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BE FIRST
JCB HYDRADIG

BE FIRST

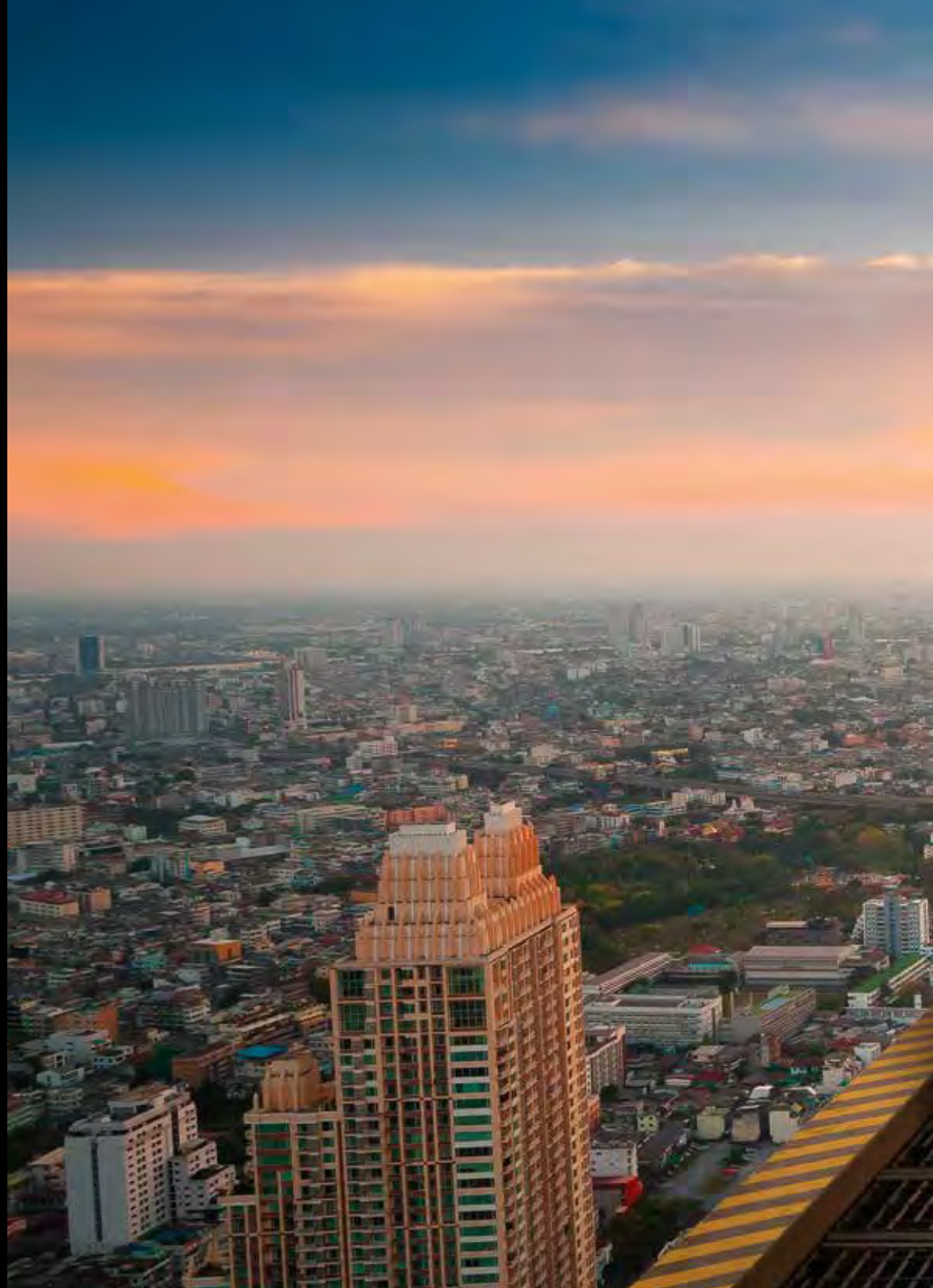
The vision from the outset of the project was to design and engineer the most innovative solution in response to five key challenges facing customers in today's construction sector. The machine had to be first for visibility, stability, manoeuvrability, mobility and serviceability. The JCB Hydradig 110W really does have innovation running right through the heart of it. In fact the Hydradig will transform the industry and I am certain you will quickly appreciate its benefits.

LORD BAMFORD, CHAIRMAN, JCB


JCB HYDRADIG
JCB
110W

FIRST FOR
VISIBILITY

In today's world where space is at a premium, compact dimensions and all-round visibility have become increasingly important. The JCB Hydradig 110W lets you enjoy total all-round visibility with the ability to see all four wheels plus a 1m perimeter around the machine at ground level. This makes it first for easier and safer operating in tight, crowded worksites.

