



# JGM860E

LE-ELECTRIX (BOSCH REXROTH)  
POWERTRAIN SYSTEM



Rated Battery Capacity

**350.07/400.62kWh**



Operating Weight

**19,000±200kg**



Bucket Heaped Capacity

**3.0-5.0m<sup>3</sup>**



Integration of New Tech & Innovation

## SUPERIOR TECHNOLOGY BOOSTS PRODUCTIVITY

**JGM860E**



Productivity &  
Energy Consumption



Durability



Comfort



Safety



Serviceability



Dimensions &  
Working Range



Standard &  
Optional Config

## ALL-ROUND EVOLUTION, GREEN POWERS THE FUTURE

As a landmark product of JGM green engineering ecosystem, JGM860E electric loader is equipped with Le-ElectriX (Bosch Rexroth) three-motor stepless speed regulation technology and high-capacity LFP battery. With ultra-long battery life and ultra-low power consumption, it efficiently cuts energy costs. Keeping abreast of global carbon neutrality trends, it helps customers adhere to low-carbon concepts, establish a green, efficient and sustainable operation mode, and jointly build a brand-new low-carbon engineering ecosystem.

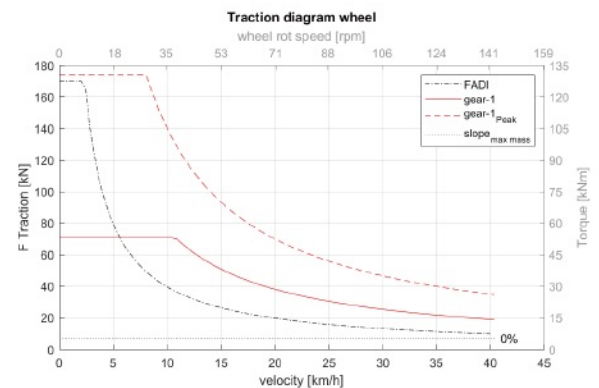
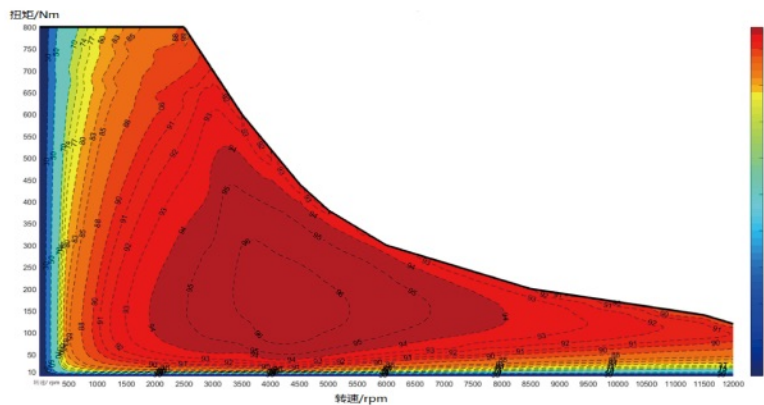
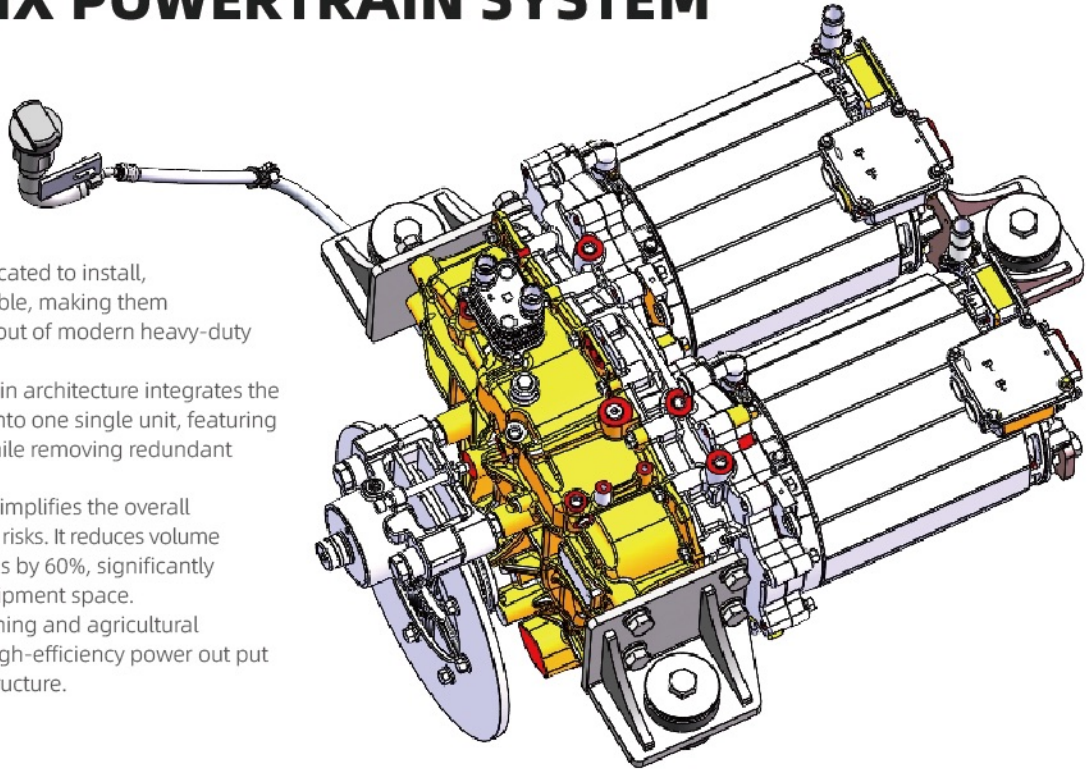
# STEPLESS SPEED CONTROL LE-ELECTRIX POWERTRAIN SYSTEM

