

JCB TELESCOPIC WHEELED LOADERS | TM310, TM310S, TM220 AND TM180

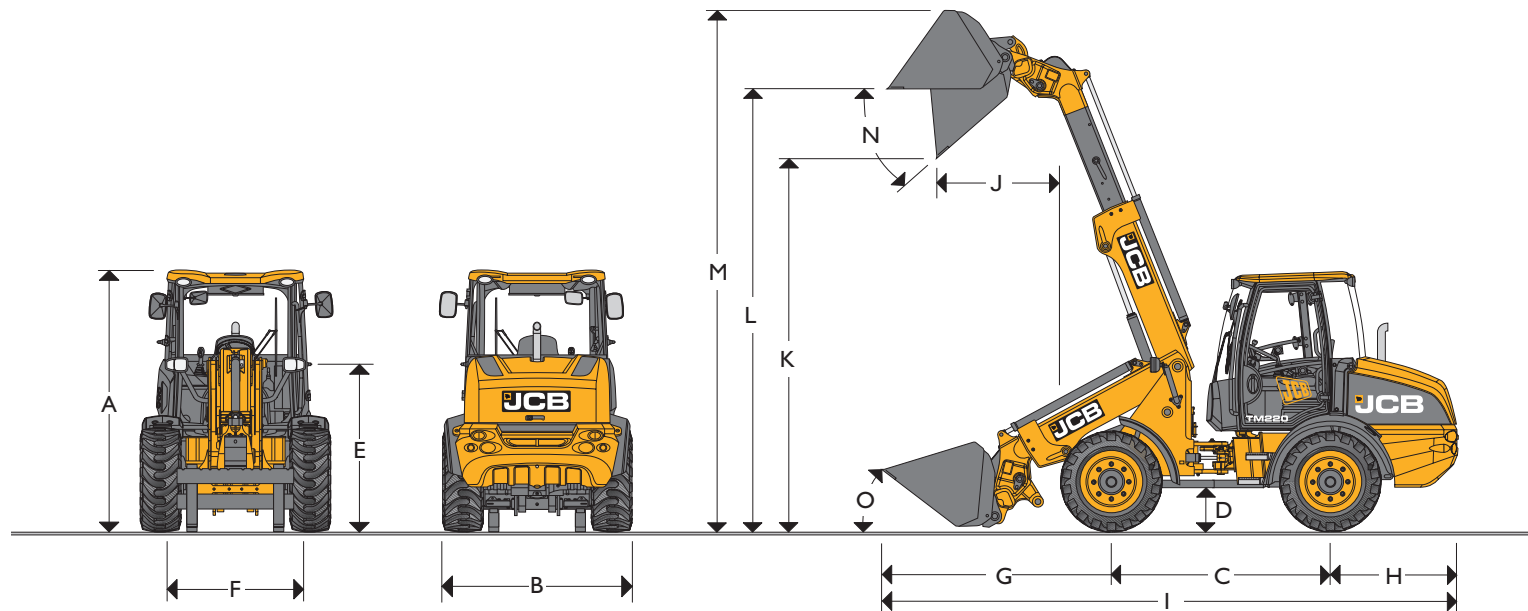


- Incredible versatility is achieved through compact dimensions and the additional lift height provided by a telescopic boom
- The manoeuvrability of articulated steering together with the side-shift function for easy load placing ability gives real spot loading precision
- A spacious cab environment with intuitive controls makes operation simple even for the novice operator
- Daily maintenance can be carried out simply and safely from ground level
- Designed and manufactured to last, only the finest components are carefully selected to give durability and reliability



TELESCOPIC WHEELED LOADER | SPECIFICATION

TM180: MAX. ENGINE POWER: 46kW (62hp) MAX. PAYLOAD: 1800kg (3968lb) MAX. LIFT HEIGHT: 4534mm (14ft 10in) **TM220:** MAX. ENGINE POWER: 56kW (75hp) MAX. PAYLOAD: 2200kg (4580lb) MAX. LIFT HEIGHT: 4562mm (14ft 11in)
TM310/TM310 WM: MAX. ENGINE POWER: 97kW (130hp) MAX. PAYLOAD: 3100kg (6832lb) MAX. LIFT HEIGHT: 5200mm (17ft 11in) **TM310S:** MAX. ENGINE POWER: 108kW (145hp) MAX. PAYLOAD: 3100kg (6832lb) MAX. LIFT HEIGHT: 5200mm (17ft 11in)



