



**MINI EXCAVATOR** | JCB50z | JCB51r | JCB55z

Operating weight: 4946/5266/5520 kg | Engine gross power: 35.7kW



# THE LATEST ADDITIONS TO OUR NEW GENERATION

**NEW GENERATION CONTROL, EFFICIENCY, PERFORMANCE, STRENGTH.**

**Control,** Industry leading digital screen technology lets you tailor and store settings to put you in total control. **Efficiency,** Designed to keep running costs low and prove to be a great business decision.

**Performance,** Designed to give you greater bucket and dipper tearout, greater dump height and greater lift capacity. **Strength,** Designed to be quite simply the strongest 5-tonne machines in the market.



## **55z**

Excellent working ranges, higher tear-out forces and tractive effort.



# IDEAL MACHINES FOR EFFECTIVE WORK AT CONGESTED & CONFINED JOB SITES

Specially designed to achieve excellent manoeuvrability to access confined job sites. New generation operator comfort, uncompromised safety & security and advanced LiveLink with 24x7 machine monitoring makes the machine an ideal choice for the customers. These mini wonders are strategically designed for use in congested job sites with narrow access like building construction, civic and municipal works, urban & rural infrastructure development, real estate, civic utility applications and many more such applications.

## **51R**

Higher operating stability with enhanced lifting capacity.



## **50z**

Excellent manoeuvrability & accessibility in confined job sites.



# ONE SOLUTION FOR ALL YOUR APPLICATION NEEDS



Construction site clearing



River bed re-building



Foundation digging



Canal cleaning



Land development



Digging close to wall



Trolley loading



Utility works



Drainage cleaning



Pipe laying



Building basement clearing



Foundation refilling

## New Generation Performance

ZTS and CTS design for higher adaptability in confined areas

Low noise engine & hydraulic performance

Excellent engine power & digging forces

Boom swing & offset feature

## New Generation Efficiency

Energy saving eco hydraulics

Customised mode selection: Light, Eco, Heavy & Heavy+

Auto idler, one touch idler & below idle feature

## New Generation Comfort

New 9" color LCD display

Rotary dial controlled engine speed & mode selection

Large canopy with low effort joysticks

AC cabin option

Fully adjustable suspension seat

## New Generation Strength

Heavy duty boom with internal baffle plates

Heavy duty steel track chain & lower frame

Four-plate arm design

One global quality - Industry best components

Mono piece cast kingpost

## New Generation Maintenance

Industry leading maintenance interval:

• Hydraulic oil - 2000 hrs

• Engine oil & filters - 500 hrs

• Dig end pin greasing - 500 hrs

## New Generation Control

All new LiveLink with enhanced features:

• Service - Health monitoring & alerts

• Operation - Utilisation reports

• Security - Geofencing, time curfew, tow-away alert & fuel level drop alert

• Servo controlled dozer operation

• Joystick controlled boom swing & auxiliary circuit

## New Generation Safety & Security

ROPS & TOPS complied canopy

JCB's unique 2Go System

Steel body works

Battery disconnect switch





# NEW GENERATION PERFORMANCE

THE LATEST COMPACT EXCAVATORS CONTINUE WITH THE NEW GENERATION LOOK AND FEEL, SUITING MODERN INDIA'S NEEDS INCLUDING ALL OUR NEW INNOVATIVE DESIGN FEATURES, MAKING THEIR VERSATILITY AND PRODUCTIVITY BEST IN CLASS.

## CTS or ZTS ?

1 We offer Reduced and Zero tailswing configurations, but choosing the right one for you depends on your application. CTS and ZTS offer concern-free manoeuvrability – especially in confined spaces – because their rear overhang outside the tracks is eliminated (ZTS) or greatly reduced (CTS).

## Boom swing & boom off-set.

2 JCB's boom swing & boom off-set feature enables the machine to operate very close to the wall/building without re-positioning the machine.

