

## SPECIFICATIONS

<b>Operating weight</b>	<b>12,330 kg (27,183 lbs)</b>
Operating weight includes the machine weight with standard work device, no additional equipment or accessories, full fuel tank, all fluids at required level and an operator 75 kg (165 lbs).	
<b>Bucket capacity</b>	<b>1.5-3.0 m<sup>3</sup> (2-3.9 yd<sup>3</sup>)</b>

ENGINE	
Description	
Engine: Perkins EPA Tier 4 final / EU Stage IV, 4.4 liter (1.2 gal), 4-cylinder straight turbocharged diesel engine with Common Rail fuel injection system.	
Single stage turbocharger with Smart Wastegate.	
Diesel Oxidation Catalyst (DOC) + Selective Catalyst Reduction (SCR) back pressure valve for SCR system thermal management.	
Particulate emissions are reduced during combustion.	
Air cleaning: Direct flow air filter.	
Cooling system: Charge air cooler, hydraulic motor drive and temperature controlled fan.	
Emission rating	EPA Tier 4 final / EU Stage IV
Make	Perkins
Model	1204F-E44TAN
Engine output - Gross (SAE J1995 / ISO 14396)	112 kW (152 hp) @ 2,200 rpm
Engine output - Net (SAE J1349 / ISO 9249)	106.4 kW (145 hp) @ 2,200 rpm
Peak torque	650 N·m (479.4 lbf·ft)
Displacement	4.4 L (1.2 gal)
Number of cylinders	4
Aspiration	Turbocharged & air-to-air intercooled

TRANSMISSION	
Description	
Torque converter: single-stage, three elements.	
Transmission: ZF 4WG 158 countershaft transmission, integrated pilot single joystick with FNR, KD & horn.	
Gear shifting system: ZF Automatic Power Shift with auto modes (1~4/2~4) all start in gear 2, faster and better for long distance material transport.	
Transmission type	Countershaft, power shift
Torque converter	Single stage, three elements
Maximum travel speed, fwd	38.2 km/h (24 mph)
Maximum travel speed, rev	23.5 km/h (14.6 mph)
Number of speed, fwd	4
Number of speed, rev	3

HYDRAULIC SYSTEM	
Description	
System supply: Single load-sensing axial piston pumps with variable displacement. The steering function always has priority.	
Valves: Double-acting 3-spool valve. The main valve is controlled by a 3-spool pilot valve.	
Lift function: The valve has four positions: lift, hold, lower, and float. Inductive/magnetic automatic boom kick-out can be switched on and off and is adjustable to two positions: bucket at ground Level and maximum reach full lifting height.	
Tilt function: The valve has three functions: rollback, hold and dump.	
Cylinders: Double-acting cylinders for all functions.	
Filter: Full-flow filtration through 12 micron (absolute) filter cartridge.	
Main pump type	Piston
Main relief pressure	23 MPa (3, 336 psi)
Raise	5.5 s
Dump time	1.0 s
Float down time	3.0 s
Fastest total cycle time	9.5 s
Controls	Joystick

AXLES	
Model	LiuGong (Wet type)
Differential front type	Limited slip
Differential rear type	Limited slip
Axle oscillation	±12°

STEERING	
Description	
Steering system: Load-sensing hydraulic articulated steering.	
System supply: The steering system has priority feed from a load-sensing axial piston pump with variable displacement.	
Steering cylinders: Two double-acting cylinders.	
Steering configuration	Articulated
Steering relief pressure	18 Mpa (2,611 psi)
Steering cylinders	2
Cylinder bore	80 mm (3")
Rod diameter	45 mm (2")
Stroke	420 mm (1' 4")
Maximum flow	210 L/min (55.5 gal/min)
Maximum articulation	±40°
Smallest turn (over tire)	5,410 mm (17' 7")

