

W100D

COMPACT WHEEL LOADER



ENGINE	
Model	FPT F5MGL413J
Emissions	Stage V Certified
Type	4-cycle
Cylinders	4
Bore/Stroke	4.0 x 4.3 in (102 x 110 mm)
Displacement	220 in ³ [3.6 L]
Fuel injection	High pressure, common rail injection
Fuel	Diesel
Fuel filter	Spin on, Beta [4] = 20
Air filter	Dry type element w/ warning restriction indicator
Exhaust aftertreatment:	
Fixed geometry turbocharger w/ air cooled inter cooler, ATS (after treatment system.)	
Radiator:	
Core type	All aluminum
Fan:	
Style	Direct drive
Lubrication/cooling oil pump:	
Style	Integral
Engine Oil:	
Pump:	Rotor Pump w/ deep sump pan, plate cooled & pressurized under piston nozzles
Pump operating angle ratings:	
Side-to-side	Rated 35°
Fore and aft	Rated 35°
Oil filtration	Spin on, full flow
Engine speeds	RPM
Rated – full load	2500
Low idle	950
High idle – no load	2500
Horsepower @ 2500 RPM:	
Gross	112 hp (kW)
Net	98 hp (72 kW)
Peak torque @ 1400 RPM:	
Gross	232 lb-ft (314 N-m)
Net	227 lb-ft (308 N-m)

NOTE: Gross horsepower and torque per SAE J1349.
Net horsepower and torque per SAE J1349.

DRIVETRAIN		
Transmission	Hydrostatic transmission	
Pump relief	6092 psi (42 000 kPa)	
Pump flow @ 2500 RPM	42.3 gpm (160 L/min)	
Differential:	Standard limited slip, Optional Diff Lock.	
Planetaries	Outboard	
Service brakes:	Master cylinder hydraulically actuated, wet disc on front axle	
SAHR park brake:	Mechanical, caliper on front axle	
Travel speeds	Forward	Reverse
	mph (kph)	mph (kph)
1st low	3.6 (5.9)	3.6 (5.9)
2nd high	12.4 (20.0)	12.4 (20.0)
Travel speeds – HS	Forward	Reverse
	mph (kph)	mph (kph)
1st low	3.6 (5.9)	3.6 (5.9)
2nd high	12.4 (14.4)	12.4 (20.0)
3rd high	25 (40.0)	25 (40.0)

NOTE: Travel speeds at full engine throttle w/ 17.5 R25 L3 radial.

ELECTRICAL	
Voltage	12 volts
Alternator	160 amp
Batteries	95 AHR, 900 CCA

OPERATOR ENVIRONMENT	
ROPS: ISO 3471: 2008; Deluxe Cab w/ heater and A/C; Key start; Articulated power steering w/ tilt column; Adjustable, air ride suspension seat; Foot throttle; Single joystick w/ electronic speed shift control F/N/R switch, proportional loader control and proportional hydraulic auxiliary w/ detent switch hydraulic; Cup holder; Storage tray on Deluxe Cab; Sun screen – front; Opening side window; Dome light; Wipers – front and rear; 12-volt auxiliary power; Lighter cigar and ashtray; Pocket cellular phone; Coat hook; External rear- view mirrors; Loader control lockout; Display w/ encoder and rear view camera; 416 JRB compatible coupler.	
Electronic information center	
Displays/Gauges:	
Vehicle speed; Hourmeter; Floating functionality on; High flow functionality on; Clock; Vehicle directions; Gear number engaged; PM Catalyst icons.	
Indicator lights:	
Diff. lock; Main hydraulic enabled; Turn light – left and right; Rear work lamps; Work lamps; Main high beam; Side lights; Stop; Warning signal; Rabbit; SAHR Brake; Brake fluid level; Quick coupler on; Ride Control on; Creep speed; PM Catalyst; Low fuel level; Clogging air filter; Engine oil pressure; Glow plug; Alternator changing.	
Audible alarms:	
Caution alarm; Critical alarm; Backup alarm.	
Horn	

NOTE: If equipped w/ option.