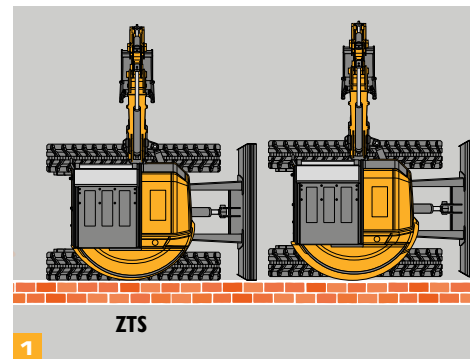
## Potent performance.

3 Powerful & fuel efficient Perkins 404D-22 engine; a quiet 2.2 litre unit delivering 48hp (35.7kW) at 2600 rpm and reduced operating cost in a small, efficient package. Also its low noise design enables higher adaptability in densely populated areas.

4 Tracking performance is smooth and precise, ensuring high dozer capabilities and fast travel times. To increase productivity, our auto kickdown motors automatically adapt to changes in terrain increasing productivity and reducing operator fatigue.

## Digging down.

5 These machines produce dipper tearout forces of up to 29.0kN; combined with fast cycle times, this enables unrivalled productivity. By perfectly matching our boom and dipper, we've created optimal dig end geometry, helping you to work and load in confined areas with ease.



Bucket rotation is a huge 181°, offering great spoil retention during truck loading. Choose a dipper length to suit your application – from 1.45-1.57m, providing total versatility.





### Hydraulic innovation.

- e** A premium closed centre hydraulic system provides improved flow sharing for smooth, precise and balanced operation during multi-functioning.
- 7** Programmable twin auxiliary lines provide high hydraulic flow to operate an array of attachments, increasing the machines versatility. Auxiliary lines are electrically proportional controlled and fully adjustable for optimum attachment control.

### Versatility attached.

- e** You can now choose from a range of buckets, designed with fuel saving in mind as per the applications. Our attachments provide ultimate performance.



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# NEW GENERATION EFFICIENCY

ULTIMATELY, OPERATING COST IS PERHAPS YOUR PRIMARY CONCERN AS A BUSINESS. SO YOU'LL BE PLEASED TO KNOW THAT THE NEW JCB 50Z, 51R AND 55Z HAVE BEEN DESIGNED TO KEEP RUNNING COSTS AS LOW AS POSSIBLE.

## Dynamic engine design.

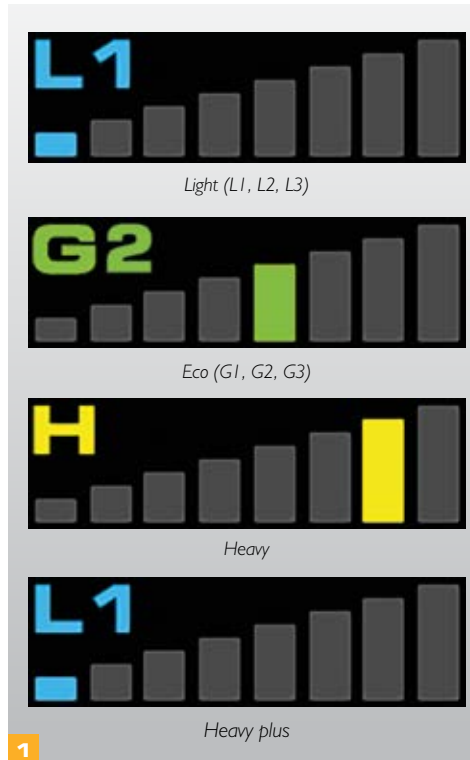
**1** Control your engine speed with four different power bands to easily toggle through and set to optimum hydraulic flows. This includes light, eco, heavy and heavy plus, all of which can be tailored to suit your application.

**2** Activate 'One-Touch-Idle' by pressing the new rotary controller dial. Just another way of reducing engine revs quickly and conserving fuel.

Our programmable auto idle can be activated between 2 and 30 seconds after the controls have been inactive, to offer increased fuel efficiencies.

**3** Our below idle feature means that engine revs are reduced even further when the operator's armrest is raised. Fuel economy and noise levels are both improved.

**4** The patented low pressure return line circuit further improves fuel efficiency, because the pump does not need to overcome as high a pressure before any work can be done.