Conventional split powertrain systems are complicated to install, energy-intensive and less reliable, making them unsuitable for the compact layout of modern heavy-duty machinery.

Our 3-in-1 integrated powertrain architecture integrates the motor, controller and reducer into one single unit, featuring unified mounting structures while removing redundant housings and brackets.

This optimized design greatly simplifies the overall structure, and minimizes failure risks. It reduces volume by 50% and mounting interfaces by 60%, significantly easing installation, saving equipment space.

Perfectly suited for loaders, mining and agricultural machinery, it delivers stable, high-efficiency power output with a compact and reliable structure.



## Further Optimized Productivity & Energy Consumption

### Stepless Powertrain • Zero Power Interruption

The single-gear stepless drive delivers 100% continuous power, boosting cycle efficiency and eliminating power interruption by shifting.

### Faster Acceleration • Stronger Heavy-Duty Start

The high-power single-gear powertrain delivers faster response, stronger start and consistent power, perfect for loading scenarios.

### Mid-Low RPM • High Efficiency & Low Noise

The design keeps motors running in mid-low RPM for 90% of scenarios, which is in the high-efficiency range, reducing energy consumption & noise and extending service life.

### Superior to the mainstream two-speed-shift configuration

2-speed systems rely on complex shift mechanisms prone to wear and frequent maintenance. Our single-gear design cancels these parts, cutting failure points by over 60%, improving uptime and reducing total operation cost.

The logo for the JGM860E model, featuring the text 'JGM860E' in a bold, black, sans-serif font with a white outline, positioned in the top right corner of the image.

# PROVEN LONG- LASTING RELIABILITY

The upgraded 860E pure electric loader delivers outstanding value in harsh and complex working conditions. Certified through multi-condition field tests, it features a high-strength bearing structure and a highly reliable pure electric powertrain, delivering stable performance, efficient operation, and superior energy efficiency. Suitable for heavy-duty scenarios including, yards, infrastructure and ports, it delivers stable and high-quality productivity consistently.

