



NEW

427/437 | WHEELED LOADING SHOVEL

Wheeled Loading Shovel 427/437

427 – Operating weight: 13053kg Gross rated power: 158hp (118kW) Full turn tipping load: 8051kg Standard shovel capacity: 2.4m³
437 – Operating weight: 15255kg Gross rated power: 173hp (129kW) Full turn tipping load: 9055kg Standard shovel capacity: 2.7m³



CLEANER, QUIETER AND MORE EFFICIENT

A quality process pages 4 – 5

Productive performance pages 6 – 7

Efficient by design pages 8 – 9

Comfortably superior pages 10 – 11

Low maintenance, long intervals pages 12 – 13

Drive safely page 14

LiveLink, knowledge is power page 15

Value added page 16

Specification pages 17 – 27



CLEANER, QUIETER AND **MORE EFFICIENT**



A QUALITY PROCESS

We use state-of-the-art manufacturing processes like robot machining, precision paint technology and innovative assembly techniques to achieve the very highest levels of quality.

WE KNOW THAT A WHEELED LOADING SHOVEL IS A KEY PART OF THE ON-SITE PROCESS. THAT'S WHY THE JCB 427 AND 437 ARE BUILT ON A FOUNDATION OF QUALITY AND RELIABILITY. THE PROCESSES WE'VE USED TO DESIGN AND MANUFACTURE THEM WILL SAFEGUARD YOUR WORKING PROCESS, HOUR AFTER HOUR, DAY AFTER DAY.

Quality built in

- 1 Finite element analysis and rig testing ensure superior structural strength and durability. Cold cell testing guarantees starting performance down to -20°C .
- 2 Precision machining provides high tolerances and accurate location of pins and bushes.
- 3 The 427 and 437 can be specified for heavy-duty applications like waste or corrosive material handling.





Well articulated

- 4 The articulation joint has a heavy-duty box section – much stronger than a single plate with a boss. Steering rams are positioned high up and well protected from possible impact and site damage.
- 5 Hoses are neatly routed and clamped through the articulation joint, well away from any pinch points.

Protecting ancillaries

- 6 Recessed rear lights are protected within the solid counterweight casting.
- 7 The rear counterweight and cast quarter pillars protect the cooling pack and the back end of the machine from damage.



The articulation joint has a heavy-duty centre pin and oversized bush, as well as twin taper roller bearings on the bottom box joints. This can tolerate both vertical and horizontal loadings for durability and rigidity.



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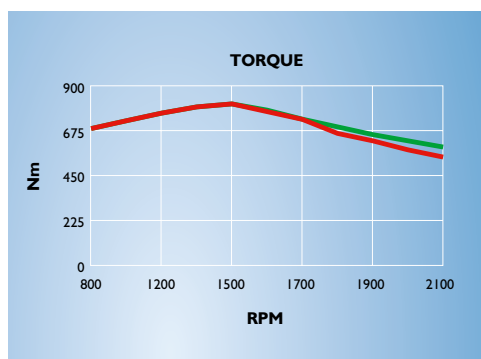
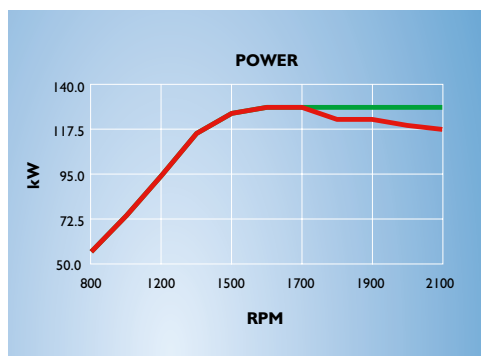
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PRODUCTIVE PERFORMANCE

THE 427 AND 437 CAN PERFORM GREAT FEATS OF PRODUCTIVITY. WITH HIGH POWER AND TORQUE, BOTH MACHINES MEET TIER 4i/STAGE 3B EMISSIONS LEGISLATION WITHOUT NEEDING A DPF OR SCR SYSTEM.



— 427 — 437

Engine productivity

1 The Cummins QSB 6.7 litre engine achieves high power (173hp in the 437 and 158hp in the 427). Peak engine torque of 801 Nm is achieved on both models at low revs for excellent response. The engine is Tier 4i/stage 3b emissions compliant, using an oxidation catalyst but without the need of SCR or a Diesel Particulate Filter.

1 A variable geometry turbocharger provides increased performance at low engine speed for improved cycle times and tractive effort.

Loading productivity

2 JCB's optional quickhitch makes attachment changing quick and efficient. The quickhitch is designed to be compatible with aftermarket attachments too.

3 Powerful twin variable displacement piston pump hydraulics can circulate a massive 264 l/min for fast cycles and excellent multi function capability.



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Loading productivity (continued)

4 You can choose your ideal loader arm on a 427/437, with z-bar linkage (ZX) for high breakout applications or high torque (HT) for parallel lift and multi-attachment use.

5 Choose a HT high lift on the 427 or 437, or super high lift HT on the 437 and you can use the machine for higher loading height applications (hopper and lorry loading).

Drivetrain productivity

5 The 427 and 437's optional 5-speed transmission with torque convertor lock-up provides closer ratios for better acceleration, hill climbing and roading performance. The lock-up element eliminates losses from the torque converter for faster cycle times and improved efficiency.

7 The innovative electronic management 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.

8 With a range of axle options you can tailor a 427/437 to any application.

- › Open differentials are ideal for hard standing ground conditions.
- › Limited slip differential is perfect for soft, muddy terrain with reduced traction.
- › Open differentials with an automatic locking front axle differential provide excellent traction in varied ground conditions.



5

Z bar (ZX)

High Torque (HT)

HT High Lift

HT Super High Lift



4

5

EFFICIENT BY DESIGN

THE JCB 427 AND 437 ARE DESIGNED TO MOVE MORE MATERIAL FOR LESS. TO ACHIEVE THIS, WE'VE DESIGNED THE ENGINE, AXLES, DRIVELINE AND HYDRAULICS TO WORK IN HARMONY WITH EACH OTHER, FOR ULTIMATE EFFICIENCY.

An efficient engine

- 1 Automatic idle returns the engine to 700rpm after 30 seconds of inactivity.
- 2 The 427/437's Eco mode limits engine speed to 1800rpm for reduced fuel consumption. Productivity remains formidable.

Our engine idle shutdown safely applies the brakes and turns the 427/437 off after a programmable amount of time.

An efficient driveline

- 3 Our torque lock-up 5 speed transmission option gives 100% efficiency in gears 2 to 5 for improved fuel consumption. Closer gear ratios provide lower engine speed in each gear.
- 4 Wheel speed braking means the brakes rotate at the same speed as the wheels for heat and drag reduction, as well as improved fuel economy.
- 5 Available on the 427 Agri model is the optional 6-speed gearbox giving optimum gear matching to the application, also features LUC from 2 to 6.



An efficient hydraulic system

E A hydraulic cooling fan automatically reacts to ambient temperature and adjusts the fan speed to optimise cooling and reduce fuel consumption. This also lowers noise.

Z Unloaded spool valves in the valve block mean that arms lower under gravitational, not hydraulic force, reducing fuel consumption.

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



COMFORTABLY SUPERIOR

KEEPING OPERATORS FRESH AND ALERT ALL DAY LONG RESULTS IN INCREASED SAFETY AND PRODUCTIVITY. WITH THAT IN MIND, THE 3M³ CAB IS ROOMY, EASY TO ACCESS, AND QUIET. IT ALSO HAS EXCELLENT VISIBILITY AND INTUITIVE TO USE ERGONOMIC CONTROLS.



In control

1 A tilting and telescopic steering column provides easy adjustment for maximum comfort.

2 A range of loader controls; multi-lever, joystick, or joystick with proportional auxiliary controls.

3 A stylish, modern central dash display combines analogue dials and a colour LCD screen – this can display machine health details, service requirements, operating information and more.



The 427 and 437 have a range of seat options: mechanical or air suspension, vinyl or fabric bases, or even our Actimo XXL option. It's heated with air suspension, lumbar support, armrests, backrest extension and a headrest, all with full adjustment.



A comfortable environment

4 The 427 and 437 have air conditioning and automatic climate control options to create perfect working temperatures.



Exterior comforts

5 3 or 4 spool hydraulics and a quickhitch enable many attachments to be used easily for extra versatility.

6 The selectable loader arm detents mean operators can set loader arm height limitations, return to dig and float functions for improved safety and productivity.

7 JCB Smoothride load suspension limits shock loadings and therefore reduces material spillage and structural stress, as well as increasing operator comfort.

8 A 3-piece laminated front screen provides excellent visibility while interior mirrors, heated exterior mirrors, an optional reverse camera and a sloping rear bonnet give good rearward views.



LOW MAINTENANCE LONG INTERVALS

A WHEELED LOADING SHOVEL NEEDS TO SPEND THE MAXIMUM AMOUNT OF TIME HARD AT WORK. WE'VE DESIGNED THE 427 AND 437 TO DO JUST THAT, WITH LONG SERVICE INTERVALS AND QUALITY COMPONENTS.



Access all areas

- 1 Gain access to the engine bay and cooling pack areas easily with wide-opening gullwing doors.
- 2 The 427 and 437 have a large single faced cooling package for unrivalled quick, easy and safe cleaning.
- 3 Ground level daily check and grease point access makes life easier and safer.

Looking after itself

- 4 An electronic monitoring system relays machine condition giving real time alerts, safeguarding the machine and operator.
- 5 With the optional auto lubrication kit your machine will take care of its own greasing requirements.
- 6 The optional widecore cooling pack and reversing fan will ensure cooling efficiency in environments with large amounts of airborne debris.



Green = standard operation Blue = reverse operation

Quality built in

By using top components in the 427 and 437 (Cummins engine, ZF transmissions and axles, Rexroth pumps and Parker valve blocks), we've built in long service life as standard.

Full hydraulic dual circuit braking with multiple oil immersed disks gives the braking system a virtually maintenance-free lifespan.

Check brake, steering and hydraulic system pressures easily on a 427 and 437 with group test ports.



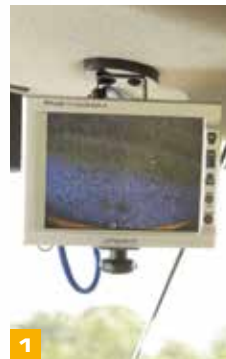
DRIVE SAFELY

THE 427 AND 437 ARE DESIGNED TO KEEP THE OPERATOR SAFE AT ALL TIMES. GREAT VISIBILITY, NON-SLIP SURFACES AND AIR FILTRATION IS JUST THE START.

