

**NEW**

TM320 | TELESCOPIC WHEELED LOADING SHOVEL



## TM320 Telescopic Wheeled Loading Shovel

Gross Power: TM320 (93kW/125hp); TM320S (108kW/145hp); TM320WM (93kW/125hp), Lift Capacity: 3,200kg, Lift Height: 5,200mm



# WHY COMPROMISE?

With the new JCB TM320, TM320S and TM320WM, you won't have to compromise. Class-leading engine power and torque, lift capacity, load-sensing hydraulics and super-fast cycle times redefine performance in a telescopic wheeled loader. The JCB EcoMAX T4i engine needs no additional aftertreatment like a DPF or SCR – ensuring optimum visibility and manoeuvrability. While the luxurious cab, SRS, TorqueLock and joystick-mounted gear changes give unrivalled comfort and efficiency.

While anything else is just a compromise.

**UP TO 12% EFFICIENCY SAVINGS\***

**INCREASED LIFT CAPACITY TO 3200KG**

**DIRECT DRIVE LOCK-UP IN GEARS 2-6\***

**NO ADDITIONAL AFTER TREATMENT**



\* Model dependent



## EFFICIENT DESIGN

**NO SACRIFICE IN VISIBILITY**

**ENHANCED INSTRUMENTATION AND CONTROLS**

**MAX HYDRAULIC FLOW INCREASED TO 160 LPM\***

**ADJUSTABLE ON-THE-GO CONSTANT FLOW HYDRAULICS**

## STRENGTH YOU CAN RELY ON

THE TM320 HAS BEEN DESIGNED AND BUILT FROM SCRATCH TO DELIVER THE STRENGTH AND POWER YOU'RE LOOKING FOR IN AN ARTICULATED MACHINE. NO COMPROMISE.

### Proven reliability

**1** We stress test across a lifetime of cycles to emulate the most arduous digging and dump situations. It's your guarantee of performance over thousands of hours.

**2** To prove how good our EcoMax engines are, we've tested them for 110,000 hours in 70 different machines across the toughest applications and environments.

**3** At JCB, we make our own hydraulic cylinders, cabs, axles, transmissions and engines – all designed to work in perfect harmony for optimum reliability.

### Structural strength

**4** The TM320's tough, inverted-U-shaped boom pressing features fully welded closing plates for ultimate strength, and is mounted into a heavy-duty loader tower.

**5** A heavy-duty centre joint takes both vertical and horizontal loadings for maximum durability and rigidity.

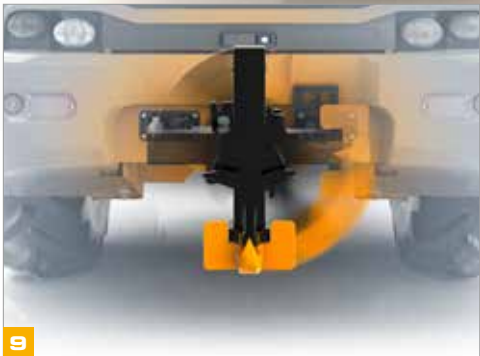
**6** Our high-strength axle mounts provide maximum support and rigidity for the purpose-designed JCB axles.





### Well protected

- 7** The JCB TM320's cast rear counterweight helps prevent impact damage.
- 8** Recessed rear lights mounted above the counterweight are well protected.
- 9** Our fold-up rear hitch design prevents impact damage and grounding when working on gradients or uneven ground.
- 10** The TM320's under-machine protection plates shield the engine and driveline from impact damage.



The hydraulic hoses are routed within the main boom structure to guard against damage.

# THE POWER TO PERFORM

THE CLASS LEADER WHEN IT COMES TO LIFT CAPACITY AND TEAROUT FORCE, COMBINED WITH 5.2M LIFT HEIGHT, 2.9M FORWARD REACH AND THE SUPERB JCB ECOMAX ENGINE. THERE'S NOTHING THE TM320 CAN'T HANDLE.

## JCB EcoMAX Engine

1 TM320 features our EcoMAX T4i engine with variable geometry turbo, giving increased performance at low engine speed for improved cycle times and tractive effort. This 4.4 litre engine delivers a massive 550Nm torque at low engine speeds for optimum response.