## ● Reinforced Drive Axle

The reinforced drive axle, which is more mature and reliable, offers greater load-bearing capacity, and ensures smoother matching of the travel system, specifically designed for heavy-duty applications.

## ● Optimized Mechanical Drive Shaft

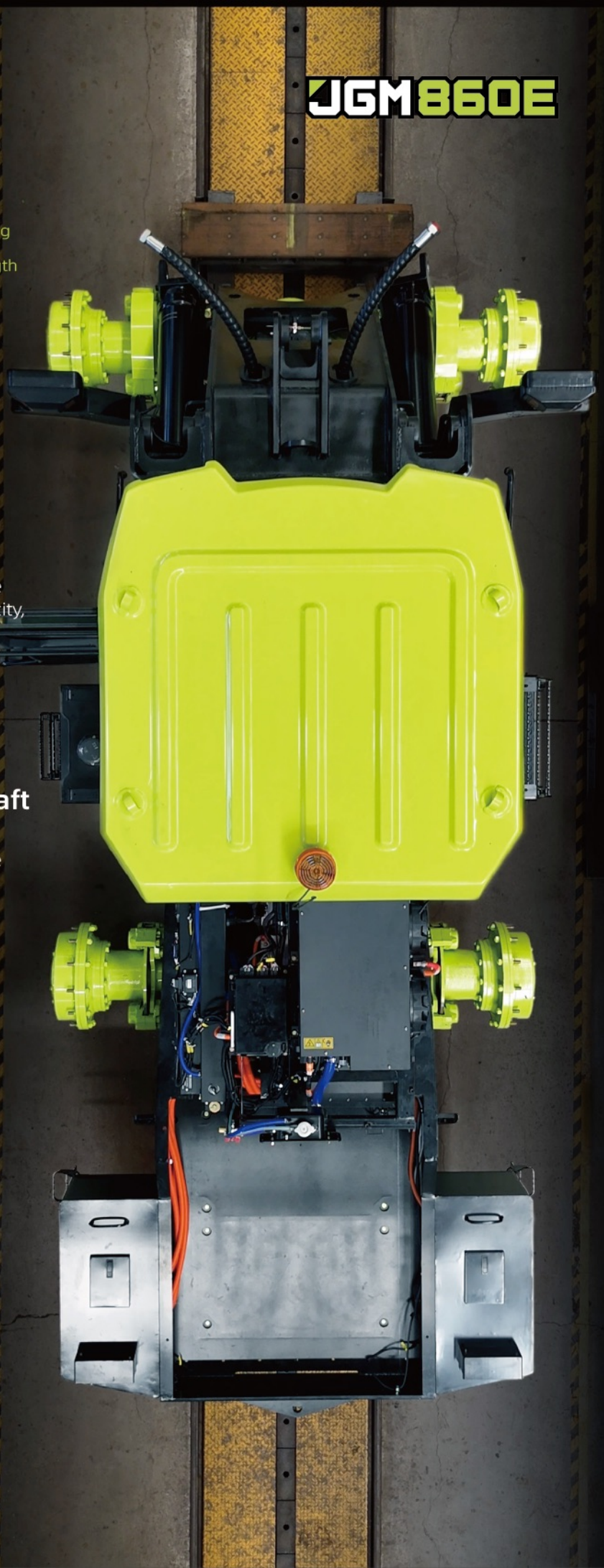
The front driveshaft features a three-section end-face tooth structure for more stable torque transmission and stronger performance.

## ● Uniform Stress Distribution

Featuring CAE-optimized structural parts and a wide-span hinge design, this system disperses stress efficiently, offers high load capacity, and adapts to varying working conditions.

## ● Reinforced Front & Rear Frame

Reinforced front and rear frames deliver high strength and long service life. 3300mm wheelbase ensures stable movement. 38° steering angle on both sides enables small turning radius for superior site adaptability.