BRAKES	
Description	
Two independent brake circuits, disks out of rim, accurate control with the advanced main valve & piston pump.	
Service brake type	Wet discs brake
Service brake actuation	Hydraulic
Parking brake type	Manual electronic control
Parking brake actuation	Hydraulic

## ELECTRICAL SYSTEM

### Description

Central warning system is a centralized electrical system with central warning light and buzzer for following functions: Serious engine fault, Low steering system pressure, Interruption in communication (computer failure), Low engine oil pressure, High engine oil temperature, High charge-air temperature, Low coolant level, High coolant temperature, Low transmission oil pressure, High transmission oil temperature, Low brake pressure, Engaged parking brake, Brake charging failure, High hydraulic oil temperature.

Voltage	24 V
Batteries	2 x 12 V
Battery capacity	2 x 120 Ah
Cold cranking capacity, approx	850 A
Reserve capacity	230 min
Alternator rating	1,960 W / 70 A
Starter motor output	4.8 kW (6.4 hp)

## SERVICE REFILL CAPACITIES

Fuel tank	190 L (50.2 gal)
Engine oil	12 L (3.2 gal)
Cooling system	33 L (8.7 gal)
Hydraulic system	180 L (47.6 gal)
Transmission and torque converter	40 L (10.6 gal)
Axles, each	34 L (9 gal)
DEF tank	19 L (5.0 gal)

## SOUND & ENVIRONMENT

Sound level in cab according to ISO 6396-2008/EN ISO 3744-1995	72 dB(A)-- Travel mode
Sound level in cab according to ISO 6396-2008/EN ISO 3744-1995	73 dB(A)-- Stationary work cycle mode
External sound level according to ISO 6395-2008	102 dB(A)-- Travel mode
External sound level according to ISO 6395-2008	103 dB(A)-- Stationary work cycle mode
Ventilation	9.2 m <sup>3</sup> (12 yd <sup>3</sup> )
Heating capacity	5.8 kW (7.8 hp)
Air Conditioning	6 kW (8 hp)

## CAB

### Description

Instrumentation: All important information is centrally located in the central instrument panel and operator's field of vision.

Large curved front glass, rear view camera and mirrors ensure great visibility.

Adjustable steering column, air suspension seat, armrest box and Denso A/C with all-around air outlets.

Pressurized cab with lower interior noise.

The cab is tested and approved according to ROPS (ISO 3471), FOPS (ISO 3449).

## LOADER ARM PERFORMANCE WITH ATTACHMENT

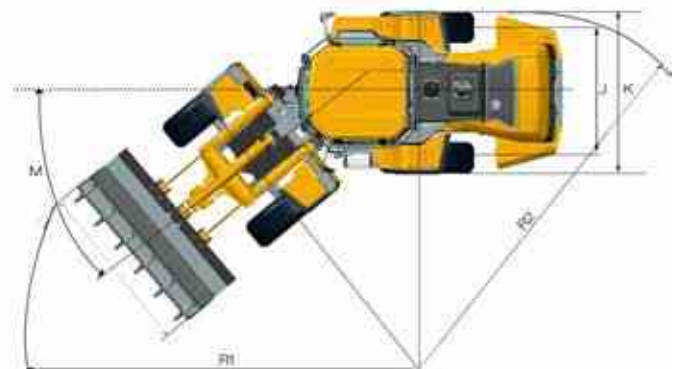
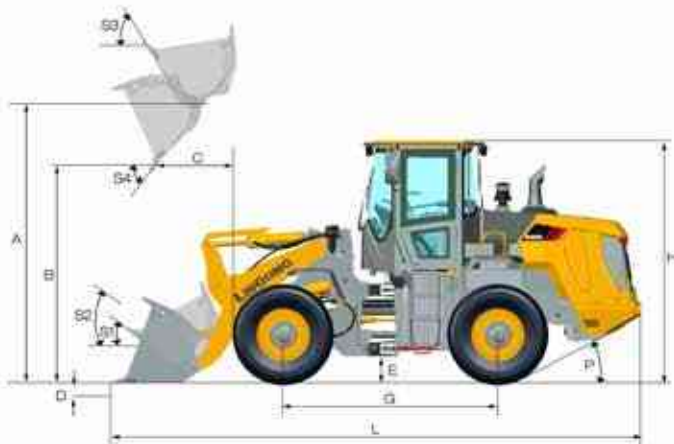
### Description

