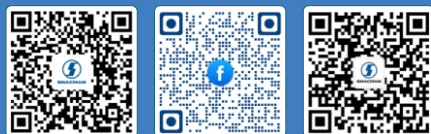


NEW ENERGY PRODUCT MANUAL



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www.shacman.com

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INTRODUCTION

5

National-Level New Energy Projects

600

R&D Experts in New Energy

1,170

Patents in New Energy & Smart Connectivity

As a global leader in heavy-duty transportation solutions, we have dedicated nearly two decades to research in the new energy heavy-duty truck sector since 2006, establishing profound technological expertise. In the first three quarters of 2025, SHACMAN's new energy truck sales surpassed 20,000 units. Based on real-world market experience, our new energy vehicles can reduce the Total Cost of Ownership by 30% to 50% compared to diesel models. By applying clean energy to heavy-duty transport, our business model has achieved significant maturity.

"Trucking made better" is the creed SHACMAN has consistently upheld and embodied. Therefore, we spare no effort in investing in the new energy sector, only to empower our customers' transport operations with clean energy and, in turn, make the world a better place. We firmly believe that, in the future, the blue sky will undoubtedly be SHACMAN BLU.



2009

SHACMAN developed and deployed the world's first purely electric heavy-duty port tractor, setting a global benchmark.

2012

SHACMAN undertook the national-level 863 High-Tech Program-the "Development of Extended-Range/Plug-in Electric Commercial Vehicles" project, making us a pioneer in extended-range trucks.

2014

SHACMAN established the industry-leading "Heavy-Duty Truck New Energy R&D and Application Laboratory," continuously translating cutting-edge technology into real-world transport solutions.

2021

SHACMAN built a 100,000-unit-capacity New Energy Intelligent Factory, achieving a significant leap from traditional manufacturing to intelligent manufacturing.

2023

SHACMAN achieved breakthroughs in core technologies, including new energy whole-vehicle control and intelligent driving, independently mastering 27 core technologies, such as automatic parking for tractor-trailer combinations.

High-Efficient E-Power

Ample Power, Extended Range, Rapid Replenishment

Multi-Scenario E-Powertrain Solutions

• Single Motor System

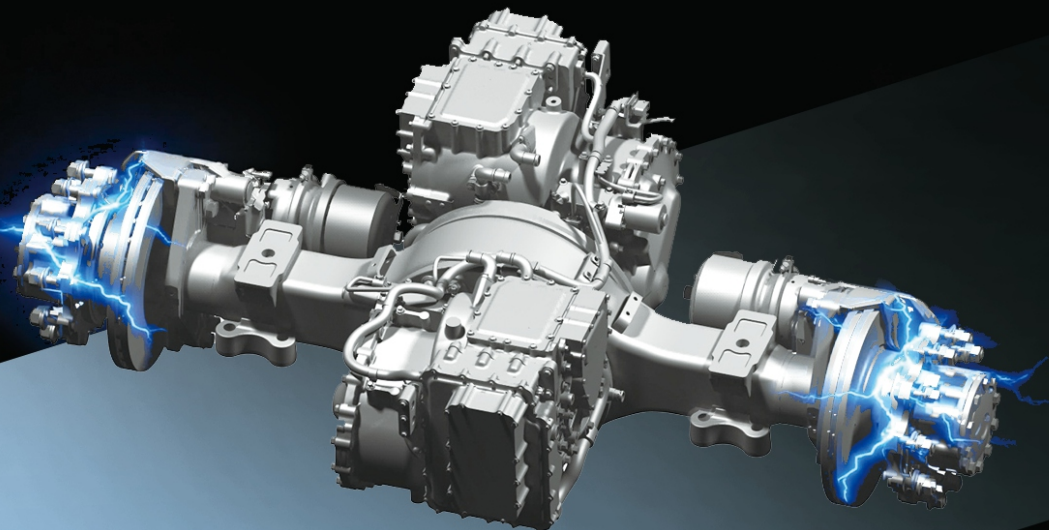
Simple structure, easy maintenance. Ideal for light-to-medium duty applications in sanitation, specialized engineering, steel/aggregate transport, coal transport, and port logistics.