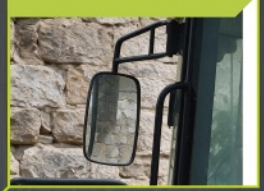




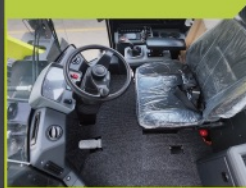
ALL TERRAIN  
ADAPTABILITY



REAR MIRROR



LOW NOISE CABIN



ROPS & FOPS(Optional)



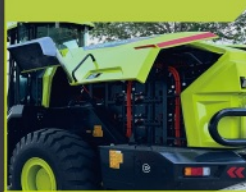
CAMERA SYSTEM  
(Advanced 360° Surround  
Monitor System)



AUTOMATIC CENTRALIZED  
LUBRICATION SYSTEM



FULL-OPEN HOOD



WIDE CONDENSER  
AND RADIATOR



## ULTIMATE SAFETY SOLUTIONS

This machine integrates a full suite of cutting-edge technologies and purpose-built safety designs to safeguard both operators and on-site personnel. By eliminating potential safety hazards, it elevates operational safety in high-risk scenarios, further mitigates accident risks, ensures uninterrupted task completion, and delivers rock-solid protection for your operations.

UPGRADED WIPER  
AND VENTILATION



NEW TYPE COMBINED  
DIGITAL DASHBOARD



COOLING & HEATING  
AC



STEPLESS ADJUST  
SHOCK-ABSORBING CHAIR



ELECTRONIC JOYSTICK



SPRING LOCK SAFETY  
BELT



ARM REST



## EASY OPERATION & COMFORTABLE DRIVING

With real-time access to precise operation data, and comprehensive optimization of the operator's driving experience, JGM loaders achieve higher productivity; even in harsh working conditions, the loaders could still maintain high-level efficiency and keep operation continuity.

TWO-STEP PARKING  
BRAKE BUTTON



## Specification



The total weight includes the weight of working devices and unloaded accessory devices specified by the manufacturer, as well as the weight of all liquid systems (i.e., hydraulic fluid, transmission fluid, gearbox fluid, and coolant for three electric systems) when they are filled to the liquid level specified by the manufacturer.

Total weight: 19,000±200 kg

Bucket capacity: 3~5 m<sup>3</sup>

## Power battery

Lithium iron phosphate power battery is chosen to meet the requirements of IEC 62619/IEC 62321/IEC 62133/UN 38.3/MSDS; the protection class of battery pack system is IP67, and that of battery box is IP68; equipped with a battery heating & cooling system, it can operate within an ambient temperature range of -30~60°C, meeting the application requirements of different regions.

|                                          |                                                                    |
|------------------------------------------|--------------------------------------------------------------------|
| Battery type                             | Lithium iron phosphate                                             |
| Rated storage energy (kWh)               | 350.07/400.62                                                      |
| Nominal voltage (V)                      | 579.6/618.24                                                       |
| Operating voltage range (V)              | 450 ~ 657/480 ~ 700.8                                              |
| Thermal Management System                | Liquid cooling + film-type heating, liquid cooling +liquid heating |
| Storage environment temperature          | -30~60°C                                                           |
| Working temperature                      | Battery system: -35~60°C                                           |
|                                          | Cell charging: 0~60°C                                              |
|                                          | Cell discharging: -35~60°C                                         |
| Relative humidity of working environment | ≤90%                                                               |
| Protection class                         | IP68                                                               |

## Power assembly

The drive system employs a single-gear drive train without any mechanical shift mechanism, which results in superior reliability, smoother driving, and improved operating efficiency.

|                                         |                    |
|-----------------------------------------|--------------------|
| Transmission type                       | Transmission shaft |
| Traction (kN)                           | ≥165               |
| Gradeability (°)                        | 28                 |
| Forward speed (km/h)                    | 0-40               |
| Reverse speed (km/h)                    | 0-20               |
| Forward gear                            | 1                  |
| Reverse gear                            | 1                  |
| Rated/peak power of drive motor (kw)    | 120/220 x 2        |
| Rated/peak power of oil pump motor (kw) | 105/190            |