# NEW GENERATION CONTROL

HIGH PRODUCTIVITY IS ACHIEVED THROUGH COMFORTABLE ENVIRONMENT THAT'S WHY OUR NEW RANGE FOCUSES ON COMFORT AND EASE OF USE.

## Comfort and control.

**1** These minis have an excellent operator comfort with suspension seat, face fan, storage galore, a phone tray, stowage net, 12V phone charger, USB port and a cup holder. The whole area is accessed easily and safely via a large door.

**2** Innovative new rotary dial type throttle control for easy & precise engine speed control. Easy touch switches have been thoughtfully designed for operational ease of use.

**3** Joystick controlled boom swing & auxiliary circuit for better control of dig end and attachment in confined job sites.

**4** Ergonomic electro-hydraulic dozer control with travel speed selection as standard, lets operator achieve smooth and precise grading control.

**5** Optional high performing air conditioning system\* with 8 vents for higher comfort.

**6** Heat protection canopy roof liner provided as standard to ensure comfortable operation in hot & sunny conditions.

**7** You can alternate quickly between single and double-acting auxiliary flow thanks to a convenient switch in the cab (optional).

\*Air conditioning optional.



Our new deluxe fully adjustable suspension seating provides great operator comfort.



# Best-in-class 9 Inch Digital Anti-glare Informative Colour Display

## Operational Informations



Engine Speed & Operating Mode Status



Trip Meter



Auto Idle Status & Time Setting



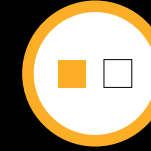
Machine Operating Parameters



## Maintenance Informations



Maintenance Due Information



Colour Coded Health Alerts Based on Severity



Hour Meter, Counting of Attachment Operation



Easy Diagnostic System



Service Warning Alerts



# NEW INDIA'S STRENGTH

TRACKED EXCAVATORS HAVE BEEN A PART OF THE JCB MANUFACTURING FAMILY FOR OVER 50 YEARS. WITH ALL THIS EXPERIENCE AND INSIGHT, OUR LATEST MINI EXCAVATORS ARE QUITE SIMPLY THE STRONGEST AND HIGHEST PERFORMING NEXT GENERATION OF MACHINES WE'VE EVER BUILT.

## The toughest form.

**1** Heavy duty boom & arm are made of high tensile steel with all critical stress points reinforced. Our clean four-plate dipper design provides added structural strength and durability.

**2** There are no longer any plastic external body panels on our new machines; instead they have 100% high strength pressed steel bodywork.

**3** High quality steel track as well as simplified H-Frame construction makes undercarriage of these minis durable & confidence inspiring.

## Dig end durability.

**4** Mono piece cast kingpost features durable re-bushable pivots to optimise service life on our new machines. It also provides a safe route for all excavator hoses.

**5** The heavy duty boom cylinder guard gives maximum boom cylinder protection even during the toughest jobs.

Our fully robot welded boom and dipper are made of high tensile strength steel, with internal baffle plates in the boom, for long-life durability.



## Quality componentry.

- 6** These minis come with trusted premium manufacturers like Perkins engines, Nachi and Bosch-Rexroth hydraulic components for higher reliability & durability.
- 7** Robust cast bucket linkages ensure higher life while handling heavy loads.
- 8** Fold back your cab door and you'll see that it fits snugly within the counterweight length. This keeps it out of harm way throughout the machine operation.
- 9** The hydraulic system boasts the latest industry technology "O-Ring Face Seal" (ORFS) hydraulic fittings, providing excellent sealing capabilities.
- 10** High quality 400mm & 550mm(optional) steel tracks and you'll find they're pre-drilled to make it easier to attach rubber pads.



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# NEW GENERATION MAINTENANCE

A JCB MINI EXCAVATOR IS DESIGNED TO BE AS PRODUCTIVE AS POSSIBLE. DOWNTIME IS MINIMISED IN EVERY WAY, INCLUDING THE TIME IT TAKES TO CARRY OUT MAINTENANCE.