For even greater power and performance, the TM320S has the new 4.8-litre 108kw (145hp) EcoMAX T4i engine.

## Traction and travel

2 The JCB TM320 gives you ultimate traction and performance in soft, muddy ground, thanks to optional limited slip differentials and 4WD as standard.

3 JCB's Smooth Ride System (SRS) allows the boom and load to move independently of the chassis for better load retention, increased operator comfort and reduced stress on structures.

When roading, the TM320 also reduces fuel consumption thanks to automatic TorqueLock in fourth, fifth and sixth gears.

Our unique oscillating centre pivot point makes the most of traction by maintaining even weight distribution over each of the four wheels. It also gives extra stability and ride comfort.



### Hydraulics and versatility

**4** The TM320's variable flow auxiliary hydraulics are easy to use, designed to maximise productivity and efficiency.

This flow sharing system with a variable flow piston pump also allows for multiple functions to be performed at the same time, reducing cycle times.

**5** The ability to change flow rate on-the-go is perfect for straw spreader or sweeper use, while the second boom auxiliary option caters for a wide range of attachments.

The TM320S has a new high-flow 160 l/min pump for ultimate productivity.

### Loading and operation

**6** Lock-up in the torque converter is selectable in gears two and three on the TM320S for enhanced efficiency and productivity.

**7** An additional benefit of the TM's articulated steering is the built-in sideshift which makes it easier to position attachments and place loads accurately.

**8** The TM320's foot brake features a selectable transmission dump for superb control when loading or rehandling.



Quickhitch options include pin and cone, JCB Q-fit and industrial type.



# IN CONTROL, IN COMFORT

THE TM320 MAKES LIFE EASIER. FIRST OF ALL, IT'S EASY TO OPERATE THANKS TO ERGONOMIC, INTUITIVE CONTROLS AND INTELLIGENT FEATURES. SECONDLY, IT GIVES A COMFORTABLE ENVIRONMENT TO WORK IN, MAKING OPERATORS MORE PRODUCTIVE.

## At your command

**1** From the high, centrally mounted driving position you're in complete control, with a low boom pivot and large glass areas giving an unhampered 360° view.

Eliminating the need for exhaust after treatment means the TM320's EcoMAX engine is extremely compact, so there's no compromise on either visibility or manoeuvrability.

**2** Constant flow hydraulics are intuitive to use, with an in-cab display of the flow rate which can be adjusted on the go.

**3** The TM320's Smooth Ride System (SRS) is easy to operate via a rocker switch. It can be auto-engaged by travel speed or constantly activated.

**4** Manual and Automatic transmission modes put the operator in control of increased transmission performance.

**5** The operator can also limit proportional auxiliary flow to adapt the TM320 for using specialist attachments.



1



2



1

A seat-mounted single-lever joystick features gear change for ease of use and improved multi-functioning.



3



4



5



### Sitting comfortably

- 6 The TM320 cab is large and roomy with plenty of storage for home comforts and work essentials.
- 7 The TM320 armrest console folds back so you can easily use the right-hand door.
- 8 Boom end damping on lower and retract reduces shock to the operator and the machine itself.

A fully adjustable telescopic steering column allows you to fine tune the driving position.



Also fully adjustable, the supportive mechanical or air suspension seats give real comfort.



## SERVICING MADE EASY

THE TM320 IS LOW MAINTENANCE AND EASY TO SERVICE, WHICH MEANS LESS DOWNTIME, AND MORE WORKING AND EARNING TIME. IT'S ALSO DESIGNED FOR CONSUMMATE SAFETY, PROTECTING BOTH YOU AND YOUR INVESTMENT.

### Maintenance made easy

**1** Most T4i engines use a Diesel Particulate Filter (DPF) or SCR requiring additional AdBlue fluid level maintenance. JCB EcoMAX doesn't, reducing service and running costs.

**2** The wide-core single-faced cooling pack delivers maximum performance and lets small materials pass through for less cleaning.

A cyclonic air cleaner reduces debris build up in the air filter while an air intake scavenge system removes debris, extending service intervals.



**3** TM320's wide-opening rear bonnet gives clear access to service points, grease points are easily accessible and no tools are required to access the battery.