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The Vision.

1 Operator can see within 1m of machine footprint at ground level and all four wheels of the machine can be seen from operator seat.

2 With the 81kW T4i JCB EcoMAX engine and other major components now housed in the chassis, the counterweight has been radically reduced making the tailswing just 120mm which helps deliver down to ground level visibility.

3 Operator can view stabilisers, dozer and trailer hitch from inside the cab without any requirement to slew the machine.

4 Low-level glass provides unobstructed visibility.

5 Optional high powered LED work lights to boom, front, rear and side gives you daylight working conditions at night. Halogens are standard.

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FIRST FOR
STABILITY

On urban worksites, safety is rapidly becoming the number one priority. The JCB Hydradig 110W gives best-in-class over the side stability, twinned with minimal tailswing. Having the engine and tank mounted on the chassis also provides unparalleled stability on the road for greater comfort and confidence. This makes it first for stable working.


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BEST-IN-CLASS

Best-in-class over the side stability when digging or lifting/slinging, compared to conventional tailswing competitors. All achieved with a minimal tailswing machine.

Ultimate stability.

1 Engine and double skinned tanks are mounted on an all steel chassis which creates a lowered centre of gravity, ideal for stability on site and whilst roading.

2 Lower centre of gravity provides extra operator confidence and productivity when lifting and carrying materials around site.

3 Conventional tailswing stability achieved with minimal tailswing of just 120mm is a breakthrough in design, engineering and manufacturing capability.

50/50 weight distribution between the axles significantly reduces nod and pitch whilst roading.

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FIRST FOR
MOBILITY

In a world where time is money, a top speed of 40kph and stepless transmission from a T4i 81kW EcoMAX engine lets you travel to and between sites quicker and in comfort. A factory fit trailer installation also lets you transport all your attachments and site equipment making the JCB Hydradig 110W first for getting to work.


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Comfortable roading.

1 A single speed, hydrostatic transmission allows you to road to site quickly eliminating the need to hire or purchase a lorry for transport.

2 Optional proven JCB Smooth Ride System dampens the dig end over uneven ground, creating a smoother ride and reducing the risk of spilling a load.

3 3 mobility modes allow the operator to set Hydradig for any task:

Choose 'highway mode' to isolate the upper structure and dig end for travelling at up to 40kp/h. Set throttle level with 'travel speed lock'.

Choose 'site mode' to limit the machine to 20kp/h, with all hydraulic services active.

Choose 'creep mode', with a speed limiter for the most precise jobs.

4 A trailer hitch with a 3.5T towing capacity and JCB approved warranty allows you to take all your attachments to site.

AUTO-IDLE

Auto-idle as standard reduces revs when the machine is idling, saving fuel.


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FIRST FOR
MANOEUVRABILITY

In even the most confined urban sites, 4-wheel steer, 2-wheel steer and crab steer as standard make operating easy, allowing you to work in tighter confines safer than ever before. A best-in-class turning circle makes the JCB Hydradig 110W first for working in today's urban world.


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110W

Great in a tight space.

1 3 steer modes as standard with 4-wheel steer, 2-wheel steer and crab steer lets you manoeuvre on site in total confidence.

2 A Kingpost allows you to dig parallel to a wall increasing versatility, particularly in tight urban environments.

3 Reduced front swing and minimal tailswing of just 120mm for working closer to walls without compromise to stability.

4 +/- 8 degrees of axle oscillation ensures the Hydradig can manoeuver over the roughest terrains.

5 Greater in-cab visibility means a more safely manoeuvrable excavator.

TURNING CIRCLE

An under 4m turning radius thanks to 4-wheel steer lets you work comfortably within a single carriageway.

REVERSE STEER

Reverse steer option lets you change the back of the machine to the front, when working in a single lane or where the machine can't be turned around manually.

FIRST FOR
SERVICEABILITY

In a more demanding world where productivity is king, easy and quick daily checks are a must. With all service points easily accessible from ground level; 500 hour greasing on all dig end, dozer and stabiliser pivot points, and a best-in-class SAE service index rating, we've designed the JCB Hydradig 110W to be first for easy maintenance.


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SERVICE COSTS

The JCB Hydradig 110W is powered by a 81kW T4i JCB EcoMAX engine that requires no after treatment keeping servicing costs and downtime to a minimum.

QUALITY

Using proven reliable JCB components we have ensured the JCB Hydradig 110W spends as much time as possible earning you money.

Simple maintenance.

1 Ground level access to all daily checks and fuel filler for quick and safe servicing without the need to climb onto upper structure.

2 500 hour greasing on all dig end, dozer and stabiliser grease points for maximum uptime.