Safety first

- 1 Our optional rear-view camera displays an unobstructed rear view on an in-cab colour monitor.
- 2 Access steps are inclined and equally spaced, complemented by well positioned grab handles for three points of contact at all times.

- 3 The 427 and 437 have interior mirrors, heated exterior mirrors and bonnet mirrors for superb all round visibility.
- 4 Non-slip walkways and additional grab handle options allow for safe moving around the machine.
- 5 The cab is isolator-mounted, compliant with ROPS/FOPS standards, and positively pressurised against dust. You can choose from fresh air, carbon and P3 – HEPA recirculation filters as well.



LIVELINK, KNOWLEDGE IS POWER

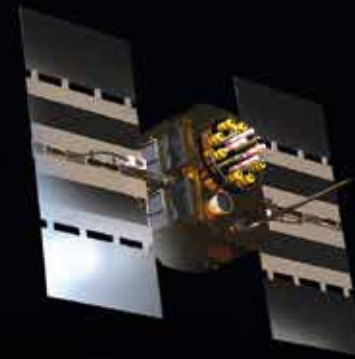
JCB LIVELINK IS AN INNOVATIVE SOFTWARE SYSTEM THAT LETS YOU MONITOR AND MANAGE YOUR MACHINES REMOTELY – ONLINE, BY EMAIL OR BY MOBILE PHONE. LIVELINK GIVES YOU ACCESS TO A WHOLE HOST OF USEFUL DATA, INCLUDING MACHINE ALERTS, FUEL REPORTS* AND EVENT HISTORY INFORMATION. ALL YOUR MACHINE INFORMATION IS HANDLED AT A SECURE DATA CENTRE FOR YOUR PEACE OF MIND.



Productivity and cost benefits

For ultimate productivity and cost-saving, JCB LiveLink provides information like idle time monitoring* and machine fuel consumption* to help reduce your fuel usage. Machine location information can improve fleet efficiency and you may even enjoy reduced insurance costs courtesy of the added security that LiveLink brings.

* These features require an electronic engine.



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.



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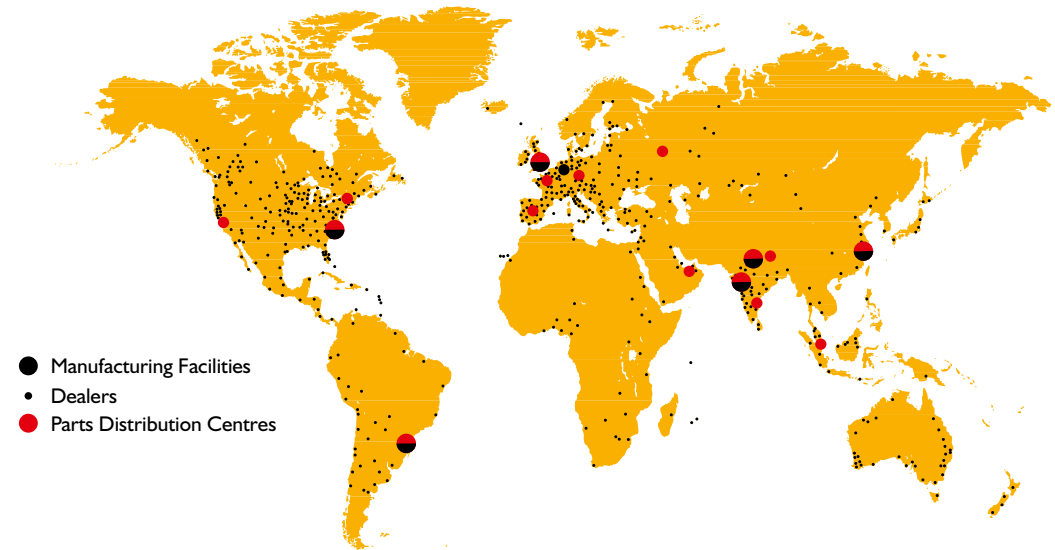
2 The global network of JCB Parts Centres is another model of efficiency; with 16 regional bases, we can deliver around 95% of all parts anywhere in the world within 24 hours. Our genuine JCB parts are designed to work in perfect harmony with your machine for optimum performance and productivity.

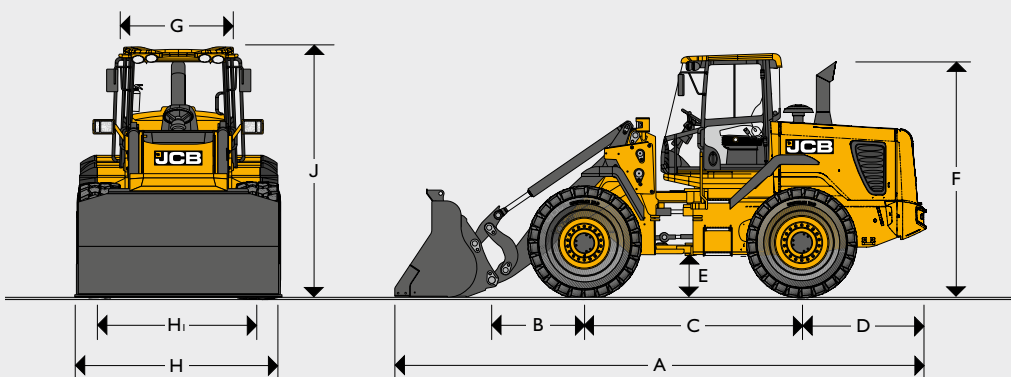


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3 JCB Assetcare offers comprehensive extended warranties and service agreements, as well as service-only or repair and maintenance contracts. Irrespective of what you opt for, our Maintenance teams around the world charge competitive labour rates, and offer non-obligation quotations as well as fast, efficient insurance repair work.

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



STATIC DIMENSIONS – HT (HIGH-TORQUE) STANDARD LIFT ARM
427 Max. engine power: 118kW (158hp) Max. operating weight: 15927kg Standard shovel capacity 2.4m³
437 Max. engine power: 129kW (173hp) Max. operating weight: 18386kg Standard shovel capacity 2.7m³


		427 HT	437 HT
A	Overall length	mm 6831	6926
B	Axle to pivot pin	mm 1096	1143
C	Wheel base	mm 3000	3000
D	Axle to counterweight face	mm 1816	1816
E	Minimum ground clearance	mm 442	459
F	Height over exhaust	mm 3236	3236
G	Width over cab	mm 1400	1400
H	Width over tyres	mm 2482 (2581 HD axles)	2597
H _i	Wheel track	mm 1955	2070
J	Height over cab	mm 3335	3335
	Pin height (maximum)	mm 3906	3996
	Overall operating height	mm 5095	5305
	Front axle weight	kg 5771	6921
	Rear axle weight	kg 6963	7867
	Total weight	kg 12734	14788
	Inside radius	mm 2920	2825
	Maximum radius over shovel	mm 5790	5860
	Articulation angle	degrees ± 40°	± 40°

 427 data based on machine equipped with pin mounted 1.9m³ bucket with toe plates and Michelin 20.5 R25 XHA2 (L3) radial tyres.

 437 data based on machine equipped with pin mounted 2.4m³ bucket with toe plates and Michelin 20.5 R25 XHA2 (L3) radial tyres.

STATIC DIMENSIONS – HT (HIGH TORQUE) HILIFT AND HT (HIGH TORQUE) SUPER HILIFT

		427 HT HL	437 HT HL	437 HT SHL
A	Overall length	mm 7244	7282	7726
B	Axle to pivot pin	mm 1509	1499	2366
C	Wheel base	mm 3000	3000	3000
D	Axle to counterweight face	mm 1816	1816	1816
E	Minimum ground clearance	mm 442	459	459
F	Height over exhaust	mm 3236	3236	3236
G	Width over cab	mm 1400	1400	1400
H	Width over tyres	mm 2581 (HD axles only)	2597	2597
H _i	Wheel track	mm 2070	2070	2070
J	Height over cab	mm 3335	3335	3335
	Pin height (maximum)	mm 4336	4650	5213
	Overall operating height	mm 5525	5959	6522
	Front axle weight	kg 6713	7729	8737
	Rear axle weight	kg 5274	7530	7071
	Total weight	kg 12987	15259	15812
	Inside radius	mm 2825	2825	2825
	Maximum radius over shovel	mm 5985	6000	6196
	Articulation angle	degrees ± 40°	± 40°	± 40°

 427 data based on machine equipped with pin mounted 1.9m³ bucket with toe plates and Michelin 20.5 R25 XHA2 (L3) radial tyres.

 437 data based on machine equipped with pin mounted 2.4m³ bucket with toe plates and Michelin 20.5 R25 XHA2 (L3) radial tyres.

STATIC DIMENSIONS - ZX STANDARD LIFT ARM
427 Max. engine power: 118kW (158hp) Max. operating weight: 16034kg Standard shovel capacity 2.4m³
437 Max. engine power: 129kW (173hp) Max. operating weight: 17922kg Standard shovel capacity 2.7m³

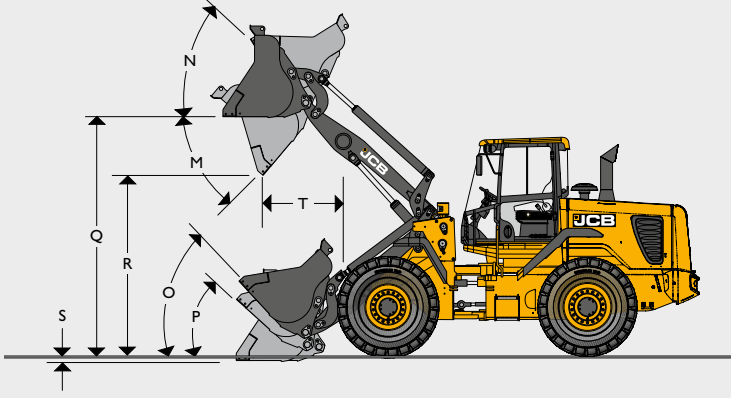
		427 ZX	437 ZX
A	Overall length	mm 6831	7169
B	Axle to pivot pin	mm 1096	1143
C	Wheel base	mm 3000	3000
D	Axle to counterweight face	mm 1816	1816
E	Minimum ground clearance	mm 442	459
F	Height over exhaust	mm 3236	3236
G	Width over cab	mm 1400	1400
H	Width over tyres	mm 2482 (2581 HD axles)	2597
H _i	Wheel track	mm 1955	2070
J	Height over cab	mm 3335	3335
	Pin height (maximum)	mm 3906	3996
	Overall operating height	mm 5095	5305
	Front axle weight	kg 6195	7426
	Rear axle weight	kg 6858	7829
	Total weight	kg 13053	15255
	Inside radius	mm 2920	2825
	Maximum radius over shovel	mm 5790	5900
	Articulation angle	degrees ± 40°	± 40°

 427 data based on machine equipped with pin mounted 1.9m³ bucket with toe plates and Michelin 20.5 R25 XHA2 (L3) radial tyres.

