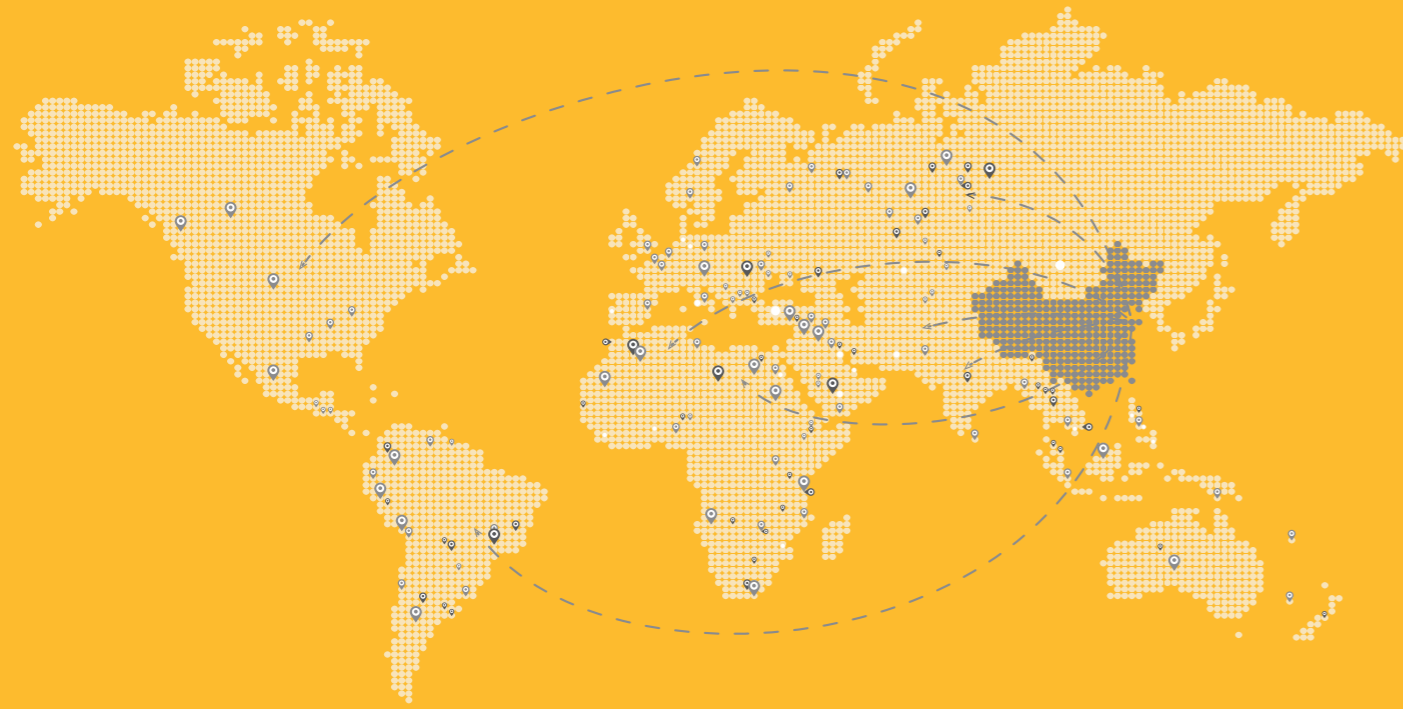


# LOVOL

# FB878H BACKHOE LOADER

Rated payload/kg	2000kg
Rated power/kW	74kW
Standard bucket capacity/m <sup>3</sup>	1.0m <sup>3</sup> /0.18m <sup>3</sup>



**ADDRESS:** No. 75, Huanghe East Road, Huangdao District, Qingdao City, Shandong Province, China.

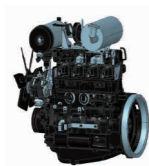
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**LOVOL HEAVY INDUSTRY GROUP CO.,LTD.**

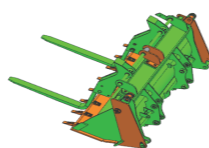
## Core Configuration



Weichai China III 74kW High-Pressure Common Rail Engine



XCMG Wet Bridge + Electric Control Fixed Axle Gearbox



Six-in-one multifunctional bucket (1.0 cubic meter)

## Power Module

### Radiator

Plate-fin water-oil composite cooler, more reliable structure, extended service life;  
Built-in damping system and top crossbeam fixing to increase reliability.