## At your service.

**1** JCB's innovative filtration system extends hydraulic service intervals. It requires hydraulic oil change of 2000 hrs & filter change at 500 hrs in bucket operations.

**2** Engine oil, oil filter & fuel filters require replacement at 500 hrs: Reduced maintenance cost and increased machine uptime.

**3** Graphite impregnated bronze bushes allow best-in-class greasing intervals of 500 hours.

**4** The wide-opening steel bonnet makes it easy to access maintenance components from ground level. Opt for a refuelling pump with auto stop function to reduce spillages and increase safety.

**5** These machines feature colour-coded hydraulic hoses for easy identification.

**6** An open frame undercarriage with sloping track legs makes cleaning easier.

**7** Removing the cab floor is easy to do, and affords access to many key components like the main control valve spools.

**8** You can remove the floor mat easily for cleaning, while anti-slip cast tread plates provide safe access and bodywork protection.

**9** Information display with service due alerts and key warning alerts for easy maintenance.

	SERVICE INTERVALS
Engine oil, oil filter and fuel filters	Every <b>500</b> hours
Hydraulic main filter	Every <b>500</b> hours
Hydraulic oil	Every <b>2000</b> hours

1 & 2



# NEW GENERATION SAFETY

OUR NEW MINI EXCAVATORS OFFER SAFETY AS FIRST PRIORITY, TO THE OWNER, OPERATOR, BYSTANDERS AND THE MACHINE ITSELF. WITH MAXIMUM SAFETY, DOWNTIME IS MINIMISED.

## Maximum protection.

**1** Ensure high uptime & better management of your equipment fleet with an improved CAN based LiveLink. It helps the owners to learn about several aspects of their machines including machine utilisation, health alerts, tow-away alerts, time curfew, geo-fencing and sudden drop in fuel level.

**2** The new compact excavators canopies are fully ROPS and TOPS compliant for increased protection to the cab and operator. Offering ROPS and TOPS certified cab as an option.

**3** JCB's unique 2GO system ensures your mini excavator hydraulics can only be operated in a safe lockable position via two separate inputs.

**4** JCB's safety lever lock fully isolates hydraulic functions to prevent unintended movement.

**5** Overload screen displays a bar chart from green to red to indicate if the overload point is close or has been passed. Once passed, the buzzer sounds and the bar flashes to warn the operator.

**e** Battery disconnect switch provided as standard to isolate machine's electric system whenever required for higher safety.



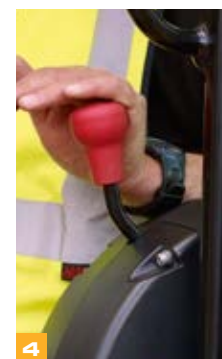
**1**



**2**



**3**



**4**



**5**



## Safely does it.

- 7** Large track frame width and a low centre of gravity helps to ensure that stability is maximised on the machines.
- 8** Standard boom and optional worklight guards offer greater protection for vulnerable components in hazardous applications.
- 9** ZTS and CTS tail swing design with steel body works ensure higher safety to the major components while working in congested job sites.
- 10** These machines offer greater visibility, thanks in part to a 70/30 front screen split; for easy, safe trench digging and manoeuvring.



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# LIVELINK, WORK SMARTER.

**NOW BE ASSURED OF YOUR JCB EXCAVATOR'S SERVICE, OPERATION AND SECURITY WITH THE ADVANCED TELEMATICS TECHNOLOGY CALLED LIVELINK\*.**

## Security



In case of sudden drop in fuel level, get an SMS/E-Mail alert.



Control the duration in which the machine should be operated by creating time curfew. Sends alert on e-mail/SMS when machine is used outside set hours.



Helps to locate your machine precisely on map to display its current location. Historic records of machine location and movements are also available.



Secure your machine by creating a fence around the machine location on the map to get alerts on e-mail and mobile, once the machine moves out of the geofenced area.



Alerts you in case the machine is being towed away even in engine off condition, thus securing your investment.

## Operation & performance monitoring



Idle time monitoring helps in analysing the extent to which engine was idle. This can be used for better site management to minimise idle hours and save fuel consumption.