 437 data based on machine equipped with pin mounted 2.4m³ bucket with toe plates and Michelin 20.5 R25 XHA2 (L3) radial tyres.

TYRE SIZE										
427 HT										
Tyre size	Manufacturer	Type	Rating	Op weight kg	Standard arms		Hi Lift Arms		Vertical	Width
					STL kg	FTTL kg	STL kg	FTTL kg		
20.5R25	Michelin	XHA2	L3	0	0	0	0	0	0	0
20.5R25	Michelin	XTLA	L2	-120	-85	-73	-72	-62	-5	5
20.5R25	Michelin	XSNOWPLUS	L2	-84	-59	-51	-51	-43	-9	7
550/65R25	Michelin	XLD	L3	-84	-59	-51	-51	-43	-44	22
20.5R25	Michelin	XLDD2A	L5	464	328	281	280	240	25	7
20.5R25	Michelin	XMINED2	L5	700	495	424	423	362	31	29
620/75R26	Michelin	MEGAXBIB		-332	-235	-201	-172	52	52	44
750/65R26	Michelin	MEGAXBIB		-84	-59	-51	-43	62	62	261
20.5R25	Goodyear	TL-3A+	L3	24	17	15	14	12	3	18
20.5R25	Goodyear	RL-5K	L5	536	379	324	324	277	33	27
620/75R26	Goodyear	DT824		-256	-181	-155	-155	-132	46	71
750/65R26	Goodyear	DT820		36	26	22	22	19	68	297
20.5R25	JCB	Earthmover	L3	92	65	56	56	48	25	-6
20.5R25	Nokian	Loadergrip	L3	-204	-144	-123	-123	-105	12	-6
20.5-25	Goodyear	SGL (12ply)	L2	-244	-173	-148	-147	-126	-9	33
20.5-25	Goodyear	HRL-3A (16ply)	L3	-32	-23	-19	-19	-17	19	37
20.5-25	JCB	Sitemaster (16 ply)	L3	-156	-110	-94	-94	-81	-4	3
20.5-25	SG Revolution Solid Cushion	SE		2304	1630	1394	1392	1190	-43	-6
20.5-25	SG Revolution Solid Cushion	S2C2 DWL		2152	1522	1302	1300	1112	-43	-32
Optional extra counterweight (not available with solid cushion or foam filled tyres)				380	717	593	612	506	-	-
Heavy duty axles (required with 6 speed, solid/foam filled tyres, 750 width agricultural tyres and high lift arms)				330	42	36	36	31	-	99

Please note: if heavy duty axles are required and 99mm width increase is not suitable (shovel width etc.) then narrow width wheel rims are available (standard height arms only)



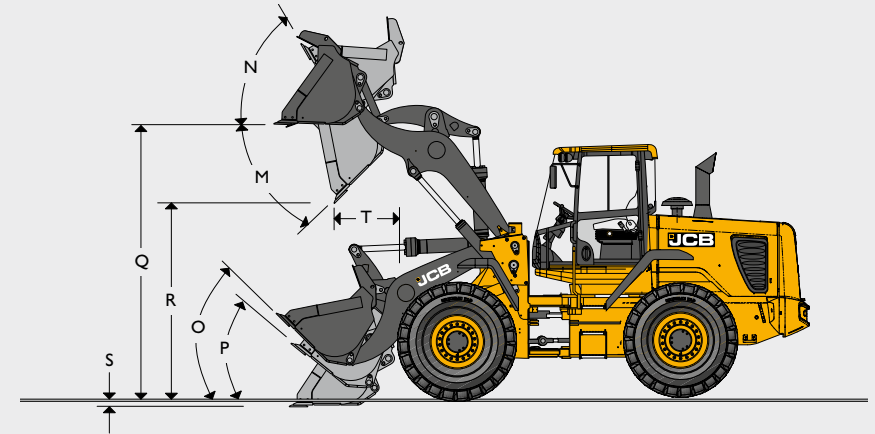
LOADER DIMENSIONS – 427 HT

Assumes machine is fitted with 20.5 R25 Michelin XHA2 tyres.

Model	427 HT – STANDARD HEIGHT ARM														427 HT – HI LIFT ARM										
	Direct							Quickhitch							Direct					Quickhitch					
	General purpose														General purpose										
Bucket mounting	Tipped teeth							Reversible toeplate							Tipped teeth					Reversible toeplate					
Bucket type	Tipped teeth														Reversible toeplate										
Bucket equipment	Tipped teeth		Reversible toeplate		Tipped teeth		Reversible toeplate		Tipped teeth		Reversible toeplate		Tipped teeth		Reversible toeplate		Tipped teeth		Reversible toeplate						
Bucket capacity (SAE heaped)	m ³	1.8	2.0	1.9	2.1	2.4	2.7	1.8	2.0	1.9	2.1	2.4	2.7	1.8	2.0	1.9	2.1	2.4	2.7	1.8	2.0	1.9	2.1	2.4	2.7
Bucket capacity (struck)	m ³	1.556	1.765	1.616	1.830	2.057	2.346	1.554	1.749	1.594	1.787	2.057	2.346	1.556	1.765	1.616	1.830	2.057	2.346	1.554	1.749	1.594	1.787	2.057	2.346
Bucket width	mm	2550	2550	2550	2550	2700	2700	2550	2550	2550	2550	2700	2700	2550	2550	2550	2550	2700	2700	2550	2550	2550	2550	2700	2700
Bucket weight	kg	810	850	810	850	1136	1211	800	850	800	850	1136	1211	810	850	810	850	1136	1211	800	850	800	850	1136	1211
Maximum material density	kg/m ³	2332	2068	2209	1969	1655	1439	2125	1884	2013	1794	1508	1311	1947	1726	1844	1644	1381	1201	1774	1573	1681	1498	1260	1095
Tipping load straight	kg	9819	9797	9819	9797	9334	9147	8983	8859	8983	8859	8554	8384	8199	8180	8199	8180	7794	7638	7501	7397	7501	7397	7142	7000
Tipping load full turn	kg	8396	8271	8396	8271	7944	7774	7650	7537	7650	7537	7243	7085	7010	6906	7010	6906	6633	6491	6388	6293	6388	6293	6048	5916
Payload	kg	4198	4136	4198	4136	3972	3887	3825	3768	3825	3768	3621	3542	3505	3453	3505	3453	3316	3245	3194	3146	3194	3145	3024	2958
Maximum break out force	kN	138	128	138	128	123	115	121	113	121	113	106	99	138	128	138	128	123	115	121	113	121	113	106	99
M Dump angle maximum	degrees	49°	49°	49°	49°	49°	49°	49°	49°	49°	49°	49°	49°	45°	45°	45°	45°	45°	45°	45°	45°	45°	45°	45°	45°
N Roll back angle full height	degrees	58°	58°	58°	58°	58°	58°	58°	58°	58°	58°	58°	58°	58°	58°	58°	58°	58°	58°	58°	58°	58°	58°	58°	58°
O Roll back at carry	degrees	48°	48°	48°	48°	48°	48°	48°	48°	48°	48°	48°	48°	50°	50°	50°	50°	50°	50°	50°	50°	50°	50°	50°	50°
P Roll back at ground level	degrees	43°	43°	43°	43°	43°	43°	43°	43°	43°	43°	43°	43°	48°	48°	48°	48°	48°	48°	48°	48°	48°	48°	48°	48°
Q Load over height	mm	3627	3627	3612	3612	3610	3610	3627	3627	3612	3612	3610	3610	4057	4057	4042	4042	4040	4040	4057	4057	4042	4042	4040	4040
R Dump height (45° dump)	mm	2817	2767	2944	2896	2860	2796	2697	2647	2848	2775	2739	2676	3247	3197	3374	3326	3290	3226	3212	3127	3278	3205	3169	3106
S Dig depth	mm	50	50	47	47	47	47	50	50	47	47	47	47	113	113	110	110	110	110	128	113	110	110	110	110
T Reach at dump height	mm	1071	1121	946	99	1028	1092	1191	1240	1052	1118	1149	1213	1233	1983	1108	1158	1190	1254	1244	1253	1214	1280	1311	1375
Reach maximum (45° dump) – horizontal arm	mm	1818	1868	1693	1743	1775	1839	1938	1987	1800	1865	1896	1960	2166	2216	2041	2091	2123	2187	2177	2286	2148	2213	2244	2308
Operating weight (includes 80kg operator and full fuel tank)	kg	12734	12778	12734	12778	13038	13101	13019	13063	13063	13063	13300	13362	12987	13031	12987	13031	13291	13354	13272	13316	13316	13316	13553	13615

TYRE SIZE									
427 ZX					Standard arms				
Type size	Manufacturer	Type	Rating	Op weight kg	STL kg	FTTL kg	Vertical	Width	
20.5R25	Michelin	XHA2	L3	0	0	0	0	0	
20.5R25	Michelin	XTLA	L2	-120	-85	-73	-5	5	
20.5R25	Michelin	XSNOWPLUS	L2	-84	-59	-51	-9	7	
550/65R25	Michelin	XLD	L3	-84	-59	-51	-44	22	
20.5R25	Michelin	XLDD2A	L5	464	328	281	25	7	
20.5R25	Michelin	XMINED2	L5	700	495	424	31	29	
620/75R26	Michelin	MEGAXBIB		-332	-235	-201	52	44	
620/75R26	Michelin	MEGAXBIB (HD AXLES)		-2	-192	-165	52	143	
750/65R26	Michelin	MEGAXBIB		-84	-59	-51	62	261	
20.5R25	Goodyear	TL-3A+	L3	24	17	15	3	18	
20.5R25	Goodyear	RL-5K	L5	536	379	324	33	27	
620/75R26	Goodyear	DT824		-256	-181	-155	46	71	
620/75R26	Goodyear	DT824 (HD AXLES)		74	-139	-119	46	170	
750/65R26	Goodyear	DT820		36	26	22	68	297	
20.5R25	JCB	Earthmover	L3	92	65	56	25	-6	
20.5R25	Nokian	Loadergrip	L3	-204	-144	-123	12	-6	
20.5-25	Goodyear	SGL (12ply)	L2	-244	-173	-148	-9	33	
20.5-25	Goodyear	HRL-3A (16ply)	L3	-32	-23	-19	19	37	
20.5-25	JCB	Sitemaster (16 ply)	L3	-156	-110	-94	-4	3	
20.5-25	SG Revolution Solid Cushion	SE		2304	1630	1394	-43	-6	
20.5-25	SG Revolution Solid Cushion	S2C2 DWL		2152	1522	1302	-43	-32	
Optional extra counterweight (not available with solid cushion or foam filled tyres)				380	717	593	-	-	
Heavy duty axles (required with 6 speed, solid/foam filled tyres, 750 width agricultural tyres)				330	42	36	-	99	

