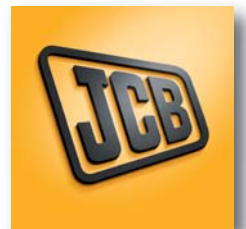


JCB | HIGH MOBILITY ENGINEER EXCAVATOR - TYPE I



# FAST FACTS

## JCB Military HMEE - Type I

- 60 mph Top Speed
- 24V electrics
- Low profile cab suitable for drive-on C130 transportation without modification
- Blackout facility for night operation
- Integral lifting, recovery and tie down points
- Wide array of attachments
- Side shift fork carriage
- Full suspension for high speed and cross-country travel
- ABS braking system
- Large cab with seating for operator and passenger, both with 3 point seat belts
- Wheels and tires with runflat capability

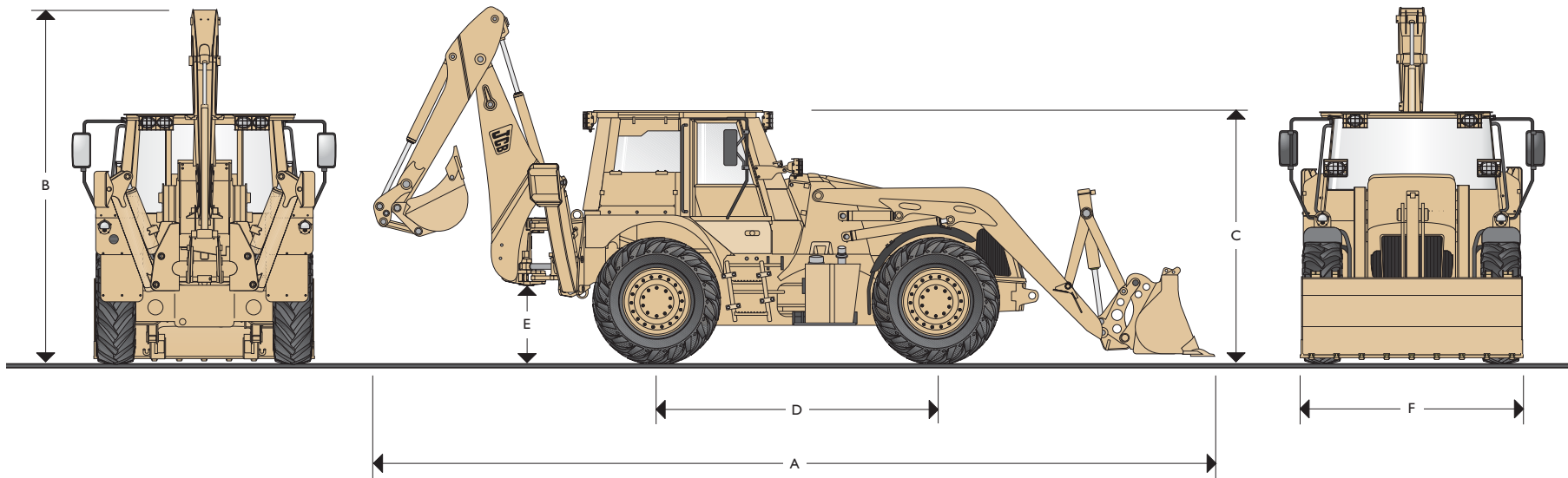




# JCB BACKHOE LOADER | HMEE - TYPE I



MAX. ENGINE POWER: 200hp (149kW)  
 MAX. BACKHOE DIG DEPTH: 12ft 11in (3.94 meters)  
 MAX. LOADER CAPACITY: 1.3 cu yd (1.0m<sup>3</sup>)



## PERFORMANCE DIMENSIONS

| Machine model                            | HMEE<br>ft-in (m) |
|--|-------------------|
| A Overall length (with full ancillaries) | 30-5 (9.27)       |
| B Overall height                         | 12-8 (3.86)       |
| C Height to top of cab                   | 8-9 (2.67)        |

| Machine model                 | HMEE<br>ft-in (m) |
|-------------------------------|-------------------|
| D Wheelbase                   | 10-0 (3.06)       |
| E Ground clearance - kingpost | 2-8 (0.82)        |
| F Width - shovel              | 8-0 (2.44)        |