STATIC DIMENSIONS

Machine model		TM180	TM220	TM310/310S	TM310 WM
A Overall Height	mm (ft-in)	2477 (8-1)	2678 (8-9)	2703 (8-10)	2751 (9-0)
B Overall Width (over tyres)	mm (ft-in)	1752 (5-9)	1905 (6-3)	2350 (7-9)	2264 (7-5)
C Wheelbase	mm (ft-in)	2200 (7-2)	2205 (7-3)	2502 (8-3)	2502 (8-3)
D Ground clearance	mm (ft-in)	301 (1-0)	329 (1-1)	472 (1-7)	463 (1-6)
E Height to top of boom pivot	mm (ft-in)	1600 (5-3)	1667 (5-5)	1835 (6-0)	1826 (6-0)
F Wheel track	mm (ft-in)	1396 (4-7)	1490 (4-11)	1870 (6-2)	1870 (6-2)
G Axle to shovel toe plate	mm (ft-in)	2535 (8-4)	2498 (8-2)	1677 (5-6)	1677 (5-6)
H Axle to counterweight face	mm (ft-in)	1254 (4-1)	1300 (4-3)	2143 (7-11)	2143 (7-11)
I Total length*	mm (ft-in)	5989 (19-8)	6003 (19-8)	6322 (20-9)	6322 (20-9)
J Dump reach	mm (ft-in)	1235 (4-0)	1175 (3-10)	983 (3-3)	971 (3-2)
K Dump height	mm (ft-in)	3585 (11-9)	3652 (12-0)	4511 (14-10)	4502 (14-9)
L Load over height	mm (ft-in)	4308 (14-1)	4376 (14-4)	5182 (17-0)	5173 (17-0)
M Pin height	mm (ft-in)	4704 (15-5)	4772 (15-8)	5367 (17-7)	5358 (17-7)
N Max dump angle	degrees	43	43	39	39
O Roll back at carry	degrees	43	43	41	41

Machine model		TM180	TM220	TM310/310S	TM310 WM
Inside Radius	mm (ft-in)	2105 (6-10)	2090 (6-10)	2001 (6-7)	2001 (6-7)
Outside radius (edge of tyre)	mm (ft-in)	3955 (12-11)	4030 (13-2)	4350 (14-3)	4350 (14-3)
Outside radius (over shovel)	mm (ft-in)	4480 (14-8)	4755 (15-7)	4633 (15-2)	4633 (15-2)
Articulation angle	degrees	±40°	±40°	±43°	±43°
Operating weight	kg (lb)	5610 (12368)	6080 (13404)	8000 (17637)	8150 (17968)
Front axle weight	kg (lb)	2310 (5093)	2150 (4740)	2980 (6570)	2980 (6570)
Rear axle weight	kg (lb)	3300 (7275)	3930 (8664)	5020 (11067)	5020 (11067)
Specification					
Tyres used for specifications		Michelin XMCL 340/80 R18	Michelin XMCL 400/70 R20	Michelin XMCL 460/70 R24	Michelin XTLA 15.5 R25
Bucket		0.8 m³ GP	0.9 m³ GP	1 m³ GP	1 m³ GP
Hitch		Pin & Cone	Pin & Cone	Pin & Cone	Pin & Cone