## Drive axle

|             |                                             |
|-------------|---------------------------------------------|
| Type        | Special reinforced axle for electric loader |
| Form        | Dry axle                                    |
| Swing angle | ±10°                                        |

## Fluid volume

|                                   |     |
|-----------------------------------|-----|
| Gearbox fluid (L)                 | 7   |
| Antifreeze (L)                    | 40  |
| Hydraulic fluid (L)               | 260 |
| Drive axle gear fluid - total (L) | 64  |
| Fluid pump reducer (L)            | /   |

## Hydraulic system

The hydraulic system with dual-pump confluence and steering priority is stable and reliable; a high-pressure gear pump is adopted as the hydraulic pump, which is matched with hydraulic accessories such as multi-way valve, flow amplifying valve and pilot supply valve, with superior performance, making the entire hydraulic system more stable and reliable; the rubber hoses are arranged in the center, reducing the connection between rubber hoses and steel tubes, achieving convenient maintenance, and reducing the fault points.

|                       |                               |
|-----------------------|-------------------------------|
| Type of working pump  | Gear pump                     |
| System pressure (MPa) | 21                            |
| Lifting time (s)      | 5.1                           |
| Unloading time (s)    | 1.2                           |
| Lowering time (s)     | 3.3                           |
| Total time (s)        | 9.6                           |
| Control mode          | Electric control pilot handle |

## Braking system

The service brake is a hydraulic caliper disc four-wheel brake; the parking brake is a hydraulic hub-mounted brake.

|                    |                    |
|--------------------|--------------------|
| Service brake type | Caliper disc brake |
| Service brake mode | Hydraulic brake    |
| Parking brake type | Hub-mounted brake  |
| Parking brake mode | Hydraulic brake    |

## Steering system

Steering system: Articulated steering wheel.  
System supply: Wide-angle steering system, with lightweight and flexible steering.  
Steering cylinder: Two hydraulic steering cylinders.  
Steering stop: A mechanical stopper is employed, providing more precise limitation.

|                                                  |                |
|--------------------------------------------------|----------------|
| Steering mode                                    | Steering wheel |
| Steering pressure (MPa)                          | 16             |
| Number of cylinders                              | 2              |
| Cylinder barrel diameter (mm)                    | 100            |
| Piston rod diameter (mm)                         | 55             |
| Cylinder stroke (mm)                             | 345            |
| Pump displacement (ml/r)                         | 80             |
| Steering angle                                   | ±38°           |
| Minimum turning radius (outer side of tire) (mm) | 6,380          |

## Cab

The upgraded designed cab is equipped with high-end luxurious seats and adjustable steering gear to achieve pilot control, hydraulic one-key parking, large-space panoramic cab, dust prevention, shock absorption and noise reduction, which enhances the driver's comfort and safety during operation. The cab door opens backwards, and the width of the entrance is increased by 20%. It is designed without a doorsill, facilitating the driver's entry and exit. The cab adopts four-point elastic suspension and two-way shock absorption.

The interior trimming features a color matching of dark color at the bottom and light color at the top, creating a tidy and comfortable cab space for drivers engaged in high-intensity operations. Adjustable seat armrests, combined with front and rear adjustable steering columns, are suitable for operators of all body types to adjust to a comfortable operating state. It is equipped with the rearview mirror, sunshade, fan, cup holder, wire loop floor mat, Bluetooth radio, hand rest, seat belt, safety hammer, fire extinguisher and other devices for comfort and safety.