**4** TM320's self-lubricating boom wear pads and dry boom lubrication provides virtually maintenance-free operation.



### Keeping you safe

- 5 TM320 offers superb all-round visibility: high, central driving position; expansive glass panels and roof glass; narrow cab pillars; and sloping rear bonnet.
- 6 Our in-cab, electronic 2-stage quickhitch isolation protects against uncontrolled release of attachments.
- 7 The operator presence switch disables drive on leaving the seat, preventing accidental operation.
- 8 TM320 features a reverse alarm as standard.
- 9 JCB Adaptive Load Control automatically prevents the machine from overturning forwards when handling heavy loads.



# A SMART INVESTMENT

WHEN YOU OWN A JCB, YOU OWN A MACHINE THAT'S RENOWNED FOR HAVING HIGH RESIDUAL VALUES AROUND THE WORLD. COMBINED WITH EFFICIENT DESIGN THAT SAVES YOU MONEY, IT'S A REAL BUSINESS ASSET.

### EcoMAX saves you money

- 1** The TM320 EcoMAX engine uses less fuel than our Tier 3 engines, saving you money.  
The TM320 also saves on service costs – the EcoMax engine doesn't need exhaust after treatment, so it doesn't require costly heat-resistant lube oils.
- 2** EcoMAX also produces high levels of power and torque at engine speeds as low as 1500-1600 rpm for fuel-efficient matching of transmission and hydraulics.

### Even more savings

- 3** TM320's load-sensing hydraulics only consume power on demand, conserving fuel.

### A business asset

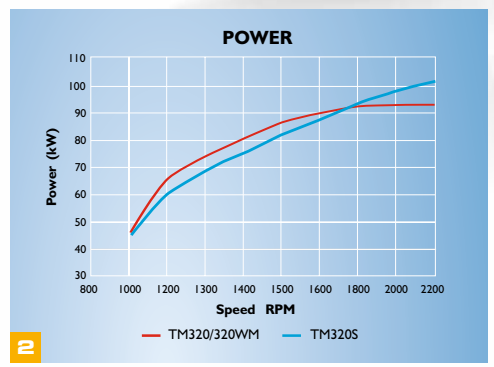
The proven demand for JCB brand machines, supported by our legendary productivity and build quality, equals high residual value.

The TM320s EcoMAX engine can be adapted to run on lower-grade fuels, allowing it to be resold across different territories for further improved residuals.

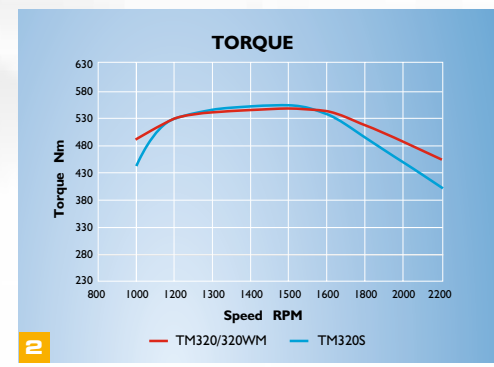


Torque converter locking on the transmission gives 100% efficiency for improved fuel economy.