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



ENGINE

Machine model		TM180	TM220	TM310	TM310S	TM310 WM
Manufacturer		Deutz	Deutz	JCB	JCB	JCB
Model		D2011 L04i	TD2011 L04i	Dieselmix	Dieselmix	Dieselmix
Capacity	ltr (in ³)	3.62 (220.9)	3.62 (220.9)	4.4 (269)	4.4 (269)	4.4 (269)
Bore	mm (in)	96 (3.7)	97 (3.7)	103	103	103
Stroke	mm (in)	125 (4.9)	126 (4.9)	132	132	132
Aspiration		Naturally aspirated	Turbocharged	Turbocharged/charge cooled	Turbocharged/charge cooled	Turbocharged/charge cooled
No. of cylinders		4	4	4	4	4
Power rating						
Gross power to SAE J1995/ISO 14396	kW (hp)	46 (62) @ 2500 rpm	56 (75) @ 2500 rpm	97 (130) @ 2200 rpm	108 (145) @ 2200 rpm	97 (130) @ 2200 rpm
Net power to J1349/EEC 80/12	kW (hp)	43.5 (58) @ 2500 rpm	53 (72) @ 2500 rpm	92 (124) @ 2200rpm	103 (139) @ 2200 rpm	92 (124) @ 2200rpm
Torque rating						
Gross torque	Nm (lbf ft)	190 (140) @ 1600 rpm	250 (184) @ 1600 rpm	532 (392) @ 1500 rpm	550 (406) @ 1500 rpm	532 (392) @ 1500 rpm

TRANSMISSION

Machine model		TM180	TM220	TM310	TM310S	TM310 WM
Type		Hydrostatic	Hydrostatic	Power shift	Power shift	Power shift
Make		Rexroth	Rexroth	JCB	JCB	JCB
Model		A6VM - 2 Speed	A6VM - 2 Speed	PS760 - 6 Speed	PS760 - 6 Speed	PS760 - 3 Speed
Low range	kph (mph)	6 (3.8)	6 (3.8)	-	-	-
High Range	kph (mph)	20 (12.4)	20 (12.4)	-	-	-
Max travel speed	kph (mph)	20 (12.4)	40 (24.8) - Optional	40 (24.8)	40 (24.8)	20 (12)

AXLES

Machine model		TM180	TM220	TM310	TM310S	TM310 WM
Type		Straight beam	Straight beam	Epicyclic hub reduction	Epicyclic hub reduction	Epicyclic hub reduction
Make		Spicer	Spicer	JCB	JCB	JCB
Model		111	111	Max-Trac	Max-Trac	Max-Trac
Overall axle ratio/ drop box ratio		19.30/2.10	19.30/2.10	13.71	13.71	13.71
Chassis angle oscillation	degrees	± 10°	± 10°	± 10°	± 10°	± 10°

BRAKES

Machine model		TM180	TM220	TM310	TM310S	TM310 WM
Service brakes		In board oil immersed brakes	In board oil immersed brakes	In board oil immersed brakes	In board oil immersed brakes	In board oil immersed brakes
Parking brake		Spring applied, hydraulic release	Spring applied, hydraulic release	Cable operated disc brake on transmissions output shaft	Cable operated disc brake on transmissions output shaft	Cable operated disc brake on transmissions output shaft



BOOM AND CARRIAGE

Boom is manufactured from high tensile steel. Low maintenance, hard wearing pads. One boom end hydraulic service fitted as standard. Safety check valves fitted to carriage tilt; telescopic and boom lift rams. JCB Adaptive Load Control fitted in compliance with EN1500.

SERVICE FILL CAPACITIES

Machine model		TM180	TM220	TM310	TM310S	TM310 WM
Hydraulic tank & transmission	litres (UK gal)	70 (15.4)	70 (15.4)	97 (21)	97 (21)	97 (21)
Fuel Tank	litres (UK gal)	80 (17.6)	80 (17.6)	160 (35)	160 (35)	160 (35)
Engine oil sump	litres (UK gal)	12 (2.6)	12 (2.6)	14 (3.1)	14 (3.1)	14 (3.1)
Axle oil (front) including hubs	litres (UK gal)	4.4 (0.96)	4.4 (0.96)	20 (4.4)	20 (4.4)	20 (4.4)
Axle oil (rear) (*including hubs & drop box)	litres (UK gal)	6.05 (1.33) *	6.05 (1.33) *	20 (4.4)	20 (4.4)	20 (4.4)
Drop box	litres (UK gal)	6.05 (1.33)	6.05 (1.33)	1.3 (0.3)	1.3 (0.3)	1.3 (0.3)