Tipping Load data is calculated with standard bucket at 2.1 m<sup>3</sup> (2.75 yd<sup>3</sup>) and operating weight at 12,330 kg (27,183 lbs).

Tipping load - straight according to ISO 14397-1:2007	10,192 kg (22,470 lbs)
Tipping load - full turn according to ISO 14397-1:2007	8,420 kg (18,563 lbs)
Bucket breakout force	116 kN (26078 lbf-ft)
A Maximum hinge pin height	3,755 mm (12' 3")
B Dump clearance at full height discharge	2,830 mm (9' 3")
C Dump reach at full height discharge	1,056 mm (3' 5")
D Maximum digging depth, bucket level	80 mm (3 ")
S1 Bucket rollback at ground level	45°
S2 Bucket rollback at carry	48°
S3 Bucket rollback at maximum height	60°
S4 Maximum dump angle at full height	45°





## DIMENSIONS

E Ground clearance	366 mm (1' 2")
G Wheelbase	2,960 mm (9' 8")
H Cab height	3,310 mm (10' 9")
J Wheel tread	1,950 mm (6' 4")
K Width over tires	2,470 mm (8' 1")
L Length with bucket down	7,500 mm (24' 6")
M Turn angle, either side	40°
P Rear angle of departure	28°
R <sub>1</sub> Turning radius, bucket carry	5,950 mm (19' 5")
R <sub>2</sub> Turning radius, outside of tire	5,430 mm (17' 8")



## TIRES


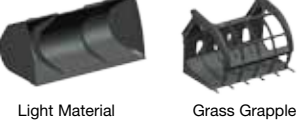


Choosing the right tyres for your machine will become a key competitive advantage to achieve outstanding performance. Through close engineering and development cooperation with renowned and carefully selected suppliers, LiuGong can offer full range of tyres specially tailored for wheel loader.

Code	Application	Patterns	Size	PR / *	Tube Type	Width	Overall Diameter	Tread Depth	Load Capacity, 50 km/h / 10 km/h (31.1 mph / 6.2 mph)
L2	<ul style="list-style-type: none"> <li>where good traction is needed, e.g. at grading work</li> <li>in soft and muddy operation where sharp stones don't occur</li> <li>in all load/carry operations</li> </ul>		20.5 - 25	12	TL	520 mm (1' 9")	1,490 mm (4' 11")	30 mm (1")	4,500 / 6,700 kg (9,921 / 14,771 lbs)
			20.5 - 25	16	TL	520 mm (1' 9")	1,490 mm (4' 11")	30 mm (1")	5,450 / 8,250 kg (12,015/18,188 lbs)
L3	<ul style="list-style-type: none"> <li>in sand operation</li> <li>in all kind of load/carry operation</li> <li>the L3-tread is not as open as L2 and has consequently less self-cleansing compared with an L2 tyre</li> </ul>		20.5 - 25	16	TL	520 mm (1' 9")	1,490 mm (4' 11")	30 mm (1")	5,450 / 8,250 kg (12,015 / 18,188 lbs)
			20.5 - 25	20	TL	520 mm (1' 9")	1,490 mm (4' 11")	30 mm (1")	6,000 / 9,000 kg (13,228 / 19,842 lbs)
			20.5 R 25	*	TL	520 mm (1' 9")	1,492 mm (4' 11")	32 mm (1")	7,300 / 9,500 kg (16,094 / 20,944 lbs)
			20.5 R 25	**	TL	520 mm (1' 9")	1,492 mm (4' 11")	35 mm (1")	7,300 / 1,150 kg (16,094 / 25,353 lbs)
L5	<ul style="list-style-type: none"> <li>in very aggressive material where good protection against cut damages is demanded, e.g. in quarries or mines</li> </ul>		20.5 R 25	*	TL	520 mm (1' 9")	1,530 mm (5')	72 mm (3")	9,500 kg, 10 km/h (20,944 lbs, 6.2 mph)
			20.5 R 25	**	TL	520 mm (1' 9")	1,530 mm (5')	72 mm (3")	11,500 kg, 10 km/h (25,353 lbs, 6.2 mph)