### Engine

Weichai China III WP4.1 Engine, total displacement 4.08L;  
Rated power 74KW, maximum torque 420N.m;  
Electric control injection system for higher combustion efficiency;  
Low noise.



## Transmission Module

### Front drive axle

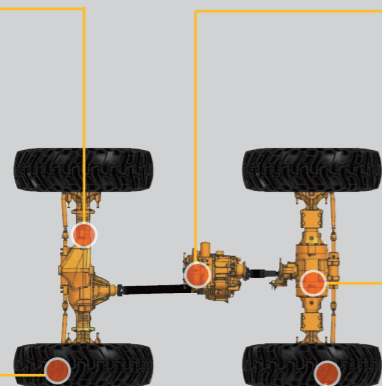
The front axle adopts a suspended oscillating steering axle, suitable for various harsh conditions, with an oscillation angle of  $\pm 11^\circ$  and a steering angle of  $35^\circ$ , ensuring reliable performance.

### Front tire

Front wheels: 12.5/80-18TL diagonal tires  
Strong load-bearing capacity, Good stability.

### Rear tire

Rear wheels: 19.5L-24TL diagonal tires  
Strong load-bearing capacity, Good stability;  
More reasonable speed matching, with a linear speed difference of 1.14% between front and rear wheels, reducing tire wear.



### Transmission

Full Electric Control Power Shift Gearbox  
Forward/Reverse and gear shifting all adopt electric control, providing comfortable shifting with minimal impact.

Four forward and three reverse gears to meet different speed requirements.  
High input torque, high reliability.  
Helical gear transmission in the gearbox for low noise and high transmission efficiency. ;  
Independent switching between 2WD and 4WD.

### Rear drive axle

Rear drive axle rigidly mounted with wet brake  
Equipped with differential lock function for better adaptability to working conditions.



### Steering System

Hydraulic System and Steering Fully hydraulic priority load sensing steering system, providing light, flexible, and highly reliable steering. When not steering, the hydraulic oil merges with the working system, reducing energy loss.

### Loading Control System

Load-sensing valve: Flow remains unaffected by load changes during composite actions, ensuring good stability.

### Excavation Control System

Pilot control for the excavation end: Low operating force, easy to achieve composite actions, enhancing operational comfort.  
Excavation main valve with closed center and pressure compensation: Enables composite actions, aligns better with excavation operation habits, and improves work efficiency.



### Braking System

Dual-Chamber Hydraulic Power Brake;  
Light brake operation with dual pedal and dual booster design, allowing for single-side braking.

### Hydraulic Oil Tank System

120L large capacity oil tank;  
Strong filtration capability

### Plunger Pump

Dual plunger pump 75+10  
Flow 156L/min;  
System Pressure 25Mpa;  
Load-sensing plunger pump: Flow remains unaffected by load changes, ensuring good stability and reliable performance.

### Dual-Leg Operation Handle

Improves ease of operation when lowering and raising the support legs.



## Body Module

### Cab

The backhoe loader cab features a spacious all-glass design, enhancing operator comfort and visibility. This design allows the operator to maintain a comfortable posture while performing both excavation and loading operations.

An inspection port has been added to the front floor of the cabin, making pump and valve maintenance easier.

### Seat

The seat can rotate 180° freely, enabling the operator to quickly switch between excavation and loading controls.

### Hood

The hood has a streamlined design, further improving the operator's visibility.

