NEW

455ZX | **WHEELED LOADING SHOVEL**



A GREAT BUSINESS DECISION

Operating weight: 17880kg, Gross engine power: 165kW (221hp), Full turn tipping load: 11100 kg, Standard shovel capacity: 3.1m³

JCB

MORE RELIABLE

DESIGNED AND BUILT TO COPE-UP WITH EVEN THE MOST DEMANDING SITES, HOUR AFTER HOUR, DAY AFTER DAY.



Designed to work hard

1 State-of-the-art manufacturing processes like robot machining, precision paint technology and innovative assembly techniques to achieve the highest levels of build quality.

2 Finite element analysis and rig testing ensure superior structural strength and durability. The 455ZX has been tested in hot and cold climates to ensure that it performs anywhere.

3 The counterweight and cast quarter pillars protect the cooling pack and the back end of the machine from damages. Recessed rear lights are protected within the solid counterweight.

4 Hoses are neatly routed and clamped through the articulation joint, well away from any pinch points.


1


2


3



Built to last

5 JCB DIESELMAX engine feature a heavy-duty cast iron cylinder block, bedplate, cylinder head and forged crankshaft to provide more strength and long life.

6 Precision machining provides high tolerance and accurate location of the 455ZX's pins and bushes.

7 The 455ZX is fitted with world class components. A JCB DIESELMAX engine, ZF transmission and axles, Rexroth pumps and a Parker valve block, assure long and reliable service life of the machine.

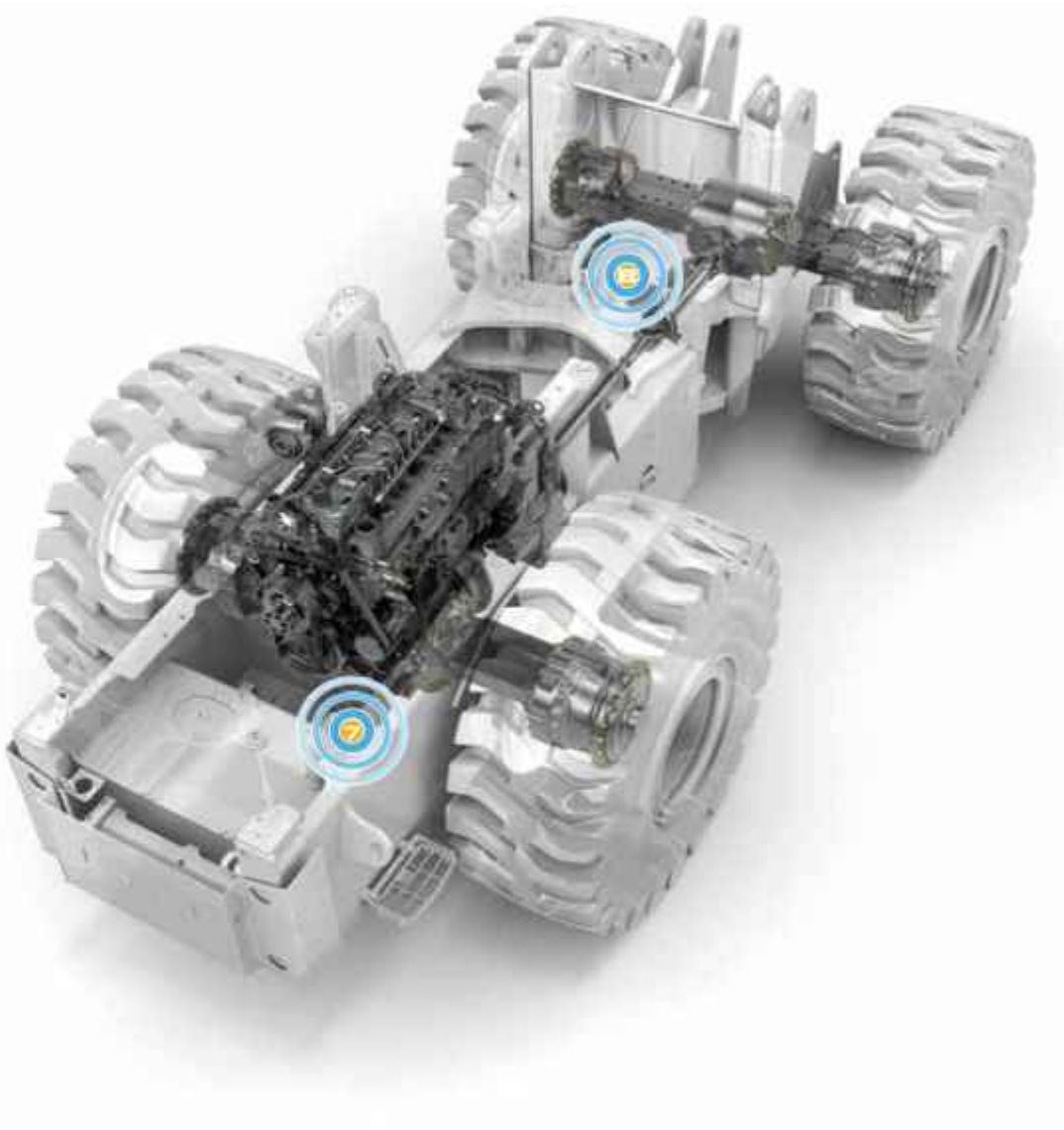
8 The articulation joint has a heavy-duty box section (much stronger than a single plate with a boss), a heavy-duty centre pin and an oversized bush. It also has twin taper roller bearings on the bottom box joints. This setup can tolerate both vertical and horizontal loadings for durability and rigidity. Steering rams are positioned high up and are protected from damage.