Please note: if heavy duty axles are required and 99mm width increase is not suitable (shovel width etc.) then narrow width wheel rims are available (standard height arms only)

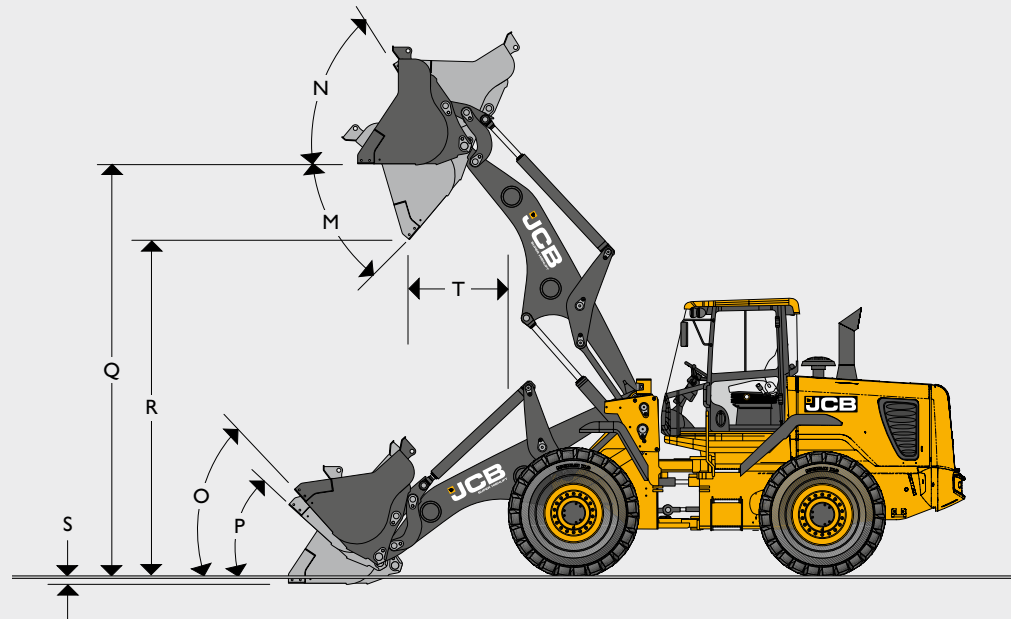


LOADER DIMENSIONS – 427 ZX

Assumes machine is fitted with 20.5 R25 Michelin XHA2 tyres.

Model	427 ZX – STANDARD HEIGHT ARM														
			Direct					Quickhitch							
	Bucket type		General purpose		Penetration		General purpose			General purpose			Reversible toeplate		
	Bucket equipment		Tipped teeth		Reversible toeplate			Tipped teeth			Reversible toeplate				
Bucket capacity (SAE heaped)	m ³	2.0	2.0	1.9	2.1	2.4	2.7	1.8	2.0	1.9	2.1	2.4	2.7		
Bucket capacity (struck)	m ³	1.724	1.724	1.612	1.785	2.057	2.346	1.554	1.749	1.594	1.787	2.057	2.346		
Bucket width	mm	2550	2550	2550	2550	2700	2700	2550	2550	2550	2550	2700	2700		
Bucket weight	kg	1040	1140	925	1040	1262	1329	800	850	800	850	1136	1211		
Maximum material density	kg/m ³	2068	2039	2202	1969	1677	1478	2152	1914	2039	1823	1549	1364		
Tipping load straight	kg	9687	9574	9795	9687	9465	9398	9067	8969	9067	8969	8747	8680		
Tipping load full turn	kg	8273	8159	8370	8273	8051	7984	7748	7659	7748	7659	7437	7370		
Payload	kg	4136	4079	4185	4136	4025	3992	3874	3829	3874	3829	3718	3685		
Maximum break out force	kN	135	135	145	135	129	120	126	118	126	118	113	106		
M Dump angle maximum	degrees	45°	45°	45°	45°	45°	45°	45°	45°	45°	45°	45°	45°		
N Roll back angle full height	degrees	52°	52°	52°	52°	52°	52°	52°	52°	52°	52°	52°	52°		
O Roll back at carry	degrees	44°	44°	44°	44°	44°	44°	44°	44°	44°	44°	44°	44°		
P Roll back at ground level	degrees	35°	35°	35°	35°	35°	35°	35°	35°	35°	35°	35°	35°		
Q Load over height	mm	3645	3640	3640	3640	3638	3638	3645	3645	3640	3640	3638	3638		
R Dump height (45° dump)	mm	2786	2786	2962	2914	2878	2814	2715	2683	2841	2793	2757	2693		
S Dig depth	mm	33	33	30	30	32	32	33	33	30	30	32	32		
T Reach at dump height	mm	1121	1121	946	996	1029	1093	1192	1242	1067	1117	1150	1214		
Reach maximum (45° dump) – horizontal arm	mm	1868	1868	1693	1743	1776	1840	1939	1989	1814	1864	1917	1961		
Operating weight (includes 80kg operator and full fuel tank)	kg	13053	13232	13020	13053	13305	13363	13379	13423	13423	13423	13660	13722		

TYRE SIZE													
437 HT													
Tyre size	Manufacturer	Type	Rating	Op weight kg	Standard arms		HI LIFT Arms		SHL Arms		Vertical	Width	
					STL kg	FTTL kg	STL kg	FTTL kg	STL kg	FTTL kg			
20.5 R25	Michelin	XHA2	L3	0	0	0	0	0	0	0	0	0	
20.5R25	Michelin	XTLA	L2	-120	-81	-69	-66	-56	-56	-48	-5	5	
20.5R25	Michelin	XSNOWPLUS	L2	-84	-57	-48	-46	-39	-39	-33	-9	7	
550/65R25	Michelin	XLD	L3	-84	-57	-48	-46	-39	-39	-33	-44	22	
20.5R25	Michelin	XLDD2A	L5	464	313	268	254	218	216	185	25	7	
20.5R25	Michelin	XMINED2	L5	700	472	404	384	328	326	279	31	29	
620/75R26	Michelin	MEGAXBIB		-332	-224	-191	-182	-156	-154	-132	52	143	
750/65R26	Michelin	MEGAXBIB		-84	-57	-48	-46	-39	-39	-33	62	360	
20.5 R25	Goodyear	TL-3A+	L3	24	16	14	13	11	11	10	3	18	
20.5 R25	Goodyear	RL-5K	L5	536	361	309	294	251	249	213	33	27	
620/75R26	Goodyear	DT824		-256	-173	-148	-140	-120	-119	-102	46	170	
750/65R26	Goodyear	DT820		36	24	21	20	17	17	14	68	396	
20.5 R25	JCB	Earthmover	L3	92	62	53	50	43	43	37	25	-6	
20.5 R25	Nokian	Loadergrip	L3	-204	-138	-118	-112	-96	-95	-81	12	-6	
20.5-25	Goodyear	SGL (12ply)	L2	-188	-127	-108	-103	-88	-87	-75	-9	33	
20.5-25	Goodyear	HRL-3A (16ply)	L3	-32	-22	-18	-18	-15	-15	-13	19	37	
20.5-25	JCB	Sitemaster (16 ply)	L3	-156	-105	-90	-86	-73	-73	-62	-4	3	
20.5-25	SG Revolution Solid Cushion	SE		2304	1553	1329	1263	1081	1072	917	-43	-6	
20.5-25	SG Revolution Solid Cushion	S2C2 DWL		2152	1451	1241	1180	1009	1001	856	-43	-32	
Optional extra counterweight (not available with solid cushion or foam filled tyres)				380	683	565	556	460	471	390	-	-	

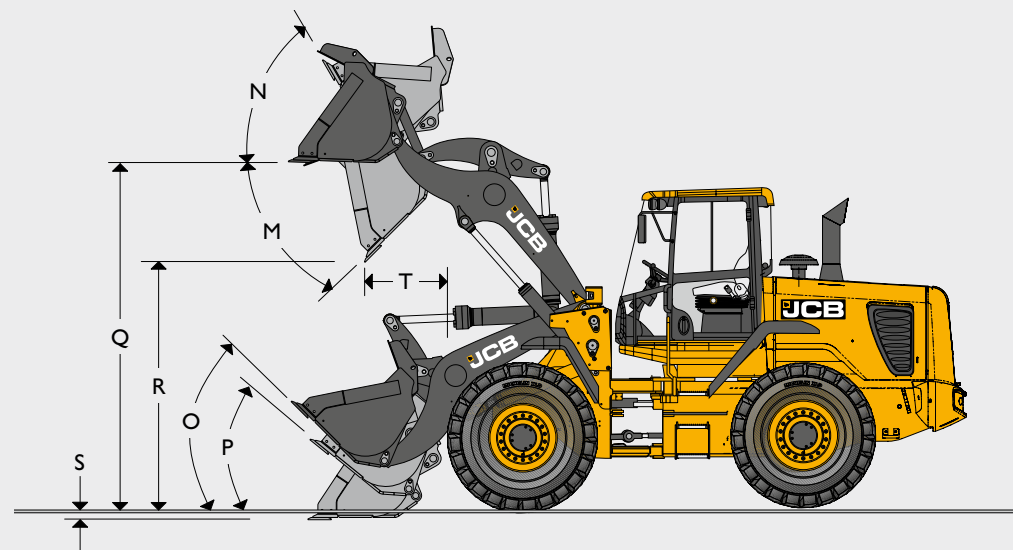


LOADER DIMENSIONS – 437 HT

Assumes the machine is fitted with Michelin 20.5R25 XHA (L3) tyres.

