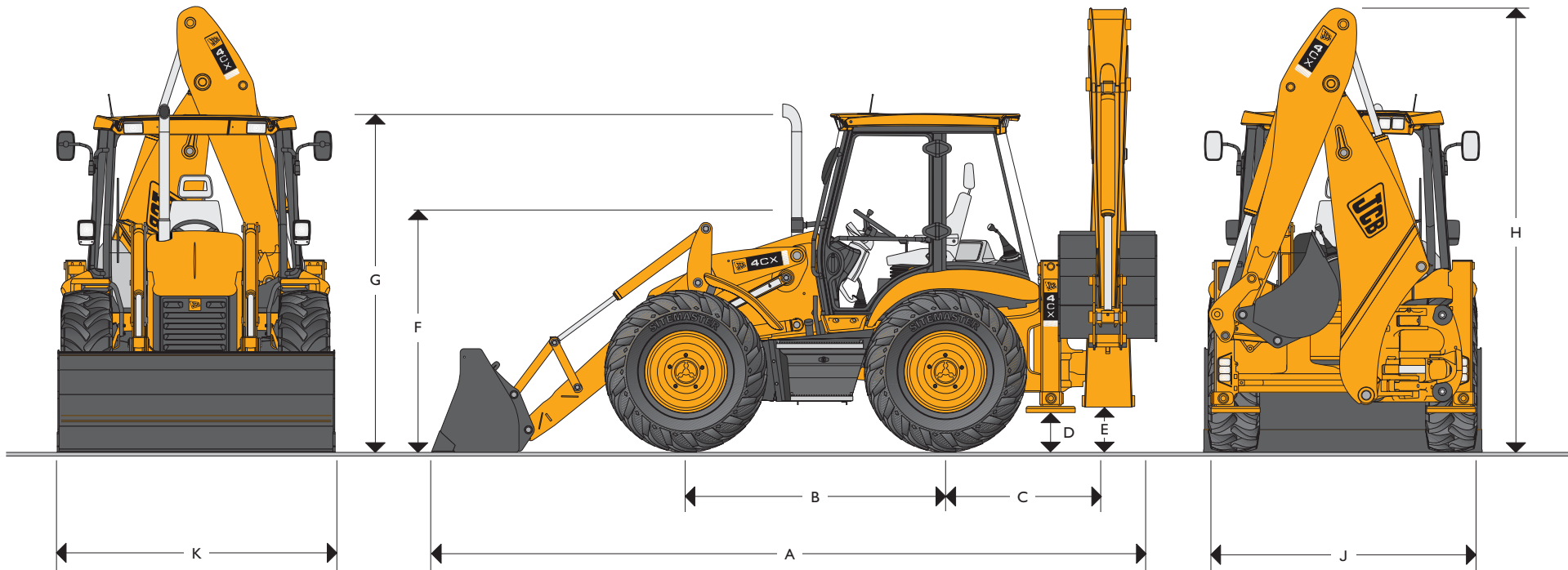




# JCB BACKHOE LOADER | 4CX



|                         |   |
|-------------------------|---|
| MAX. ENGINE POWER       | 74.2kW (100hp)                          |
| MAX. BACKHOE DIG DEPTH: | 4.67 metres (15ft 4in)                  |
| MAX. LOADER CAPACITY:   | 1.3m <sup>3</sup> (1.7yd <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                              | 4CX         |
|--|-------------|
|  | m (ft-in)   |
| A Total travel length                      | 5.91 (19-5) |
| B Axle centreline distance                 | 2.22 (7-3)  |
| C Slew centre to rear axle centre distance | 1.36 (4-6)  |
| D Stabiliser feet clearance                | 0.34 (1-1)  |
| E Kingpost clearance                       | 0.50 (1-8)  |

