

LIUGONG

820TE

BEV

OPERATING WEIGHT
7,100 KG (15,653 LBS)

BUCKET CAPACITY
0.8-2.0 m³ (1-2.6 yd³)



SPECIFICATIONS

Operating weight 7,100 kg (15,653 lbs)

Operating weight includes the machine weight with standard work device, no additional equipment or accessories, all fluids at required level and an operator 75 kg (165 lbs).

Bucket capacity 0.8-2.0 m³
(1-2.6 yd³)

POWER BATTERY

Description

Battery Type: LFP, lithium iron phosphate battery

Manufacturer CATL

Model LFP

Rated storage energy 70.5 kWh

Nominal voltage 309 V

Battery box protection level IP68

Control box protection level IP67

Cooling method Intelligent temperature control, liquid cooling

Optional charging pile specifications ≤60 kW (80.4 hp)

Charging time (60 kW charging pile) ≤1-1.5 h (Fast charging)

TRANSMISSION

Description

LiuGong has independently developed a single-motor electric drive transmission system, featuring a fixed-axis gearbox with two forward gears and one reverse gear, integrating FNR. This system is compact in structure, has high load-bearing capacity, and eliminates the design of a hydraulic torque converter to enhance transmission efficiency, reduce noise, simplify the control system, and provide a more comfortable operating experience.

Transmission type Fixed-axis gearbox

Maximum travel speed, fwd 40 km/h (24.9 mph)

Maximum travel speed, rev 19 km/h (11.8 mph)

Number of speed, f/r 2/1

HYDRAULIC SYSTEM

Description

System supply: A piston pump supplies oil to the working and steering systems, with steering having priority.

Valve: Load-sensitive flow sharing valve.

Lifting function: The valve has four positions: lift, hold, lower, and float.

Dumping function: Enables the boom to lift and dump simultaneously.

Brake: Dual-circuit full hydraulic brake system.

Main pump type Piston

Control Electric proportional joystick control

Main relief pressure 23.5 MPa (3,408 psi)

3rd function valve relief pressure 23.5 MPa (3,408 psi)

Raising time 4.7 s

Dump time 1.1 s

Float down time 4 s

Fastest total cycle time 9.8 s

3rd function valve maximum flow 92 L/min (24.3gal/min)

DRIVE MOTOR

Description

Drive motor & hydraulic motor: Made by WEITEL and INOVANCE

Power 50 kW (67.1 hp)

Ambient temperature -40~85°C (-40~185 °F)

Adaptive altitude ≤5,000 m (3.1 mile)

AXLES

Front and rear axle reduction ratio 18.6

Oscillation ±8°

STEERING

Steering configuration Articulated

Steering relief pressure 19 MPa (2,755 psi)

Maximum flow 90 L/min (23.7 gal/min)

Steering cylinders 1

Cylinder bore 80 mm (3.2")

Rod diameter 40 mm (1.6")

Stroke 335 mm (1'1")

ELECTRICAL SYSTEM

Description

The central warning system includes central warning light and buzzer for the following functions: power battery fault alarm, motor fault alarm, insulation fault alarm, charger connection alarm, shutdown alarm. When working, the central warning light and buzzer are used for the following functions: power battery & travel motor & hydraulic motor temperature display, battery power display, brake low pressure alarm, parking brake indicator.

Voltage DC 24 V

Batteries 2×12 V

Battery capacity 2×45 Ah

SOUND & ENVIRONMENT

Sound level in cab (stationary work cycle mode) according to iso 6396-2008/en iso 3744-1996 80dB

External sound level (stationary work cycle mode) according to iso 6396-2008 98dB

Ventilation 350 m³/h (457.8 yd³/h)

Heating capacity 4 kW (5.4 hp)

Refrigerating capacity 4.2 kW (5.6 hp)

BRAKES

Description

Dual-circuit full hydraulic brake system.

Service brake type Full hydraulic

Service brake actuation Hydraulic wet brake

Parking brake type Manual electronic control/Hydraulic release callper brake

Parking brake actuation Caliper disc parking brake system

CAB

Description

Instrumentation: All important information is centrally located in the central instrument panel and operator's field of vision. Large front window, rear mirrors, and standard review camera ensure great visibility.

Two-way-adjustable steering column, heated air suspension high back seat. DAB radio, rear window grid defroster, heat and A/C with all-around air outlets are provided standard.

Pressurized cab with lower interior noise.