9 A unique 3 stage fuel filtration system along with a water separator to deal with water, in fuel fine and large particles. Thus ensuring reliable opearation at sites where fuel quality is a challenge.





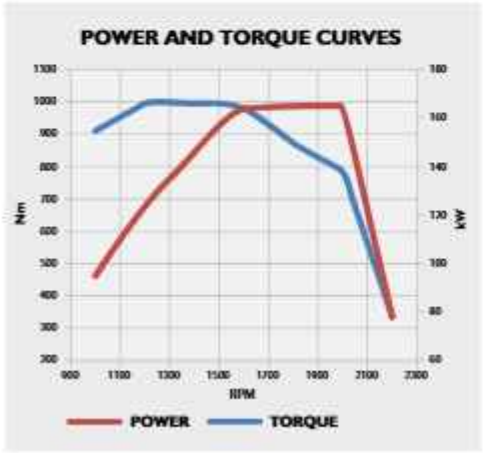




MORE PRODUCTIVE

THE NEW JCB 455ZX GIVES UNMATCHED AND UNINTERRUPTED PRODUCTIVITY. ITS ENGINE OFFERS MORE POWER AND TORQUE, WHILE ITS HYDRAULICS AND LOADER END ARE SET UP TO KEEP CYCLE TIMES SHORT AND WORKING SHIFTS LONG.





Powering it all

1 The JCB DIESELMAX 672 engine uses our latest generation EcoMAX lean-burn combustion technology for more efficiency and reduced emissions. The 6-cylinder 7.2 litre engine achieves high power (165kW) and peak torque (1000Nm) at low revs for excellent response.

2 A state-of-the-art engine management system ensures fuel effieciency and offers optimised performance at all times.

3 There is a 310-litre fuel tank as standard on the 455ZX, along with an extremely efficient matching hydraulics, transmission with the engine. This combination ensures maximum uptime between refuelling: a welcome feature when you're working in remote sites where diesel has to be transported in.







*In 3 years (T&C Apply)

Loading productivity

4 Proven Z-bar loader geometry gives exceptional productivity, due to a comprehensive penetration into the pile, high breakout forces, good roll-back angles and faster dig time. The users are also benefited from reduced tyre wear and more fuel efficiency, making this machine a great investment for any business.