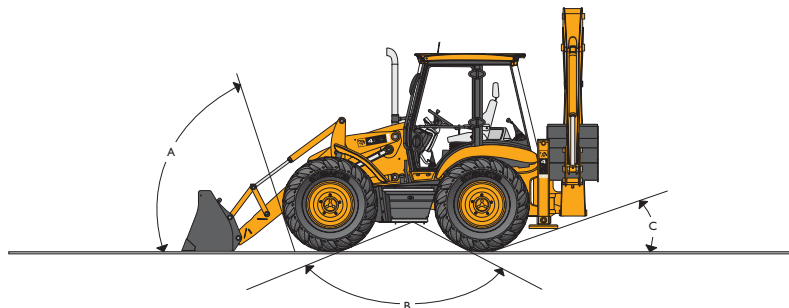
| Machine model                  | 4CX         |
|--------------------------------|-------------|
|                                | m (ft-in)   |
| F Steering wheel centre height | 1.88 (6-2)  |
| G Cab roof height              | 2.84 (9-4)  |
| H Total travel clearance       | 3.54 (11-7) |
| J Rear frame width             | 2.36 (7-9)  |
| K Shovel width                 | 2.33 (7-8)  |



# JCB BACKHOE LOADER | 4CX



## GROUND LINE ANGLES



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

## OPERATING WEIGHTS

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

| Machine model                         | 4CX          |
|---------------------------------------|--------------|
|                                       | kg (lb)      |
| Standard dipper and GP shovel         | 7950 (17500) |
| Extradig and 6-in-1 shovel with forks | 8660 (19050) |

## ENGINE

Four cylinder, direction injection diesel. Water pump, spin-on oil filter, fuel filter, water/sediment separator prefilter, dual element air cleaner with internal precleaner, cold start aid.

| Machine model                    | 4CX          |             |
|----------------------------------|--------------|-------------|
| Manufacturer                     | JCB          |             |
| Aspiration                       | Turbocharged |             |
| Displacement                     | 4.4 Ltr      |             |
| Rated engine RPM                 | 2200         |             |
| <b>Power ratings</b>             |              |             |
| Gross ISO 14396 and SAE J1995    | kW (HP)      | 74.2 (100)  |
| Net ISO 9249 and SAE J1349       | kW (HP)      | 72.8 (97.6) |
| <b>Maximum torque</b>            |              |             |
| Gross ISO/TR 14396 and SAE J1995 | Nm (lbf ft)  | 425 (313.5) |
| Net ISO/TR 9249 and SAE J1349    | Nm (lbf ft)  | 417 (307.6) |
| Max. torque RPM                  | 1300         |             |

## 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. Four equal size wheels with three steering modes – front wheel steering, four wheel steering and crab steer. Steer modes can be selected via the three-position rotary switch on the front dashboard.

| Machine model                         | 4CX                           |
|---------------------------------------|-------------------------------|
| Steering axles                        | Steer drive                   |
| Steering turns – lock to lock         | 2 <sup>3</sup> / <sub>4</sub> |
| <b>m (ft-in)</b>                      |                               |
| Kerb – kerb turning circle – unbraked | 9.1 (29-10)                   |
| Loader clearance circle – unbraked    | 10.7 (35-1)                   |
| Kerb – kerb turning circle – braked   | 8.0 (26-3)                    |
| Loader clearance circle – braked      | 9.5 (31-2)                    |

## 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 cartridge plus water/sediment separator prefilter.  |
| <b>Air cleaner</b>                | Dual, dry element type, with self cleaning internal air intake precleaner.  |
| <b>Oil filter and lubrication</b> | Full flow, spin-on type filter.   |
| <b>Cooling system</b>             | Hot climate specification, pressurised 14.5 psi (1.0 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.

|                             |   |
|-----------------------------|---|
| <b>Gauges</b>               | Tachometer, engine coolant temp, fuel level, hourmeter, clock.  |
| <b>Warning system</b>       | Audible and visual system. Engine oil, water in fuel, transmission oil temperature and pressure, park brake, 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>           | 95 amp standard.  |
| <b>Front working lights</b> | 2 twin beam fixed position.   |
| <b>Rear working lights</b>  | 4 adjustable.   |

## JCB TORQUE LOCK (Optional)

An industry exclusive, JCB Torque Lock enables an operator to dramatically reduce travel time and improve fuel efficiency during roading operations.