500, 1000 and 1500 hour oil and filter service parts package included as standard.

A LiveLink 5 year contract as standard enabling you to monitor utilisation of your investment, fuel consumption and machine location.

A class-leading SAE rating is 33% better than closest competitor.

FIRST FOR
COMFORT

In a cramped world with restricted operating conditions, the new JCB CommandPlus cab with a large glass area and Command controls make it easier and safer to work. Designed with making the operator more productive, the JCB Hydradig 110W has succeeded in being first for cab ergonomics.

CommandPlus cab.

Delivering true CommandPlus standards, the JCB CommandPlus cab is the result of exhaustive customer feedback and huge investment. It is now without doubt, the ultimate in operator comfort with superb ergonomics, unrivalled visibility and a commanding driving position.

Tactile rotary controller provides precise intuitive control for the all new 7" colour display.

A heater is standard with optional climate control.

Optional seatbelt warning beacon available to meet your job site commitments.

A JCB EcoMAX engine mounted in chassis, creates a lower centre of gravity providing greater roading comfort and operator confidence.

NOISE LEVELS

With engine now mounted directly to the chassis, noise and vibration have been moved away from the operator, increasing comfort and reducing fatigue over long shifts.

FIRST FOR
VERSATILITY

In a world where one machine is expected to do the work of many, having the right attachments and more importantly the ability to utilise them is crucial. The JCB Hydradig has all the pipework, circuits and towing ability to give you the ultimate in adaptability making it first for versatility.

Highly versatile.

1 All genuine JCB attachments are pre-loaded into attachments menu interface with just 3 clicks to set up. Additional attachments can be manually set up and named.

2 Add a Clevis or Rockinger hitch to utilise the up to 3.5t towing capabilities. Vital when transporting extra attachments to the jobsite.

A parallel dozer is available with a large flat ground engaging area to reduce damage to hard standing. A radial option is also available.

3 The closed loop hydrostatic transmission features separate pumps for traction and boom power, making it easy to multifunction.

A handheld tool circuit is available to provide even greater versatility. It lets you control a variety of hand tools needed on site such as grinders, pumps, breakers etc).


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BOOM OPTIONS

Both Monoboom and TAB can be fitted with a 1.65, 2.00 or 2.25 meter dipper.

ADJUSTABLE FLOW

Bi-directional pipework lines as standard with two additional lo-flow circuits available as options to power a variety of attachments. All feature adjustable flow rates.

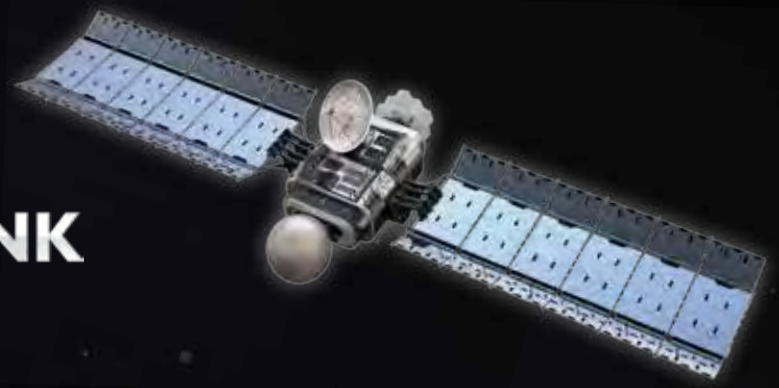
MORE VERSATILITY

Identical bucket pin geometry as 3CX and 85/86 mini excavator allowing you to utilise even more attachments.

FIRST FOR SUPPORT

In a world of tough business decisions where the customer rightfully expects the very best in machine back up and a complete package of value added solutions, JCB delivers. Whatever you need and wherever you are, JCB's worldwide customer support is truly first class.

LIVELINK



Machine efficiency.

1 By providing information like idle time monitoring and fuel consumption, JCB LiveLink saves you money and improves productivity.

Machine reliability.

2 Accurate hours monitoring and service alerts improve maintenance planning and help rental companies with accurate charging. Technical alerts and maintenance history records help you manage your machines.

Machine monitoring.

3 Keep track of what your machine's been doing throughout the day with regular performance reports accessed via the LiveLink website.

Machine security.

