LiuGong

820TE

BATTERY TYPE	LFP
RATED STORAGE ENE-RGY	70.5 kWh
OPERATING WEIGHT	6,600 kg (14,550 lbs)
STANDARD BUCKET SIZE	1.2 m^3 (1.57 yd^3)
STANDARD BREAKOUT FORCE	61 kN (13,713 lbf)
STANDARD DUMP CLEARANCE	2,620 mm (5'4")

BATTERY ELECTRIC VEHICLE

TOUGH WORLD. TOUGH EQUIPMENT.

CHANGE FOR THE BETTER

LET'S TALK CHANGE

If you are reading this, then in all probability you are considering making the change to electric machines.

But how do you go about it? Who offers the best machines, support and advice? Who offers the best total cost of ownership? What kind of return on investment can you expect?

As a leader in electric machine and infrastructure technology, we believe we can guide you through every step of your change to electric.

WHY ELECTRIC?

Fully electric? Hybrid? Alternative fuel transmissions?

Making the change from diesel presents a number of options and LiuGong have fully evaluated all of the above and more before deciding on electric as the best option.

DECARBONIZATION

Reaching our taraget with electric technolgoy **CO_2**

BETTER EFFICIENCY

Work efficiency increases by

20%

compared with the diesel alternative

BETTER ECONOMY

1 electric unit can save

36 L
of fuel per day*

That equates to over

11,250 L
of fuel per year**, saving up to

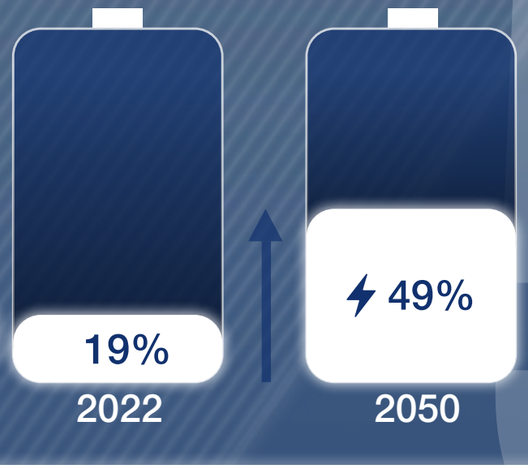
30 t
of carbon emissions.

*based on 8 hours at 4.5L/hour.
**based on 2,500 hours/year

WHY CHANGE NOW?

Our global priorities for energy are changing rapidly, with the adoption of electric power accelerating beyond all other sources. For our customers, changing to electric is a strategic change for the better.

At LiuGong, we can relate to this. We want to be a better global citizen and help make life better for everyone. This thinking has shaped our investment and transformation into a leader in electric capability.



Our energy priorities are changing fast.

Now is the time to change for the better. Together we can help reduce CO_2 emissions by over

50 MILLION TONS

LEADING IN BATTERY ELECTRIC VEHICLE TECHNOLOGY

WE OFFER A WORLD LEADING BEV RANGE

LiuGong were one of the first Chinese construction equipment manufacturers to identify the potential of battery electric vehicles in our industry.

As a leader in BEVs we are already developing one of the world's largest electrically powered construction equipment ranges.

Covering 9 product areas, from aerial access equipment to heavy-weight excavators and wheel loaders, we are changing the face of the industry.

ELECTRIC PRODUCT LINES

WHEEL LOADERS

EXCAVATORS

MOTOR GRADERS

ROLLERS

MINING TRUCKS

TRACTORS

FORK LIFTS

SKID STEER LOADERS

REACH STACKERS

AERIAL ACCESS EQUIPMENT

2014
Start of EV technology development

2018
World's first EV loader and excavator built by LiuGong

December 2020
Launch of the first-generation EV loader and excavator

April 2021
EV loader won the top 50 innovation gold award 2021

March 2022
Top 50 new energy gold award 2022

December 2023
Sales of EV wheel loader exceeded 3000 units in the world

WE ARE A WORLD LEADER IN BEV DESIGN AND R&D

Our Design and R&D Teams are driven to produce the widest possible range of electric vehicles with the toughness, intelligence and performance you would expect from LiuGong.

Sharing our Red Dot award winning design DNA, our BEVs have already been awarded with Top 50 Innovation Gold Award in 2021 and Top 50 Energy Gold Award in 2022.