Torque Lock incorporates a clutch which, when engaged, enables a direct connection between the engine and gearbox. By "locking up" the torque converter slippage is eliminated. Torque Lock engages automatically in 4th gear (Powershift models) or "A" mode (Autoshift models).

Not available on Synchroshuttle models.



# JCB BACKHOE LOADER | 4CX



## 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. JCB optional auto powershift 6 speed transmission features automatic upshift and downshift between 4th, 5th and 6th gear controlled by machine travel speed and incorporates a kickdown pedal to select first gear. The operator may use the Autoshift in manual mode when operator control of shift points is desired. The JCB Powershift transmission allows fast gear changing without losing speed or momentum on gradients. The integral torque converter and electrically operated reversing shuttle help this backhoe loader produce fast cycle times for real wheeled loader performance. Low 1st and 2nd gear ratios provide excellent tractive effort for loading and sitestripping.

| Machine model          | 4CX                           | 4CX                           |
|------------------------|-------------------------------|-------------------------------|
| Manufacturer           | JCB                           | JCB                           |
| Type                   | Powershift                    | Automatic Powershift          |
| Torque converter       | 305mm (12")                   | 305mm (12")                   |
| Torque converter ratio | 2.54:1                        | 2.54:1                        |
| Torque Lock            | Option                        | Option                        |
| Gears forward/reverse  | 4/4                           | 6/4                           |
| Gear selection         | Powershift                    | Powershift                    |
| Shuttle control – F/R  | Power shuttle                 | Power shuttle                 |
| Travel speeds          | kph (mph)                     | kph (mph)                     |
| Tyres equipped         | 16.9x28 Goodyear Sure Grip    | 16.9x28 Goodyear Sure Grip    |
| Gear 1                 | 5.0 (3.1) F / 5.0 (3.1) R     | 4.9 (3.0) F / 6.2 (3.9) R     |
| Gear 2                 | 9.3 (5.8) F / 9.3 (5.8) R     | 8.1 (5.0) F / 8.4 (5.2) R     |
| Gear 3                 | 21.5 (13.4) F / 21.5 (13.4) R | 11.0 (6.8) F / 22.4 (13.9) R  |
| Gear 4                 | 38.1 (23.7) / 38.1 (23.7)     | 17.7 (11.0) F / 30.5 (19.0) R |
| Gear 5                 | –                             | 29.6 (18.4) F / –             |
| Gear 6                 | –                             | 38.1 (23.7) F / –             |

\* Speeds vary dependant on tyre selection.

## FRONT AXLE

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

| Machine model       | 4CX  |
|---------------------|--|
| Type                | JCB epicyclic hub reduction with torque proportional |
| Limited slip        | Option   |
| Axle ratings        | kg (lb)  |
| Static load rating  | 21000 (46296)  |
| Dynamic load rating | 7000 (15432)   |
| Oscillation angle   | 16°  |
| Steering ram        | 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       | 4CX  |
|---------------------|--|
| Type                | JCB epicyclic hub reduction with torque proportional |
| Limited slip        | Option   |
| Axle ratings        | kg (lb)  |
| Static load rating  | 21000 (46296)  |
| Dynamic load rating | 7000 (15432)   |

## 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 a 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.
- 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.
- 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 PRECISION CONTROL (Optional)

JCB Precision Control offers smooth, low effort and productive backhoe operation, while reducing operator fatigue. Excavator control joysticks are integrated into the seat, providing increased legroom, improved job visibility and hydraulic excavator ergonomics. A proportional switch is mounted in the joystick to operate JCB's Extradig. An optional joystick mounted switch is also available to operate auxiliary attachments. The low effort mechanical loader control incorporates an optional proportional switch to operate loader mounted attachments.