4 LiveLink's real time geo-fencing alerts tell you when machines move out of predetermined zones. Curfew alerts inform you of unauthorised usage. JCB have a history of working with the police to recover stolen machines and tackle fuel theft.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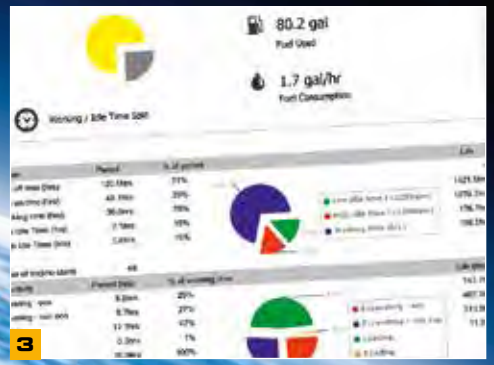

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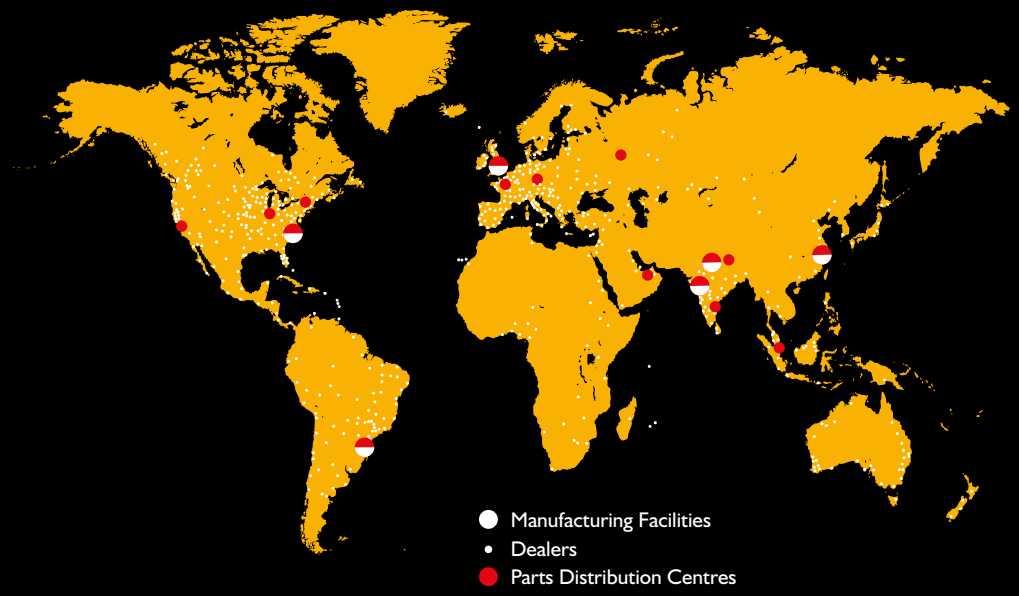

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5 Our Technical Support Service provides instant access to factory expertise, day or night, while our Finance and Insurance teams are always on hand to provide fast, flexible, competitive quotes.

6 The global network of JCB Parts Centres is another model of efficiency; with 16 regional bases, we can deliver around 95% of all parts anywhere in the world within 24 hours. Our genuine JCB parts are designed to work in perfect harmony with your machine for optimum performance and productivity.

7 JCB Assetcare offers comprehensive extended warranties and service agreements, as well as service-only or repair and maintenance contracts. Irrespective of what you opt for, our maintenance teams around the world charge competitive labour rates, and offer non-obligation quotations as well as fast, efficient insurance repair work.

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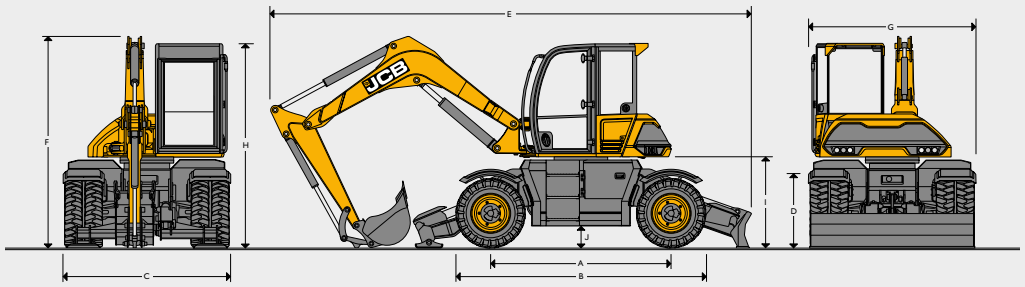
STATIC DIMENSIONS