HYDRAULICS

Machine model		TM180	TM220	TM310	TM310S	TM310 WM
Pump type		Tandem gear pump	Tandem gear pump	Variable displacement piston pump	Variable displacement piston pump	Variable displacement piston pump
Pump max. Flow	l/min (UK gal/min)	60 (13.2)	78 (17.1)	140 (30.8)	140 (30.8)	140 (30.8)
Pump max. Pressure	bar (lb/ cubic in)	230 (3335)	250 (3626)	230 (3336)	230 (3336)	230 (3336)
Hydraulic cycle times						
Boom Raise	seconds	6.2	4.3	6.0	6.0	6.0
Boom Lower	seconds	5.1	4.5	4.4	4.4	4.4
Extend	seconds	5.3	3.6	4.0	4.0	4.0
Retract	seconds	4.4	2.9	2.6	2.6	2.6
Bucket Dump	seconds	3.9	3.4	2.6	2.6	2.6
Bucket Crowd	seconds	4.1	2.8	3.0	3.0	3.0
Total Cycle Time	seconds	29.0	21.5	22.6	22.6	22.6

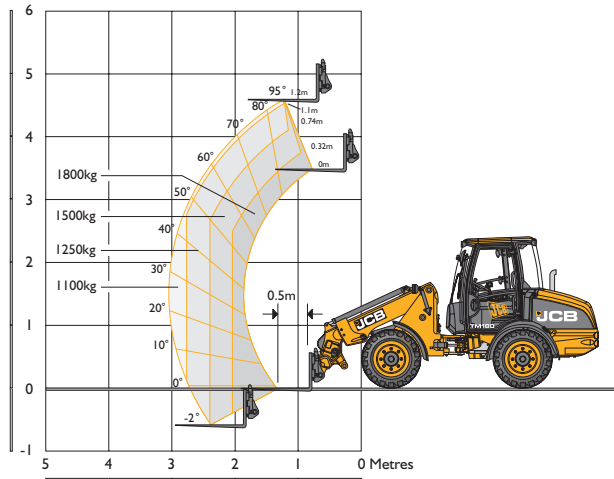
ELECTRICAL SYSTEM

Machine model		TM180	TM220	TM310	TM310S	TM310 WM
System voltage	Volt	12	12	12	12	12
Alternator output	Amp Hour	80	80	95	95	95
Battery capacity	Amp Hour	105	105	120	120	120

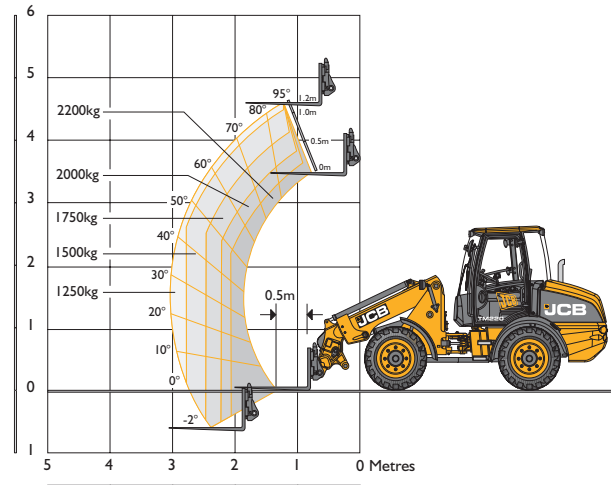
All machines fitted with: Full road lighting, reversing light, direction indicators, battery isolator.