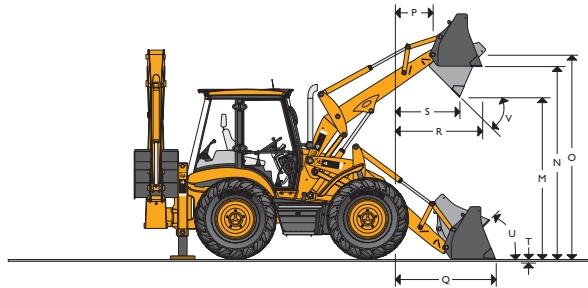
Best in class hydraulic modulation combined with the greatest digging performance, means that the JCB Precision Control is unmatched in any backhoe loader. This option is available on open centre system only.



# JCB BACKHOE LOADER | 4CX



## LOADER DIMENSIONS



## LOADER DIMENSIONS

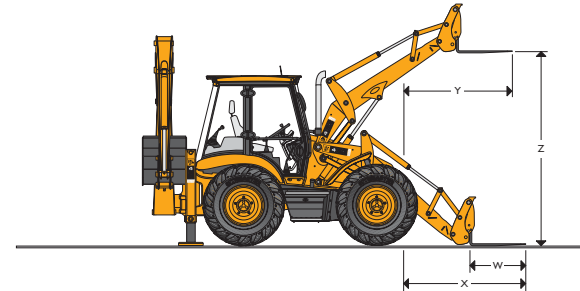
|   | GP shovel<br>m (ft-in) | 6-in-1 shovel<br>m (ft-in) |
|---|------------------------|----------------------------|
| <b>M</b> Dump height                            | 2.69 (8-10)            | 2.69 (8-10)                |
| <b>N</b> Load over height                       | 3.21 (10-6)            | 3.18 (10-5)                |
| <b>O</b> Pin height                             | 3.46 (11-4)            | 3.46 (11-4)                |
| <b>P</b> Pin forward reach                      | 0.41 (1-4)             | 0.41 (1-4)                 |
| <b>Q</b> Reach at ground (toe plate horizontal) | 1.42 (4-8)             | 1.39 (4-7)                 |
| <b>R</b> Max. reach at full height              | 1.21 (4-0)             | 1.17 (3-10)                |
| <b>S</b> Reach at full height fully dumped      | 0.82 (2-8)             | 0.76 (2-6)                 |
| <b>T</b> Dig depth                              | 0.14 (0-5)             | 0.18 (0-7)                 |
| <b>U</b> Roll back at ground                    | 45°                    | 45°                        |
| <b>V</b> Dump angle                             | 45°                    | 45°                        |
| Jaw opening width                               | —                      | 0.95 (3-1)                 |

## LOADER PERFORMANCE

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.

|                                   |           | 4CX          |              |
|-----------------------------------|-----------|--------------|--------------|
|                                   |           | G.P. Shovel  | 6-in-1       |
| Shovel breakout                   | kgf (lbf) | 6227 (13699) | 6590 (14498) |
| Loader arm breakout               | kgf (lbf) | 5936 (13059) | 5730 (12606) |
| Max. lift capacity to full height | kg (lb)   | 4638 (10203) | 4378 (9631)  |
| Clamping force                    | kgf (lbf) | —            | 2945 (6479)  |

## LOADER ATTACHMENTS



## LOADER ATTACHMENTS – Forklift Performance and Data

| Machine model                                    |         | m (ft-in)    |
|--|---------|--------------|
| Section width                                    |         | 0.08 (0-3/8) |
| <b>W</b> Fork length                             |         | 1.1 (3.7)    |
| <b>X</b> Reach at ground                         |         | 2.68 (8-9)   |
| <b>Y</b> Reach at full height                    |         | 2.30 (7-6)   |
| <b>Z</b> Full lift height                        |         | 2.90 (9-6)   |
| Minimum fork spacing                             |         | 0.2 (0-8)    |
| Maximum fork spacing                             |         | 2.17 (7-3)   |
| SWL at 500mm load centres – shovel mounted forks | kg (lb) | 1000 (2205)  |
| SWL at 500mm load centres – frame mounted forks  | kg (lb) | 2000 (4410)  |