1



2



2



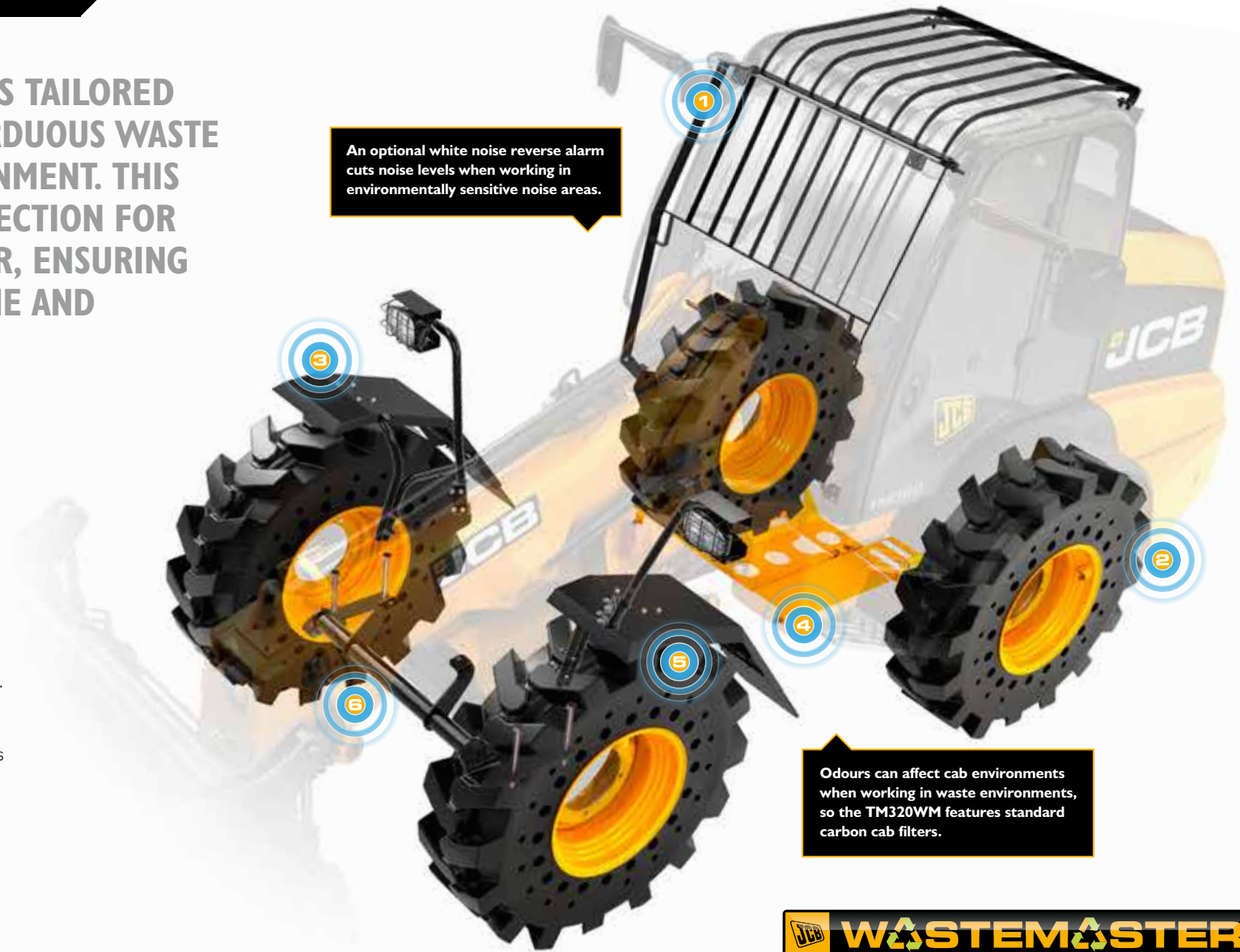
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## ALL-ROUND PROTECTION

THE TM320WM MODEL IS TAILORED SPECIFICALLY FOR THE ARDUOUS WASTE AND RECYCLING ENVIRONMENT. THIS MEANS INCREASED PROTECTION FOR MACHINE AND OPERATOR, ENSURING MAXIMUM SAFETY, UPTIME AND PRODUCTIVITY.

### Total protection

- 1 The TM320WM features front and top window screen guards to give increased protection against falling debris.
- 2 Choose from a wide range of tyres for added puncture resistance and maximum uptime, including Michelin XmineD2 and solid cushion options.
- 3 Front and rear light guards protect against damage.
- 4 Extra-duty under-machine protection and a top boom guard prevent costly impact damage and debris build up.
- 5 Our steel front fender options increase impact resilience.
- 6 The TM320WM's optional front chassis guard protects against impact damage to the front of the machine.



**JCB WASTEMASTER**

## LIVELINK, KNOWLEDGE IS POWER

**JCB LIVELINK IS AN INNOVATIVE SOFTWARE SYSTEM THAT LETS YOU MONITOR AND MANAGE YOUR MACHINES REMOTELY – ONLINE, BY EMAIL OR BY MOBILE PHONE.**

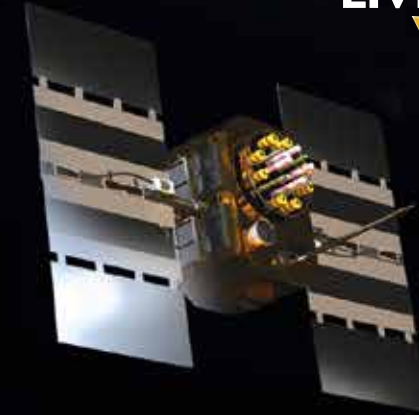
**LIVELINK GIVES YOU ACCESS TO A WHOLE HOST OF USEFUL DATA, INCLUDING MACHINE ALERTS, SERVICE DATA AND EVENT HISTORY INFORMATION. ALL YOUR MACHINE INFORMATION IS HANDLED AT A SECURE DATA CENTRE FOR YOUR PEACE OF MIND.**



### Productivity and cost benefits

Machine location information can improve fleet efficiency and you may even enjoy reduced insurance costs courtesy of the added security that LiveLink brings.