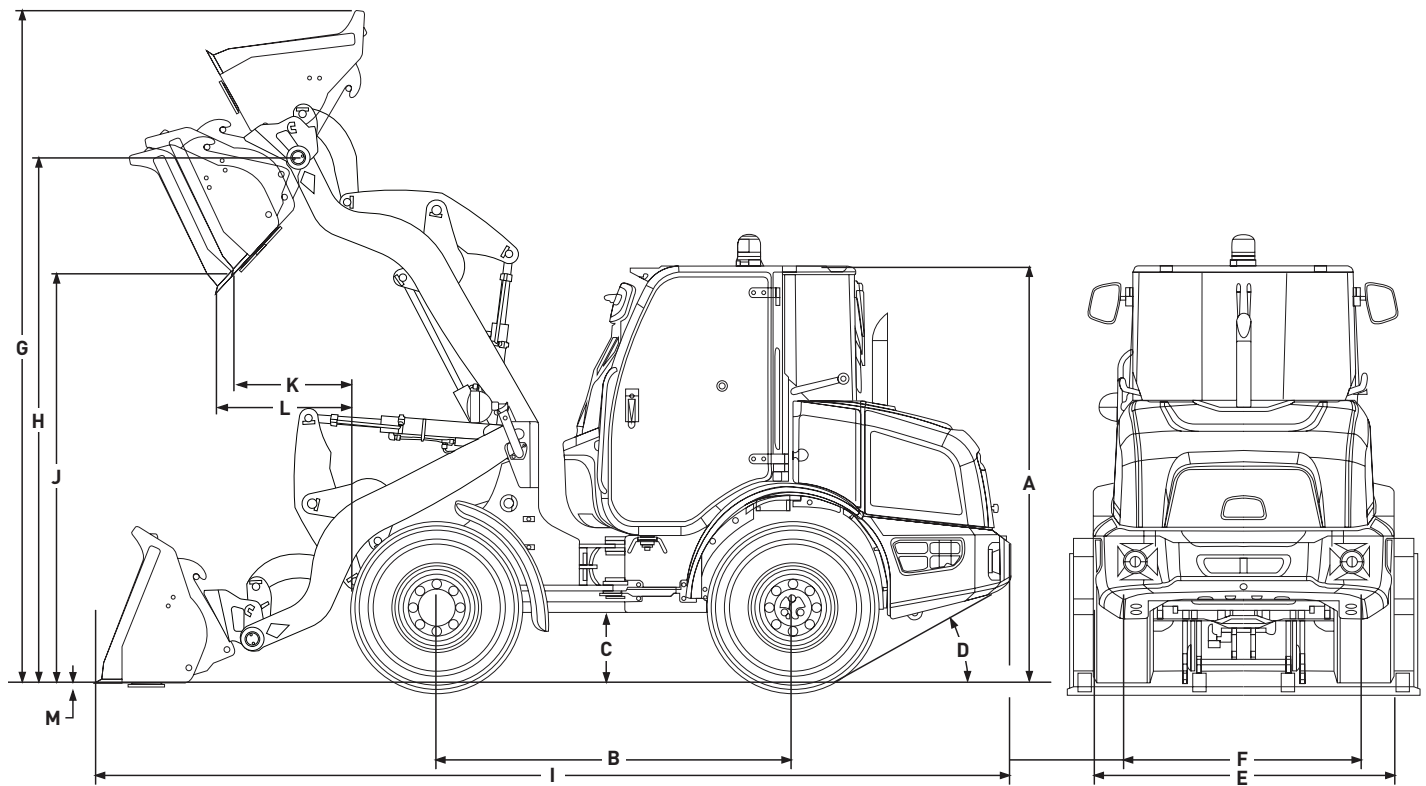
OPERATING WEIGHT	
Z-Bar:	19,775 lb (8970 kg)
Unit equipped w/ ROPS/FOPS cab w/ HVAC, standard counterweight, 17.5R25 XHA2 L3 Michelin tires, front and rear fenders, 1.9 yd ³ [1.5 m ³] general purpose bucket w/ edge, full fuel, 165 lb (75 kg) operator:	