Model	437 HT – STANDARD HEIGHT ARM								437 HT – HI LIFT ARM								437 HT – SUPER HI LIFT ARM								
	Direct				Quickhitch				Direct				Quickhitch				Direct				Quickhitch				
Bucket mounting	General purpose																								
Bucket type	General purpose																								
Bucket equipment	Tipped teeth	Reversible toeplate	Tipped teeth	Reversible toeplate	Tipped teeth	Reversible toeplate	Tipped teeth	Reversible toeplate	Tipped teeth	Reversible toeplate	Tipped teeth	Reversible toeplate	Tipped teeth	Reversible toeplate	Tipped teeth	Reversible toeplate	Tipped teeth	Reversible toeplate	Tipped teeth	Reversible toeplate	Tipped teeth	Reversible toeplate	Tipped teeth	Reversible toeplate	
Bucket capacity (SAE heaped)	m ³	2.3	2.6	2.4	2.7	2.3	2.6	2.4	2.7	2.3	2.6	2.4	2.7	2.3	2.6	2.4	2.7	2.3	2.6	2.4	2.7	2.3	2.6	2.4	2.7
Bucket capacity (struck)	m ³	1.984	2.270	2.057	2.346	1.984	2.270	2.057	2.346	1.984	2.270	2.057	2.346	1.984	2.270	2.057	2.346	1.984	2.270	2.057	2.346	1.984	2.270	2.057	2.346
Bucket width	mm	2740	2740	2700	2700	2740	2740	2700	2700	2740	2740	2700	2700	2740	2740	2700	2700	2740	2740	2700	2700	2740	2740	2700	2700
Bucket weight	kg	1151	1224	1163	1236	1124	1199	1136	1211	1151	1224	1163	1236	1124	1199	1136	1211	1151	1224	1163	1236	1124	1199	1136	1211
Maximum material density	kg/m ³	2082	1814	1995	1747	1958	1706	1876	1642	1582	1379	1516	1327	1488	1396	1426	1248	1288	1123	1235	1081	1212	1055	1161	1016
Tipping load straight	kg	11467	11310	11467	11310	10828	10676	10828	10676	8715	8595	8715	8595	8229	8114	8229	8114	7247	7148	7247	7148	6843	6747	6843	6747
Tipping load full turn	kg	9578	9436	9578	9436	9009	8870	9009	8870	7279	7171	7279	7171	6847	6741	6847	6741	592	5841	5929	5841	5576	5490	5576	5490
Payload	kg	4789	4718	4789	4718	4504	4435	4504	4435	3639	3585	3639	3585	3423	3370	3423	3370	2964	2920	2964	2920	2788	2745	2788	2745
Maximum break out force	kN	147	134	147	134	131	122	131	122	147	134	147	134	131	122	131	122	153	139	153	139	136	124	136	127
M Dump angle maximum	degrees	50°	50°	50°	50°	50°	50°	50°	50°	45°	45°	45°	45°	45°	45°	45°	45°	50°	50°	50°	50°	50°	50°	50°	50°
N Roll back angle full height	degrees	58°	58°	58°	58°	58°	58°	58°	58°	60°	60°	60°	60°	60°	60°	60°	60°	58°	58°	58°	58°	58°	58°	58°	58°
O Roll back at carry	degrees	48°	48°	48°	48°	48°	48°	48°	48°	54°	54°	54°	54°	54°	54°	54°	54°	48°	48°	48°	48°	48°	48°	48°	48°
P Roll back at ground level	degrees	43°	43°	43°	43°	43°	43°	43°	43°	45°	45°	45°	45°	45°	45°	45°	45°	43°	43°	43°	43°	43°	43°	43°	43°
Q Load over height	mm	3755	3755	3755	3755	3755	3755	3755	3755	4409	4409	4409	4409	4409	4409	4409	4409	4976	4976	4976	4976	4976	4976	4976	4976
R Dump height (45° dump)	mm	2806	2742	2974	2883	2721	2657	2862	2798	3460	3396	3628	3537	3375	3311	3516	3452	4023	3959	4191	4100	3938	3874	4079	4015
S Dig depth	mm	132	132	106	106	132	132	106	106	127	127	101	101	127	127	101	101	105	105	79	79	105	105	79	79
T Reach at dump height	mm	1148	1207	1044	1103	1225	1283	1121	1179	1148	1207	1044	1103	1225	1283	1121	1179	1172	1231	1068	1127	1249	1307	1145	1230
Reach maximum (45° dump) – horizontal arm	mm	1987	2051	1883	1947	1772	2136	1968	2032	2477	2541	2373	2437	2262	2626	2458	2522	2952	3016	2848	2912	2737	3101	2933	2997
Operating weight (includes 80kg operator and full fuel tank)	kg	14778	14851	14788	14851	14813	15050	14813	15050	15259	15322	15259	15322	15284	15521	15284	1552	15812	15875	15812	15875	15837	16074	15837	16074

TYRE SIZE								
437 ZX					Standard arms			
Tyre size	Manufacturer	Type	Rating	Op weight kg	STL kg	F TTL kg	Vertical	Width
20.5R25	Michelin	XHA2	L3	0	0	0	0	0
20.5R25	Michelin	XTLA	L2	-120	-81	-69	-5	5
20.5R25	Michelin	XSNOWPLUS	L2	-84	-57	-48	-9	7
550/65R25	Michelin	XLD	L3	-84	-57	-48	-44	22
20.5R25	Michelin	XLDD2A	L5	464	313	268	25	7
20.5R25	Michelin	XMINED2	L5	700	472	404	31	29
620/75R26	Michelin	MEGAXBIB		-332	-224	-191	52	143
750/65R26	Michelin	MEGAXBIB		-84	-57	-48	62	360
20.5R25	Goodyear	TL-3A+	L3	24	16	14	3	18
20.5R25	Goodyear	RL-5K	L5	536	361	309	33	27
620/75R26	Goodyear	DT824		-256	-173	-148	46	170
750/65R26	Goodyear	DT820		36	24	21	68	396
20.5R25	JCB	Earthmover	L3	92	62	53	25	-6
20.5R25	Nokian	Loadergrip	L3	-204	-138	-118	12	-6
20.5-25	Goodyear	SGL (12ply)	L2	-188	-127	-108	-9	33
20.5-25	Goodyear	HRL-3A (16ply)	L3	-32	-22	-18	19	37
20.5-25	JCB	Sitemaster (16 ply)	L3	-156	-105	-90	-4	3
20.5-25	SG Revolution Solid Cushion	SE		2304	1553	1329	-43	-6
20.5-25	SG Revolution Solid Cushion	S2C2 DWL		2152	1451	1241	-43	-32
Optional extra counterweight (not available with solid cushion or foam filled tyres)				380	683	565	-	-



LOADER DIMENSIONS – 437 ZX

Assumes the machine is fitted with Michelin 20.5R25 XHA (L3) tyres

Model	437 ZX – STANDARD HEIGHT ARM									
	Bucket type	General purpose			Direct	General purpose		Quickhitch		
		Tipped teeth		Penetration	Penetration	Reversible toeplate		General purpose		Reversible toeplate
Bucket equipment		Tipped teeth			Reversible toeplate		Tipped teeth		Reversible toeplate	
Bucket capacity (SAE heaped)	m ³	2.3	2.6	2.6	2.4	2.7	2.3	2.6	2.4	2.7
Bucket capacity (struck)	m ³	1.984	2.274	2.274	2.057	2.346	1.984	2.274	2.057	2.346
Bucket width	mm	2740	2740	2740	2700	2700	2740	2740	2700	2700
Bucket weight	kg	1250	1317	1361	1262	1329	1124	1199	1136	1211
Maximum material density	kg/m ³	1999	1744	1752	1913	1676	1908	1664	1811	1600
Tipping load straight	kg	11057	10911	10953	11044	10898	10551	10404	10451	10388
Tipping load full turn	kg	9199	9069	9110	9185	9055	8778	8656	8694	8643
Payload	kg	4599	4535	4555	4592	4527	4389	4328	4347	4321
Maximum break out force	kN	176	162	162	176	162	157	144	157	144
M Dump angle maximum	degrees	47°	47°	47°	47°	47°	47°	47°	47°	47°
N Roll back angle full height	degrees	58°	58°	58°	58°	58°	58°	58°	58°	58°
O Roll back at carry	degrees	45°	45°	45°	45°	45°	45°	45°	45°	45°
P Roll back at ground level	degrees	37°	37°	37°	37°	37°	37°	37°	37°	37°
Q Load over height	mm	3755	3755	3755	3755	3755	3755	3755	3755	3755
R Dump height (45° dump)	mm	2824	2759	2759	2965	2833	2739	2674	2880	2748
S Dig depth	mm	131	131	131	105	105	131	131	105	105
T Reach at dump height	mm	1248	1312	1312	1144	1103	1333	1397	1229	1188
Reach maximum (45° dump) – horizontal arm	mm	2000	2064	2064	1896	1947	2077	2141	1973	2024
Operating weight (includes 80kg operator and full fuel tank)	kg	15255	15313	15380	15255	15313	15373	15329	15373	15610

ENGINE – 427/437

6-cylinder, charge air cooled, variable geometry turbocharged, electronically controlled high pressure common rail injection, cooled exhaust gas recirculation and diesel oxidation catalyst. A remote sump oil drain facility simplifies servicing.

		427	437
Type		4 stroke direct injection	4 stroke direct injection
Model		QSB6.7	QSB6.7
Capacity	litres	6.7	6.7
Aspiration		Turbo charged	Turbo charged
Cylinders		6	6
Max gross power to SAE J1995/ISO 14396	kW (hp) @ 1600rpm	129 (173)	129 (173)
Rated gross power to SAE J1995/ISO 14396	kW (hp) @ 2100rpm	118 (158)	129 (173)
Nett power to SAE J1349/EEC 80/1269	kW (hp) @ 2100rpm	109 (146)	119 (160)
Max torque	Nm @ 1500rpm	801	801

Emissions:- US EPA Tier 4i, EU Stage IIIB

TRANSMISSION – 427/437

4 wheel drive, automatic smooth shift transmission electrically operated selector and gear change incorporating a speed inhibitor and modulation for smooth, responsive on-the-move direction and ratio changes. Single stage integral torque converter. 4 forward and 3 reverse gears. Optional 5 speed with (LUC) lock-up torque converter available, 6 speed with lock-up torque converter available on 427 AGRI only.