Note : Please consult your local dealer for LiveLink availability



### Maintenance benefits

JCB LiveLink makes it easy to manage machine maintenance. Accurate hours monitoring and service alerts improve maintenance planning, and real-time location data helps you manage your fleet. You'll also have access to critical machine alerts and maintenance history records.



### Security benefits

Keep your machine operating safely with JCB LiveLink. Real-time geofencing alerts tell you when machines move out of predetermined operating zones, and real-time curfew alerts inform you if machines are being used when they're not supposed to be. Real time location information helps you store your machines in the safest places.



## VALUE ADDED

JCB'S WORLDWIDE CUSTOMER SUPPORT IS FIRST CLASS. WHATEVER YOU NEED AND WHEREVER YOU ARE, WE'LL BE AVAILABLE QUICKLY AND EFFICIENTLY TO HELP MAKE SURE YOUR MACHINERY IS PERFORMING TO ITS FULL POTENTIAL.



1

**1** 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.

**2** 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.

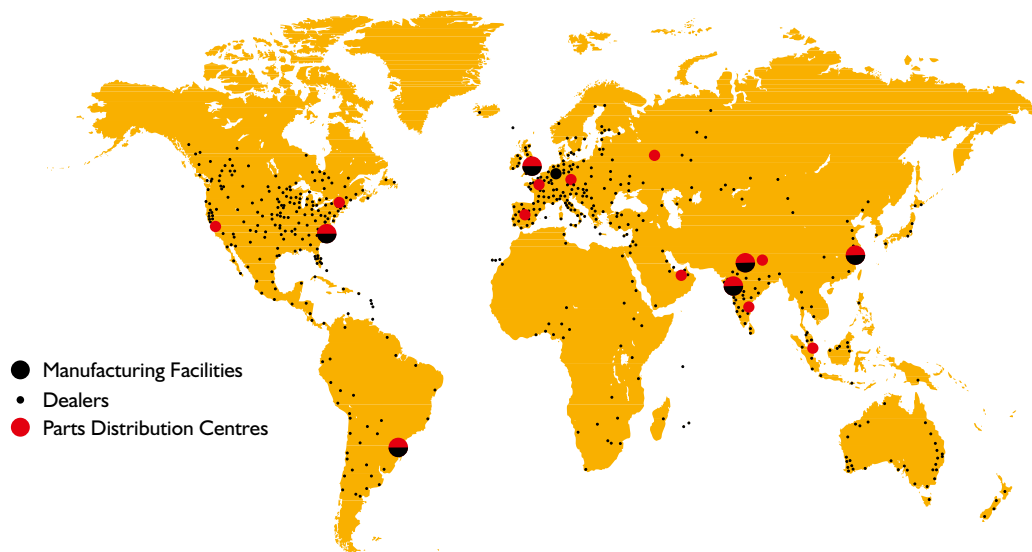


2

**3** 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.

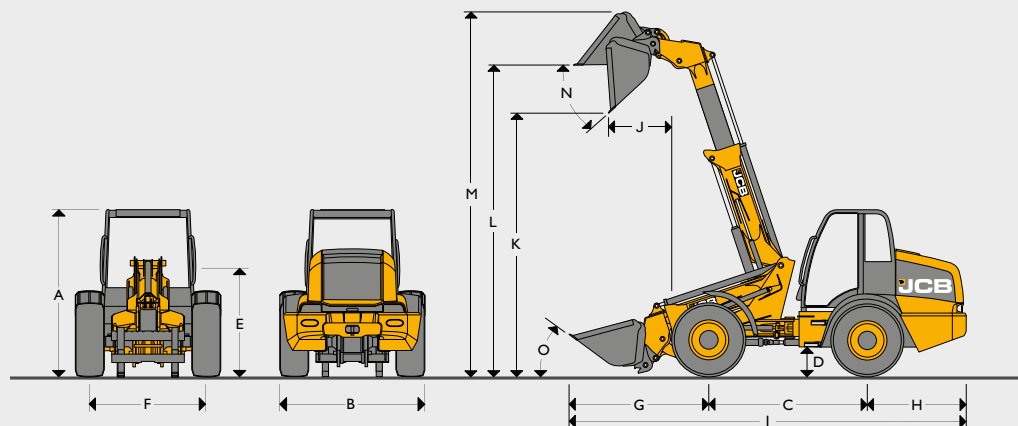


3



TM320/TM320 WM: MAX. ENGINE POWER: 93KW (125HP) MAX. PAYLOAD: 3200KG MAX. LIFT HEIGHT: 5200MM TM320S: MAX. ENGINE POWER: 108KW (145HP) MAX. PAYLOAD: 3200KG MAX. LIFT HEIGHT: 5200MM

STATIC DIMENSIONS



Machine model		TM320/320S	TM320WM
A	Overall Height	mm 2703	2751
B	Overall Width (over tyres)	mm 2350	2264
C	Wheelbase	mm 2550	2550
D	Ground clearance	mm 472	463
E	Height to top of boom pivot	mm 1835	1826
F	Wheel track	mm 1870	1870
G	Axle to shovel toe plate	mm 1627	1627
H	Axle to counterweight face	mm 2143	2143
I	Total length*	mm 6322	6322
J	Dump reach	mm 933	921