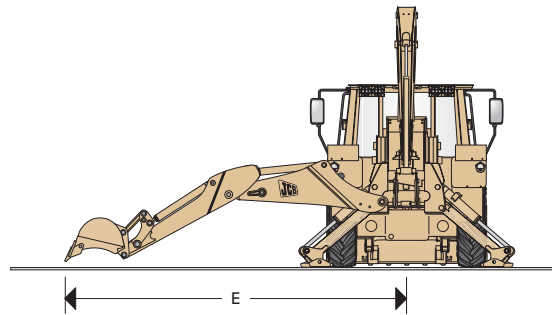
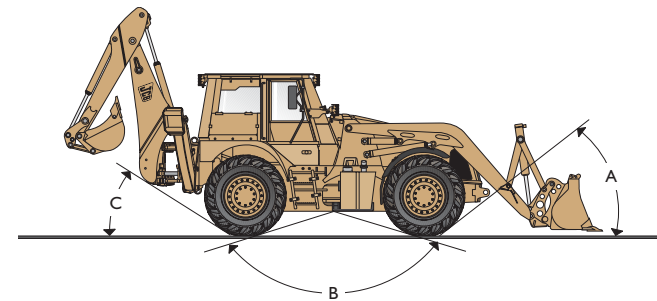
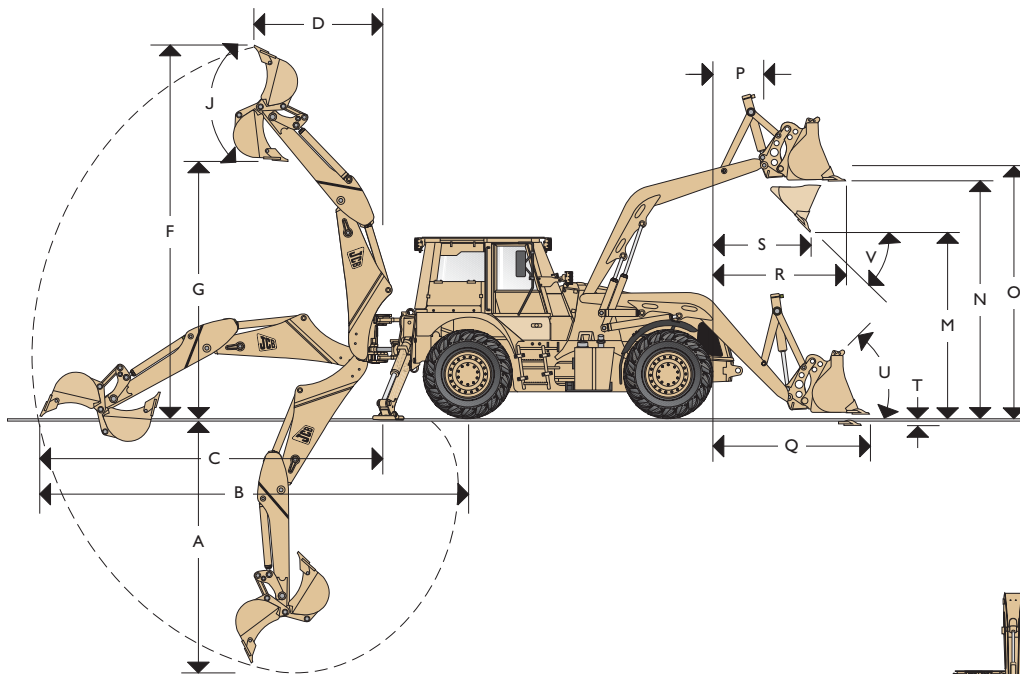