Note: The radial tire-load bearing capacity is indicated by the number of stars (\*). More stars, greater radial tire-load bearing capacity. For the specific radial tire sizes listed in the table above, 2 stars (\*\*) represents the maximum radial tire-load bearing capacity.

## ATTACHMENTS

LiuGong attachments with pin-on or quick-coupler ensure high quality. The integrated design of the system creates a perfect match to achieve superior productivity.

Type	Capacity	Width	Height	Digging Depth	Dump Clearance	Dump Reach	Description	Attachment Drawing
General Purpose	2.1 m <sup>3</sup> (2.7 yd <sup>3</sup> )	2,456 mm (8' 1")	1,100 mm (3' 6")	80 mm (3")	2,780 mm (9' 1")	1,080 mm (3' 5")	Anti-Wear Blade with Welded Teeth	
	2.5 m <sup>3</sup> (3.3 yd <sup>3</sup> )	2,465 mm (8' 1")	1,175 mm (3' 9")	/	2,720 mm (8' 9")	1,120 mm (3' 7")	Anti-Wear Blade with Bolt-on Cutting Edge and Bolt-on Teeth.	
	2.7 m <sup>3</sup> (3.5 yd <sup>3</sup> )	2,640 mm (8' 7")	1,220 mm (4' 0")	/	2,700 mm (8' 8")	1,150 mm (3' 8")	Bolt-on Cutting Edge; Bolt-on Teeth; Bolt-on Cutting Edge and Bolt-on Teeth.	
	3. m <sup>3</sup> (3.9 yd <sup>3</sup> )	2,537 mm (8' 3")	1,219 mm (4' 0")	/	2,660 mm (8' 7")	1,180 mm (3' 9")	Bolt-on Cutting Edge; Bolt-on Teeth.	
Light Material	2.1 m <sup>3</sup> (2.7 yd <sup>3</sup> )	2,660 mm (8' 7")	1,070 mm (3' 5")	/	2,660 mm (8' 7")	1,190 mm (3' 9")	Bolt-on Cutting Edge.	
	2.5 m <sup>3</sup> (3.3 yd <sup>3</sup> )	2,716 mm (8' 9")	1,200 mm (3' 9")	/	2,600 mm (8' 7")	1,220 mm (4' 0")	Bolt-on Cutting Edge.	
	3.0 m <sup>3</sup> (3.9 yd <sup>3</sup> )	2,700 mm (8' 8")	1,280 mm (4' 2")	/	2,560 mm (8' 3")	1,255 mm (4' 1")	Bolt-on Cutting Edge; Bolt-on Cutting Edge and Welded Teeth.	
Rock	1.5 m <sup>3</sup> (2 yd <sup>3</sup> )	2,530 mm (8' 3")	1,130 mm (3' 7")	/	2,760 mm (9' 1")	1,060 mm (3' 5")	V-Shape Anti-Wear Blade.	
Grapple	Φ850 mm (2' 7")	2,120 mm (6' 9")	1,620 mm (5' 3")	128 mm (4")	2,570 mm (8' 4")	1,490 mm (4' 9")	Aligned Teeth.	
	Φ320 mm (1')	2,300 mm (7' 5")	1,200 mm (3' 9")	50 mm (2")	2,567 mm (8' 4")	1,418 mm (4' 6")	Crossed Teeth.	