The rear hood features a technological modelling, which is more in line with the aesthetics of modern engineering machinery; non-metallic materials are adopted for integrated molding, and both wings can be opened simultaneously to provide more space for maintenance and service. The air conditioner can blow air from multiple angles, meeting the requirements of human comfort. The evaporator assembly adopts a side-mounted design, making maintenance and service more convenient.

|                                          |     |
|------------------------------------------|-----|
| Heating capacity of air conditioner (kW) | 3   |
| Cooling capacity of air conditioner (kW) | 3.8 |

## Low-voltage electronic system

The low-voltage electrical system of the machine features the centralized control mode, and the fuse boxes are respectively arranged on the cab and the electronic control support assembly, which is convenient for fault classification, maintenance and troubleshooting.

Intelligent digital display screen provides a clear view of equipment status, fault information, power consumption data, etc. The rocker switch and combination switch are respectively placed in different areas of the cab according to man-machine engineering.

Vehicle Manager digital platform; it can check the operating condition of the machine in real time, with remote diagnosis function, and can provide customers with fast and accurate solutions in case of any faults; the reversing camera improves the safety of driving control. The air speed of the fan is upgraded from one gear to six gears. The width of the rearview mirror lens is increased. The radio with USB and MP3 functions is adopted. Both front and rear wipers are provided, and the front wiper has water spraying function.

|                       |        |
|-----------------------|--------|
| Voltage (V)           | 24     |
| Battery (V)           | 2 x 12 |
| Battery capacity (Ah) | 120    |

## Noise & environment

|                                                         |                                      |
|---------------------------------------------------------|--------------------------------------|
| Cab noise according to ISO 6396-2008 / EN ISO 3744-1995 | 73 dB(A)-- Travel mode               |
| Cab noise according to ISO 6396-2008 / EN ISO 3744-1995 | 74 dB(A)--Stationary work cycle mode |
| External noise according to ISO 6395-2008               | 98 dB(A)-- Travel mode               |
| External noise according to ISO 6395-2008               | 99 dB(A)--Stationary work cycle mode |

## Performance parameters

The tipping load data is calculated using the standard ISO 14397-1:2007. When a 3.5m<sup>3</sup> bucket is configured, the operating weight is 19,000 kg.

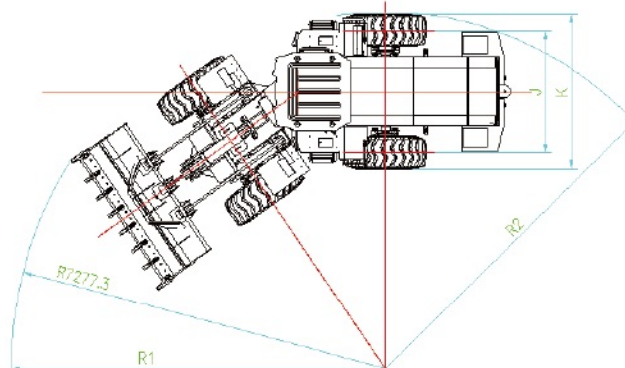
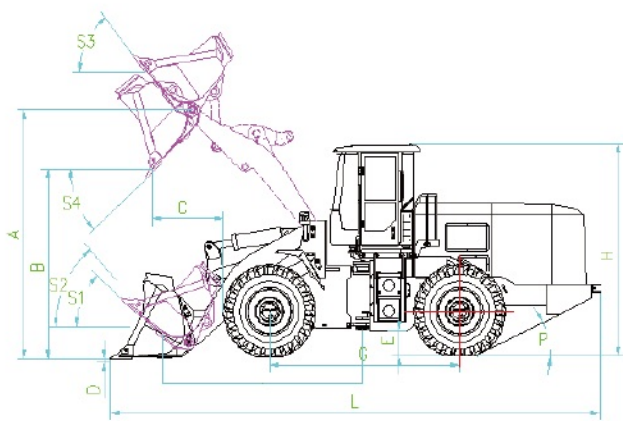
|                                                                   |         |
|-------------------------------------------------------------------|---------|
| Tipping load - straight according to ISO 14397-1:2007 (kN)        | 125     |
| Tipping load - complete turn according to ISO 14397-1: 2007 (kN)  | 120     |
| Breakout force                                                    | ≥170 kN |
| A Pin shaft height at maximum lifting (mm)                        | 4,584   |
| B Unloading height (mm)                                           | 3,420   |
| C Unloading distance at maximum lifting (mm)                      | 1,140   |
| D Digging depth (mm)                                              | 45      |
| S1 Maximum bucket retraction angle at ground level                | 45°     |
| S2 Maximum bucket retraction angle at material transport position | 55°     |
| S3 Maximum bucket retraction angle at maximum lifting             | 53°     |
| S4 Unloading angle                                                | 45°     |