## LOADER ATTACHMENTS – Direct Mount

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

| Width mm (ft-in)     | Capacity SAE                            |  |
|----------------------|---|--|
|                      | Rated m <sup>3</sup> (yd <sup>3</sup> ) | Struck m <sup>3</sup> (yd <sup>3</sup> ) |
| <b>G.P. shovel</b>   |   |  |
| 2235 (7-4)           | 1.0 (1.32)                              | 0.83 (1.09)                              |
| 2350 (7-8)           | 1.1 (1.44)                              | 0.91 (1.19)                              |
| 2350 (7-8)           | 1.3 (1.70)                              | 1.19 (1.56)                              |
| <b>6-in-1 Shovel</b> |   |  |
| 2235 (7-4)           | 1.0 (1.32)                              | 0.76 (1.00)                              |
| 2350 (7-8)           | 1.0 (1.32)                              | 0.76 (1.00)                              |
| 2350 (7-8)           | 1.2 (1.57)                              | 1.02 (1.33)                              |
| 2440 (8-0)           | 1.3 (1.70)                              | 1.19 (1.56)                              |



# JCB BACKHOE LOADER | 4CX



## 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.

- 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 integral park brake is a ball and ramp, oil immersed type located within the transmission 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. There are 5 friction brake discs having an outside diameter of 127mm (5 in). Frictional area per brake disc is 47.65 sq. cm (7.39 sq. in) giving a total frictional area of 476.5 sq. cm (73.9 sq. in).

## TYRES

16.9/14 x 24, 12PR Industrial  
 16.9 x 28, 10PR Industrial  
 16.9 x 28, 12PR Traction and Industrial  
 16.9 x 28, Radial Traction  
 440/80 x 28, Radial Industrial  
 15.5 x 25, Radial Industrial  
 17.5 x 25, 12PR Industrial

## JCB 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. The JCB Smooth Ride System is manually controlled, via a rocker switch on the instrument panel, for maximum benefit and user flexibility.

## JCB POWERSLIDE (Optional)

Exclusive to JCB, this option enables the excavator's sideshift carriage to be hydraulically powered across the rearframe by the operation of a pedal or joystick mounted proportional switch (Precision Control) 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. This option is available on open centre system only.

## HYDRAULIC SYSTEM

The standard 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.

The alternative Closed Centre system uses a single variable flow axial piston pump. This load sensing system matches flow to work demand improving productivity and efficiency.

Both systems incorporate:

- Ergonomically positioned levers allowing excellent control of the loader and backhoe.
- A full flow 10 micron filter ensures that oil stays free of contaminants.

| Pump flows at 2200rpm          | l/min (gal/min) |
|--------------------------------|-----------------|
| <b>Open centre system</b>      |                 |
| Main pump                      | 81 (17.8)       |
| Second pump                    | 72 (15.8)       |
| <b>Closed centre system</b>    |                 |
| Main pump                      | 163 (35.9)      |
| <b>System working pressure</b> |                 |
| Backhoe and loader             | 251 (3650)      |

## SERVICE CAPACITIES

| Machine model                       | 4CX        |
|-------------------------------------|------------|
|                                     | ltr (gal)  |
| Cooling system                      | 18.5 (4.1) |
| Fuel tank                           | 160 (35.2) |
| Engine oil with filter              | 15 (3.3)   |
| Powershift transmission with filter | 16 (3.5)   |
| Autoshift transmission 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 | 4CX



## BACKHOE BUCKETS – Standard Profile Bucket

JCB backhoe buckets are designed specifically for use on JCB machines with pin positions to maximise tearout, load retention and straight wall digging characteristics.