Gearbox options

	427	427	427	437	437
Gear	(4WG160) 4 Speed	(5WG160) 5 Speed + LUC	(6WG160) 6 Speed + LUC	(4WG190) 4 Speed	(5WG190) 5 Speed + LUC
1	6.67	6.93	6.32	6.87	7.05
2	12.97	12.38	9.83	12.82	12.8
3	23.25	19.05	15.07	24.58	19.6
4	37.92	28.45	23.19	37.88	30.28
5	–	40.00	34.66	–	40.00
6	–	–	40.00	–	–

AXLES – 427/437**427**

Type		Open, limited slip or automatic differential locking
Make & model	Standard fit	ZF MT-L 3075 II (front) ZF MT-L 3065 II (rear)
	Heavy duty	ZF MT-L3085 II (front) ZF MT-L3065 II (rear)
Overall axle ratio		21.53:1
Rear axle oscillation		21° (standard), 18° (heavy duty)
Weight	Front axle (standard)	780 kg
		785 kg
	Rear axle (heavy duty)	1080 kg
		785 kg

437

Type		Open, limited slip or automatic differential locking
Make & model	Standard fit	ZF MT-L3085 II (front) ZF MT-L 3075 II (rear)
		20.184:1 (front) 20.365:1 (rear)
Overall axle ratio		21°
Rear axle oscillation		21°
Weight	Front axle (standard)	1080 kg
	Rear axle (standard)	815 kg

Bias Ratio: Open differential- 12%, limited slip differential- 30%, open differential with locking front- 100%

STEERING

Priority steer hydraulic system with emergency steering. Piston pump meters flow through steer valve @ 190 bar (2756 psi) to provide smooth low effort response. Steering angle \pm 40°. Steer rams located high in the chassis fabrication to provide protection from damage. Adjustable steering column.

BRAKES

Hydraulic power braking on all wheels, operating pressure 60 bar (870psi). Dual circuit with accumulator back-up provide maximum safety under all conditions. Hub mounted, oil immersed, multi-plate disc brakes with organic brake linings are environmentally acceptable. Also available with sintered-linings for increased wear resistance, recommended in re-handling duties with extensive forward/reverse shuttling. Parking brake, mechanical type operating on transmission output shaft.

TYRES

20.5-25 SGL (L2), 20.5 R25 XTLA (L2), 20.5 R25 XSNOWPLUS (L2), 20.5 R25 LOADERGRIP (L2), 20.5-25 JCB SITEMASTER (L3), 20.5-25 HRL (L3), 20.5 R25 XHA2 (L3), 20.5 R25 RT-3B (L3) 20.5 R25 TL-3A (L3), 20.5 R25 EARTHMOVER (L3), 550/65 R25 XLD (L3), 20.5 R25 XLDD2A (L5T), 20.5 R25 XMINED2 (L5), 20.5 R25 RL-5K, 20.5-25 SG REVOLUTION SOLID CUSHION (DWL OR SE), 620/75 R26 MEGAXBIB, 620/75 R26 DT824, 750/65 R26 MEGAXBIB, 750/65 R26 DT824.

ELECTRICAL SYSTEM – 427/437 HT

24 volt negative ground system, 70 Amp alternator with 2 x 110 Amp hour low maintenance batteries. Isolator located in rear of machine. Ignition key start/stop and pre-heat cold start. Primary fuse box. Other electrical equipment includes quartz halogen, twin filament working lights, front/rear wash/wipe, heated rear screen, full road going lights, clock, gauge and warning light monitoring. Connectors to IP67 standard.

		427	437
System voltage	Volt	24	24
Alternator output	Amp hour	70	70
Battery capacity	Amp hour	2 x 110	2 x 110

LOADER – 427/437 HT

Widely spaced four ram geometry provides the combination of excellent visibility with high bucket torque characteristics throughout the working arc. The pin, bush and sealing design on all pivot points provide extended maintenance intervals.

LOADER HYDRAULICS – 427/437 HT

Twin variable displacement piston pumps feed a "load sensing" system providing a fuel efficient and responsive distribution of power as required. Main services are servo actuated from a single lever (joystick) loader control or separate multi-levers. Auxiliary circuits (3 or 4) controlled via additional lever next to joystick, joystick mounted proportional buttons or additional multi lever with column mounted changeover switch. Accumulator back-up is available to control loader in the event of loss of pump pressure.

		427		437					
Pump type		Twin variable displacement piston pumps							
Pump 1 max. flow	l/min	132		132					
Pump 1 max. pressure	bar	250		250					
Pump 2 max. flow	l/min	132		132					
Pump 2 max. pressure	bar	160		160					
Hydraulic cycle times at full engine revs		Seconds							
		427		437					
Arms raise (full bucket)		4.7		6.4					
Bucket dump (full bucket)		1.8		2.3					
Arms lower (empty bucket)		2.8		4.6					
Total cycle		9.3		13.3					
Ram dimensions		Bore		Rod		Closed centres		Stroke	
		427	437	427	437	427	437	427	437
Bucket ram x2	mm	100	110	60	65	1600	1740	1055	1056
Lift ram x2	mm	110	130	60	70	1260	1259	820	813
Steer ram x2	mm	80	80	50	50	621	621	312	312

CAB

Resiliently mounted ROPS/FOPS structure (tested in accordance with EN3471:2008/EN3449:2008 (Level 2). Entry/exit is via a 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 interior mirror and 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 a powerful 8kW 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. In-cab noise level - 69dB(A).

SERVICE FILL CAPACITIES – 427/437 HT

		427	437
Hydraulic system	litres	210	210
Fuel tank	litres	230	230
Engine oil sump	litres	18	18
Transmission oil system	litres	30	36
Axle oil (front)	litres	23 (35 HD axles)	
Axle oil (rear)	litres	23	
Engine coolant system	litres	35	

**STANDARD EQUIPMENT
427/437 HT**

Loader: Bucket reset mechanism, loader arm kickout mechanism, loader control isolator, high torque true parallel lift geometry combines with excellent visibility between the arms.

Engine: Engine: Powercore air cleaner with scavenge system, silencer and exhaust stack with diesel oxidation catalyst, sedimenter, twin bowl fuel filters, fan guards. Isolated cooling package with hydraulically driven low speed cooling fan. Low idle speed of 700rpm, engine idle shutdown timer. ECO (Economy) mode.

Transmission: Single lever column shift control, speed inhibitor, neutral start, progressive intelligent clutch cut-off, direction changes and kickdown on column lever and loader controls.

Axles: Epicyclic wheel hub reduction, fixed front, oscillating rear. Heavy Duty axles required on 427 with 6 speed, solid or foam filled tyres and high lift arms.

Brakes: Multi-plate "oil-immersed" wet disc brakes, wheel speed braking, organic linings.

Hydraulics: Piston pumps with priority steer, emergency steer back-up, 2 spool loader circuit with accumulator support, 3rd spool auxiliary hydraulic circuit as standard. Hydraulic tank located in the rear chassis fabrication.

Steering: Adjustable steering column, "soft feel" steering wheel 5 turns lock to lock, resilient stops on max lock.

Cab: ROPS/FOPS safety structure, interior reading light, centre mounted master warning light. Electronic monitoring panel with LCD message display. Two speed intermittent front windscreen wipe/wash and self park, single speed rear windscreen wipe/wash and self park. 3 speed heater/demisting with replaceable air filter, LH and RH opening windows, sun visor, internal rear view mirror, external mirrors, adjustable suspension seat with belt and headrest, operator storage facilities, laminated windscreen, heated rear screen, loader control isolator, horn, adjustable armrest.

Electrical: Road lights front and rear, parking lights, front and rear working lights, reverse alarm and light, rear fog light, battery isolator, radio wiring and speakers, 70 amp alternator, rotating beacon.

Bodywork: Front and rear fenders, side and rear access panels, flexible bottom step, full width rear counterweight, recovery lugs, lifting lugs.

**WASTEMASTER
STANDARD EQUIPMENT
427/437 HT**

427: Machine as above including belly guarding, carbon cab air filter, front and rear light guards, front and side screen guards, full wastemaster branding.

437: as 427 with additional front chassis belly guard, lift ram hose guarding and front axle guard.

**OPTIONAL EQUIPMENT
427 HT**

Air conditioning, automatic temperature control option, Open, limited slip differentials front/rear, or automatic differential locking axles, Sinter lined brake pads also available for extended life, Turbo 2 pre-cleaner, tooth guard, replaceable bucket wearparts, epoxy coated radiator/coolers, automatically reversing cooling fan, smooth ride system (SRS), hydraulic quickhitch, full rear fenders, reversing camera (colour), additional front and rear worklights, auto greasing system, joystick or multi-lever hydraulic controls, auxiliary hydraulic control on separate lever or joystick mounted (proportional), smart reverse alarm, white noise (BBS) reverse alarm, parallel lift links (recommended for pallet forks), canopy cab, Wastemaster cab, Livelink telematics, widecore radiator, sealed electrics, grease gun and cartridge, belly guard kit, ARV kit, safety strut, transmission cooler bypass, non-heated mirrors, 24V to 12V in cab converter, cab screen guards, additional front and rear work lights, vinyl seat, air suspension seat with or without heating, Grammer Actimo XXL deluxe seat, extra counterweight, light guards, front and rear blinds, engine block heater, biodegradable hydraulic oil, cab filtration options, fire extinguisher, number plate light kit, auxiliary 4th spool hydraulic service, high lift arms, rear fender grab rails, red and white chevrons, rear hinged guard protection.

**OPTIONAL EQUIPMENT
437 HT**

Air conditioning, automatic temperature control option, Open, limited slip differentials front/rear, or automatic differential locking axles, Sinter lined brake pads also available for extended life, Turbo 2 pre-cleaner, tooth guard, replaceable bucket wearparts, epoxy coated radiator/coolers, automatically reversing cooling fan, smooth ride system (SRS), hydraulic quickhitch, full rear fenders, reversing camera (colour), additional front and rear worklights, auto greasing system, joystick or multi-lever hydraulic controls, auxiliary hydraulic control on separate lever or joystick mounted (proportional), smart reverse alarm, white noise (BBS) reverse alarm, parallel lift links (recommended for pallet forks), canopy cab, Wastemaster cab, Livelink telematics, widecore radiator, sealed electrics, grease gun and cartridge, Wastemaster belly guards, ARV kit, safety strut, transmission cooler bypass, non-heated mirrors, 24V to 12V in cab converter, cab screen guards, additional front and rear work lights, vinyl seat, air suspension seat with or without heating, Grammer Actimo XXL deluxe seat, extra counterweight, light guards, front and rear blinds, engine block heater, biodegradable hydraulic oil, cab filtration options, fire extinguisher, number plate light kit, auxiliary 4th spool hydraulic service, high lift arms, super high lift arms, rear fender grab rails, red and white chevrons, rear hinged guard protection.

LOADER – 427/437 ZX

Heavy duty three ram geometry providing high breakout forces with excellent loading characteristics. The pin, bush and sealing design on all pivot points provide extended maintenance intervals.