# STANDARD EQUIPMENT

## ENGINE

- Perkins 1204F-E44TAN, Tier 4 final/StageIV engine, air-to-air intercooled, net power of 116.4 kW (145 hp) - 4 cylinders, 4 stroke, reverse fan cooling.
- High Pressure Common Rail
- Exhaust emission control
- DC air filter, fuel filter
- Hydraulic driven reversible fan

## TRANSMISSION

- ZF 4WG158 power shift transmission
- Kick-down function, FNR, F4/R3
- Transmission oil level sight gauge
- Secondary oil filter, oil stick
- Remote pressure taps for diagnostics
- Auto shifting mode by speed
- Interlock between parking brake and gear shifting

## AXLE

- Liugong wet front axle with limited slip differentials
- Wet discs service brake system
- Parking brake service as secondary

## HYDRAULIC SYSTEM

- Single piston pumps with variable displacement hydraulic load-sensing
- Third valve and multipurpose lines
- Single joystick control
- Boom kick-out, automatic
- Bucket positioner, automatic
- Plug at the port of bucket and boom cylinder for pressure check
- Emergency boom lower via pilot accumulator

## STEERING SYSTEM

- Load sensing system with flow amplification and steering priority
- Emergency steering system

## TIRE & RIM

- 17.5-25/L3 Bias tire
- Full fender

## CHASSIS FRAME

- Spacious central articulation arrangement with conic bearing
- Articulation locking bar
- Tow hitch
- Rubber cushion articulation stops

## LINKAGE & ATTACHMENTS

- Z-bar linkage

## ELECTRIC SYSTEM

- Two front lights with high/low beam
- Four front headlights on top of cab
- Four rear headlight on top of cab
- Turn signals with flasher
- Batteries, free of maintenance
- Cigarette lighter, 24 V power outlet
- Electric horn
- Front and rear windshield wiper
- Electronic device compartment
- Back-up alarm
- Radio/player with USB port
- Reversing warning light, automatic
- Rotating beacon
- License-plate bracket and light

## GAUGE GROUP

- Engine coolant temperature
- Transmission oil temperature

- Fuel level
- Hour meter
- Voltage
- Brake oil pressure

## INDICATOR GROUP

- Air inlet heater
- Battery charging
- Parking brake applied
- Machine emergent stop
- Power cut-off
- Engine servicing
- Turning lights
- Engine starter running
- Beam of front light

## CAB

- Certified FOPS (ISO 3449) and ROPS (ISO 3471) cab
- Seat - mechanical suspension with 3 inch seat belt
- 4-way adjustable steering column
- Large curved front glass
- Rubber cab mounts
- Cab fresh air filter
- One interior & dual exterior rear-view mirrors
- Rear-view camera display
- Air conditioner
- Lunch-box/cooler holder
- One beverage holder
- Cigarette lighter
- Cab rear window defroster
- Sun visors
- Fire extinguisher

## OTHERS

- Manual central lubrication
- Wedge block

# OPTIONAL EQUIPMENT

## ENGINE

- Cold start aid

## AXLE

- LiuGong wet front axle without limited slip differentials

## HYDRAULIC SYSTEM

- Ride control

## TIRE & RIM

- See tires options
- Normal fender
- Tire protective chain

## CAB

- Heated air suspension seat
- Heated external rear view mirrors
- Cab dust removal device
- Front windshield screen (must be mounted at factory)

## LINKAGE & ATTACHMENTS

- Quick coupler
- Additional counterweight
- High/extra-high linkage
- Bolt-on wear-resist blade and teeth
- Rock bucket

- Grapple with aligned or crossed teeth
- Fork
- Snow blade

## OTHERS

- Automatic central lubrication
- Weight scale (Electric load weigher)
- Hood protective guard



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