| 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 (2½)                               | 0.05 (1¾)                                | 102 (225)        | 3     |
| 400 (16) | 0.09 (3)                                | 0.07 (2½)                                | 109 (240)        | 3     |
| 457 (18) | 0.12 (4¼)                               | 0.09 (3)                                 | 116 (256)        | 3     |
| 610 (24) | 0.17 (6)                                | 0.13 (4½)                                | 140 (310)        | 4     |
| 800 (32) | 0.24 (8½)                               | 0.17 (6)                                 | 162 (355)        | 5     |
| 950 (37) | 0.30 (10½)                              | 0.21 (7¼)                                | 198 (435)        | 5     |

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

## BACKHOE BUCKETS – 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 (2½)                                | 102 (225)        | 3     |
| 457 (18)  | 0.16 (5½)                               | 0.13 (4½)                                | 122 (269)        | 3     |
| 610 (24)  | 0.23 (8)                                | 0.18 (6¼)                                | 142 (314)        | 4     |
| 800 (32)  | 0.30 (10½)                              | 0.24 (8½)                                | 163 (359)        | 5     |
| 950 (37)  | 0.38 (½)†                               | 0.30 (10½)                               | 183 (403)        | 5     |
| 1100 (43) | 0.48 (¾)†                               | 0.34 (12)                                | 203 (448)        | 6     |