# JCB BACKHOE LOADER | HMEE - TYPE I



## GROUND LINE ANGLES

- A Approach angle  $36.5^{\circ}$
- B Interface angle, travel mode  $148^{\circ}$
- C Departure angle  $31.5^{\circ}$





# JCB BACKHOE LOADER | HMEE - TYPE I



## BACKHOE DIMENSIONS

|  | Std Dipper   |
|--|--------------|
|  | ft-in (m)    |
| <b>A</b> SAE max dig depth                         | 12-11 (3.94) |
| SAE 2ft flat bottom                                | 12-9 (3.89)  |
| Maximum dig depth                                  | 12-11 (3.94) |
| <b>B</b> Reach – ground level to rear wheel center | 21-5 (6.54)  |
| <b>C</b> Reach – ground level to slew center       | 17-3 (5.25)  |
| <b>D</b> Reach – at full height to slew center     | 9-4 (2.85)   |
| <b>E</b> Side reach – to center line of machine    | 17-3 (5.25)  |
| <b>F</b> SAE maximum operating height              | 18-6 (5.63)  |
| <b>G</b> Maximum loadover height                   | 12-8 (3.86)  |
| <b>J</b> Bucket rotation                           | degrees 204° |

## BACKHOE PERFORMANCE

|                                | Std Dipper         |
|--------------------------------|--------------------|
| Bucket tearout SAE J1179 speed | 9,650lbs (4378kg)  |
| Power                          | 11,311lb (5131kgf) |
| Dipper tearout SAE J1179       | 6,975lb (3164kgf)  |
| Lift capacity over end SAE J31 | 2,860lb (1300kgf)  |

## LOADER PERFORMANCE

| Shovel Type – 1.3 cu. yd. 4 in I Multi-Purpose on Quick Hitch (ISO 7546) |              |
|--|--------------|
| Shovel breakout lbf (kgf) SAE J732                                       | 9,000 (4082) |
| Loader arm breakout lbf (kgf) SAE J732                                   | 5,070 (2300) |
| Lift capacity to full height lbf (kg) SAE J732                           | 5,070 (2300) |

## BACKHOE ATTACHMENTS

| STANDARD PROFILE BUCKET |   | CAPACITY SAE J/ISO 74511                 |                 | WEIGHT |  |
|-------------------------|---|--|-----------------|--------|--|
| WIDTH* in (mm)          | RATED ft <sup>3</sup> (m <sup>3</sup> ) | STRUCK ft <sup>3</sup> (m <sup>3</sup> ) | + TEETH lb (kg) | TEETH  |  |
| 24 (610)                | 6 (0.17)                                | 4.5 (0.13)                               | 310 (140)       | 4      |  |

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

## LOADER DIMENSIONS

| Shovel type – 1.3 cu.yd. 4 in I Multi-Purpose on Quick Hitch |         | ft-in (m)    |
|--|---------|--------------|
| <b>M</b> Dump height SAE J732                                |         | 9-7 (2.92)   |
| <b>N</b> Loadover height                                     |         | 12-1 (3.70)  |
| <b>O</b> Pin height  |         | 12-11 (3.96) |
| <b>P</b> Pin forward reach                                   |         | 2-5 (0.75)   |
| <b>Q</b> Reach at ground (Toe plate horizontal)              |         | 7-10 (2.39)  |
| <b>R</b> Max. reach at full height                           |         | 6-5 (1.96)   |
| <b>S</b> Reach at full height fully dumped                   |         | 4-8 (1.43)   |
| <b>T</b> Dig depth   |         | 0-5 (0.14)   |
| <b>U</b> Rollback at ground                                  | degrees | 48°          |
| <b>V</b> Dump angle  | degrees | 45°          |

## LOADER ATTACHMENTS

| 4 IN I MULTI PURPOSE – CAPACITY SAE |   |  |
|-------------------------------------|---|--|
| WIDTH ft-in (m)                     | RATED yd <sup>3</sup> (m <sup>3</sup> ) | STRUCK yd <sup>3</sup> (m <sup>3</sup> ) |
| 8-0 (2.44)                          | 1.32 (1.00)                             | 1.06 (0.81)                              |