TRUST OUR EXPERIENCE TO HELP YOU CHANGE

NEW 820TE

AN INTELLIGENT SOLUTION FOR A TOUGH WORLD

Experience the future of electric loading with the new generation LiuGong T Series, China's first 2-ton electric wheel loader.
Continuing LiuGong's legacy of excellence in electric machinery, this groundbreaking loader offers wide adaptability and high efficiency.

INTELLIGENT APPLICATIONS

– Enhance versatility with an electronic crntrolquick coupler for various attachments.
– Self-adjustable overall traction force and third-link flow rate optimize performance for different working conditions.
– Cruise control function simplifies operation, enhancing productivity on the job site.
Step into the future of construction machinery with the 820TE Electric Wheel Loader, where innovation meets efficiency for unparalleled performance.

ZERO EMISSIONS & LOW NOISE

– Pure electric motor design ensures zero emissions, eliminating pollution concerns.
– Engineered for tranquility, cabin noise is reduced by at least 10 dB compared to traditional fuel-powered loaders.

SAFE & RELIABLE

– High-temperature resistant battery system with three-tier leak protection measures for enhanced safety.
– Enjoy peace of mind with a five-year, ten-thousand-hour battery warranty.
– Benefit from the stability, reliability, and high maintenance-free performance of the LiuGong wet brake axle.

HIGHLY EFFICIENT & COST-EFFECTIVE

– Extended maintenance intervals and fast charging ensure uninterrupted operations.
– Energy recovery and intelligent thermal management optimize efficiency.
– With a 15% increase in transmission efficiency with the exclusive automatic gearbox, eliminating the need for a torque converter.

CONVENIENT & COMFORTABLE

– Designed with ergonomic principles, offering a spacious cabin for operator comfort.
– Adjust components such as the steering wheel, seat, and armrest for personalized operation.
– Enjoy improved visibility with a full-glass design and maneuver easily with a compact height of ≤2.52 m.

CHANGE FOR INTELLIGENT PERFORMANCE

ENERGY RECOVERY

Experience unprecedented efficiency with our independently developed energy recovery system. By enabling reverse charging during gear shifting or braking, it delivers a remarkable 15% overall energy savings while extending battery life.

AUTOMATIC CONTROL

LiuGong's electric control box linked to an electric proportional transmission with a direct connection to the drive motor delivers the optimum torque with minimum energy. This smart solution improves transmission efficiency by more than 15% compared with conventional machines.

SMART ANTI-THEFT

Safeguard your investment with our smart anti-theft features. Key-operated door locks and negative terminal switches provide physical security, while the graphical display instrument password confirmation function prevents unauthorized access, ensuring machine integrity and preventing safety accidents.

INTELLIGENT ADJUSTMENT

Adapt effortlessly to varying working conditions with our intelligent adjustment capabilities. The 820TE autonomously fine-tunes traction force, vehicle speed, and third-link hydraulic flow rate, enhancing operational experience and maximizing work efficiency for tasks like snow removal and sweeping.

MAKING THE MOST OF EVERY CHARGE

For BEVs, fuel consumption may no longer be an issue, but energy efficiency is still a top priority for LiuGong. Our machines are required to work in the toughest, most remote locations, so it's essential that they use their battery power intelligently. Our smart approach differentiates our BEVs and makes the most of every charge.

OPTIMIZED BATTERY PERFORMANCE

Keep operations running smoothly with intelligent temperature control. Our system efficiently cools and protects the battery, maintaining an optimal temperature range of 20°C to 35°C. With independent fan control and automatic forward and reverse rotation, our battery design ensures unmatched performance and reliability.

CHANGE FOR A SAFER SOLUTION

SAFETY WITHOUT COMPROMISE

With active and passive safety protection our aim is to create the safest working environment yet. Designed around the operator, our cab provides the highest levels of safety, visibility and comfort. ROPS protection, advanced battery technology and excellent overall construction all combine to create zero tolerance for accidents in or around the machine. No one protects you or the environment more.

IP67 ASSURANCE

Every electrical component on the 820TE meets the IP67 standard for dust-proof and waterproof performance.
As you would expect, the battery easily meet the IP67 standard and have been designed to withstand the harshest working environments of extreme heat and humidity.

SAFE AND SECURE

Our approach to battery management is simple. We keep our batteries safe, secure and in top condition to give you performance you can rely on.

SAFETY FIRST

Our charging gun has been designed with simplicity and safety in mind and prevents the operator from potential electrical hazards such as shocks, short circuits and over-charging. It’s a simple, safe solution that gets you back on the job, fast.