LOADER HYDRAULICS – 427/437 ZX

Twin variable displacement piston pumps feed a "load sensing" system providing a fuel efficient and responsive distribution of power as required. Main services are servo actuated from a single lever (joystick) loader control or separate multi-levers. Auxiliary circuits (3 or 4) controlled via additional lever next to joystick, joystick mounted proportional buttons or additional multi lever with column mounted changeover switch. Accumulator back-up is available to control loader in the event of loss of pump pressure.

		427		437					
Pump type		Twin variable displacement piston pumps							
Pump 1 max. flow	l/min	132		132					
Pump 1 max. pressure	bar	250		250					
Pump 2 max. flow	l/min	132		132					
Pump 2 max. pressure	bar	160		160					
Hydraulic cycle times at full engine revs		Seconds							
		427		437					
Arms raise (full bucket)		4.7		5.9					
Bucket dump (full bucket)		1.8		1.45					
Arms lower (empty bucket)		2.8		4.3					
Total cycle		9.3		11.65					
Ram dimensions		Bore		Rod		Closed centres		Stroke	
		427	437	427	437	427	437	427	437
Bucket ram x2	mm	130	160	70	80	1100	1200	521	536
Lift ram x2	mm	110	130	60	70	1260	1259	820	813
Steer ram x2	mm	80	80	50	50	621	621	312	312

ELECTRICAL SYSTEM – 427/437 ZX

24 volt negative ground system, 70 Amp alternator with 2 x 110 Amp hour low maintenance batteries. Isolator located in rear of machine. Ignition key start/stop and pre-heat cold start. Primary fuse box. Other electrical equipment includes quartz halogen, twin filament working lights, front/rear wash/wipe, heated rear screen, full road going lights, clock, gauge and warning light monitoring. Connectors to IP67 standard.

		427		437	
System voltage	Volt	24		24	
Alternator output	Amp hour	70		70	
Battery capacity	Amp hour	2 x 110		2 x 110	

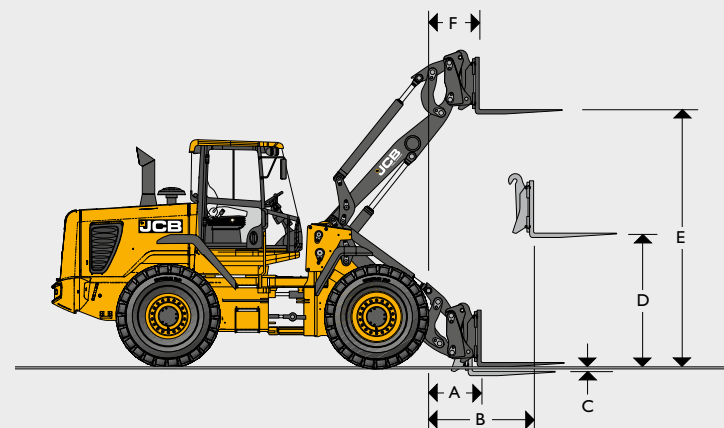
CAB – 427/437 ZX

Resiliently mounted ROPS/FOPS structure (tested in accordance with EN3471:2008/EN3449: 2008 (Level 2). Entry/exit is via a 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 interior mirror and 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 a powerful 8kW 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. In-cab noise level - 69db(A).

SERVICE FILL CAPACITIES – 427/437 ZX

		427	437
Hydraulic system	litres	210	210
Fuel tank	litres	220	220
Engine oil sump	litres	18	18
Transmission oil system	litres	30	36
Axle oil (front)	litres	23 (35 HD axles)	
Axle oil (rear)	litres	23	23
Engine coolant system	litres	35	35

LOADER DIMENSIONS – FORK FRAME WITH FORKS – STANDARD HEIGHT ARM



Assumes the fitment of Michelin 20.5R25 XHA (L3) tyres		Parallel fork		Non parallel fork	
		427 HT	437 HT	427 HT	437 HT
Fork carriage width	mm	1500	1500	1500	1500
Length of tines	mm	1220	1220	1220	1220
A Reach at ground level	mm	760	791	770	798
B Reach at arms horizontal	mm	1545	1613	1545	1620
C Below ground level	mm	-52	8	-25	16
D Arms, horizontal height	mm	1906	1946	1867	1936
E Arms, maximum height	mm	3718	3828	3695	3818
F Reach at maximum height	mm	792	862	800	869
Payload*	kg	5000	5000	5000	5000
Tipping load straight	kg	7571	8589	7571	8589
Tipping load full turn (40°)	kg	6492	7267	6492	7267
Attachment weight	kg	440	482	440	482

*At the centre-of-gravity distance 500mm. Based on 80% of full turn tipping load as defined by ISO 8313.

Manual fork spacings at 50mm increments. Fork section 100mm x 50mm.

**STANDARD EQUIPMENT
427/437 ZX**

Loader: Bucket reset mechanism, loader arm kickout mechanism, loader control isolator, high breakout forces with excellent loading characteristics.

Engine: Engine: Powercore air cleaner with scavenge system, silencer and exhaust stack with diesel oxidation catalyst, sedimenter, twin bowl fuel filters, fan guards. Isolated cooling package with hydraulically driven low speed cooling fan. Low idle speed of 700rpm, engine idle shutdown timer. ECO (Economy) mode.

Transmission: Single lever shift control, speed inhibitor, neutral start, disconnect on footbrake and loader lever, disconnect isolator switch, direction changes and kickdown on gear selector and loader control lever.

Transmission: Single lever column shift control, speed inhibitor, neutral start, progressive intelligent clutch cut-off, direction changes and kickdown on column lever and loader controls.

Axles: Epicyclic wheel hub reduction, fixed front, oscillating rear. Heavy Duty axles required on 427 with 6 speed, solid or foam filled tyres and high lift arms.

Hydraulics: Twin piston pumps with priority steer, emergency steer back-up, 2 spool loader circuit with accumulator support, 3rd spool auxiliary hydraulic circuit as option.

Steering: Adjustable steering column, "soft feel" steering wheel 5 turns lock to lock, resilient stops on max lock.

Cab: ROPS/FOPS safety structure, interior reading light, centre mounted master warning light. Electronic monitoring panel with LCD message display. Two speed intermittent front windscreen wipe/wash and self park, single speed rear windscreen wipe/wash and self park. 3 speed heater/demisting with replaceable air filter, LH and RH opening windows, sun visor, internal rear view mirror, external mirrors, adjustable suspension seat with belt and headrest, operator storage facilities, laminated windscreen, heated rear screen, loader control isolator, horn, adjustable armrest.

Electrical: Road lights front and rear, parking lights, front and rear working lights, reverse alarm and light, rear fog light, battery isolator, radio wiring and speakers, 70 amp alternator, rotating beacon.

Bodywork: Front and rear fenders, side and rear access panels, flexible bottom step, full width rear counterweight, recovery lugs, lifting lugs.

**OPTIONAL EQUIPMENT
427 ZX**

Air conditioning, automatic temperature control option, Open, limited slip differentials front/rear, or automatic differential locking axles, Sinter lined brake pads also available for extended life, Turbo 2 pre-cleaner, tooth guard, replaceable bucket wearparts, epoxy coated radiator/coolers, automatically reversing cooling fan, smooth ride system (SRS), hydraulic quickhitch, full rear fenders, reversing camera (colour), additional front and rear worklights, auto greasing system, joystick or multi-lever hydraulic controls, auxiliary hydraulic control on separate lever or joystick mounted (proportional), smart reverse alarm, white noise (BBS) reverse alarm, canopy cab, Wastemaster cab, Livelink telematics, widecore radiator, sealed electrics, grease gun and cartridge, belly guard kit, ARV kit, safety strut, transmission cooler bypass, non-heated mirrors, 24V to 12V in cab converter, cab screen guards, additional front and rear work lights, vinyl seat, air suspension seat with or without heating, Grammer Actimo XXL deluxe seat, extra counterweight, light guards, front and rear blinds, engine block heater, biodegradable hydraulic oil, cab filtration options, fire extinguisher, number plate light kit, auxiliary 4th spool hydraulic service, rear fender grab rails, red and white chevrons, rear hinged guard protection.

**OPTIONAL EQUIPMENT
437 ZX**

Air conditioning, automatic temperature control option, Open, limited slip differentials front/rear, or automatic differential locking axles, Sinter lined brake pads also available for extended life, Turbo 2 pre-cleaner, tooth guard, replaceable bucket wearparts, epoxy coated radiator/coolers, automatically reversing cooling fan, smooth ride system (SRS), hydraulic quickhitch, full rear fenders, reversing camera (colour), additional front and rear worklights, auto greasing system, joystick or multi-lever hydraulic controls, auxiliary hydraulic control on separate lever or joystick mounted (proportional), smart reverse alarm, white noise (BBS) reverse alarm, canopy cab, Wastemaster cab, Livelink telematics, widecore radiator, sealed electrics, grease gun and cartridge, Wastemaster belly guard kit, ARV kit, safety strut, transmission cooler bypass, non-heated mirrors, 24V to 12V in cab converter, cab screen guards, additional front and rear work lights, vinyl seat, air suspension seat with or without heating, Grammer Actimo XXL deluxe seat, extra counterweight, light guards, front and rear blinds, engine block heater, biodegradable hydraulic oil, cab filtration options, fire extinguisher, number plate light kit, auxiliary 4th spool hydraulic service, rear fender grab rails, red and white chevrons, rear hinged guard protection.

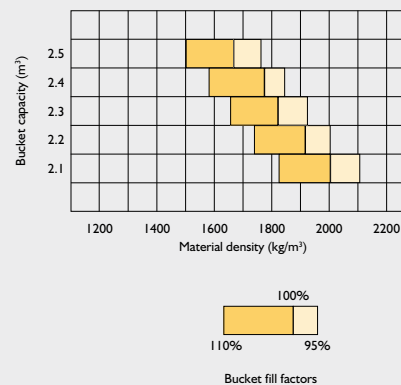
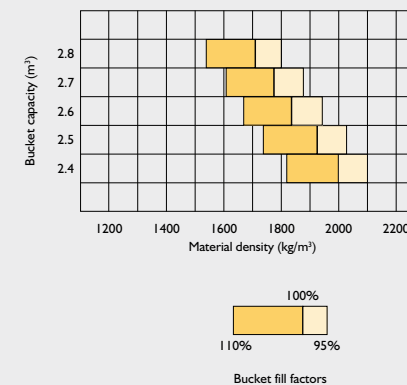
**WASTEMASTER
STANDARD EQUIPMENT
427/437 ZX**

427: Machine as above including belly guarding, carbon cab air filter, front and rear light guards, front and side screen guards, full wastemaster branding.

