



TELESCOPIC WHEEL LOADER | TM420

Gross power: 108kW (145hp) Lift capacity: 4100kg Lift height: 5450mm







SMART TECHNOLOGY FROM JCB.

JCB'S SMART HYDRAULICS PACKAGE IMPROVES CYCLE TIMES WHILST DELIVERING A REDUCTION IN THE AMOUNT OF FUEL CONSUMED.

Introducing JCB Smart Hydraulics.

JCB's TM420 is enhanced by JCB's new Smart Hydraulics package. High flow auxiliaries and a seatmounted servo joystick brings improved comfort and productivity. These features are in addition to JCB's unique regenerative hydraulics system which improve cycle times whilst reducing the amount of fuel used to move the same amount of material.

Also part of the Smart Hydraulics package are end-of-stroke damping on boom lift, extension/retract and attachment dump cylinder, whilst the Auto SRS further improves comfort and productivity.



Regenerative hydraulics.

Making the most out of every drop of precious fuel, gravitational forces are harnessed to make boom lowering and retract more energy efficient and productive.



Optional Auto SmoothRide System.

Auto SRS engages at speeds of over 2.5mph (4kph). This improves load retention when travelling at speed on roads and fields.



Hydraulic auxiliary venting.

The cab boasts a pressure release button for front and rear hydraulic services ensuring quick and safe changeover of attachments.



High low hydraulics.

High flow pipework gives greater flow to the boom, ideally suited to attachments demanding high flow such as silage defacers and straw spreaders.



Boom end damping.

Improved material retention and smoother cycle work with boom end damping on lift, extend, retract and bucket dump cycles.

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THE POWER TO PERFORM.

THE CLASS LEADER WHEN IT COMES TO LIFT CAPACITY AND TEAROUT FORCE, COMBINED WITH 5.45M LIFT HEIGHT, 3.05M FORWARD REACH AND THE SUPERB JCB ECOMAX ENGINE. THERE'S NOTHING THE TM420 CAN'T HANDLE.

Redefined productivity.

Auto SmoothRide System (SRS) engages at speeds of 2.5mph (4kph). This improves load retention and comfort (and, in turn, productivity) when travelling at speed on roads and fields. The system can be manually engaged with the boom in any position.

TM420 features our JCB EcoMAX engine with variable geometry turbo, giving increased performance at low engine speed for improved cycle times and tractive effort. This 4.8 litre 145hp (108kW) engine delivers a massive 560Nm of torque at low engine speeds for optimum response.

By producing high levels of power and torque even at engine speeds as low as 1300-1400rpm, EcoMAX can provide fuel-efficient matching of transmission and hydraulics.

Our optional hydraulic rear tow hitch further increases machine versatility whilst its fold-up design prevents impact damage and grounding when working on gradients or uneven ground.



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THE **POWER** TO PERFORM

Traction and travel.

The JCB TM420 gives you ultimate traction and performance in soft, muddy ground, thanks to an oscillating front and rear chassis and optional limited slip differentials and 4WD as standard.

C Lock-up in the torque converter is selectable in gears four to six on the TM420 for enhanced efficiency and productivity.

The TM420'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.

Constant flow hydraulics are intuitive to use, with an in cab display of flow rate, which can be adjusted on the go, making it perfect for straw spreader or sweeper use. Large 5/8 auxiliary pipework is fitted as standard allowing greater flow rate down to the attachment.

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STRENGTH YOU CAN RELY ON.

THE TM420 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.

The TM420's stringent testing program has included high stress loading of the chassis, boom and other key components, as well as repeated transmission use over thousands of typical agricultural work cycles.

The centrally mounted lift, tilt and extension rams eliminate boom twisting and are held in place by centrally-mounted keyhole castings for even greater structural integrity.

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

To provide long-term protection, we dip every TM420 cab and various bodywork panels in electrophoretic alloy before painting it.



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STRENGTH YOU CAN RELY ON

Designed to work hard.

The TM420 features heavy duty chassis and boom construction for ultimate strength and reliability.

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

Wide-core cooling pack with optional hydraulic reversing fan removes built up debris. Reverse fan can be set to manual or automatic at a flick of a switch.

C The JCB TM420's cast rear counterweight helps prevent impact damage.

Recessed rear lights mounted above the counterweight are well protected.

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









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IN CONTROL, IN COMFORT.

THE TM420 MAKES LIFE EASIER. FIRST OF ALL, IT'S EASY TO OPERATE THANKS TO ERGONOMIC, INTUITIVE CONTROLS AND INTELLIGENT FEATURES. SECONDLY, THEY PROVIDE A COMFORTABLE ENVIRONMENT TO WORK IN, MAKING OPERATORS MORE PRODUCTIVE.