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

## BACKHOE DIMENSIONS

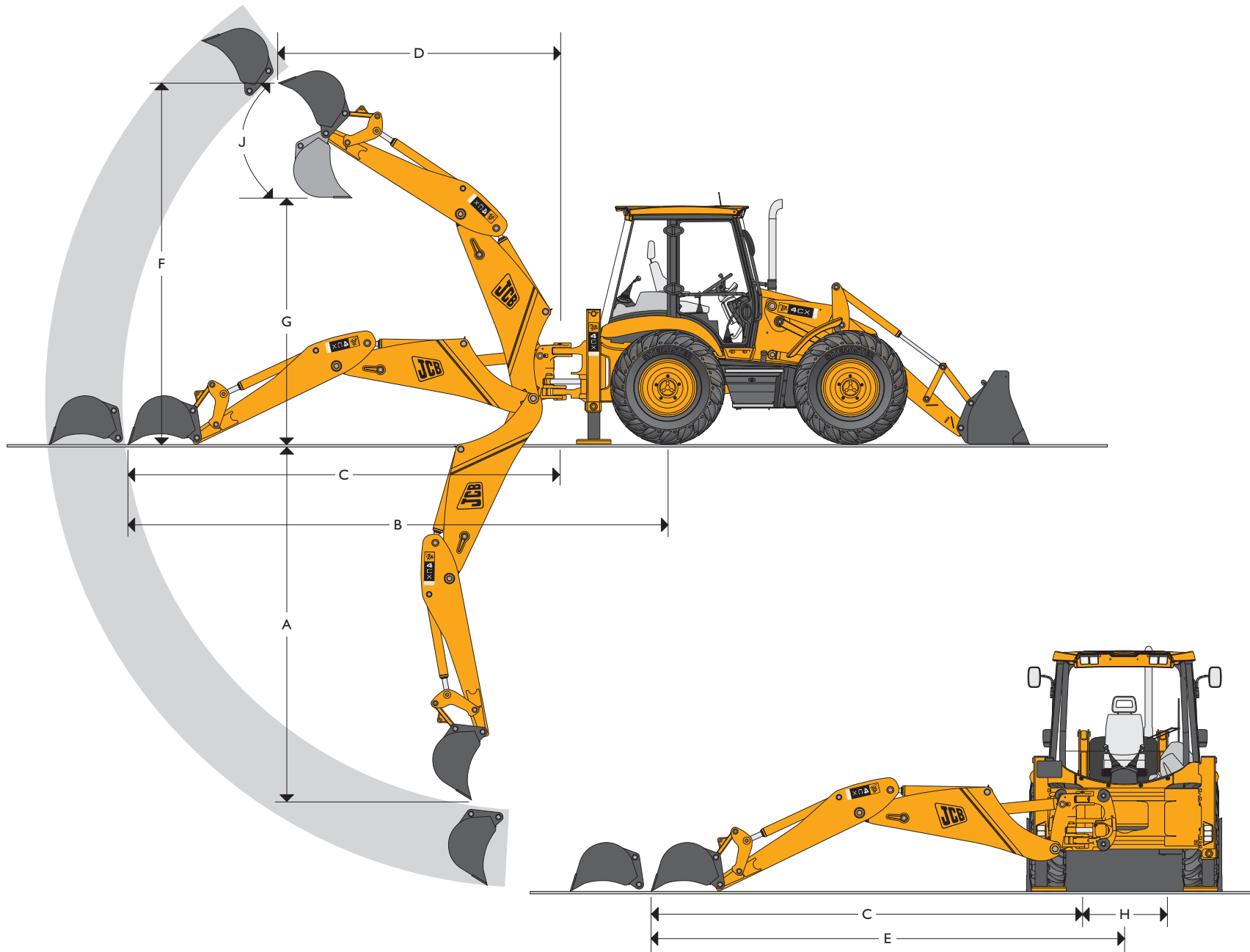
|   |     | Standard Dipper | Extradig     |
|---|-----|-----------------|--------------|
|   |     | m (ft-in)       | m (ft-in)    |
| A SAE max dig depth                         | Ext | –               | 5.53 (18-2)  |
|   | Ret | 4.32 (14-2)     | 4.32 (14-2)  |
| SAE 2ft flat bottom                         | Ext | –               | 5.50 (18-1)  |
|   | Ret | 4.29 (14-1)     | 4.29 (14-1)  |
| Maximum dig depth                           | Ext | –               | 5.88 (19-4)  |
|   | Ret | 4.67 (15-4)     | 4.67 (15-4)  |
| B Reach – ground level to rear wheel centre | Ext | –               | 7.88 (25-10) |
|   | Ret | 6.74 (22-1)     | 6.74 (22-1)  |
| C Reach – ground level to slew centre       | Ext | –               | 6.54 (21-5)  |
|   | Ret | 5.40 (17-9)     | 5.40 (17-9)  |
| D Reach – at full height to slew centre     | Ext | –               | 3.75 (12-4)  |
|   | Ret | 2.82 (9-3)      | 2.82 (9-3)   |
| E Side reach – to centre line of machine    | Ext | –               | 7.16 (23-6)  |
|   | Ret | 6.02 (19-9)     | 6.02 (19-9)  |
| F SAE operating height                      | Ext | –               | 6.26 (20-7)  |
|   | Ret | 5.45 (17-11)    | 5.45 (17-11) |
| G Maximum loadover height                   | Ext | –               | 4.73 (15-6)  |
|   | Ret | 3.84 (12-7)     | 3.84 (12-7)  |
| SAE loadover height                         | Ext | –               | 4.28 (14-1)  |
|   | Ret | 3.39 (11-1)     | 3.39 (11-1)  |
| H Total kingpost travel                     |     | 1.16 (3-10)     | 1.16 (3-10)  |
| J Bucket rotation                           |     | 201°            | 201°         |

## BACKHOE PERFORMANCE

|  |       | Standard Dipper | Extradig     |
|--|-------|-----------------|--------------|
|  |       | kgf (lbf)       | kgf (lbf)    |
| Bucket tearout                                   | Speed | 5431 (11948)    | 5385 (11847) |
|  | Power | 6324 (13912)    | 6228 (13701) |
| Dipper tearout                                   | Ext   | –               | 2729 (6004)  |
|  | Ret   | 3893 (8564)     | 3903 (8587)  |
| Max. lift capacity of bucket pivot at full reach | Ext   | –               | 1082 (2380)  |
|  | Ret   | 2046 (4501)     | 1885 (4147)  |



# JCB BACKHOE LOADER | 4CX





## 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.