# JCB BACKHOE LOADER | HMEE - TYPE I



## ENGINE

Conforming to EPA 02 on highway emissions limits, the full authority electronic engine delivers good fuel consumption, the ability to use pump diesel or aviation turbine fuels such as JP8 or F34 and optimized torque and power curves. Two stage dry type air filter has primary and safety elements.

|                         |                                      |
|-------------------------|--------------------------------------|
| Make                    | Cummins                              |
| Model                   | QSB 6.7                              |
| Displacement/Lt         | 6.7                                  |
| No. cylinders           | 6                                    |
| Bore size/mm            | 102                                  |
| Stroke/mm               | 120                                  |
| Aspiration              | Turbocharged with charge air cooling |
| Air filter              | Dual element, dry filter             |
| Cold start              | Inlet grid heater                    |
| <b>Power rating to:</b> | <b>ISO/TR 14396 &amp; SAE J1995</b>  |
| Gross power @ 2300 rpm  | 200hp (149kW)                        |
| Gross torque @ 1600 rpm | 520 lbf.ft (705Nm)                   |

## TRAVEL SPEEDS

On standard tires

| Gear        | mph (km/h)  |
|-------------|-------------|
| 1st forward | 7.6 (12.2)  |
| 2nd forward | 11.7 (18.8) |
| 3rd forward | 18.0 (29.0) |
| 4th forward | 27.9 (44.9) |
| 5th forward | 41.8 (62.3) |
| 6th forward | 60 (88.5)   |
| 1st reverse | 8.0 (12.8)  |
| 2nd reverse | 19.0 (30.6) |

## ELECTRICS 24 VOLT

|                       |                       |
|-----------------------|-----------------------|
| Starting circuit      | 24 Volt               |
| Standard alternator   | 200 Amp 28V brushless |
| No. front work lights | 2 adjustable          |
| No. rear work lights  | 4 adjustable          |

## MULTI MODE SUSPENSION SYSTEM

Full suspension with optimized spring rates and damping gives increased mobility and operator comfort and predictable handling on highway.

The suspension system allows the operator to select one of four suspension modes –

- Travel mode – full suspension for travel on and off highway
- Transport / Maintenance mode – lowers suspension for tie-down, storage or workshop
- Loader mode – front axle locked for maximum stability, rear axle oscillates
- Backhoe mode – rear axle locked, front axle oscillates

## TRANSMISSION

The ZF Ergopower transmission allows full power gear shifts without loss of speed or momentum. Gear shifts can be under operator control or fully automatic. Electrically operated reversing shuttle enables fast loading cycle times. Torque converter and low first and second gear ratios give excellent tractive effort for loading and sitestripping. Transmission controlled torque converter lock-up gives improved fuel economy and on-highway performance.

- Easy to use column mounted electric switch controls both machine direction and gear selection
- Direction changes are modulated from forward to reverse with detented lever gates for safety. The light electric twist grip provides low effort shifting between gears
- Torque converter (13.4") stall ratio: 1.79:1
- Electrical selection of 4WD

## AXLES

Dedicated JCB heavy duty steer-drive axles front and rear. Both axles incorporate JCB soft-engage differentials enabling on-the-move engagement of differential locks.

## WHEELS AND TIRES

Bridgestone 445/80 R25 tires on steel 2 piece rims. Hutchinson VFI runflat inserts fitted to preserve mobility in the event of tire burst or deflation.

## BRAKES

Outboard dry discs with twin callipers front and single callipers rear provide outstanding retardation and endurance.

- ABS for controlled stopping in difficult conditions
- Air over hydraulic operation for low pedal efforts
- Service brake disc diameter 18.1 in (460mm)
- Parking brake provided by two spring applied, hydraulically released callipers operating on discs mounted on the transmission output shafts. Capable of holding vehicle on 1:2.5 (21.8 degrees) grade. Park brake disc diameter 14.9 in (380mm).