The hood can be flipped forward as a whole, increasing maintenance convenience.



## Frame Module

### Frame Weldment Assembly

Special chassis frame for backhoe loader  
Verified through CAE structural and strength analysis and bump fatigue testing, ensuring high reliability.

### H-Type Support Legs

Enhances the overall stability of the machine during excavation operations.

Compared to M-type support legs, the H-type legs have a lower center of gravity during transportation, making loading and transporting easier.

### Sliding Frame

The excavation working device can side shift, making it easier to operate in special environments.

The low center of gravity during transportation is beneficial for loading and transporting.

### Counterweight

Cast counterweight for a more aesthetically pleasing design.  
Increases the overall stability of the machine.



### Shovel Bucket

Reinforced bucket bottom for higher strength.

### Bucket rod

Telescopic arm effectively increases the working range of the machine.

### Swing frame

Cast swing frame with an aesthetically pleasing design.  
High reliability due to integral molding.

## Working Device Module

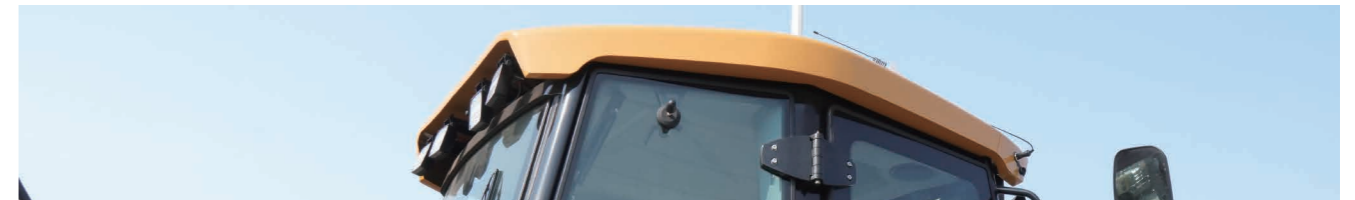
### Bucket

Added functions such as fork, clamp, high dumping, and leveling.

The bottom of the bucket uses wear-resistant quenched steel plate, significantly improving bucket wear resistance.

Heavy-duty bucket teeth are durable and cost-effective.

Side blades are welded with side protectors to improve wear resistance at the base of the bucket.Box-type bucket bottom offers good rigidity, suitable for harsh working conditions.



## Electrical Module

### Top Cover Wiring Harness

LED combination lights with an 18-lamp structure to extend the working light's lifespan.

### Power Supply System

12V 180Ah low-temperature start battery, suitable for temperatures as low as -41°C.

### Meter

1.8-inch instrument panel displaying vehicle status through fault lights.

### Air Conditioner

Air conditioning system with both heating and cooling functions, controlled by an electromagnetic water valve for added convenience.



Support leg cylinder sensor  
Alerts the driver when the legs are fully retracted.



Current Functions  
Power cut-off

Loading end handle with power cut-off function: Allows for quick unloading during parking.


**Machine Parameters**

Rated payload/kg	2000
Curb weight/kg	9800
Maximum traction force/kN	80
Maximum breakout force of arm cylinder at loading end/kN	48
Maximum breakout force of boom cylinder at loading end/kN	36
Overall dimensions (L×W×H)/mm	6070X2420X3500
Minimum ground clearance/mm	350
Wheel base/mm	2170
Front wheel track/mm	1880
Rear wheel track/mm	1730
Departure angle°	23
Front axle swing angle°	11
Minimum turning radius of bucket outside/mm	6340
Minimum turning radius of tire center/mm	5120

**Loading Working Device**

Maximum discharging height/mm	2690
Discharging distance/mm	210
Hinge pin height/mm	790
Boom length/mm	2500
Discharging angle°	45
Bucket rollback angle°	45
Standard bucket capacity/m³	1.0
Standard bucket dimensions (L×W×H)/mm (hinge joint to bucket teeth front)	2420X1878X1150
Bucket weight/kg	1059