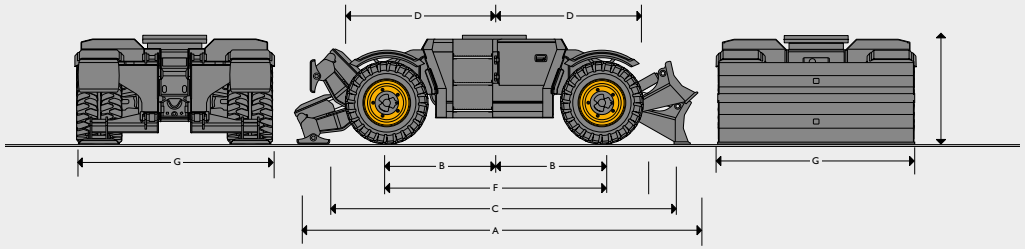


A	Wheelbase	mm		2650	
B	Length over tyres	mm		3689	
C	Width over tyres	mm		2420	
D	Height over tyres	mm		1016	
G	Transport width	mm		2440	
H	Height over cab	mm		2988	
I	Clearance under counterweight	mm		1319	
J	Ground clearance	mm		298	
				TAB	
Dipper lengths			**1.65m**	**2.0m**	**2.25m**
E	Transport length	mm	5899	5899	5899
F	Transport height	mm	3907	3907	3907
				Monoboom	
Dipper lengths			**1.65m**	**2.0m**	**2.25m**
E	Transport length	mm	6406	6406	6406
F	Transport height	mm	3973	3973	3973

*Machine is specified with a rear dozer blade. Please check chassis options for alternative specification dimensions.

CHASSIS OPTIONS

Any combination of dozer (parallel/radial), stabiliser or grab stowage bar are available to both front and/or rear of chassis.



Front axle / rear axle	Oscillating steering axle / rigid steering axle		
Axles load capacity	14 tonnes		
Axles load oscillation	+/- 8 degrees		
Transmission	Hydrostatic drive via piston motor and stepless transmission		
A	Overall length		
	Rear stabiliser only	mm	4119
	Rear dozer only (raised)	mm	Parallel: 4342, Radial: 4319
	Front dozer and rear stabiliser (raised)	mm	Parallel: 4773, Radial: 4749
	Front and rear stabiliser (raised)	mm	4550
B	Centre of slew ring to front and rear axle	mm	1325
C	Centre of slew ring to front stabiliser (rear stabiliser)	mm	2275
D	Centre of slew ring to front tyre face	mm	1325
E	Centre of slew ring to rear dozer blade (lowered)	mm	Parallel: 2498, Radial: 2431
F	Wheelbase	mm	2650
G	Overall width		
	Over stabilisers		2380
	Over dozer blade		2430
H	Stabiliser lift height		191
I	Dozer		
	Lift height (clearance)		Parallel: 440, Radial: 501
	Blade height (lowered)		505
	Dig depth		Parallel: 160, Radial: 169

TURNING RADIUS	To outside of tyres	To outer edge of front mounted dozer blade
	4-Wheel Steer (mm)	4-Wheel Steer (mm)
Dual wheels	4163	4650
Single wheels	3946	4511
Floatation wheels	3946	4511

MAIN HYDRAULIC SYSTEM	
System	Electronically controlled system using two variable displacement piston pumps plus twin gear pumps for steering, brakes and cooling
Services pump	72cc variable displacement axial piston pump
Flow rate @ 2200rpm	158.4 l/min
Excavator main relief pressure	280 bar
Transmission pump – 40kph	85cc variable displacement axial piston pump in a closed loop hydrostatic drive system independent from working hydraulics
Flow rate @ 2200rpm	187 l/min
Transmission absolute pressure	525 bar
Transmission pump – 30kph and 20kph	65cc variable displacement axial piston pump in a closed loop hydrostatic drive system independent from working hydraulics
Flow rate @ 2200rpm	143 l/min
Transmission absolute pressure	525 bar
High flow auxiliary	
High flow auxiliary pressure	210 bar
High flow auxiliary max. flow	120 l/min
Low flow auxiliary	
Low flow auxiliary pressure	210 bar
Low flow auxiliary max. flow	60 l/min
Second low flow auxiliary pressure	210 bar
Second low flow auxiliary max. flow	60 l/min
Hydraulic cylinders	Hardened, chromed piston rods with end damping on boom raise and dipper in
Filtration	
In tank	125 micron suction strainer
Main return line	10 micron return line filter

SERVICE CAPACITIES		
Fuel tank	litres	162
Engine coolant	litres	28
Engine oil	litres	14
Hydraulic system	litres	190
Hydraulic tank	litres	130
Transmission (dropbox)	litres	1.0
Axle differentials (each)	litres	Front = 18, rear = 14
Axle hubs (each)	litres	2.0

TYRES	Twins	Single	Floatation
Type	9.00x20 tyres with spacer ring	405/70 x 20 tyres	500/45 x22.5tyres
Inflation pressure	7.0 bar	4.0 bar	3.8 bar
Ply rating	14PR	16PR	16PR