K	Dump height	mm 4511	4502
L	Load over height	mm 5182	5173
M	Pin height	mm 5367	5358
N	Max dump angle	degrees 39	39
O	Roll back at carry	degrees 41	41
	Inside Radius	mm 2001	2001
	Outside radius (edge of tyre)	mm 4350	4350
	Outside radius (over shovel)	mm 4633	4633
	Articulation angle	degrees ±43°	±43°
	Operating weight	kg 7780	7930
	Front axle weight	kg 2870	2925
	Rear axle weight	kg 4910	5005
	Tyres used for specifications	Michelin XMCL 460/70 R24	Michelin XTLA 15.5 R25
	Bucket used for specification	1 m <sup>3</sup> GP	1 m <sup>3</sup> GP
	Hitch used for specification	Pin & Cone	Pin & Cone

\*Please note total length: machine fitted with standard bucket – boom fully down, shovel crowded fully back

ENGINE

Machine model		TM320	TM320S	TM320WM
Manufacturer		JCB	JCB	JCB
Model		ECOMAX	ECOMAX	ECOMAX
Capacity	ltr	4.4	4.8	4.4
Bore	mm	103	106	103
Stroke	mm	132	135	132
Aspiration		Turbocharged/charge cooled	Turbocharged/charge cooled	Turbocharged/charge cooled
No. of cylinders		4	4	4
Power rating				
Gross power to SAE J1995/ISO 14396	kW (hp)	93 (125) @ 2200 rpm	108 (145) @ 2200 rpm	93 (125) @ 2200 rpm
Net power to J1349/EEC 80/12	kW (hp)	86 (115) @ 2200rpm	101 (135) @ 2200 rpm	86 (115) @ 2200rpm
Torque rating				
Gross torque	Nm	550 @ 1500 rpm	560 @ 1500 rpm	550 @ 1500 rpm

TRANSMISSION

Machine model		TM320	TM320S	TM320WM
Type		Powershift	Powershift	Powershift
Make		JCB	JCB	JCB
Model		PS760 - 6 Speed	PS760 - 6 Speed	PS760 - 3 Speed
Max travel speed	kph	40	40	20

AXLES

Machine model		TM320	TM320S	TM320WM
Type		Epicyclic hub reduction	Epicyclic hub reduction	Epicyclic hub reduction
Make		JCB	JCB	JCB
Model		Max-Trac	Max-Trac	Max-Trac
Overall axle ratio/ drop box ratio		13.71	13.71	13.71
Chassis angle oscillation	degrees	±10°	±10°	±10°
Max travel speed	kph	40	40	20