At your command.

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 degree view.

Por ergonomic, fast and precise control, the TM420 is fitted with a fully proportional single lever seat mounted servo joystick controls.

Joystick-mounted manual gear changes means you can shift gears, speed and direction quickly and easily with one ergonomic control. The TM420 also benefits from automatic gear changes.

Our new HVAC system keeps operators comfortable and focused for longer, the 3-speed fan heater can help create the right working temperature all year round, from the depths of winter to hot harvesting days. Optional air conditioning makes it even easier to find the perfect cab temperature. A selectable transmission dump on the foot brake provides superb multi-functioning and increased engine speeds during loading or rehandling.

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.







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IN CONTROL, IN COMFORT

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Sitting comfortably.

Boom end damping on boom raise, extend, retract and dump reduces shock to the operator and the machine itself.

The TM420 cab is large and roomy with plenty of storage for home comforts and work essentials.

TM420's are fitted with an auxiliary service as standard, ensuring they can be used with a wide range of attachments, ensuring maximum versatility. The cab boasts a pressure release button for the front and rear hydraulic auxiliary services too. A constant flow auxiliary fitted as standard with twin auxiliary optional.

An LED colour screen on the dash provides operators with useful information such as efficient running, fuel remaining, fuel used since last fill, and current average fuel consumption figures.

Backlit switches ensure quick and accurate control recognition, even in the dark.

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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.

JCB's new efficient EcoMAX engine produces its power and torque at low engine speeds for great responsiveness.

The 145hp (108kW) JCB EcoMAX engine is fitted with a variable speed cooling fan that automatically reacts to ambient temperatures, adjusting fan speed to maximise fuel efficiency and reduce in cab noise levels.

High back-off power brakes reduce viscous drag during roading and rehandling, which improves fuel economy.

TM420's load-sensing hydraulics only consume power on demand, conserving fuel.









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A SMART INVESTMENT

EcoMAX saves you money (cont.)

5 Innovative all-new smart regenerative hydraulics helps to make the most of every drop of precious fuel. Gravitational forces are harnessed to make boom lowering and retraction more energy efficient than ever, allowing the boom to retract and lower in less than five seconds!

C The TM420 is fitted with TorqueLock in gears four to six for greater speed, quicker journey times between farm and field, and reduced fuel consumption when roading.







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SERVICING MADE EASY.

THE TM420 IS LOW MAINTENANCE AND EASY TO SERVICE, WHICH MEANS LESS DOWNTIME, AND MORE WORKING AND EARNING TIME. THEY'RE ALSO DESIGNED FOR CONSUMMATE SAFETY, PROTECTING BOTH YOU AND YOUR INVESTMENT.

Maintenance made easy.

Next generation In-Cab display incorporating In-Cab daily checks including coolant level and engine oil level. 500 hour greasing intervals maximise machine uptime courtesy of our graphite inpregnated bronze bushes.

TM420's self-lubricating boom wear pads and dry boom lubrication provides virtually maintenance free operation. TM420's self-lubricating boom wear pads and dry boom lubrication provides virtually maintenance free operation.

Engine oil, hydraulic oil and fuel filters are centrally located for easy servicing. The air filter is easily accessed too, and its double-element design simplifies cleaning.

The TM420 is equipped with a large, wide service bay that's accessed via a gas-assisted bonnet. This setup allows fast and easy inspection around three sides of the engine.











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SAFETY AND SECURITY

Keeping you safe.

Excellent cab access, with three points of contact and ergonomically positioned grab handles and foot step.

Hose burst check valves on the rams prevent collapse if a hose fails.

The low boom profile and low boom pivot make for superb forward visibility.

1 Adaptive Load Control technology automatically controls hydraulic operation, helping to maintain the longitudinal stability of the machine.

LLI In order to protect your investment, the TM420 is available with JCB LiveLink telematics tracking realtime vehicle position as standard with optional immobiliser key.

Doptional rear-view camera displays an unobstructed rearward view on the in-cab colour monitor onboard your TM420.

Our in-cab electric two stage quickhitch isolation protects against accidental release of attachments.











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LIVELINK, WORK SMARTER.

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

LIVEJCBLINK

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 Prese consult your local dealer for Livelink availability

Maintenance benefits – Accurate hours monitoring, maintenance history records, critical machine alerts and service alerts improve maintenance planning. Security benefits – Real-time geofencing lets you set operating zones and curfew alerts that tell you when your machinery outside of pre-determined times. Location information helos you store machines safely.

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.



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.

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.