HYDRAULICS	
Pump – steering/implement:	
Closed-centered pressure/flow compensated	
Fixed gear type:	
Standard flow:	Max. 22.5 gpm @ 3336 psi (Max. 85 L/min @ 230 bar)
Optional high flow:	Max. 33.0 gpm @ 4061 psi (Max. 125 L/min @ 280 bar)
Loader control valve:	
Closed-center circuit. Electro-hydraulic control w/single lever includes: Forward/Neutral/ Reverse switch, Floating switch, Low/High Travel mode switch, Auxiliary Function Roller	
Loader auxiliary steering:	
Main relief pressure:	3336 psi (23 000 kPa)
Filtration:	
15-micron, full flow replaceable cartridges on return line	

SERVICE CAPACITIES	
Fuel tank	31.1 gal (118.0 L)
DEF tank	5.7 gal (21.5 L)
Hydraulic system:	
Reservoir	19.3 gal (73.0 L)
Total	24.0 gal (92.0 L)
Front and rear axle:	
Front axle	2.4 gal (8.9 L)
Rear axle	2.4 gal (8.9 L)
Engine oil w/ filter	1.8 gal (7.0 L)
Cooling*	3.7 gal (13.9 L)

NOTE: *1.72 gal (6.5 L) antifreeze + 1.72 gal (6.5 L) water.

OTHER SPECIFICATIONS	
Lift cylinder	Two (2)
Bore diameter	4.00 in (101.6 mm)
Rod diameter	2.25 in (57.2 mm)
Stroke	31.79 in (807.5 mm)
Tilt cylinder:	
Bore diameter	4.25 in (108.0 mm)
Rod diameter	2.25 in (57.1 mm)
Stroke	20.94 in (531.9 mm)
Loader:	
Z-Bar:	
Z-Bar loader linkage	
Single control for lift and tilt	
Positive hold float	
Hydraulic attachment coupler:	
Skid steer compatible/horizontal pin compatible	
Cycle time:	
Z-Bar:	
Raise w/ rated bucket load	5.8 sec
Dump w/ rated bucket load	0.9 sec
Lower – empty	3.8 sec



Line drawings are for illustrative purpose only and may not be exact representation of unit.

DIMENSIONS		
Z-BAR		
A	Height to top of ROPS cab	118.8 in (3017 mm)
B	Wheelbase	102.4 (2600 mm)
C	Ground clearance under shaft	13.7 in (349 mm)
	Ground clearance under axles	19.2 in (488 mm)
D	Angle of departure	33°
	Width:	
E	Overall without bucket	90.1 in (2289 mm)
F	Centerline tread	70.9 in (1800 mm)
	Turning radius – outside	185.7 in (4716 mm)
	Turning angle:	
	From center	40°
	Total angle	80°
	Rear axle oscillation – total	20°

W100D COMPACT WHEEL LOADER SPECIFICATIONS

PERFORMANCE SPECS		
W100D Z-Bar	1.9 yd³ GP (1.5 m³) JRB Bucket with Bolt-on Edge	2.2 yd³ GP (1.7 m³) LM Bucket with Bolt-on Edge
ISO bucket capacity – struck	1.70 yd³ [1.3 m³]	1.90 yd³ [1.45 m³]
Heaped	1.96 yd³ [1.5 m³]	2.2 yd³ [1.7 m³]
Bucket width – outside	94.5 in [2400 mm]	94.5 in [2400 mm]
Bucket weight – includes coupler and added components	1684 lb [764 kg]	1772 lb [804 kg]
G Operating height – fully raised with spillguard	194.3 in [4934 mm]	194.3 in [4934 mm]
H Hinge pin height – fully raised	146.2 in [3714 mm]	146.2 in [3714 mm]
I Overall length – bucket level on ground	251.6 in [6390 mm]	251.6 in [6390 mm]
Dump angle – fully raised	45°	45°
J Dump height – fully raised, 45° dump	106.4 in [2702 mm]	104.6 in [2656 mm]
K Bucket reach – fully raised, 45° dump	34.6 in [880 mm]	36.5 in [927 mm]
L Bucket reach – 7 ft 0 in [2.13 m] height, 45° dump	53.0 in [1346 mm]	53.5 in [1359 mm]
M Dig depth	3.4 in [86 mm]	3.5 in [90 mm]
Operating Load (ROC) - ISO	6476 lb [2937 kg]	6347 lb [2879 kg]
Maximum material density – ISO	3301 lb/yd³ [1959 kg/m³]	2885 lb/yd³ [1309 kg/m³]
Tipping load – ISO:		
Straight	14,718 lb [6676 kg]	14,436 lb [6548 kg]
40° turn	12,952 lb [5875 kg]	12,694 lb [5758 kg]
Lift capacity:		
Full height	14,826 lb [6725 kg]	14,716 lb [6675 kg]
Maximum reach	14,334 lb [6502 kg]	13,380 lb [6069 kg]
Ground	15,333 lb [6955 kg]	14,308 lb [6490 kg]
Breakout force with tilt cylinder	15,806 lb [7170 kg]	14,831 lb [6727 kg]
Maximum rollback:		
@ Ground	45°	45°
@ Carry position	48°	48°
@ Maximum reach	61°	62°
@ Full height	65°	65°
Maximum grading angle with bucket – back dragging	56°	56°
Loader clearance circle with bucket	412.3 in [10 474 mm]	413.8 in [10 512 mm]