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

SERVICE CAPACITY

Cooling system 25 L (6.6 gal)

Hydraulic system 54 L (14.3gal)

Transmission and torque converter 4 L (1.1 gal)

Axles, front/rear 13 L (3.4 gal)

TIRES

Tire size 405/70R20

LOADER ARM DIMENSIONS

E Ground clearance 350 mm (1'2")

F Length without bucket 4,925 mm (16'2")

G Wheelbase 2,150 mm (7'1")

H Cab height 2,520 mm (8'3")

I Hood height 1,750 mm (5'9")

J Wheel tread 1,520 mm (5'0")

K Width over tires 1,925 mm (6'4")

L Length with bucket down 5,894 mm (19'4")

M Turn angle, either side 38°

P Rear angle of departure 30°

R1 Turning radius, bucket carry 4,749 mm (15'7")

R2 Turning radius, outside of tire 3,750 mm (12'4")

W Width over bucket 2,225 mm (7'4")

LOADER ARM PERFORMANCE

Tipping load - straight (iso 14397-1:2007) 4,350 kg (9,590 lbs)

Tipping load - full turn (iso 14397-1:2007) 3,650 kg (8,047 lbs)

Bucket breakout force 61 kN (13,713 lbf)

A Maximum hinge pin height 3,408 mm (11'2")

B Dump clearance at full height discharge 2,620 mm (8'7")

C Dump reach at full height discharge 850 mm (2'9")

D Maximum digging depth, bucket level 95 mm (3.7")

S1 Bucket rollback at ground level 45°

S2 Bucket rollback at carry 49.5°

S3 Bucket rollback at maximum height 60°

S4 Maximum dump angle at full height 45°

HIGH LIFT LOADER ARM DIMENSIONS

E Ground clearance 350 mm (1'2")

F Length without bucket 5,172 mm (17'0")

G Wheelbase 2,150 mm (7'1")

H Cab height 2,520 mm (8'3")

I Hood height 1,750 mm (5'9")

J Wheel tread 1,520 mm (5'0")

K Width over tires 1,925 mm (6'4")

L Length with bucket down 6,168 mm (20'3")

M Turn angle, either side 38°

P Rear angle of departure 30°

R1 Turning radius, bucket carry 4,868 mm (16'0")

R2 Turning radius, outside of tire 3,750 mm (12'4")

W Width over bucket 2,225 mm (7'4")

HIGH LIFT LOADER ARM PERFORMANCE

Tipping load - straight (iso 14397-1:2007) 3,661 kg (8,071 lbs)

Tipping load - full turn (iso 14397-1:2007) 3,051 kg (6,726 lbs)

Bucket breakout force 70 kN (15,737 lbf)

A Maximum hinge pin height 3,573 mm (11'9")

B Dump clearance at full height discharge 2,830 mm (9'3")

C Dump reach at full height discharge 1,002 mm (3'3")

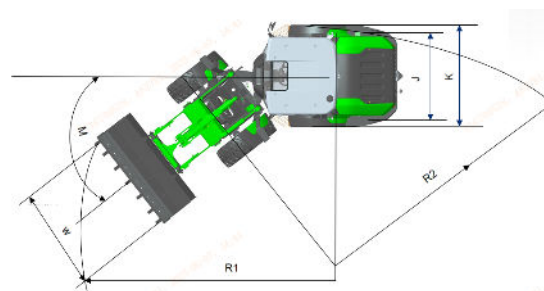
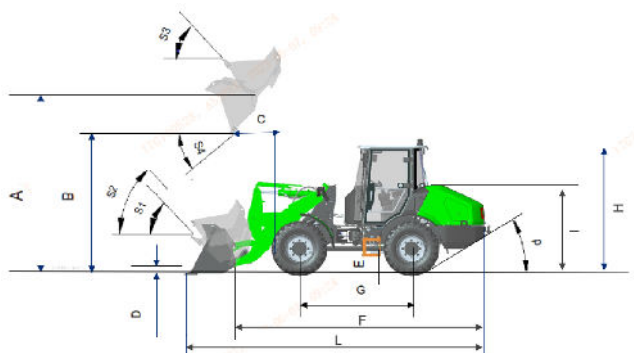
D Maximum digging depth, bucket level 173 mm (6.8")