# SPECIFICATIONS

**JGM860E**

## Size

|                                                                             |       |
|-----------------------------------------------------------------------------|-------|
| E Ground clearance (mm)                                                     | 408   |
| G Wheelbase (mm)                                                            | 3,300 |
| H Cab height (mm)                                                           | 3,550 |
| J Wheel track (mm)                                                          | 2,270 |
| K Outer width of tire (mm)                                                  | 2,880 |
| L Overall length (mm)                                                       | 8,760 |
| M Steering angle, on either side                                            | 38°   |
| P Departure angle                                                           | 28°   |
| R1 Minimum turning radius of the bucket at material transport position (mm) | 7,100 |
| R2 Turning radius, outer side of tire (mm)                                  | 6,380 |



## Tire

Choosing the right tires for your machine will be a key competitive advantage in achieving excellent performance. Through close cooperation in engineering and development with carefully selected well-known suppliers, JGM can provide a full range of tires tailored for wheel loaders.

| Size | Applications                                                                                                                                                                                                                  | Pattern | Size    | PR/* | Pipe type | Width | Overall diameter | Tread pattern depth | Load capacity, 50/10 km/h |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|------|-----------|-------|------------------|---------------------|---------------------------|
| L2   | <ul style="list-style-type: none"> <li>Places that require good traction, e.g., at reduced slope</li> <li>Places without sharp stones in soft and muddy operations</li> <li>During all loading/handling operations</li> </ul> |         | 23.5-25 | 12   | TL        | 595mm | 1,615mm          | 29.5mm              | 3,650/6,150kg             |
|      |                                                                                                                                                                                                                               |         | 23.5-25 | 16   | TL        | 595mm | 1,615mm          | 29.5mm              | 6,150/9,500kg             |
| L3   | <ul style="list-style-type: none"> <li>In sand operations</li> <li>In all types of loading/carrying operations</li> <li>L3 tread is not as open as L2, so the self-cleaning effect is poor compared with L2 tire</li> </ul>   |         | 23.5-25 | 18   | TL        | 595mm | 1,615mm          | 35mm                | 6,150/9,500kg             |
|      |                                                                                                                                                                                                                               |         | 23.5-25 | 20   | TL        | 595mm | 1,615mm          | 35mm                | 7,300/10,900kg            |
|      |                                                                                                                                                                                                                               |         | 23.5-25 | 24   | TL        | 595mm | 1,615mm          | 35mm                | 8,000/13,200kg            |
|      |                                                                                                                                                                                                                               |         | 23.5R25 | *    | TL        | 600mm | 1,617mm          | 36mm                | 7,100/12,150kg            |
|      |                                                                                                                                                                                                                               |         | 23.5R25 | **   | TL        | 600mm | 1,617mm          | 36mm                | 9,250/14,500kg            |
| L4   | <ul style="list-style-type: none"> <li>Highly aggressive materials require good protection against cutting damage, e.g., in quarries or mines</li> </ul>                                                                      |         | 23.5R25 | *    | TL        | 600mm | 1,704mm          | 78mm                | 12,150kg(10km/h)          |
|      |                                                                                                                                                                                                                               |         | 23.5R25 | **   | TL        | 600mm | 1,704mm          | 78mm                | 14,500kg(10km/h)          |

Note: The load capacity of radial tires is indicated by the number of stars (\*). The more stars, the higher load capacity of radial tires. For specific sizes of radial tires listed in the table, 2 stars (\*\*) indicate the maximum load capacity of radial tires.