FORKS	
W100D Z-Bar	
Fork length	47.2 in [1200 mm]
Fork weight – includes coupler	1684 lb [746 kg]
Operating load – level ground	7255 lb [3291 kg]
Operating mass	19,775 lb [8970 kg]
Tipping load – straight	10,725 lb [4865 kg]
Tipping load – 40° turn	9453 lb [4288 kg]
Fork load center	15.0 in [380 mm]

Standard Equipment

Operator Environment

- See page 1
- TeleScop adjustable steering column on Deluxe Cab
- Radio, antenna, and speakers

Engine

- FPT F5MGL413J
- Fuel filter with water trap
- Dual element air cleaner
- Smart Mode feature

Loader

- See page 3

Drivetrain

- 4-wheel drive - Shift on the fly with Auto Shift
- Hydrostatic transmission
- Single joystick with electronic speed shift control F/ N / R switch and proportional loader control
- Outboard planetary axles
- Limited slip - front and rear axles
- Hydraulic wet disc brakes
- Mechanical parking brake

Hydraulics

- 3-spool loader control valve
- 3 Diagnostic quick couplers
- Adjustable electro hydraulic (EH) loader controls
Smooth, moderate & aggressive settings for both lift and tilt responsiveness:
 - Return to Dig
 - 416 JRB compatible coupler
 - Connect under pressure connectors
 - Remote drain of hydraulic oil
 - Aux. Hydraulic drain line coupling
- Auxiliary flow:
22.5 gpm @ 3336 psi (85 l/min @ 230 bar)
- Auto Ride Control
- Creep speed: 0 - 3.1 mph (5 kph)

Other

- Front and rear fenders
- Lights:
 - 2 Stop tail lights and backup light
 - Front and rear turn signal/flash
- LED work lights, 2 front and 2 rear
- Drawbar pin
- Articulation locking pin
- Tie-down and Lift-up point - front and rear
- Backup alarm
- Tool box
- Bucket position indicator
- Front electrical socket for powered attachments
- Rear view camera
- 4 Corner strobes

Telematics

- New Holland FleetForce™ Telematics - includes hardware and a 5-year advanced data subscription for 2-way communication

Optional Equipment

Operator Environment

- 100% lock - front and open rear axles

Loader

- Buckets - see performance data:
 - General purpose standard
 - General purpose light material
- Forks
- Cold weather with Block Heater - Two 680 CCA batteries and Low-temp Hytran oil
- Optional High flow:
Max. 33.0 gpm @ 4061 psi
(125 L/min @ 280 bar)
- ISO coupler
- Anti-burst valves

Tires

- 17.5R25 XHA2 L3 Michelin
- 17.5R25 L3 Triangle



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Learn more at www.newholland.com

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Safety begins with a thorough understanding of the equipment. Always make sure you and your operators read the Operator's Manual before using the equipment. Pay close attention to all safety and operating decals and never operate machinery without all shields, protective devices and structures in place. This is a one-person machine. Never allow riders in the cab, outside the machine, or in/on any bucket or attachment.