• Dual Motor System

Robust power and high torque. Perfectly suited for heavy-duty operations in engineering projects, mine logistics, and high-demand port transport.

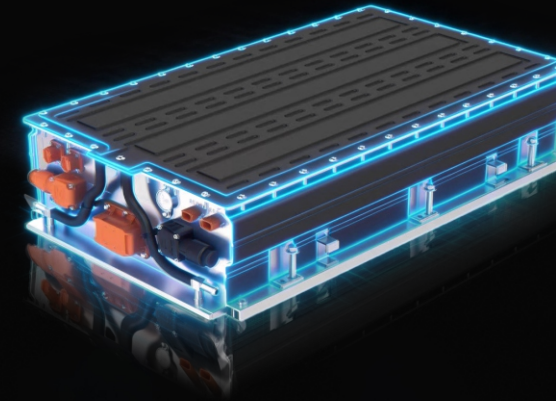
• E-Axle System

High integration, superior transmission efficiency, minimal chassis footprint. Best for applications requiring optimal space and efficiency, such as sanitation, medium/long-haul standard-load transport, daily industrial use, and express logistics.



Comprehensive Battery Solution

SHACMAN delivers a multi-source battery solution combining industry-leading external brands (such as CATL) with our proprietary self-developed battery technology. We support both 600V and 800V voltage platforms, offering a total battery capacity range from 200 to 800kWh. This entire matrix covers the specific usage needs of every niche segment with granular capacity steps of 30kWh and 50kWh.



• 600V & 800V

• 200-800kWh

• Self-Developed Battery + Sourced Battery

Multi-Format High-Efficiency Energy Replenishment



• 400kW Rapid Charging

Maximum input current of 300A. Reaches full charge in just 1-2 hours. Real-time monitoring of vehicle BMS data ensures charging is safe and hassle-free.

• 720kW Liquid-Cooled Ultra-Fast Charging

Dual charging guns provide a maximum input current of up to 2200A, achieving a peak power of 720kW. Supported by a liquid cooling system to maintain high-power replenishment for extended periods.

• Battery Swap: 5 Minutes for Full Power

SHACMAN supports both rear-mounted and bottom-mounted battery swap forms, easily adapting to different working conditions. Start with a full charge after just a coffee break.



Energy-Saving

Maximum Energy Efficiency



Precision Thermal Management

Our system employs Grouped Electronic Fan Control and PI Smart Regulation of the Electric Compressor to achieve precision management over accessory power consumption. Furthermore, we ingeniously recover and utilize waste heat through Thermoelectric Coupling Control. This suite of intelligent temperature control strategies effectively reduces the energy consumption of accessories like compressors and fans, ultimately resulting in a 1.5% reduction in total vehicle power consumption.

Extreme-Cold Integrated Heat Pump

To definitively address the crucial winter range degradation issue faced by heavy-duty electric trucks, SHACMAN is the industry pioneer in introducing the Integrated Heat Pump Technology. This system maximizes the recovery of waste heat from all vehicle subsystems, creating a highly efficient thermal cycle that significantly improves energy utilization. The result is a 3% reduction in overall vehicle power consumption, directly translating to enhanced operational range and profitability.

15kg Reduction

Dedicated Refrigerant Valve Island

50% Reduction

in Heating Power Consumption

Adaptive Kinetic Energy Recovery

SHACMAN has pioneered the development of the Adaptive Energy Recovery System for commercial vehicles.

Unlike a simple superposition of motor and mechanical braking, this innovative technology intelligently determines the optimal blending ratio between motor braking and mechanical braking, based on real-time vehicle operating conditions.

15%

Boost in Energy Recovery Efficiency

6%

Reduction in Power Consumption



SECURE

Full-chain cooperative safety control system

Big Data Diagnostics

Based on millions of kilometers of driving data from new energy vehicles, the system enables rapid remote pre-diagnosis of vehicle faults.