ENGINE	
Model	JCB EcoMAX 444 TCA-99 Eu Stage IIIB, EPA Tier 4 Interim Compliant
Type	Water cooled, 4-stroke, 4-cylinder in-line, direct injection, turbocharged diesel
Rated power (ISO 14396)	81 kW (109 hp) @ 2200 rpm
Gross torque (ISO 14396)	516 Nm @ 1500 rpm
Piston displacement	4.4 litres
Air filtration	Dry element with secondary safety element and in-cab warning sensor
Starting system	12 volt
Batteries	12 volt
Alternator	12 volt, 150 ampere

SLEW SYSTEM	
Drive train	Axial piston type
Slew brake	Hydraulic braking plus automatic spring applied disc type parking brake
Slew torque	27.0 kNm
Slew speed	8.9 rpm
Slew gear	11 tooth pinion / 84 tooth ring

TRAVEL SPEED	
Max. roading speed	40 kp/h
Drawbar pull	45 kNm
Steering	Fully hydraulic system with 4-wheel steer, 2-wheel steer and crab steer

BRAKES	
Brakes	All hydraulic dual circuit brake system with positive brake back off
Parking brake	Built into the transmission
Gradability	26.6° / 50% maximum continuous

OPERATING WEIGHTS

Machine equipped with no bucket, 75kg operator, 154kg fuel, dual tyres, 2000mm dipper.

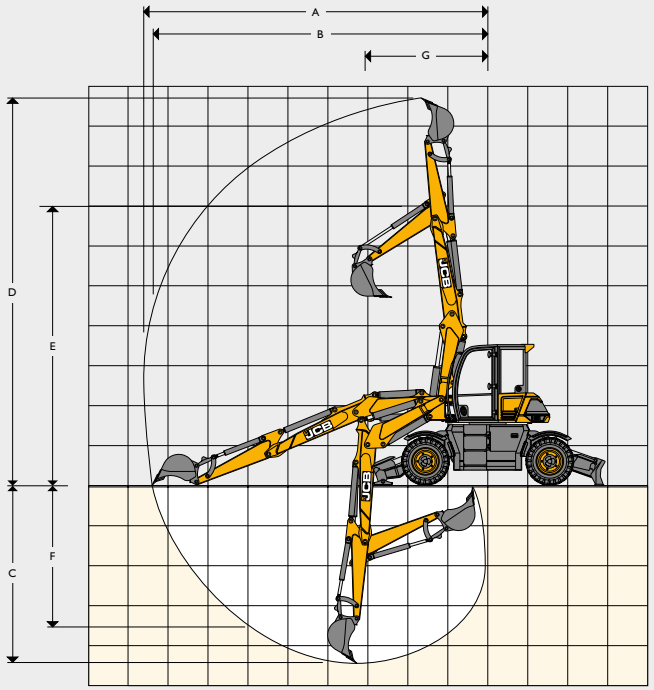
		Monoboom	TAB
No dozer, no stabiliser	kg	10208	10487
Rear parallel dozer	kg	10750	11029
Rear radial dozer	kg	10695	10974
Rear stabiliser	kg	10636	10915
Front parallel dozer and rear stabiliser	kg	11178	11457
Front radial dozer and rear stabiliser	kg	11123	11402
Front stabiliser and rear stabiliser	kg	11064	11343

BUCKET AND ARM COMBINATIONS

Bucket options		GP Bucket							
Bucket width	mm	250	300	400	450	500	600	800	900
Bucket capacity	m^3	0.06	0.08	0.11	0.13	0.15	0.19	0.27	0.31
Bucket weight	kg	102	109	107	113	120	135	166	179
Monoboom									
1.65m		❑	❑	❑	❑	❑	❑	❑	❑
2.00m		❑	❑	❑	❑	❑	❑	❑	❑
2.25m		❑	❑	❑	❑	❑	❑	❑	❑
T.A.B.									
1.65m		❑	❑	❑	❑	❑	❑	❑	❑
2.00m		❑	❑	❑	❑	❑	❑	❑	❑
2.25m		❑	❑	❑	❑	❑	❑	❑	❑