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.

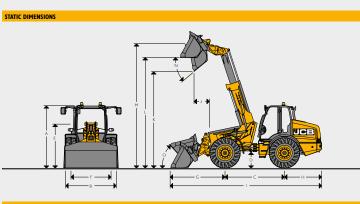
Note: JCB LIVELINK and JCB ASSETCARE may not be available in your region, so please check with your local dealer.

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TM420 TELESCOPIC WHEEL LOADER SPECIFICATION



STAT	TIC DIMENSIONS		
А	Overall height	mm	2827
В	Overall width (over tyres)	mm	2350
С	Wheelbase	mm	2758
D	Ground clearance to bottom of axle	mm	466
Е	Height to top of boom pivot	mm	1975
F	Wheel track	mm	1860
G	Axle to shovel toe plate	mm	2532
Н	Axle to counterweight face	mm	1721
L	Total length*	mm	7011
J	Dump reach	mm	735
Κ	Dump height	mm	4411
L	Load over height	mm	5064
Μ	Pin height	mm	5661
Ν	Maximum dump angle	degrees	39
0	Roll back at carry	degrees	43
	Total length to front of hitch	mm	5829
	Inside radius	mm	3880
	Outside radius (edge of tyre)	mm	5060
	Outside radius (over shovel)	mm	5680
	Articulation angle	deg	±40°
	Operating weight	kg	9530
	Front axle weight	kg	3280
	Rear axle weight	kg	6250
	Tyres used for specifications		Michelin XMCL 480/80R26
	Bucket used for specifications		I.6m3 GP
	Hitch used for specification		Q-Fit

*Please note total length: machine fitted with standard bucket - in carry position, shovel crowded fully back.

- Manue					
ENGINE					100
Manufacturer					JCB
Model					EcoMAX
Capacity				litres	4.8
Aspiration					Turbocharged/charge cooled
Number of cylinders					4
Power rating					
Gross power to SAE J1995/ISO 14	1396			kW (hp)	108 (145) @ 2200 rpm
Net power to J1349/EEC 80/12				kW (hp)	101 (135) @ 2200 rpm
Torque rating					
Gross torque				Nm	560 @ 1500 rpm
TRANSMISSION					
Туре					Powershift
Make					JCB
Model					PS760 - 6 Speed
Max. travel speed				kph	40
AXLES					
Туре					Epicyclic hub reduction
Make					JCB
Model					PD87 Max-Trac
Overall axle ratio/ drop box ratio					15.23
Chassis angle oscillation				degrees	±10°
				8	
BRAKES					
Service brakes					In board oil immersed brakes
Parking brake					Cable operated disc brake on transmission: output shaft
NOISE AND VIBRATION					
			Uncertainty	Measurement condit	
Noise at the operator station	LpA	73 dB	+/- I dB		rdance with the test method defined in ISO 639 condition defined on 2000/14/EC.
Noise emission from the machine	LWA	107 dB	+/- dB		ent sound power (external noise) determined in dynamic test conditions defined in 2000/14/EC
Whole body vibration	m/s²	0.39	+/- 0.11 dB	ISO 2631-1:1997 nd	ormalised to an 8h reference period and based mprising of loader work (soil).
I lead ann cilemtica	1-2	< 2.5	N1/A	. ,	

Hand-arm vibration m/s² < 2.5 N/A ISO 5349-2:2001 dynamic test conditions.

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SPECIFICATION TM420 TELESCOPIC WHEEL LOADER

SERVICE FILL CAPACITIES			
Hydraulic tank	litres	97	
Fuel tank	litres	160	
Engine oil sump	litres	14	
Axle oil (front) including hubs	litres	25	
Axle oil (rear) including hubs	litres	25	
Drop box	litres	1.3	
DEF	litres	29	
Transmission	litres	19	

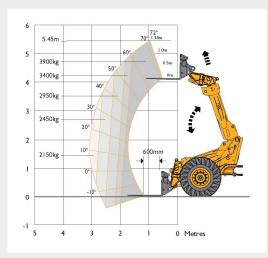
HYDRAULICS		
Pump type		Variable displacement piston pump
Pump maximum flow	I/min	160
Pump maximum pressure	bar	260
Hydraulic cycle times		
Boom raise	seconds	5.1
Boom lower	seconds	4.7
Extend	seconds	3.6
Retract	seconds	3.5
Bucket dump	seconds	2.9
Bucket crowd	seconds	3.4
Total cycle time	seconds	15
ELECTRICAL SYSTEM		
System voltage	Volt	12