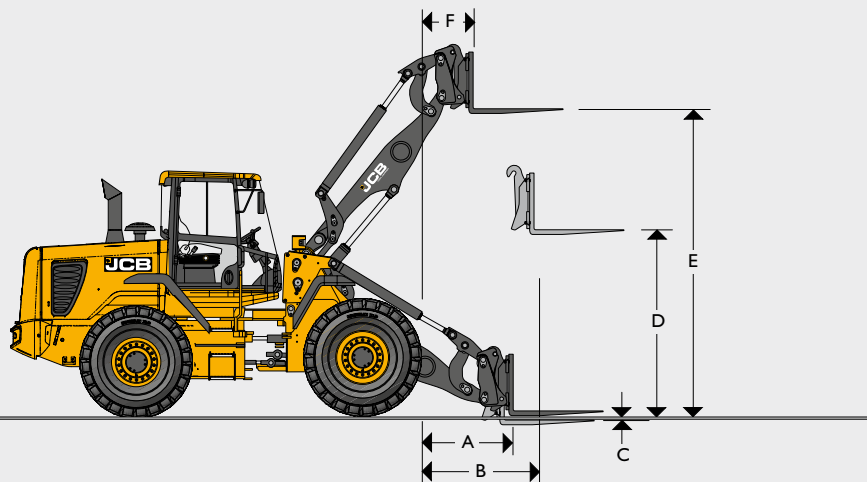
437: as 427 with additional front chassis belly guard, lift ram hose guarding and front axle guard.

BUCKET SELECTOR – STANDARD HEIGHT ARM

Material	Loose density (kg/m ³)	Fill factor (%)
Snow (fresh)	200	110
Peat (dry)	400	100
Sugar beet	530	100
Coke (loose)	570	85
Barley	600	85
Petroleum coke	680	85
Wheat	730	85
Coal bituminous	765	100
Fertiliser (mixed)	1030	85
Coal anthracite	1046	100
Earth (dry) (loose)	1150	100
Nitrate fertiliser	1250	85
Sodium chloride (dry) (salt)	1300	85
Cement Portland	1440	100
Limestone (crushed)	1530	100
Sand (dry)	1550	100
Asphalt	1600	100
Gravel (dry)	1650	85
Clay (wet)	1680	110
Sand (wet)	1890	110
Fire clay	2080	100
Copper (concentrate)	2300	85
Slate	2800	100
Magnetite	3204	100

427 HT - STANDARD HEIGHT ARM**437 HT - STANDARD HEIGHT ARM**

LOADER DIMENSIONS – FORK FRAME WITH FORKS – HiLift ARM / SUPER HiLift ARM



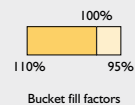
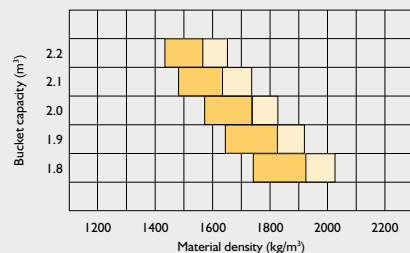
		Parallel fork			Non parallel fork		
		427 HT	437 HT	437 HT SHL	427 HT	437 HT	437 HT SHL
Assumes the fitment of Michelin 20.5R25 XHA (L3) tyres							
	Fork carriage width	mm	1500	1500	1500	1500	1500
	Length of tines	mm	1220	1220	1220	1220	1220
A	Reach at ground level	mm	1173	1147	2014	1183	1154
B	Reach at arms horizontal	mm	1893	2103	2578	1893	2110
C	Below ground level	mm	11	3	-19	38	11
D	Arms, horizontal height	mm	1906	1946	1946	1867	1936
E	Arms, maximum height	mm	4148	4482	5045	4125	4472
F	Reach at maximum height	mm	954	862	886	962	869
	Payload*	kg	4518	4650	3599	4518	4650
	Tipping load straight	kg	6587	6871	5428	6587	6871
	Tipping load full turn (40°)	kg	5648	5813	4499	5648	4499
	Attachment weight	kg	440	482	440	440	440

*At the centre-of-gravity distance 500mm. Based on 80% of full turn tipping load as defined by ISO 8313.
Manual fork spacings at 50mm increments. Fork section 100mm x 50mm.

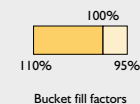
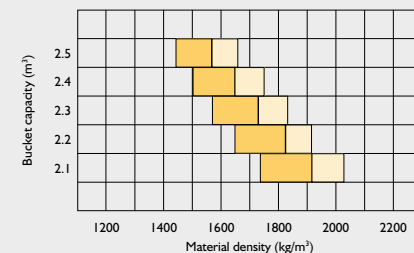
BUCKET SELECTOR – HiLift ARM / SUPER HiLift ARM

Material	Loose density (kg/m ³)	Fill factor (%)
Snow (fresh)	200	110
Peat (dry)	400	100
Sugar beet	530	100
Coke (loose)	570	85
Barley	600	85
Petroleum coke	680	85
Wheat	730	85
Coal bituminous	765	100
Fertiliser (mixed)	1030	85
Coal anthracite	1046	100
Earth (dry) (loose)	1150	100
Nitrate fertiliser	1250	85
Sodium chloride (dry) (salt)	1300	85
Cement Portland	1440	100
Limestone (crushed)	1530	100
Sand (dry)	1550	100
Asphalt	1600	100
Gravel (dry)	1650	85
Clay (wet)	1680	110
Sand (wet)	1890	110
Fire clay	2080	100
Copper (concentrate)	2300	85
Slate	2800	100
Magnetite	3204	100

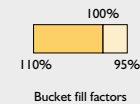
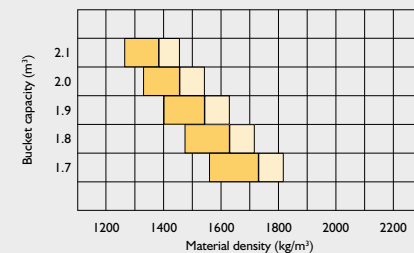
427 HT - HiLIFT ARM



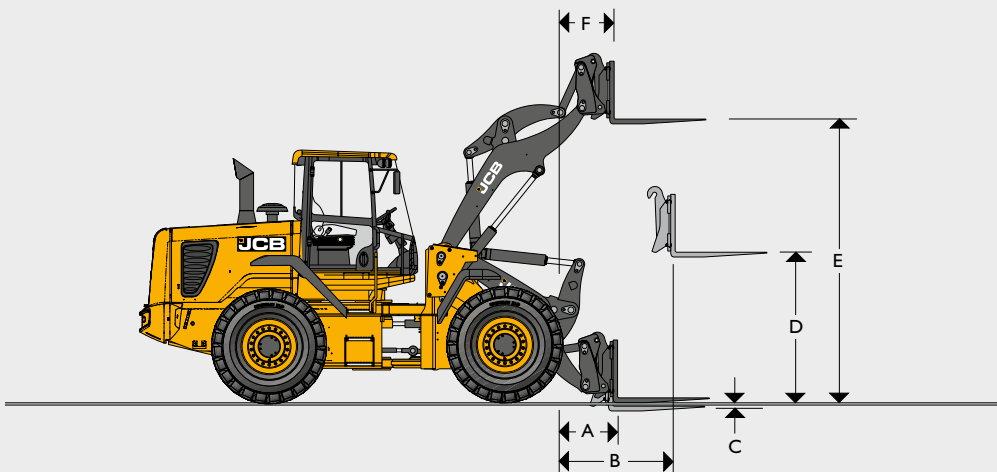
437 HT - HiLIFT ARM



437 HT - SUPER HiLIFT ARM



LOADER DIMENSIONS – FORK FRAME WITH FORKS



Assumes the fitment of Michelin 20.5R25 XHA (L3) tyres

		427 ZX	437 ZX
Fork carriage width	mm	1500	1500
Length of tines	mm	1220	1220
A Reach at ground level	mm	770	798
B Reach at arms horizontal	mm	1545	1620
C Below ground level	mm	-42	16
D Arms, horizontal height	mm	1867	1936
E Arms, maximum height	mm	3695	3818
F Reach at maximum height	mm	800	869
Payload*	kg	5000	5000
Tipping load straight	kg	7722	8289
Tipping load full turn (40°)	kg	6575	7013
Attachment weight	kg	440	482

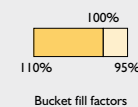
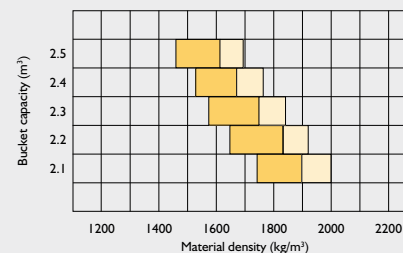
*At the centre-of-gravity distance 500mm. Based on 80% of full turn tipping load as defined by ISO 8313.

Manual fork spacings at 50mm increments. Fork section 100mm x 50mm.

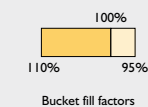
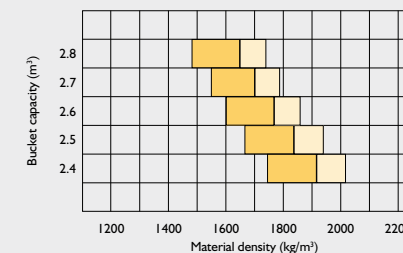
BUCKET SELECTOR – STANDARD HEIGHT ARM

Material	Loose density (kg/m ³)	Fill factor (%)
Snow (fresh)	200	110
Peat (dry)	400	100
Sugar beet	530	100
Coke (loose)	570	85
Barley	600	85
Petroleum coke	680	85
Wheat	730	85
Coal bituminous	765	100
Fertiliser (mixed)	1030	85
Coal anthracite	1046	100
Earth (dry) (loose)	1150	100
Nitrate fertiliser	1250	85
Sodium chloride (dry) (salt)	1300	85
Cement Portland	1440	100
Limestone (crushed)	1530	100
Sand (dry)	1550	100
Asphalt	1600	100
Gravel (dry)	1650	85
Clay (wet)	1680	110
Sand (wet)	1890	110
Fire clay	2080	100
Copper (concentrate)	2300	85
Slate	2800	100
Magnetite	3204	100

427 ZX



437 ZX





Wheeled Loading Shovel 427/437

427 – Operating weight: 13053kg
Gross rated power: 158hp (118kW)
Full turn tipping load: 8051kg
Standard shovel capacity: 2.4m³

437 – Operating weight: 15255kg
Gross rated power: 173hp (129kW)
Full turn tipping load: 9055kg
Standard shovel capacity: 2.7m³

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