Machine usage can be monitored in detail including the hours worked in each mode which indicates the extent of loads on the machine.



Instantaneous fuel level can be monitored remotely. This can also be reported through customised daily reports.



Machine usage can be easily monitored through information on total working time with low & high speed modes.

## Reports & alerts



Provides customised reports on performance, utilisation, fleet summary, landmark activity, machine hours and service status.



Machines can be grouped together in a fleet for consolidated views and reports which make fleet management easy.

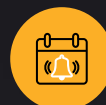


Variety of reports can be received on periodic basis, be it daily, weekly, monthly or as required.

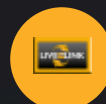


Get customised alerts on mobile about the machine status and critical health alerts.

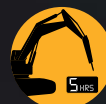
## Proactive maintenance & usage



Sends maintenance reminders in advance for planning maintenance so that the machine is serviced as per required schedule.



Alerts are provided in case of any critical health parameter needs attention. Such alerts are displayed on the dashboard of the LiveLink website. These are sent by e-mail/ SMS.



Time spent in hammer operation; Indicates breaker usage hours thus helping in maintenance planning.

## Safety



Long engine idling report: Get to know the number of times when the machine was idling for long time - Helps to organize your jobsite to reduce fuel wastage.



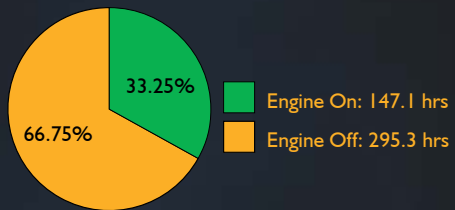
Critical health alerts on the parameter which needs immediate attention.



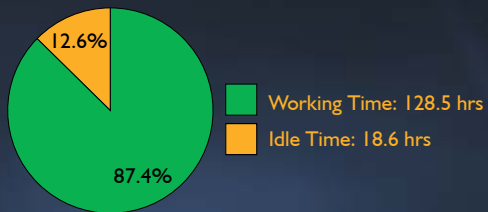


### User Friendly Report

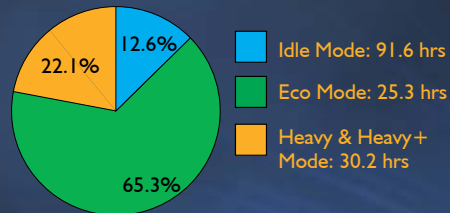
Engine On-Off Time



### Working & Idle Time



### Power Mode



## EXTENDED CARE

### GIVE YOUR MACHINE EXTENDED WARRANTY AND CARE.

- JCB Careplus is an extended warranty programme that comes into effect after the machine standard warranty expires.
- JCB Careplus can be purchased within the 1<sup>st</sup> year from the sale of the machine.
- The programme offers you peace of mind and saves your maintenance cost even after your machine standard warranty expires.



Extended Warranty Programme



### BENEFITS OF JCB CAREPLUS



JCB skilled manpower support



Preventive maintenance service\*



Nationwide coverage\*



JCB skilled manpower support



Maximum productivity



Maximum uptime



Maximum performance



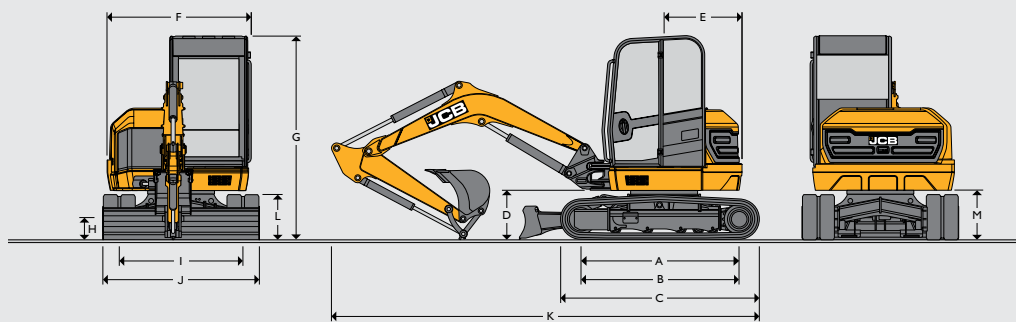
Breakdown cost protection



Better resale value

\*T&C Apply.