BOOM AND CARRIAGE

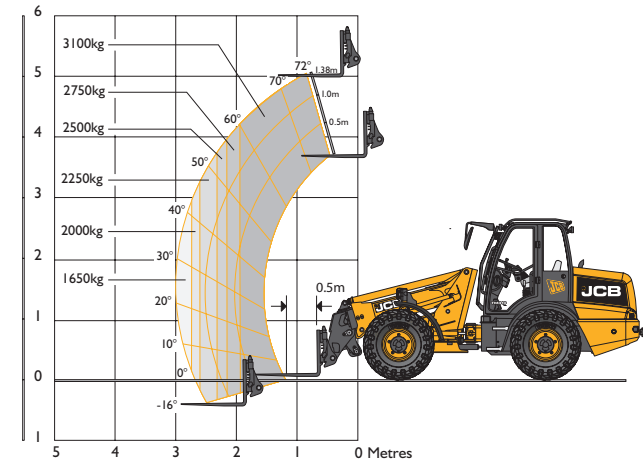
TM180



TM220



TM310 / TM310S / TM310 WM



SERVICE FILL CAPACITIES

Machine model		TM180	TM220	TM310	TM310S	TM310 WM
Max lift capacity to full height with forks	kg (lb)	1800 (3968)	2200 (4850)	3100 (6834)	3100 (6834)	3100 (6834)
Lift capacity at full reach	kg (lb)	1100 (2425)	1250 (2755)	1650 (3638)	1650 (3638)	1650 (3638)
Lift height	mm (ft-in)	4534 (14-10)	4562 (14-11)	5200 (17-0)	5200 (17-0)	5200 (17-0)
Maximum forward reach	mm (ft-in)	3107 (10-2)	3041 (10-0)	3000 (9-10)	3000 (9-10)	3000 (9-10)
Full turn tipping load - forks with 500mm load centre*	kg (lb)	2250 (4960) *	2750 (6062) *	3890 (8576) **	3890 (8576) **	3890 (8576) **
Full turn tipping load - forks calculated @ 80% load factor*	kg (lb)	1800 (3968) *	2200 (4850) *	3112 (6861) **	3112 (6861) **	3112 (6861) **
Full turn tipping load - forks calculated @ 60% load factor*	kg (lb)	1350 (2976) *	1650 (3638) *	2334 (5146) **	2334 (5146) **	2334 (5146) **
Breakout force - tearout	kg (kN)	4140 (40.6)	4990 (48.9)	6260 (61.4)	6260 (61.4)	6260 (61.4)

*Full Turn Tipping Load with forks direct mount to pin and cone quickhitch to EN474 (ISO 14397)

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

STANDARD/OPTIONAL EQUIPMENT

	TM180	TM220	TM310	TM310S	TM310WM
Engine and cooling					
62hp Deutz engine	●	x	x	x	x
75hp turbocharged Deutz engine	x	●	x	x	x
130hp JCB Engine	x	x	●	x	●
145hp JCB Engine	x	x	x	●	x
Cyclonic air filter	●	●	●	●	●
Air intake scavenge system	x	x	○	○	○
Widcore cooling pack	x	x	○	○	●
Auto reversing fan	x	x	○	○	○
Transmission / Axles					
Hydrostatic transmission	●	●	x	x	x
3 speed powershift transmission	x	x	x	x	●
6 speed powershift transmission	x	x	●	●	x
40kph travel speed	x	○	●	●	x
Transmissions disconnect on footbrake	●	●	x	x	x
Forward / reverse controls on joystick	●	●	●	●	●
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	●	●	●	●	●
Gear pump	●	●	x	x	x
Variable displacement piston pump	x	x	●	●	●
Priority steer valve	●	●	●	●	●
Hose burst check valves	●	●	●	●	●
JCB Adaptive Load Control	●	●	●	●	●
JCB Smoothride system	○	○	○	○	○
Hydraulic tank cap lock	○	○	x	x	x
Biodegradable hydraulic oil	○	○	○	○	○