Alternator output	Amp Hour	150	
Battery capacity	Amp Hour	120	

TTRE OPTIONS					
Manufacturer	Size	Туре	Application	Dimension	nal changes
manufacturer	Size	туре	Application	Overall height (mm)	Width over tyres (mm)
Michelin	480/80R26	XMCL	AG		
Michelin	480/80R26	BIBLOAD	AG/EM	+8	0
Michelin	620/70R26	CEREXBIB	AG	+7	+201
Michelin	17.5R25	XHA	EM	-54	-19
Michelin	17.5R25	XSNOPLUS	EM	-60	-19
Nokian	17.5R25	LOADER GRIP TL	EM	-42	-20
JCB	17.5R25	EARTHMOVER	EM	-23	-22

LOADER PERFORMANCE - FORK FRAME WITH FORKS		
Maximum lift capacity to full height with forks	kg	4100
Lift capacity at full reach	kg	2250
Lift height	mm	5450
Maximum forward reach	mm	3050
Straight tipping load - forks with 600mm load centre*	kg	6670
Full turn tipping load - forks with 600mm load centre*	kg	5062 **
Full turn tipping load - forks calculated @ 80% load factor*	kg	4050 **
Full turn tipping load - forks calculated @ 60% load factor*	kg	3037 **
Breakout force - tearout	kg	7200

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



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TM420 TELESCOPIC WHEEL LOADER SPECIFICATION

STANDARD/OPTIONAL EQUIPMENT	
ENGINE AND COOLING	
145hp JCB EcoMAX engine	•
Cyclonic air filter	•
Air intake scavenge system	•
Widecore cooling pack	•
Auto reversing fan	+
TRANSMISSION / AXLES	
6 speed Powershift transmission	•
Lock-up torque converter in gears 4 - 6	•
40kph travel speed	•
Transmissions disconnect on footbrake	•
Forward / reverse controls on joystick	•
Column mounted transmission selector	•
In board oil immersed disc brakes	•
Limited slip differentials front and rear	+
HYDRAULICS	
Servo controls	•
Flow sharing hydraulics	•
Proportional boom and auxiliary controls	•
Adjustable constant flow hydraulics	•
Variable displacement piston pump	•
Priority steer valve	•
Hose burst check valves	•
JCB Adaptive Load Control	•
JCB Smoothride system	+
Biodegradable hydraulic oil	+

CAB	
ROPS/FOPS safety structure	•
Laminated screen	•
Fully adjustable mechanical seat	•
Air suspension seat	+
Interior light	•
LED interior light	+
Tilt and telescopic steering column	•
Adjustable joystick control console and armrest	•
Front and rear wash / wipe	•
3 speed heater fan	•
Air conditioning	+
RH opening window with lock back	•
LH opening door with door lock back	•
LH Sliding window	+
Single lever joystick controls	•
Loader control isolator	•
External rear view mirrors	•
Front and roof screen blinds	•
Fire extinguisher	+
Additional storage box	+
Tool box	+
ELECTRICAL	
Road lights front and rear	•
LED road lights front and rear	+
Reverse lights	•
Battery isolator	•
Rotating beacon	+
Twin beacons	+
Four front and four rear worklights	+
LED boom worklights	+
Halogen twin reverse light kit	+
Reverse foglight kit	+
LiveLink telematics	•
LED 360 degree worklights	+
LED Four front and four rear worklights	+
LED tow hitch light	+
12v in-cab power socket	•

Reverse camera with colour screen

HASSIS AND BODYWORK	
astic front and rear fenders	
xed bottom step	
ull width rear counterweight	
ecovery hitch	
rop shaft guard	
Grease gun and cartridge	-
Deluxe exterior mirrors	
lydraulic tow hitch	
ockinger hitch (15000kg)	-
railer electrics	-
railer braking	-
ear auxiliary	H
ear belly guards	+
1id belly guards	+
OADER	
arallel lift	
nd damping on boom lift, extend, retract and bucket dump	
in and Cone carriage (CAT III)	-
CB Q-fit carriage	-
ndustrial carriage	+
lectrical in cab quickhitch pin isolation	
/8" Auxiliary couplers	+
TTACHMENTS	
Grain shovel 4.0m ³	H
Grain shovel 2.7m ³	+
1uck grab 2.4m ³	-
SP shovel 1.6m ³	-
allet forks 1.067mm	-

STANDARD OPTIONAL + NOT AVAILABLE \times

NB. Regional variations may apply to standard and optional equipment

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ONE COMPANY, OVER 300 MACHINES.

Your nearest JCB dealer

Telescopic Wheel Loader TM420

Gross power: 108kW (145hp) Lift capacity: 4100kg Lift height: 5450mm

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