# SPECIFICATIONS



| Parameters of variant working device                                                                                                                                                  |                 |             |                 |      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------|-----------------|------|
| Project                                                                                                                                                                               | Standard bucket | Coal bucket | Enlarged bucket | Unit |
| Bucket capacity                                                                                                                                                                       | 3               | 3.5         | 4.5             | m³   |
| Rated load                                                                                                                                                                            | 5,800           | 5,800       | 5,300           | kg   |
| Total weight                                                                                                                                                                          | 18,500          | 18,750      | 19,300          | kg   |
| Unloading height                                                                                                                                                                      | 3,420           | 3,300       | 3,230           | mm   |
| Unloading distance                                                                                                                                                                    | 1,360           | 1,490       | 1,540           | mm   |
| Overall length                                                                                                                                                                        | 8,800           | 9,000       | 9,110           | mm   |
| Minimum turning radius<br>(outer edge of bucket)                                                                                                                                      | 7,340           | 7,580       | 7,670           | mm   |
| Product specifications and parameters are subject to change without notice as technology evolves. The physical products shall prevail over prototypes in case of minor discrepancies. |                 |             |                 |      |

| Standard Configuration                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Power battery</b><br>Lithium iron phosphate battery, 350/400 kWh<br>Battery heating & cooling system                                                 | <b>Electrical System</b><br>Integrated lighting LED system (lighting, warning, outline marker, status, etc.)<br>24V low-voltage battery<br>Electric horn<br>Windshield wiper<br>Radio/player with USB port<br><br><b>Instrumentation</b><br>Motor temperature and speed<br>Electronic controller temperature and speed<br>Fault information display<br>Battery health status, SOC value<br>Battery temperature<br>Timer<br>Voltage<br>Charging display<br>Turn signal display<br>High beam indicator lamp display<br><br><b>Cab</b><br>Seats<br>Bidirectional adjustable steering column<br>Large arc-shaped front glass<br>Rubber shock pad<br>Rearview mirrors on both sides<br>Electric heating and cooling air conditioner<br>One cup holder<br>Sun shield<br>Fire extinguishers<br>Emergency hammer<br><br><b>Other</b><br>Automatic centralized lubrication<br>On-board tools and attachments |
| <b>Power assembly</b><br>Two sets of permanent magnet synchronous motors and their control systems<br>1 forward gears, neutral gear, and 1 reverse gear |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Drive axle</b><br>Special reinforced and axle for electric loader                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Hydraulic system</b><br>Electronic pilot control<br>Dual-pump confluence hydraulic system                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Brake System</b><br>Fully hydraulic brake system<br>Auxiliary parking brake                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Steering system</b><br>Fully hydraulic wide-angle steering system<br>Steering priority                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Tire</b><br>23.5-25 -18PR                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Frame assembly</b><br>Spacious middle hinge<br>Conical bearing<br>Articulated lock rod<br>Traction pin                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| Optional configuration                                                                         |                                                                                                                  |                                                                                                                                                                                                       |
|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Other</b><br>Secondary blade<br>Automatic on-board weighing system<br>Emergency stop button | <b>Cab</b><br>ROPS/FOPS Cabin                                                                                    | <b>Attachments</b><br>Log grapple attachment, bale handling attachment<br>Side dumping device<br><br><b>Charging port standard</b><br>GB/T 20234 Chinese standard<br>IEC 62196 European standard CCS2 |
|                                                                                                | <b>Axle &amp; tire</b><br>Wet axle<br>Refer to the tire specification mentioned earlier<br>Tire protection chain |                                                                                                                                                                                                       |



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 FUJIAN JINGONG NEW ENERGY TECHNOLOGY CO., LTD.