CHANGE FOR A SAFER SOLUTION

CHANGE FOR COMFORT

ENVIRONMENTALLY FRIENDLY

Changing to electric brings you the obvious benefits of zero emissions and zero diesel costs. But our new design for the 820TE goes even further.

‘Silent’ is a bold claim, but noise performance tests prove that internal and external noise and vibrations are negligible, compared with traditional machines. Zero noise is our aim, and the new 820TE comes within a whisper of achieving that.

NO VIBRATIONS

Engineered to withstand high-intensity vibrations, our machine’s battery and overall structure ensure optimal protection for the battery system, even in the toughest conditions. Rest assured, safety is paramount during all machine operations.

CHANGE FOR ‘PLUG & PLAY’ SIMPLICITY

PLUG & PLAY SIMPLICITY

We help you change to electric by offering a simple plug-and-play solution, perfectly matched to deliver the optimum performance, economy and safety.

up to **7 HOURS** working time in light applications

up to **5 HOURS** working time in heavy applications

1 HOUR 80 kW charging pile

9.5 HOURS 7 kW charging pile

POWER & BATTERY PERFORMANCE

We’ve made the change to electric easy with an “all-in-one unit” powertrain, designed for optimum simplicity and performance, and an intelligent battery management system for a safe and easy charging solution.

ALL IN ONE POWERTRAIN

Our All-In-One Powertrain seamlessly integrates controller, drive motor, transmission, drive axle controller, and hydraulic motor and pump into a single system. That means maximum power with maximum efficiency.

SUPERIOR BATTERY PERFORMANCE

The 820TE is powered by a 70.5 kWh capacity lithium iron phosphate battery. Delivering:

– Choose the 80 kW direct current fast charge from 12% to 95% SOC in 1 hour, minimizing downtime.
– Alternatively, select the 7 kW alternating current slow charge for 95% capacity in 9.5 hours, adapting to your schedule.

CHANGE WITH CONFIDENCE

GUARANTEED RELIABILITY

As you would expect, the 820TE has reliability built in. The machine has been proven to be reliable in harsh working conditions such as mixing plant, livestock farm, etc, meeting the needs of various working conditions. In addition, the IP67-rated wiring harness adds extra protection to the battery, motor and electronic control system .

But we go further to guarantee your peace of mind.
The 820TE comes with a 5-year or 10,000-hour (for battery) warranty as standard.

This is not a sales gimmick. This guarantee underlines the confidence we have in our electric machines, born out of real-life controller) perience in tough, commercial job sites.

5 YEARS 10,000 HOURS WARRANTY

CHANGE FOR BETTER RETURN ON INVESTMENT

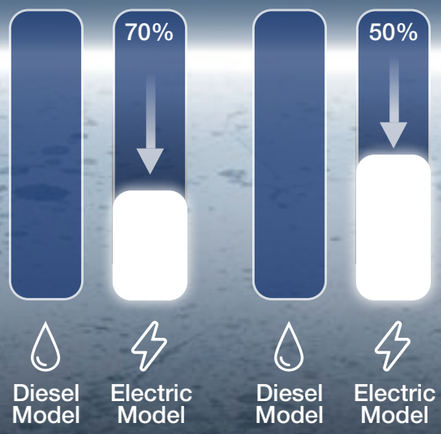
DIESEL VS ELECTRIC?

This is the big question. In a straight cost-per-ton comparison, changing to electric makes sense on the job site and on the balance sheet. Diesel wheel loaders use 1 litre of oil, while electric wheel loaders use only 3 kWh of electricity.

LOW TOTAL COST OF OWNERSHIP

– Permanent magnet synchronous motor

– Maintenance-free battery



up to **70%** reduction in operation costs over 5 years

up to **50%** reduction in maintenance costs over 5 years

SLASHES OPERATIONAL & MAINTENANCE COSTS

Not guesswork – but cold, hard fact, gleaned from over 200 customer job sites. Our detailed analysis proves that our electric machines reduce 5-year operational costs by up to 70% and maintenance costs by up to 50%.

Add to the five-year or 10,000-hour warranty of Liugong (for battery, motor, controller), the 820TE promises exceptional return on investment.

RECHARGES WHILE YOU WORK

It would be impossible for a conventional machine to create its own diesel, but LiuGong's intelligent energy recovery system actually charges the battery as you work. This smart technology saves up to 20% of energy and keeps you working longer between charges.