5 The innovative Electronic Management System can perform progressive clutch cut-off for efficient, productive loader control. This feature controls tractive effort via the transmission, diverting maximum power to the loader hydraulics and reducing service brake wear and fuel consumption.

6 The limited slip differential in the 455ZX are perfect for slushy terrian.

7 The 455ZX's selectable loader arm detents, means that the operators can set loader arm height limitations, return to dig and float functions to ensure faster cycle time and enhanced productivity.

EMS ELECTRONIC MANAGEMENT SYSTEM









MORE COMFORT MORE SPACIOUS

TO KEEP OPERATORS SAFE AND PRODUCTIVE, THE NEW 455ZX COMES WITH 3M³ CABIN WHICH IS SPACIOUS, EASY TO ACCESS AND QUIET. IT ALSO OFFERS EXCELLENT VISIBILITY AND AN INTUITIVE, ERGONOMIC CONTROL LAYOUT.

Best-in-class operator comfort

1 For maximum operator comfort, the 455ZX is fitted with an easily adjustable tilt and telescopic steering column.

2 A stylish, modern central dash display combines analogue dials and a colour LCD screen – this displays machine's health details, service requirements and operating information.

3 Optional 3-spool hydraulics enable many attachments to be used easily for extra versatility of your machine.



Excellent visibility is assured with a 3-piece laminated front screen and interior mirrors, an optional reverse camera and a sloping rear bonnet also help to provide an all-around view.









A good place to work

5 Air conditioning and fan comes as standard on the JCB 455ZX, ensuring that operators can work comfortably in extreme conditions that sites have to offer.

6 Ergonomic controls, comfortable seats and spacious cabin offer fatigue free operation and enhances productivity of operator.

7 Increased ventilation and easy on-site communication through sliding windows on each side.

8 There is more storage behind the rear seat of this machine, keeping the forward operating area uncluttered and safe.

9 Additional storage capacity and security is provided by the lockable tool box on the right-hand step.











MORE ACCESSIBLE LOW MAINTENANCE

THE NEW 455ZX PROMISES TO WORK FOR MORE HOURS AT A LOWER MAINTENANCE COST. WORLD-CLASS COMPONENTS ENSURE BUILT-IN QUALITY LEADING TO RELIABILITY AND VALUE OF MONEY.



Access all areas

1. Wide-opening gull-wing doors give access to the 455ZX's engine bay and cooling packs easily.

2. Daily checks and grease points are accessible from ground level, which encourage daily checks.

3. The cooling pack is a single faced unit, allowing excellent access for cleaning.







Low maintenace long intervals

4 Grouped test ports give the convenience to check brakes, steering and hydraulic system pressures easily on a 455ZX.

5 Replaceable bolt on teeth bucket make it quick and easy to renew and thus ensuring maximum uptime.

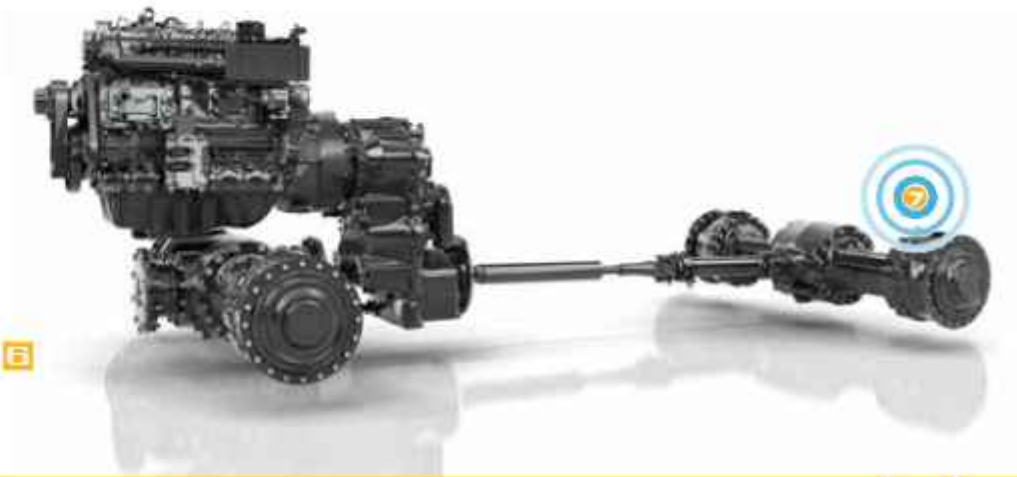
6 The 455ZX's electronic monitoring system relays key information and real time alerts, thereby safeguarding both machine and the operator.