## STATIC DIMENSIONS



Machine model		50z	51R	55z
A	Sprocket idler centres	m	1.99	
B	Track length on ground	m	1.99	
C	Undercarriage overall length – steel	m	2.49	
D	Kingpost clearance	mm	631	
E	Tailswing radius	mm	975	975
F	Overall width of superstructure	m	1.82	1.85
G	Height over cab	m	2.55	
H	Ground clearance	mm	300	
I	Track gauge	m	1.55	
J	Width over tracks	m	1.95	
K	Transport length with standard dipper	m	5.35	5.52
L	Track height	mm	560	
M	Counterweight clearance	mm	618	

## ENGINE

		Standard
Machine model		50z, 51R, 55z
Model		Stage 3A 404D-22
Fuel		Diesel
Cooling		Water cooled
Gross power ISO 14396	kW	35.7 (@ 2600rpm)
Net power	kW	33.1 (@ 2600rpm)
Gross torque ISO 14396	Nm	143 (@ 1800rpm)
Displacement	cc	2179
Gradeability	degrees	35
Starter motor	kW	2
Battery	volt / amps	12V / 75Ah
Alternator	amps (Air con)	85

## UNDERCARRIAGE

Machine model		50z	51R	55z
No of top rollers			1	
No of bottom rollers			4	
Track width steel	mm		400	
Ground bearing pressure (400mm tracks)	kg/cm <sup>2</sup>	0.30	0.32	0.35
Ground bearing pressure (550mm tracks)	kg/cm <sup>2</sup>	0.22	0.23	0.25
Track tensioning			Grease	
Travel speed – low	kph		3	
Travel speed – high	kph		4.6	
Tractive effort	kN	35.7	36.5	38.1

## HYDRAULIC SYSTEM

Machine model		50z	51R	55z
Pump	cc		63	
Nominal output @ 2000rpm	lpm		126	
Excavator/track main relief pressure	bar	240		265
Slew main relief pressure	bar		216	
Auxiliary hydraulic pressure (Low)	bar		190	
Auxiliary hydraulic pressure (High)	bar		190	
Auxiliary hydraulic flow (Low)	lpm		40	
Auxiliary hydraulic flow (High)	lpm		90	
Hydraulic pump			Piston	

## WEIGHTS

Machine model		50z	51R	55z
Operating weight* (400mm steel tracks)	kg	4946	5266	5520
Shipping** weight (400mm steel tracks)	kg	4816	5136	5390
Operating weight* (550mm steel tracks)	kg	5068	5388	5642
Shipping** weight (550mm steel tracks)	kg	4938	5258	5512

\* Operating weight to ISO 6016 including cab, steel track, standard dipper, 600mm bucket, full tanks and a 75kg operator.

\*\* Shipping weight to ISO 6016 is mass of the base machine without an operator, with the fuel level at 10% of tank capacity.

Note: Weight for canopy variant would be less by 65 kg.

## SERVICE CAPACITIES

Machine model		50z	51R	55z
Fuel tank	L		76	
Engine coolant	L	12 (Canopy)/13.2 (AC Cabin)		
Engine oil	L		9.1 max	
Hydraulic system	L		100	
Hydraulic tank	L		55	



## OPERATOR ENVIRONMENT

Machine model	50z	51R	55z
Cab/canopy height	m	2.55	
Cab/canopy height with FOGS guard LEVEL I	m	2.58	
Cab/canopy length	m	1.29	
Cab/canopy width	m	1.02	
Door aperture width	mm	552	