USE OUR SMART APP

You can calculate your total cost of ownership in an instant with our smart app. Try it now. It could change your mind for the better.

NEW 820TE

AN INTELLIGENT SOLUTION FOR A TOUGH WORLD

820TE

SPECIFICATIONS >>>

Operating weight	66,00 kg (14,550 lbs)
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 lb).	
Bucket capacity range	0.8~2.0 m^3 (1~2.6 yd^3)

POWER BATTERY

Description	
Battery Type: LFP, lithium iron phosphate batteries Drive motors & hydraulic motors: Made by WEITELI and INOVANCE Ambient Temperature: -30~40℃ .	
Manufacturer	CATL
Model	Lithium iron phosphate battery
Rated Storage Energy	70.5 kWh
Nominal Voltage	309 V
Protection class of battery system	IP67
Cooling method	Intelligent temperature control, liquid cooling
Optional charging pile specifications	≤ 80 kW (≤ 109 hp)
Charging time (80 kW charging pile)	≤ 55 min (SOC12% ~ 95%)

TRANSMISSION

Description	
LiuGong has independently developed a single-motor electric drive transmission system, featuring a fixed-axis gearbox with two forward gear 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 axle gearbox
Maximum drive speed, fwd	40 km/h (24.9 mph)
Maximum drive speed, rev	19 km/h (11.8 mph)
Number of speed, fwd	2
Number of speed, rev	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. Cylinders: Double-acting cylinders used for all functions.”	
Main pump type	Piston
Controls	Single electric-control joystick
Main relief pressure	23.5 MPa (3,408 psi)
Raise	4.7 s
Dump time	1.1 s
Float down time	4 s
Fastest total cycle time	9.8 s

DRIVE MOTOR

Description	
Efficient permanent magnet synchronous motor with high power density and compact structure. It’s low maintenance, cost-effective, and has extended maintenance cycles.	
Motor output -Max (SAE J1995/ISO 14396)	50 kW (67 hp / 68 ps) @ 8,000 rpm
Ambient temperature	-40~85°C
Adaptive altitude	≤ 5,000 m (3.1 mile)

AXLES

Front and rear axle reduction ratio	18.7
Oscillation	±8°

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 priority. Steering cylinder: single cylinder.	
Steering configuration	Articulated
Steering relief pressure	19 MPa (2,755 psi)
Maximum flow	90 L/min (23.78 gal /min)
Steering cylinder	1
Cylinder bore	80 mm (3.1")
Rod diameter	35 mm (1.4")
Stroke	330 mm (1'1")

ELECTRICAL SYSTEM

Voltage	DC 24 V
Batteries	2×12 V
Battery capacity at 20h rate	90 Ah
Cold cranking capacity at -18°C	375 A
Reserve capacity	140 min

SOUND & ENVIRONMENT

Sound level in cab (travel mode) according to iso 6396-2008/en iso 3744-1995	/
Sound level in cab (stationary work cycle mode) according to iso 6396-2008/en iso 3744-1995	< 80 dB(A)
External sound level (travel mode) according to iso 6396-2008	/
External sound level (stationary work cycle mode) according to iso 6396-2008	< 98 dB(A)
Ventilation	14 m^3/h
Heating capacity	4 kW (5.4 hp)
Refrigerating capacity	4.2 kW (5.6 hp)

BRAKES

Description	
New electro-hydraulic proportional braking system	
Service brake type	Full hydraulic brake
Parking brake type	Caliper disc
Parking brake actuation	Electro-hydraulic control

CAB

Description
Instrumentation: All important information is centrally located in the central instrument panel and operator‘s field of vision. Large curved front window glass and rear mirrors ensure great visibility. Adjustable steering column, high back seat, armrest box and A/C with all-around air outlets are provided as standard. Pressurized cab with lower interior noise. The cab is tested and approved according to ROPS (ISO 3471), FOPS (ISO 3449).