7 Full hydraulic dual circuit braking with multiple oil immersed discs give the 455ZX's braking system a virtually maintenance-free lifespan.









MORE EFFICIENT MORE SYTLISH

THE NEW JCB 455ZX IS DESIGNED TO MOVE MORE MATERIAL IN LESS TIME. WE'VE BUILT THE ENGINE, AXLES, DRIVELINE AND HYDRAULICS TO WORK IN PERFECT HARMONY WITH EACH OTHER FOR ULTIMATE EFFICIENCY.



1 Wheel speed braking means the brakes rotate at the same speed as the wheels for heat and drag reduction, as well as for improved fuel economy.

2 A hydraulic cooling fan automatically reacts to ambient temperature and adjusts the 455ZX's fan speed to optimise cooling and reduce fuel consumption. This feature also lowers noise levels.

3 JCB's innovative variable displacement pumps feed a load-sensing valve block which only consumes power on demand, providing precise, efficient loader control.







MORE SAFETY

IT'S ESSENTIAL TO KEEP WORKSITES SAFE AT ALL TIMES. THE NEW JCB 455ZX OFFERS GREAT VISIBILITY, NON-SLIP SURFACES, AIR FILTRATION AND MANY MORE FEATURES WHICH MAKE THE EQUIPMENT AND THE SITE SAFER.



Safety first

1 Access steps are inclined and equally spaced, complemented by well positioned grab handles for three points of contact at all times.

2 Interior mirrors, exterior mirrors and bonnet mirrors combine to provide superb all-round visibility.

3 Non-slip walkways and additional grab handle options allow operators to move around the exterior of the machine safely.

The 455ZX's cab is isolated from the chassis by rubber mounts, which keeps noise and vibration levels to a minimum. It's also compliant with ROPS/FOPS standards, and positively pressurised against dust.

4 Our optional rear-view camera displays an unobstructed rear view on in-cab colour monitor.







MORE CARE

WITH OVER 650 DEALER OUTLETS, THE EQUIPMENT WILL NEVER BE FAR FROM PROFESSIONAL PRODUCT SUPPORT. AVAILABILITY OF PARTS AND MANPOWER ENSURE THAT THE MACHINE PERFORMS TO ITS FULL POTENTIAL.



JCB PREMIER LINE

JCB Premier Line Solutions

Choose from exclusive array of warranty support packages which are tailor made for your business requirements. JCB trained experts and part availability will keep your businesses moving.

Livelink

Stay in control 24x7 with JCB Advance Telematics System - Livelink. With real time data monitoring around Service, Security and Operation of your machines. It is the quickest way to confirm that your machines are well maintained and in good health, without having to be physically present near you machines.

Care

JCB Trained Service engineers, parts availability across the strategic location and 650+ dealer outlets. Ensuring your machines are up all the time 24x7.

650+ OUTLETS and growing >>>

WE CARE

THAT IS WHY WE ARE EVERYWHERE





Stay Connected 24x7

Now be assured of your JCB wheel loading shovel's service, operation and security with the advanced telematics system called Livelink.

SERVICE



Livelink will notify you about the service requirement of your machine. It increases the efficiency of your machine and keeps it in a perfect working conditions.