Intelligent Power-Off Protection

In the event of internal vehicle communication failures, the system intelligently manages the high-voltage power-off process to prevent sudden power loss.

Redundant Control Protection

Utilizes independent multi-channel steering and braking control to ensure normal driving safety even if the main controller fails.

Driver Misoperation Protection Mechanism

For misoperation of gear or key in high-speed scenarios, the vehicle can automatically identify and prevent abnormal high-voltage or gear status.

In-Transit Anti-Stall Protection

By integrating functions like fault graceful degradation, limp-home mode, and electronic driving assistance, the vehicle can continue to operate safely and under control even in the event of a fault.



RELIABILITY

Inheriting the reliability genes for the new energy era



Integrated electric drive control technology

By integrating the motor controller, drive motor, and transmission structure, SHACMAN has achieved the industry's first integrated MCU (Motor Control Unit) and TCU (Transmission Control Unit) in the commercial vehicle sector. This innovative design effectively minimizes potential failure points. Furthermore, the built-in three-phase high-voltage power lines significantly reduce electromagnetic interference.



High/low voltage isolation technology

Through forward-thinking development of independent high- and low-voltage controllers, coupled with a completely isolated wiring harness solution, we have successfully mitigated vehicle electromagnetic compatibility (EMC) issues, ensuring system stability and safety.



Robust chassis protection & durability

IP68

Battery & Motor Protection Rating

CLASS 3

Chassis Electromagnetic Compatibility Protection

150,000 km

Gear Shifting Teeth - Wear-Free

30 Million Cycles

Transmission Shifting Mechanism Durability

Extreme Cold Validation

SHACMAN New Energy Vehicles underwent real-world reliability testing in extreme cold conditions down to -30°C. They achieved a 100% first-attempt success rate for cold starts, ensuring worry-free operation even in frigid regions.



X6000^e 4×2

Tractor



Bottom Battery Swapping
Standard-Load Highway Transportation

GCW (t)	44
Cab	Extended Flat-Roof Cab
Power Battery	LFP 512. 59kW.h
Energy Replenishment	Charge & Swap
Drive Motor	Electric Drive Axle-with PTO
Rated/Peak Power(kW)	400/600
Frame (mm)	(970-850) × 270 (Single-layer 8mm)
Wheelbase (mm)	4000
Suspension	Front with Few Leaf Springs and Rear with All-Air Suspension
Tire Specification	315/80R22.5
AI-CARE Kit	EBS+ESC/ ECAS/ ADAS+LDWS/ Push-Button Start/ Keyless Entry
Applicable Scenario	Container and other Standard-Load Transportation

T5000^e 4×2

Terminal Tractor



Ranked Consistently First in Market Share for China-Branded Terminal Tractors
Heavy-duty Terminal Towing

GVW (t)	80
Power Battery	281.9Kwh
Energy Replenishment	Charge
Drive Motor	TZ400XS003
Rated/Peak Power(kW)	210/260
Frame (mm)	1080×300
Wheelbase (mm)	3600
Rear Axle	16T Double-Stage Axle
Suspension	Front Multi-Leaf Springs Rear Air Suspension, Rigid Rear Suspension
Tire Specification	310/80R22.5, 11R22.5, and Others
Saddle	Pneumatic Unlocking Lifting Saddle, Pneumatic Unlocking Fixed Saddle
Steering Gear	Hydraulic Steering, Mechanical Steering Gear
Applicable Scenario	Terminal Container Transportation

X5000^e 6×4

Tractor



410kW High-Power Motor
Heavy-Duty Transportation for Semi-Trailer Dump Trucks

GCW (t)	49-70
Cab	Extended Flat-Roof/High-Roof Cab
Power Battery	310.66/352.08/400.61/452.5/528.13/600. 92kW.h
Energy Replenishment	Charge & Swap
Drive Motor	TZ400XS033
Rated/Peak Power(kW)	270/410
Frame (mm)	850×300(single-layer 8/8+7)
Wheelbase (mm)	3775+1400
Rear Axle	Drum Drive Axle - 5.286
Suspension	Leaf Springs
Tire Specification	12R22.5/12.00R20
Internet of Vehicles	SHACMAN Telematics
Applicable Scenario	Intra-Park Transportation, Highway Short-Haul Transportation

• For more configurations and details, please consult your local sales representative.