**Excavation Working Device**

Maximum excavation height/mm	5110/5815
Maximum excavation depth/mm	4340/5500
Maximum excavation radius/mm	5365/6460
Maximum discharging height/mm	3640/4350
Standard bucket capacity/m³	0.18
Bucket weight/kg	142

**Engine**

Model	WEICHAI WP4.1G100E311
Emission standard	GB III
Engine intake method	Supercharger
Number of cylinders - cylinder diameter × stroke/mm	4-105×118
Displacement/L	4.088
Rated power/kW	2200
Rated speed/rpm	74
Maximum torque/N·m	420

**Transmission**

Brand	LOVOL
Transmission type	A0 LOVOL electronic control box (small and large wheels)
Type of torque converter	Single-stage single-phase hydraulic torque converter
Torque coefficient	2.8
Gear shift	4/3
Forward speed ratio	4.932/2.681/1.295/0.704
Reverse speed ratio	3.9/2.12/1.314
Forward I (km/h)	5.9
Forward II (km/h)	10.6
Forward III (km/h)	21.2
Forward IV (km/h)	32
Reverse I (km/h)	7.4
Reverse II (km/h)	13.4
Reverse III (km/h)	20.7
Reverse IV (km/h)	/

**Front Axle**

Type	Steering axle
Input torque/speed/transmission ratio	1800/3200/13.998

**Rear axle**

Type	Wet axle
Input torque/speed/transmission ratio	2000/3200/18.463

**Front Tire**

Specifications	12.5/80-18
Ply rating	14
Front tire pressure/Mpa	0.43±0.03

**Rear Tire**

Specifications	19.5L-24
Ply rating	12
Rear tire pressure/Mpa	0.23±0.03

**Steering Hydraulic System**

Steering hydraulic system type	Load sensing full hydraulic steering system/ single pump split flow
System working pressure/Mpa	16
Steering pump model	HP3V80
Displacement/L	75

**Loading End**

Control mode	Mechanical manipulation
Hydraulic working system type	Load sensing full hydraulic steering system/ single pump split flow
System working pressure/Mpa	25
Working pump model	HP3V80
Displacement/L	75
Multi-way valve model	DLV20
Pilot working pressure/Mpa	/
Boom cylinder - cylinder diameter × stroke/mm	75-50×713
Bucket cylinder - cylinder diameter × stroke/mm	70-40×733
Boom lifting time/s	3.7
Discharging/s	1.95
Boom lowering time/s	2.05
Total time/s	7.7

**Excavator End**

Control mode	Pilot manipulation
Hydraulic working system type	Load sensing hydraulic system
System working pressure/Mpa	25
Working pump model	HP3V80
Displacement/L	75
Multi-way valve model	DLV20
Pilot working pressure/Mpa	4
Boom cylinder - cylinder diameter × stroke/mm	110-60×971
Arm cylinder - cylinder diameter × stroke/mm	100-60×748
Bucket cylinder - cylinder diameter × stroke/mm	90-60×687

**Braking**

Service brake	Hydraulic power brake
Parking brake	Mechanical caliper disc parking brake
Brake pressure/Mpa	4.1-5.3

**Air Conditioner**

Working medium (heat/cool)	Coolant/R134a
Cooling capacity/kW	4.5

**Appliances**

System voltage/bulb voltage/V	12
Battery	180Ah

**Body**

Cab overall dimensions (L×W×H)/mm	2063X2270X1947
Cab weight/kg	813

**Oil**

Fuel tank (geometric volume)/L	120
Hydraulic oil tank (midline of level gauge)/L	100
Engine oil/L	10
Transmission oil/L	14
Front axle/L	Final reduction drive: 5.7, hub reduction gear: 0.7X2
Rear axle/L	Final reduction drive: 10, hub reduction gear: 1.5X2
Antifreeze/L	14

**FB878H**