Service reminder

Reminds you when the service of your machine is due; to help you plan your work better.

Machine data backup

Helps to maintain the records of past services in an organised manner.

Critical machine health alerts

Allowing you to know the inside of your machine from a faraway location. Helps in taking proactive measures to avoid breakdown through alerts like;

- Low engine oil pressure.
- Water in fuel.
- Coolant temperature.
- Transmission oil temperature.

OPERATION



Livelink helps you maintain your machine health and manage your fleet better by alerting you of any variation in health indicators. It lets you know in real time, if your machine is facing a problem or needs any quick check-up.

Machine utilisation report

Maintains machine usage record and helps you analyse & optimise utilisation of machine.

Engine status

Informs you if your JCB machine's engine is switched on or off.



SECURITY



Livelink helps you to keep a track of your machine's location, protection and movement.

GPS tracking

Tells you the exact position of your machine on a map.

Operating hours

Alerts you when the machine is used outside the working hours, as set by you.

Possible intrusion/ Tow away alert

Helps you save your machine from intruders and possible tow aways.

Geofencing

Allows you to keep your machine within the allocated area of work.

ENGINE

Type		Common Rail Direct Injection (CRDI), Water cooled diesel engine
Model		JCB DIESELMAX 672
Capacity	litres	7.2
Aspiration		Turbocharged and after cooler
Cylinders		6
Max gross power to (SAEJ 1995/ISO 14396)	kW (hp)	165 (221)
Max torque	Nm @ 1500rpm	1000
Emissions		BSIII

CAB

Resiliently mounted ROPS/FOPS structure (tested in accordance with EN347:2008/EN3449: 2008 (Level 2). Entry/exit is via large rear hinged door, grab handles giving 3 points of contact and anti-slip inclined steps. Forward visibility through a curved, laminated windscreen with lower glazed quarter panels, two mirror and non heated exterior mirrors. Instrumentation analogue/digital display gauges along with full colour LCD screen including selectable machine and operator menus along with service and diagnostic screens. Heating/ventilation provides balanced and filtered air distribution throughout the cab via powerful 8 kW capacity heater, with air conditioning and climate control system as options. Provision of speakers and antenna for radio fitment (radio/CD not included). The cab environment is positively pressurised preventing the ingress of dust including in-cab recirculation filter. Fabric mechanical suspension seat as standard with various options including vinyl material, air suspension, heating and deluxe grammer actimo XXL air suspension seat with headrest, twin armrests, lumbar support, backrest extension, heating and full adjustment. Coat hook, cup holder and additional stowage space. Fuse box positioned at rear for access to fuses, relays and diagnostic connectors.

TRANSMISSION

Type		4 Wheel drive, Automatic 4 speed transmission	
Make		ZF	
Model		4WG190	
Speed		Forward	Reverse
1st gear	kph	6.5	6.85
2nd gear	kph	12.8	13.49
3rd gear	kph	23.77	24.85
4th gear	kph	36.04	

AXLES

Type	Limited slip differential
Make and model	Front- ZF MTL 3095 II / Rear - ZF MTL 3085 II
Overall axle ratio	23.33
Rear axle oscillation	±12.5°
Bias ratio	30%

STEERING

Q-Amp hydraulic system with steer priority valve operating at 190 bar to provide smooth, low effort response.
steer ram located high in chassis to provide protection from damage. Adjustable steering column. Steering angle ±40°

BRAKES

Hydraulic power braking on all wheels, operating pressure 80 bar (1160psi). Dual circuit with accumulator back-up provides maximum safety under all conditions. Inboard mounted, oil immersed, multi-plate disc brakes with sintered linings reduce heat build up. Wheel speed braking improves performance and reduce wear. Parking brake, electro-hydraulic disc type operating on transmission output shaft.