BRAKES

Machine model		TM320	TM320S	TM320WM
Service brakes		In board oil immersed brakes	In board oil immersed brakes	In board oil immersed brakes
Parking brake		Cable operated disc brake on transmissions output shaft	Cable operated disc brake on transmissions output shaft	Cable operated disc brake on transmissions output shaft



**SERVICE FILL CAPACITIES**

Machine model		TM320	TM320S	TM320WM
Hydraulic tank & transmission	litres	97	97	97
Fuel Tank	litres	160	160	160
Engine oil sump	litres	14	14	14
Axle oil (front) including hubs	litres	20	20	20
Axle oil (rear) including hubs	litres	20	20	20
Drop box	litres	1.3	1.3	1.3

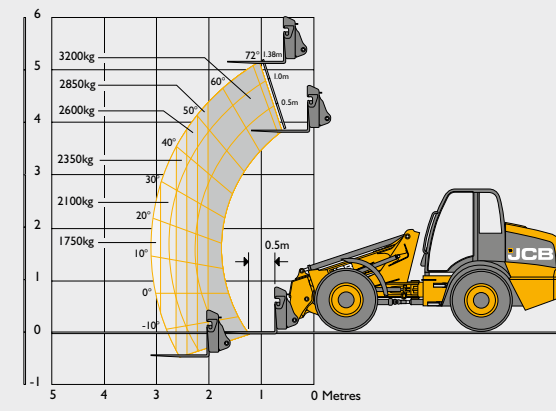
**HYDRAULICS**

Machine model		TM320	TM320S	TM320WM
Pump type		Variable displacement piston pump	Variable displacement piston pump	Variable displacement piston pump
Pump max. Flow	l/min	140	160	140
Pump max. Pressure	bar	230	230	230
<b>Hydraulic cycle times</b>				
Boom Raise	seconds	5.5	5.5	5.5
Boom Lower	seconds	6.0	6.0	6.0
Extend	seconds	3.5	3.4	3.5
Retract	seconds	2.7	2.6	2.7
Bucket Dump	seconds	2.8	2.8	2.8
Bucket Crowd	seconds	2.8	2.8	2.8
Total Cycle Time	seconds	23.3	23.1	23.3

**ELECTRICAL SYSTEM**

Machine model		TM320	TM320S	TM320WM
System voltage	Volt	12	12	12
Alternator output	Amp Hour	95	95	95
Battery capacity	Amp Hour	120	120	120

**LOADER PERFORMANCE**



Machine model		TM320	TM320S	TM320WM
Max lift capacity to full height with forks	kg	3200	3200	3200
Lift capacity at full reach	kg	1750	1750	1750
Lift height	mm	5200	5200	5200
Maximum forward reach	mm	2950	2950	2950
Full turn tipping load - forks with 500mm load centre*	kg	4132 **	4132 **	4132 **
Full turn tipping load - forks calculated @ 80% load factor*	kg	3305 **	3305 **	3305 **
Full turn tipping load - forks calculated @ 60% load factor*	kg	2479 **	2479 **	2479 **
Breakout force - tearout	kg	6260	6260	6260

\*\*Full Turn Tipping Load with forks and direct mount to Q-Fit carriage to EN474 (ISO 14397)

**TYRE OPTIONS**

TM320/TM320S					
Manufacturer	Size	Type	Application	Dimensional changes	
				Overall height (mm)	Width over tyres (mm)
Continental	445/70 R24	AC70G MPT	Ag	-1	-22
Goodyear	15.5/80 R24	Sure Grip	Ag	+2	-74
Goodyear	460/70 R24	IT520	Ag	-7	-31
Goodyear	500/70 R24	IT520	Ag	+18	+38
Goodyear	500/70 R24	IT530	EM	+18	+38
Michelin	440/80 R24	XMCL	Ag	+30	-82
Michelin	460/70 R24	XMCL	Ag	0	0
Michelin	500/70 R24	XMCL	Ag	+24	+38
Michelin	15.5 R25	XHA	EM	-5	-86
Michelin	15.5 R25	XTLA	EM	-9	-86
TM320WM					
Goodyear	500/70 R24	IT530	EM	+27	+124
Michelin	15.5 R25	XHA	EM	+4	0
Michelin	15.5 R25	XTLA	EM	0	0
Michelin	12.0 R24	Xmine D2	Waste	+31	-19
Michelin	12.0 R24	XSM D2+	Waste	+26	-19