X5000^e 8×4

Dump Truck



Ultimate Payload Power
Short- and Medium-Haul Heavy-Duty Transport

GCW (t)	45-90
Cab	Standard/Extended Flat-Roof Cab
Power Battery	284.39/352.08/400.61/600. 92kW.h
Energy Replenishment	Charge & Swap
Drive Motor	TZ380XS030
Rated/Peak Power(kW)	290/430
Frame (mm)	850×300(8+7),850×320(8+7+8)
Wheelbase (mm)	1950+4025+1400/1950+5025+1400
Rear Axle	Drum Drive Axle - 7.63/8.88
Suspension	Multi-Leaf Springs
Tire Specification	11.00R20/12.00R20
Internet of Vehicles	SHACMAN Telematics
Applicable Scenario	Highway, Transportation of Sand and Gravel from Selected Mining Areas

• For more configurations and details, please consult your local sales representative.

X5000^e 8×4

Cement Mixer



Equipped with Premium Superstructures from CIMC and Zoomlion
Concrete Transportation

GVW(t)	35-45
Cab	Extended Flat-Roof Cab
Power Battery	352.08/400. 61kW.h
Energy Replenishment	Charge & Swap
Drive Motor	TZ400XS033
Rated/Peak Power(kW)	270/410
Frame (mm)	850×300(8+5)
Wheelbase (mm)	1800+3400+1400/1200
Rear Axle	16T Dual-Stage Cast Axle – 6.72
Suspension	Leaf Springs
Tire Specification	12R22.5
Mixer (m³)	12
Internet of Vehicles	SHACMAN Telematics
Applicable Scenario	Concrete Transportation

L5000^e 4×2

Washing and Sweeping Truck



Meeting Multiple Needs, such as Road Cleaning and Garbage Transfer
Municipal Sanitation

GVW(t)	18-23
Power Battery	231.84/262.75kW.h
Energy Replenishment	Charge
Drive Motor	TZ375XS038
Rated/Peak Power(kW)	105/175
Frame (mm)	850×270(7+4)
Wheelbase (mm)	5300/2200
Rear Axle	10t 2-Speed Electric Drive Axle/10t Single-Stage Axle
Suspension	Leaf Springs
Tire Specification	10.00R20
Internet of Vehicles	SHACMAN Telematics
Applicable Scenario	Municipal Sanitation

H3000S^e 8×4

Cement Mixer



Equipped with Premium Superstructures from CIMC and Zoomlion
Concrete Transportation

GVW(t)	35-45
Cab	Standard
Power Battery	352.08/400. 61kW.h
Energy Replenishment	Charge & Swap
Drive Motor	TZ400XS033
Rated/Peak Power(kW)	270/410
Frame (mm)	850×300(8+5)
Wheelbase (mm)	1800+3400+1400/1200
Rear Axle	16T Dual-Stage Cast Axle – 6.72
Suspension	Leaf Springs
Tire Specification	12R22.5
Mixer (m³)	12
Internet of Vehicles	SHACMAN Telematics
Applicable Scenario	Concrete Transportation

H3000S^e 6×4

Washing and Sweeping Truck



Meeting Multiple Needs, such as Road Cleaning and Garbage Transfer
Municipal Sanitation

GVW (t)	18-23
Power Battery	262.75/352.08kW.h
Energy Replenishment	Charge
Drive Motor	TZ400XS033
Rated/Peak Power(kW)	270/410
Frame (mm)	970-850×300(8+5)
Wheelbase (mm)	4575+1400/1200
Rear Axle	11.5T Double-Stage Axle
Suspension	Leaf Springs
Tire Specification	11.00R20
Internet of Vehicles	SHACMAN Telematics
Applicable Scenario	Municipal Sanitation



BL

The Road to Zero
It's SHACMAN 