ELECTRICAL SYSTEM

System voltage	Volt	24V
Alternator output	Amp hour	28V 100A
Battery capacity	Amp hour	2 x 12V 900CCA

TYRE SIZE

				Dimensions		
Tyre size	Manufacturer	Type	Rating	Operating weight (kg)	Vertical mm	Width mm
23.5x25-20PR	BKT	L3	20PR	17,880		
23.5x25 (crossply)	BKT (XL GRIP)	E3/L3	20PR	18000	+26	0
23.5R25 (radial)	BKT	E3/L3	1*	18020	+12	0

HYDRAULICS

Pump type		Variable displacement piston pump-load sensing
Pump 1, max. flow	l/min	132
Pump 1, max. pressure	bar	250
Pump 2, max. flow	l/min	94
Pump 2, max. pressure	bar	310
Hydraulic cycle times at full engine rpm		
- Arms raise (full bucket)	seconds	6.0
- Bucket dump (full bucket)	seconds	1.9
- Arms lower (empty bucket)	seconds	3.7
- Total cycle	seconds	11.6

SERVICE FILL CAPACITIES

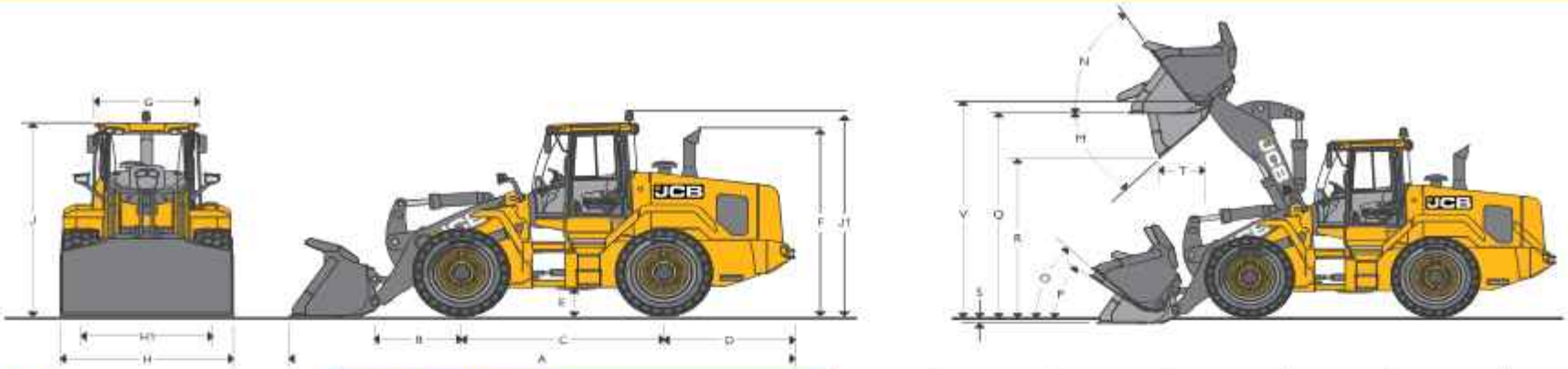
Hydraulic tank	litres	180
Fuel tank	litres	310
Engine oil sump	litres	28
Transmission oil system	litres	36
Axle oil (front)	litres	35
Axle oil (rear)	litres	35
Engine coolant system	litres	37

STANDARD EQUIPMENT

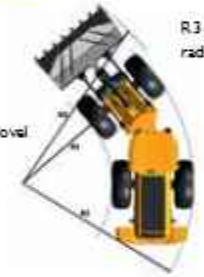
Return to dig, boom kickout, 12V converter, sun visor, interior mirror, left hand and right hand rear view mirror, front light guard, tail lamp guard, livelink, front screen guard, cabin fan, FM radio with speakers, beacon

OPTIONAL EQUIPMENT

3.5 cum bucket, 2.8 cum bucket, 4.8 cum bucket, reversible fan, 3 spool option valve, quick hitch (3 spool), 24V socket in cabin, heated mirror, cold start kit, emergency steer pump, rear view camera, rear view mirror, cigarette lighter, additional worklight, white noise horn, air suspension+ heated seat, radial tyre