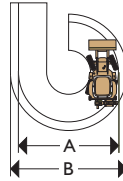
# JCB BACKHOE LOADER | HMEE - TYPE I



## STEERING

Three operator selectable steering modes available.

- 2WS for on-highway travel. Power assisted mechanical front steering and locked rear steering
- 4WS for loading duties and confined sites. Power assisted mechanical front steering and synchronised hydrostatic rear steering
- Crab steer for parallel drive when digging close to walls and other obstacles. Power assisted mechanical front steering and synchronized hydrostatic rear steering



|                  | 4WS             | 2WS             |
|------------------|-----------------|-----------------|
| A Min. curb-curb | 34'6" (10.38m)  | 60'4" (18.40m)  |
| B Min. Wall-wall | 42'11" (13.10m) | 65'11" (20.10m) |

(Depending on tyre size, ground condition and front ancillaries etc.)

## CAB

The cab is designed to allow machine drive-on access to C130 transport without modification. ROPS and FOPS certified with seating for 2 people approved to ISO 3471 and 3449 (SAE J1040 and J231) for maximum operator protection.

- Fully adjustable operator's seat with ergonomically positioned controls to minimize operator fatigue.
- Fixed passenger seat.
- 3 point inertia reel seat belts for both seats meeting SAE J386 and FMVSS 210 and 207
- Cab provides two door access. Standard features include 3 speed heating and air conditioning blowers, front and rear screen wash/wipers, front and rear horn, exterior mirrors, and sliding rear glass
- The main instrument panel is positioned to the right-hand side for ease of viewing from either the loading or excavating position. The main panel carries full instrumentation for vehicle systems and audio/visual warning of system failure.
- Warning lights for key systems are repeated on a panel in front of the steering wheel
- SAE J1939 CANBUS enables diagnostic access to main vehicle systems

## HYDRAULICS

The hydraulic system is comprised of 2 fixed displacement gear pump sets and one electrically operated emergency pump feeding the open center loader and backhoe control valves. Hydraulic integrated circuit manifolds control suspension, steering, parking brake, transmission services, and cooling fan drive.

The system incorporates:-

- Gear pumps for high reliability, low noise operation of main hydraulics
- Electrically driven emergency pump allowing limited operation of main hydraulic functions in the event of engine failure
- Integrated hydraulic handtool circuit to HTMA type 2 with 50 foot hose reel
- Full flow 10 micron filter to ensure that oil stays free of contaminants
- Auxiliary hydraulic connections on loader and backhoe for optional attachments

## PUMP FLOWS

### Open Center System

|                   |   |
|-------------------|---|
| Main pump 1:      | 26.4 gal/min (100ltr/min) at 2300 rpm rated engine speed. |
| Auxiliary pump 2: | 18.5 gal/min (70ltr/min) at 2300 rpm rated engine speed.  |
| Emergency pump 3: | 3 gal/min (12ltr/min).                                    |



## CAPACITIES

|                                      |                     |
|--------------------------------------|---------------------|
| Hydraulic system (inc. tank)         | 41.5 gal (157 ltrs) |
| Fuel tank                            | 60.7 gal (230 ltrs) |
| Engine coolant                       | 9.8 gal (37.1 ltrs) |
| Engine oil (inc. filter)             | 3.9 gal (15.0 ltrs) |
| Axle differential casing (each axle) | 4.8 gal (18 ltrs)   |
| Axle hubs (each axle)                | 0.8 gal (3.0 ltrs)  |
| Transmission (inc. filter)           | 7.9 gal (30.0 ltrs) |

## WEIGHT

Operational weight with one operator, 1.3 cu. yd. 4 in 1 Multi-Purpose shovel, 24" standard profile backhoe bucket, full fuel load, no stowage = 26,283lb (11,922kg).