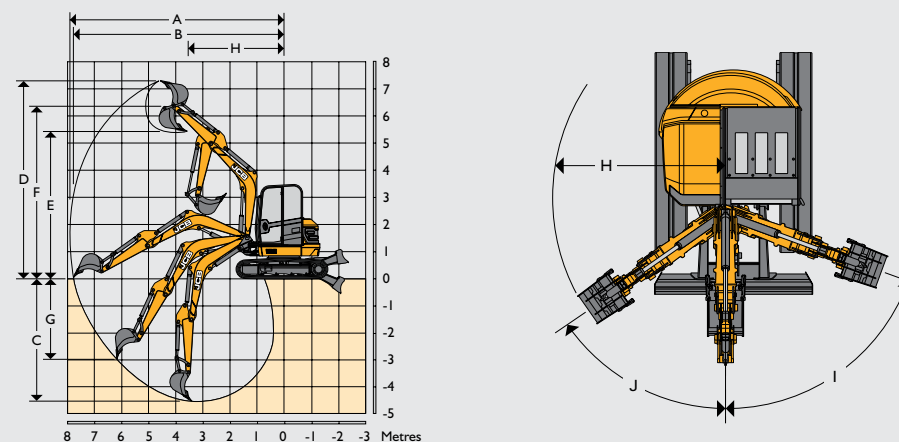
## STANDARD EQUIPMENT

ROPS & TOPS certified canopy, colour LCD display, digital clock, internal lockable toolbox, cup holder, coat hook, storage net, USB port, 12v accessory socket, operator face fan, steel track (400mm), full audio/visual warning systems, auto idle throttle, one touch idle, 4 power bands (light,eco,heavy & heavy plus), ISO servo controls with electro hydraulic dozer lever, electro-proportional thumb controlled high flow single acting auxiliary, joystick mounted hammer switch, neutral start function, full control isolation, 2GO hydraulic isolation, midback suspension seat, removable floormat, 2 speed tracking, auto kickdown track motors, double element air cleaner, heavy duty alternator, heavy duty battery, hydraulic slew braking with disc type park brake, ORFS hydraulics, colour coded hydraulic hoses, 500hrs dig end greasing intervals, heavy duty boom cylinder guard, 100% steel bodyworks, dedicated tie down and lifting points, JCB LiveLink, battery isolator, tool kit, exterior cab mounted mirrors & bushed kingpost.

## OPTIONAL EQUIPMENT

Protected boom worklight, fully glazed ROPS & TOPS certified air-conditioned cab with programmable Intermittent wiper with wash/wipe, 3 speed heater/demister with 8 adjustable air vents, air conditioning with 8 adjustable air vents, track shoe options 550mm steel, arm option (1.45m, 1.57m), buckets (450mm, 600mm, 750mm, 900mm), fan guards, high back seat, quick hitch, hydraulic hammers, travel alarm, grease gun & cartridge, fire extinguisher, interior mirror, electric refuelling pump, duel pattern controls (ISO/SAE change-over) & LED or halogen worklights.

## WORKING RANGE



		50z	51R	55z
Dipper length	m	1.45		1.57
Boom length	m		2.70	2.866
A Max digging reach	m	5.85	5.96	6.2
B Max digging reach on ground	m	5.72	5.83	6.0
C Max digging depth – dozer up	m	3.33	3.45	3.61
Max digging depth – dozer down	m	3.53	3.65	3.84
D Max digging height	m	5.39	5.47	5.66
E Max dump height	m	4.00	4.08	4.27
F Max height to dipper nose pivot pin	m	4.68	4.76	4.97
G Max vertical wallcut depth	m	1.97	2.07	2.05
H Min front swing radius (no offset)	m	2.6	2.63	2.64
Min front swing radius (fully offset)	m	2.12	2.15	2.16
I Boom swing left	degrees		70	
J Boom swing right	degrees		55	
Bucket rotation	degrees		181	
Dipper rotation	degrees		121	
Bucket tearout	kN		38	42
Dipper tearout	kN	22	21	29
Slew speed	rpm		8.3	

## DOZER

Machine model	50z	51R	55z
Dozer length	m	1.14	
Max height above ground	mm	433	
Dig depth below ground	mm	464	
Approach angle	degrees	31	
Width	m	1.96	
Height	mm	400	