	TM180	TM220	TM310	TM310S	TM310WM
Cab					
ROPS/FOPS safety structure	●	●	●	●	●
Laminated screen	●	●	●	●	●
Fully adjustable mechanical seat	●	●	●	●	●
Air suspension seat	○	○	○	○	○
Interior light	●	●	●	●	●
Tilting steering column	●	●	x	x	x
Tilt and telescope steering column	○	○	●	●	●
Adjustable joystick control console and armrest	x	x	●	●	●
Column and joystick mounted transmission selector	x	x	●	●	●
Front and rear wash/wipe	●	●	●	●	●
3 speed heater fan	●	●	●	●	●
Air conditioning	○	○	○	○	●
LH opening door with door lock back	●	●	●	●	●
RH opening door with door lock back	x	x	●	●	●
RH opening window with lock back	●	●	x	x	x
LH Sliding window	○	○	○	○	○
RH Sliding window	x	x	○	○	○
Single lever joystick controls	●	●	●	●	●
Loader control isolator	●	●	●	●	●
External rear view mirrors	●	●	●	●	●
Front and roof screen blinds	●	●	●	●	●
Fire extinguisher	○	○	○	○	○
Additional storage box	○	○	x	x	x
Electrical					
Road lights front and rear	●	●	●	●	●
Reverse lights	●	●	●	●	●
Battery isolator	●	●	●	●	●
Direction indicators	●	●	●	●	●
Rotating beacon	○	○	○	○	○
Front and rear worklights	○	○	○	○	○
Boom worklights	○	○	○	○	○
Twin reverse light kit	○	○	○	○	○
Reverse foglight kit	○	○	○	○	○
Liveline telematics	○	○	○	○	○

	TM180	TM220	TM310	TM310S	TM310WM
Chassis & Bodywork					
Articulated steering	●	●	●	●	●
Centre pivot oscillation	●	●	●	●	●
Plastic front and rear fenders	●	●	●	●	●
Steel front fenders	x	x	x	x	○
Fixed bottom step	●	●	●	●	●
Full width rear counterweight	●	●	●	●	●
Recovery hitch	●	●	●	●	●
Prop shaft guard	x	x	●	●	●
Front chassis cover plate	x	x	○	○	●
Rear chassis cover plate	x	x	○	○	●
Front chassis protective bumper	x	x	○	○	○
Front Screen guard	○	○	○	○	●
Roof screen guard	○	○	○	○	●
Toothguard	○	○	○	○	○
Grease gun and cartridge	○	○	○	○	○
Exterior deluxe mirror	x	x	○	○	○
Choice of hydraulic tow hitch options	x	x	○	○	○
Rear electrics	x	x	○	○	○
Trailer braking	x	x	○	○	○
Loader					
Centre mounted single stage telescopic boom	●	●	●	●	●
Parallel lift	●	●	●	●	●
End damping on boom lower and retract	●	●	●	●	●
JCB Compact tool carrier	○	○	x	x	x
Eurohitch	○	○	x	x	x
Pin and Cone (CAT II)	○	○	x	x	x
Pin and Cone (CAT III)	x	x	○	○	○
Q-fit	x	x	○	○	○
Electrical in cab pin isolation	○	○	○	○	○

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

NB. Regional variations may apply to standard and optional equipment

TYRE OPTIONS

Tables detail tyre options available.
Dimensional changes stated relative to static machine dimensions.

TM310 / TM310S

Manufacturer	Size	Type	Application	Dimensions	
				Vertical	Width over tyres
				mm (in)	mm (in)
Continental	445/70 R24	AC70G MPT	Ag	-1 (-0.03)	-22 (-0.9)
Goodyear	15.5/80 R24	Sure Grip	Ag	+2 (+0.1)	-74 (-2.9)
Goodyear	460/70 R24	IT520	Ag	-7 (-0.3)	-31 (-1.2)
Goodyear	500/70 R24	IT520	Ag	+18 (+0.7)	+38 (+1.5)
Goodyear	500/70 R24	IT530	EM	+18 (+0.7)	+38 (+1.5)
Michelin	440/80 R24	XMCL	Ag	+30 (+1.2)	-82 (-3.2)
Michelin	460/70 R24	XMCL	Ag	0 (0)	0 (0)
Michelin	500/70 R24	XMCL	Ag	+24 (+0.9)	+38 (+1.5)
Michelin	15.5 R25	XHA	EM	-5 (-0.2)	-86 (-3.4)
Michelin	15.5 R25	XTLA	EM	-9 (-0.4)	-86 (-3.4)