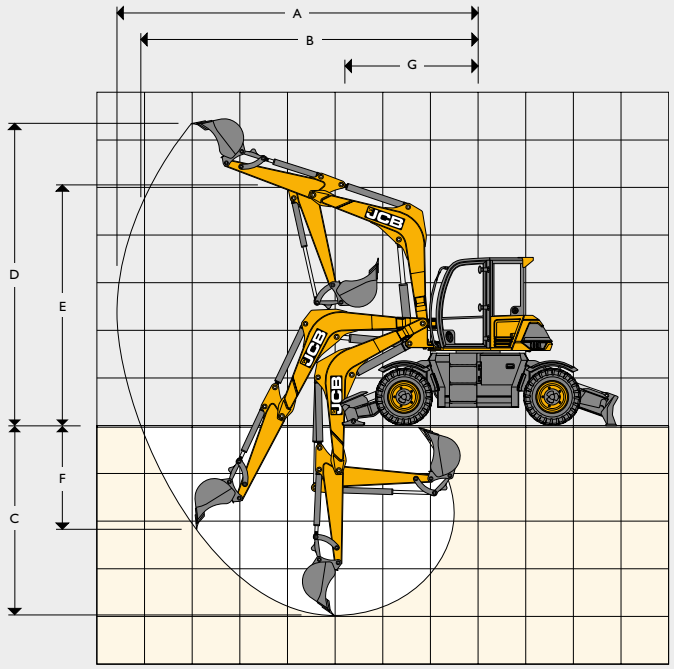
❑ = Material weight up to 2000kg/m^3.
● = Material weight up to 1600kg/m^3.
■ = Material weight up to 1200kg/m^3.
The above are to subject to ground conditions and are a guide only.

WORKING RANGE – TAB



Dipper length			1.65m	2.0m	2.25m
A	Max digging reach	mm	7420	7770	8020
B	Max digging reach (on ground)	mm	7165	7530	7785
C	Max digging depth	mm	3810	4160	4410
D	Max digging height	mm	8195	8545	8795
E	Max loadover height	mm	6380	6720	6965
F	Max vertical wall cut depth	mm	3000	3315	3540
G	Min swing radius	mm	2675	2920	3100
	Boom swing left	degrees		50	
	Boom swing right	degrees		70	
	Bucket rotation	degrees		184	
	Dipper tearout	kNm	48.3	42.3	39
	Bucket tearout	kNm		60.2	

WORKING RANGE – MONOBOOM



Dipper length			1.65m	2.0m	2.25m
A	Max digging reach	mm	6455	6785	7020
B	Max digging reach (on ground)	mm	6085	6445	6695
C	Max digging depth	mm	3370	3720	3970
D	Max digging height	mm	6445	6645	6790
E	Max loadover height	mm	4710	4915	5060
F	Max vertical wall cut depth	mm	1815	2135	2360
G	Min swing radius	mm	2645	2685	2715
	Boom swing left	degrees		50	
	Boom swing right	degrees		70	
	Bucket rotation	degrees		184	
	Dipper tearout	kNm	48.3	42.3	39
	Bucket tearout	kNm		60.2	

LIFT CAPACITIES: 1.65M DIPPER WITH STABS AND DOZER DEPLOYED

TAB

Reach	3m		4m		5m		6m		Capacity at Max Reach		
											
Load Point Ht.	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	mm
4.5m	1765*	1730*	2130*	2165*	1840*	1850*		1320	1690*	1290	5962
3.0m			2610*	2660*	2225*	1720	1690*	1300	1540*	1115	6515
1.5m			2975*	2215	2190*	1625	1720*	1250	1420*	1080	6633
0m			2750*	2170	2070*	1580	1535*	1240	1250*	1230*	6343
-1.0m	2860*	2725*	2305*	2200*	1735*	1660*			1060*	1020*	5892

LIFT CAPACITIES: 1.65M DIPPER OFF TYRES

TAB

Reach	3m		4m		5m		6m		Capacity at Max Reach		
											
Load Point Ht.	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	mm
4.5m	1765*	1765*	2130*	2130*	1840*	1520			1690*	1100	5962
3.0m			2610*	2030	2225*	1455	1690*	1090	1540*	940	6515
1.5m			2975*	1850	2190*	1360	1720*	1050	1420*	900	6633
0m			2750*	1800	2070*	1320	1535*	1030	1250*	965	6343
-1.0m	2860*	2860*	2305*	1815	1735*	1330			1060*	1060*	5892

 Lift capacity front and rear.

 Lift capacity full circle.

Notes:

1. **For lifting capacity including bucket, subtract total weight of bucket or bucket and quickhitch from above values.**
2. Lifting capacities are based on ISO 10567, that is: 75% of minimum tipping load or 87% of hydraulic lift capacity, whichever is the less. Lifting capacities marked* are based on hydraulic capacity.
3. Lift capacities assume that the machine is on firm, level ground.
4. Lift capacities may be limited by local regulations. Please refer to your dealer.