## STANDARD EQUIPMENT

Tinted glass, Front sunvisors, Front and rear wipers and washers, Cab heater with front and rear demist, Air conditioning, Operator and passenger seat, 3 point inertia reel seat belts, Reverse alarm, External mirrors, Fire extinguisher, Road lights, Front and rear work lights with light guards, Battery isolator, Inter-vehicle starting socket, Support and maintenance struts for loader and backhoe, Hydraulic self levelling for loader end, Loader quick hitch with 1.3 cu. yd. GP shovel with teeth, 24" standard profile excavator bucket with teeth, Tire inflation supply, Spare wheel, Hydraulic handtool supply and 50ft hose reel, Lighting blackout system.

## OPTIONAL EQUIPMENT

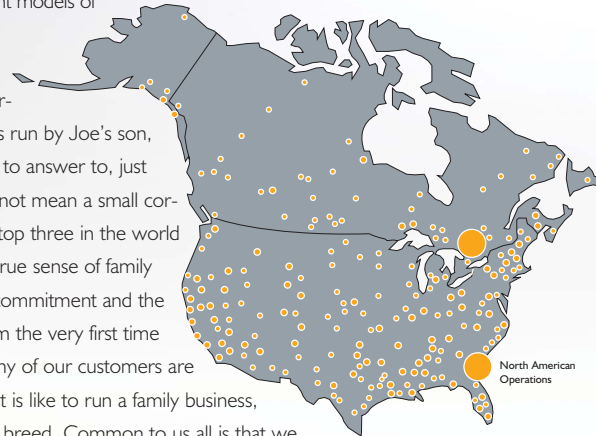
Range of shovels, Bolt on cutting edges for shovels, Lifting shackle or hook for backhoe, Excavator quick hitch, Wide range of excavator buckets including ditching and grading buckets, Excavator mounted hydraulic hammer, Biodegradable hydraulic fluid, External equipment stowage box, Quick hitch fork frame with sideshift and rotate, Auger, Breaker, Compactor/tamper, Post driver, Rock/ripper bucket, Sand bagger, Snow plow, Sweeper.

# JCB | Helping you Get the Job Done!



In 1945, Joseph Cyril Bamford (Mr. JCB) launched the construction and agricultural equipment manufacturing company that bears his initials. He began his business in a garage that measured 12 feet by 15 feet. The worldwide growth of the Backhoe Loader is due to Joe's pioneering work on perfecting this machine in those early days. In just 60 years since Joe founded JCB, the company has grown to employ over 8,000 people and produce over 270 different models of machinery on 4 continents.

JCB is a true family owned and operated business. Today, the company is run by Joe's son, Anthony Bamford. No stock market to answer to, just our customers. Family owned does not mean a small corporation. In fact, we are one of the top three in the world in construction equipment. It is the true sense of family that unites us – the dedication, the commitment and the loyalty that we hope is apparent from the very first time you meet a JCB representative. Many of our customers are family businesses. They know what it is like to run a family business, as they are unique and of a different breed. Common to us all is that we treat customers as people, not numbers. We react quickly to the customers' needs.



Of course, it is no use producing unique products if they do not meet the customers' needs. In this business, machines need the right back-up. Our World Wide Parts Center delivers parts 24/7. Our North American operation has two facilities – one at HQ in Savannah, and one in Canada and our dealer network is spread throughout the country to give you the service you deserve. Our aim is to provide the best customer support in the industry.

JCB machines are known for their style and quality. We have won many awards for quality all over the world. It is our attention to detail, the pride in our work, the desire to be different, the dedication to push ourselves to do better and never being content that drives us forward.

We do not want to be the biggest company in the world as there are already too many faceless corporations. We do however want to be the best. When a customer buys a JCB, we hope they feel a part of our extended family. We will do everything in our power to make this choice the right one for them. To quote Joe Bamford, "the customer pays our wages". At JCB, we never forget this. Joe also believed that success came to those who worked hard and had a sense of urgency. A day never went by without hearing Joe say, "Time is Money", reminding us that this is as true for our customers as it is for JCB. Our customer buys a JCB machine to get the job done.

**JCB—Helping You Get the Job Done!®**

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