S1 Bucket rollback at ground level 45°

S2 Bucket rollback at carry 49.5°

S3 Bucket rollback at maximum height 60°

S4 Maximum dump angle at full height 45°



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
L2	- Where good traction is needed, e.g. at grading work - In soft and muddy operation where sharp stones don't occur - In all load/carry operations		405/70R20	★	TL	405 mm (1'3")	1,070 mm (3'5")	25.2 mm (1")	2725 / 3875 kg (50 km/h / 10 km/h)
									6008 / 8543 lbs (31,1 mph / 6.2mph)

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	Dump Clearance (High Lift Loader Arm)	Dump Reach (High Lift Loader Arm)	Description	Attachment Drawing
General Purpose (QC)	1.2 m ³ (1.6 yd ³)	2,225 mm (7'4")	1,011 mm (3'4")	197 mm (7.8")	2,620 mm (8'7")	850 mm (2'9")	2,830 mm (9'3")	1,002 mm (3'4")	Bolt-on teeth.	 General Purpose  Side-Dump Bucket
	1.2 m ³ (1.6 yd ³)	2,225 mm (7'4")	1,012 mm (3'4")	197 mm (7.6")	2,615 mm (8'7")	880 mm (2'1")	2,780 mm (9'1")	1,016 mm (3'4")	Bolt-on cutting edge.	 Light Material  Grass Grapple
Pallet Fork (QC)	/	1,256 mm (4'1")	969 mm (3'2")	/	2,304 mm (7'7")	1,245 mm (4'1")	2,468 mm (8'1")	1,381 mm (4'6")	Pallet Fork (QC)	 Rock  Forks
Four in one bucket	/	2,074 mm (6'10")	1,076 mm (3'6")	243 mm (10")	2,642 mm (8'8")	826 mm (2'9")	2,807 mm (9'3")	962 mm (3'2")	Four in one bucket	 Grapple with Aligned Teeth  Grapple with Crossed Teeth

STANDARD EQUIPMENT

POWER SYSTEM

- CATL battery, WEITELI drive motor and INOVANCE hydraulic motor
- Intelligent temperature-controlled liquid cooling
- Electronic controlled fan with automatically speed adjustment, and auto reversing functions

TRANSMISSION

- LiuGong EPT202 transmission & Two-speed

AXLE

- LiuGong wet axles
- Locking front differential & open rear axles

HYDRAULIC SYSTEM

- Variable working hydraulic system
- 4-spool main valve
- Electric proportional joystick control with FNR
- Ride control

STEERING SYSTEM

- Load sensitive steering hydraulic system
- Variable steering hydraulic system

TIRE & RIM

- Radial Tire, 405/70R20

CHASSIS FRAME

- Rubber shock absorber steering limit

OPERATOR STATION

- Work System: standard boom, electric control quick coupler
- Cab Type: pressurized cab, with FOPS&ROPS
- AC System: cooling and warm air conditioner
- Seat: Air suspension electric-heated ventilated seat, high back, armrest+headrest, multi-direction adjustable
- Cab Accessory: electric heated rear view mirror, rearview camera button start and stop, rear defroster, seat belt, seat belt indicators, rotating beacon, Graphical display, rear wiper, sun visor, sound system, T-BOX, two-way adjustable steering column, fire extinguisher
- Intelligent Machine Control: Auto leveling, remote reservation(Include heating/ charging), OTA
- Lubrication Type: manual centralized lubrication
- Protective Device: full fender
- Safety Warning: emergency steering system, parking wedge, back alarm with white noise+Orange back light, ride control system, boom supporting brackets
- Work Light: LED light, license plate light, high & low beams, locking status, parking brake, direction, lubrication system, battery charging, operation ready
- Hood: Noise-reduced engine hood
- Instrument: full LCD front instrument panel, voltage, motor speed, fault code, SOH/SOC, battery temperature, hour meter

- Cooling System: Transmission cooler

OTHERS

- Other: Idle stop, Neutral starting protection, DAB radio, Safety hammer
- Charging Port: CCS1 Single Charging Port
- Accessory parts
- Liugong telematics
- Emergency stop

OPTIONAL EQUIPMENT

OPERATOR STATION

- Work Implement System: Long boom refit
- Cab Accessory: 3 points seatbelt, Cab dust removal device

LINKAGE & ATTACHMENTS

- Four in one bucket
- Pallet Fork(QC)

PROTECTIVE DEVICE

- Light protective guard

OTHERS

- Low temperature oil kit
- 12V external power supply



TOUGH WORLD. TOUGH EQUIPMENT.

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LG-SP-856HE MAX-WW-A4-102024-ENG

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