LIFT CAPACITIES: 2.0M DIPPER OFF DOZER ONLY — **MONOBOOM**

Reach	3m		4m		5m		6m		Capacity at Max Reach		
Load Point Ht.	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	mm
4.5m											
3.0m			1690*	1690*	1665*	1665*			1705*	1705*	5879
1.5m		3960*	2620*	2620*	2100*	2100*			1870*	1870*	5966
0m	5000*	5000*	3265*	3265*	2430*	2430*			2110*	2110*	5587
-1.0m	4995*	4995*	3305*	3305*					2315*	2315*	5014

LIFT CAPACITIES: 2.0M DIPPER OFF TYRES — **MONOBOOM**

Reach	3m		4m		5m		6m		Capacity at Max Reach		
Load Point Ht.	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	mm
4.5m											
3.0m			1690*	1690*	1665*	1665*			1705*	1180	5845
1.5m		3060	2620*	2010	2100*	1440			1870*	1105	5978
0m	5000*	2850	3265*	1890	2430*	1375			2110*	1165	5648
-1.0m	4995*	2835	3305*	1850					2315*	1335	5121

Lift capacity front and rear.

Lift capacity full circle.

Notes:

1. **For lifting capacity including bucket, subtract total weight of bucket or bucket and quickhitch from above values.**
2. Lifting capacities are based on ISO 10567, that is: 75% of minimum tipping load or 87% of hydraulic lift capacity, whichever is the less. Lifting capacities marked* are based on hydraulic capacity.
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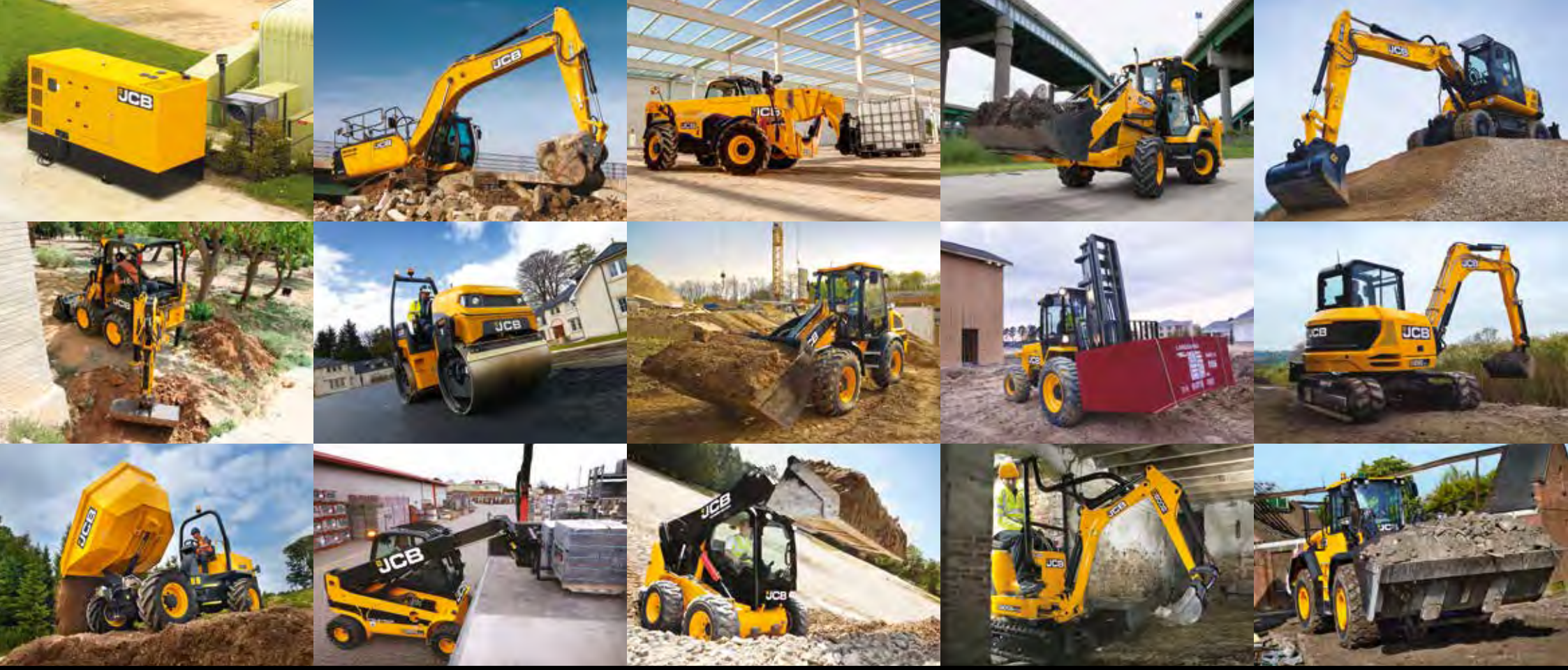

ONE COMPANY, OVER 300 MACHINES.

Your nearest JCB dealer

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JCB HYDRADIG 110W

Gross power: 81kW (109hp) Max. operating weight: 11457kg Travel speed: 40kp/h

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Download the very latest information on this product range at: www.jcb.com

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