TURNING RADIUS



R1 Inside turn radius
R2 Radius over tyre
R3 Turn radius over shovel

R3 (=) Maximum turn radius over shovel

STATIC DIMENSIONS ENGINE

A	Overall length	mm	7,984
B	Axle to pivot pin	mm	1,622
C	Wheel base	mm	3,300
D	Axle to counterweight face	mm	1,994
E	Minimum ground clearance	mm	470
F	Height over exhaust	mm	3,318
G	Width over cab	mm	1,400
H	Width over tyres	mm	2,702
H1	Wheel track	mm	2,100
J	Height over cab	mm	3,370
J1	Over all height with beacon	mm	3,714
	Total weight	kg	17,800
R1	Inside turn radius	mm	3211
R2	Radius over tyre	mm	5913
	Inside turn radius over tyres	mm	3,182
	Maximum turn radius over shovel	mm	6,554
	Articulation angle	degrees	±40

Data based on machine equipped with direct mounted 3.1 m3 bucket with toe plates and bolt on teeth & 23.5- 25 -20 PR L3 BKT

LOADER DIMENSIONS

Assumes the fitment of BKT 23.5- 25 -20PR L3 tyres






	Shovel mounting		Direct	Direct	Direct	Direct	Direct	Direct	Direct	Direct
	Shovel type		General purpose		General purpose		General purpose		Coal bucket	
	Shovel equipment		Tipped teeth penetration		"Reversible toeplate no teeth"		Tipped teeth & toe plate segments		No teeth	"Reversible toeplate no teeth"
	Shovel capacity (SAE heaped)	m3	2.8	3.1	3.3	3.5	3.3	3.5	4.8	5.0
	Shovel capacity (struck)	m3	2.497	2.791	2.993	3.137	2.993	3.137	3.972	4.110
	Shovel width	mm	2800	2800	2800	2800	2800	2800	3231	3231
	Shovel weight	kg	1538	1614	1708	1757	1754	1803	1838	2100
	Maximum material density	kg/m3	1995	1790	1664	1557	1664	1557	1134	1063
	Tipping load straight	kg	12353	12276	13170	10371	13170	10371	13086	12824
	Tipping load full turn	kg	11170	11100	10975	10893	10975	10893	10891	10629
	Payload (50% FTTL)	kg	5585	5550	5490	5450	5490	5450	5446	5315
	Maximum breakout force	kN	175	164	154	148	154	148	139	132
M	Dump angle maximum	degrees	45	45	45	45	45	45	45	45
N	Roll back angle full height	degrees	67	67	67	67	67	67	67	67
O	Roll back at carry	degrees	45	45	45	45	45	45	45	45
P	Roll back at ground level	degrees	39	39	39	39	39	39	39	39
Q	Load over height	mm	3822	3822	3831	3831	3822	3822	3769	3734
R	Dump height (45 ° dump)	mm	2741	2741	2887	2845	2741	2699	2724	2647
S	Dig depth	mm	74	74	91	109	109	109	125	160
T	Reach at dump height	mm	1183	1183	1085	1039	1183	1135	1288	1321
V	Pin height	mm	4107	4107	4107	4107	4107	4107	4107	4107
	Reach maximum (45°dump) - horizontal arm	mm	2140	2140	2032	2074	2140	2182	2088	2120
R3	Maximum turn radius over shovel	mm	6603	6637	6565	6591	6637	6670	6832	6865
	Operating weight (includes 80Kg operator and full fuel tank (includes aux tank)	kg	17805	17880	18000	18042	18000	18042	18084	18346
					Standard					

* All dimensions, weights and timings are variable within 1.5% JCB reserves the right to change specifications without prior notice.



ONE COMPANY, OVER 300 MACHINES.

Dealer's stamp:

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