## STANDARD/OPTIONAL EQUIPMENT

	TM320	TM320S	TM320WM		TM320	TM320S	TM320WM		TM320	TM320S	TM320WM
<b>Engine and cooling</b>				<b>Cab</b>				<b>Chassis and Bodywork</b>			
125hp JCB Engine	●	X	●	ROPS/FOPS safety structure	●	●	●	Articulated steering	●	●	●
145hp JCB Engine	X	●	X	Laminated screen	●	●	●	Centre pivot oscillation	●	●	●
Cyclonic air filter	●	●	●	Fully adjustable mechanical seat	●	●	●	Plastic front and rear fenders	●	●	●
Air intake scavenge system	●	●	●	Air suspension seat	○	○	○	Steel front fenders	X	X	○
Widecore cooling pack	●	●	●	Interior light	●	●	●	Fixed bottom step	●	●	●
Auto reversing fan	○	○	○	Tilt and telescope steering column	●	●	●	Full width rear counterweight	●	●	●
				Adjustable joystick control console and armrest	●	●	●	Recovery hitch	●	●	●
<b>Transmission / Axles</b>				Front and rear wash/wipe	●	●	●	Prop shaft guard	●	●	●
3 speed powershift transmission	X	X	●	3 speed heater fan	●	●	●	Front chassis cover plate	○	○	●
6 speed powershift transmission	●	●	X	Air conditioning	○	○	○	Rear chassis cover plate	○	○	●
Lock-up torque converter in gears 2 - 6	X	●	X	LH opening door with door lock back	●	●	●	Front chassis protective bumper	○	○	○
Lock-up torque converter in gears 4 - 6	●	X	X	RH opening door with door lock back	●	●	●	Front Screen guard	○	○	●
40kph travel speed	●	●	X	LH Sliding window	○	○	○	Roof screen guard	○	○	●
Transmissions disconnect on footbrake	●	●	●	RH Sliding window	○	○	○	Toothguard	○	○	○
Forward / reverse controls on joystick	●	●	●	Single lever joystick controls	●	●	●	Grease gun and cartridge	○	○	○
Column mounted transmission selector	○	○	○	Loader control isolator	●	●	●	Exterior deluxe mirror	○	○	○
In board oil immersed disc brakes	●	●	●	External rear view mirrors	●	●	●	Choice of hydraulic tow hitch options	○	○	○
Limited slip differentials front and rear	○	○	○	Front and roof screen blinds	●	●	●	Rear electrics	○	○	○
				Fire extinguisher	○	○	○	Trailer braking	○	○	○
<b>Hydraulics</b>				Additional storage box	○	○	○				
Servo controls	●	●	●	<b>Electrical</b>				<b>Loader</b>			
Flow sharing hydraulics	●	●	●	Road lights front and rear	●	●	●	Centre mounted single stage telescopic boom	●	●	●
Proportional boom and auxiliary controls	●	●	●	Reverse lights	●	●	●	Parallel lift	●	●	●
Adjustable constant flow hydraulics	●	●	●	Battery isolator	●	●	●	End damping on boom lower and retract	●	●	●
Variable displacement piston pump	●	●	●	Direction indicators	●	●	●	Pin and Cone carriage (CAT III)	○	○	○
Priority steer valve	●	●	●	Rotating beacon	○	○	○	JCB Q-fit carriage	○	○	○
Hose burst check valves	●	●	●	Front and rear worklights	○	○	○	Industrial carriage	○	○	○
JCB Adaptive Load Control	●	●	●	Boom worklights	○	○	○	Electrical in cab pin isolation	○	○	○
JCB Smoothride system	○	○	○	Twin reverse light kit	○	○	○				
Biodegradable hydraulic oil	○	○	○	Reverse foglight kit	○	○	○				
				Livelink telematics	○	○	○				

● – Standard, ○ – Option, X – Not available

NB. Regional variations may apply to standard and optional equipment





### **TM320 Telescopic Wheeled Loading Shovel**

Gross Engine Power: TM320 (93kW/125hp)

TM320S (108kW/145hp)

TM320WM (93kW/125hp)

Lift Capacity: 3,200kg

Lift Height: 5,200mm

Your nearest JCB dealer