TM310 WM

Manufacturer	Size	Type	Application	Dimensions	
				Vertical	Width over tyres
				mm (in)	mm (in)
Goodyear	500/70 R24	IT530	EM	+27 (+1.1)	+124 (+4.9)
Michelin	15.5 R25	XHA	EM	+4 (+0.2)	0 (0)
Michelin	15.5 R25	XTLA	EM	0 (0)	0 (0)
Michelin	12.0 R24	Xmine D2	Waste	+31 (+1.2)	-19 (-0.7)
Michelin	12.0 R24	XSM D2+	Waste	+26 (+1.0)	-19 (-0.7)

TM220

Manufacturer	Size	Type	Application	Dimensions	
				Vertical	Width over tyres
				mm (in)	mm (in)
Dunlop	405/70 R18	EM SPT9	EM	-20 (-0.8)	-12 (-0.5)
Dunlop	335/80 R20	MPT SPT9	EM	+1 (+0.03)	-89 (-3.5)
Dunlop	365/80 R20	MPT SPT9	EM	+21 (+0.8)	-55 (-2.2)
Dunlop	405/70 R20	MPT SPT9	EM	+14 (+0.6)	-11 (-0.4)
Goodyear	400/70 R20	IT520	Ag	-4 (-0.2)	-21 (-0.8)
Goodyear	16.0/70 R20	SGL	Ag	+4 (+0.2)	-4 (-0.2)
Goodyear	420/75 R20	IT520	Ag	+25 (+1.0)	+6 (+0.2)
Michelin	12.00 R20	X Mine D2	Waste	+25 (+1.0)	+6 (+0.2)
Michelin	375/75 R20	XZSL	EM	0 (0)	-17 (-0.7)
Michelin	380/75 R20	XMCL	Ag	0 (0)	-19 (-0.8)
Michelin	400/70 R20	XMCL	Ag	0 (0)	0 (0)
Michelin	405/70 R20	XMCL	EM	+23 (+0.9)	+6 (+0.2)
Michelin	405/70 R20	XZSL	Ag	+27 (+1.1)	+6 (+0.2)
Nokian	340/80 R18	TRI 2	EM	-28 (-1.1)	-69 (-2.7)
Nokian	360/80 R20	TRI 2	EM	+14 (+0.6)	-55 (-2.2)

TM180

Manufacturer	Size	Type	Application	Dimensions	
				Vertical	Width over tyres
				mm (in)	mm (in)
Dunlop	335/80 R18	EM SPT9	EM	+2 (+0.1)	-25 (-1.0)
Dunlop	365/70 R18	EM SPT9	EM	-8 (-0.3)	+44 (+1.7)
Dunlop	405/70 R18	EM SPT9	EM	+15 (+0.6)	+88 (+3.5)
Goodyear	12.5/80 R18	SGL	Ag	-9 (-0.4)	-46 (-1.8)
Goodyear	400/70 R18	IT520	Ag	+7 (+0.3)	+92 (+3.6)
Michelin	340/80 R18	XMCL	Ag	0 (0)	0 (0)
Michelin	335/80 R18	XZSL	EM	+15 (+0.6)	-11 (-4.3)
Nokian	340/80 R18	TRI 2	EM	+7 (+0.3)	-13 (-0.5)
Solideal	12.5 R18	SLR4	Ag	+24 (+0.9)	-25 (-1.0)



A GLOBAL COMMITMENT TO QUALITY

JCB's total commitment to its products and customers has helped it grow from a one-man business into Britain's largest privately owned manufacturer of backhoe loaders, crawler excavators, wheeled excavators, telescopic handlers, wheeled loaders, dump trucks, rough terrain fork lifts, industrial fork lifts, mini/midi excavators, skid steer loaders, tractors and compaction equipment.

By making constant and massive investments in the latest production technology, the JCB factories have become some of the most advanced in the world.

By leading the field in innovative research and design, extensive testing and stringent quality control, JCB machines have become renowned all over the world for performance, value and reliability.

And with a global sales and service network of more than 750 dealers and agents, we aim to deliver the best customer support in the industry.

Through setting the standards by which others are judged, JCB has become one of the world's most impressive success stories.



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