DIMENSIONS

E Ground clearance	350 mm (1'2")
G Wheelbase	2,150 mm (7')
H Cab height	2,520 mm (8'3")
J Wheel tread	1,520 mm (5')
K Width over tires	1,925 mm (6'4")
L Length with bucket down	5,894 mm (19'34")
M Turn angle, either side	40°
P Rear angle of departure	30°
R1 Turning radius, bucket carry	4,749 mm (15'58")
R2 Turning radius, outside of tire	3,953 mm (12'97")
W Width over bucket	2,225 mm (7'3")

SERVICE CAPACITY

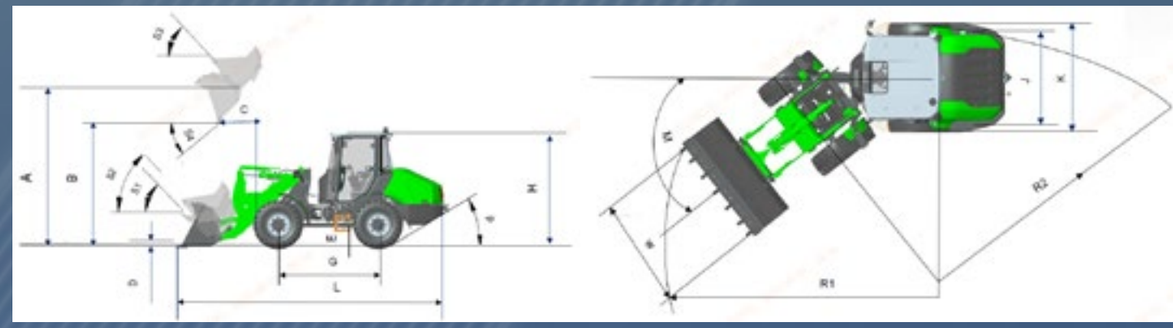
Cooling system	10 L (2.6 gal)
Hydraulic system	54 L (14.3 gal)
Transmission and torque converter	4 L (1.1 gal)
Axles, front/rear	13 L (3.4 gal)

LOADER ARM PERFORMANCE WITH ATTACHMENT

Tipping load - straight (iso 14397-1:2007)	4,350 kg (9,590 lbs)
Tipping load - full turn (iso 14397-1:2007)	3,650kg (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 (3.12")
S1 Bucket rollback at ground level	45°
S2 Bucket rollback at carry	50°
S3 Bucket rollback at maximum height	60°
S4 Maximum dump angle at full height	45°

TIRES

Tire size	405/70R20



LiuGong standard and optional equipment may vary from region to region. Please consult your LiuGong dealer for information specific to your area.

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STANDARD EQUIPMENT

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

TRANSMISSION
- LiuGong EPT200 automatic electric control transmission

AXLE
- LiuGong wet axles
- Front & rear limited slip differentials
- With differential lock

HYDRAULIC SYSTEM
- Variable working hydraulic system
- 3-spool main valve
- Integrated pilot single joystick with FNR
- Ride control

STEERING SYSTEM
- Load sensitive steering hydraulic system
- Variable steering hydraulic system

TIRE & RIM
- Radial Tire, 405/70R20
- Tire nozzle protection

CHASSIS FRAME
- Hinge swing
- Rubber shock absorber steering limit

OPERATOR STATION
- Pressurized cab, with FOPS&ROPS
- Two-way adjustable steering cloumn
- Air-suspension seat, high back, armrest headrest, multi-direction adjustable
- Full LCD front instrument panel
- Indicators: high & low beams, locking status, parking brake, direction, lubrication system, battery charging, operation ready, etc.
- AC system
- Instument: voltage, motor speed, fault code, SOH/SOC, battery temperature, hour meter, etc.
- Back-up alarm
- Electric horn
- Fire extinguisher
- Cab rear windshield defroster
- Rotating beacon
- Button start or stop

OTHERS
- Fenders
- Liugong telematics
- Light protective guard
- Boom supporting brackets
- CCS2 Charging interface

OPTIONAL EQUIPMENT

HYDRAULIC SYSTEM
- 4 SPL valve

OPERATOR STATION
- Cab dust removal device
- Rearview camera

LINKAGE & ATTACHMENTS
- Quick coupler
- Four in one bucket.

PROTECTIVE DEVICE
- Chassis guard
- Protection guard of cab

SAFETY WARNING
- Ride control system
- Load holding vavle

OTHERS
- Low temperature package
- CCS1 charging interface
- Safety hammer
- Mechanical seat

LiuGong standard and optional equipment may vary from region to region. Please consult your LiuGong dealer for information specific to your area.

A TEAM YOU CAN TRUST

TALK TO US TODAY

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LG-PB-820TE MAX-70.5kWh-EU-A4-28P-072025-ENG

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