ZBH5041ZYSBJY6 type 4-ton Japanese-style compression vehicle

Product Introduction

Changsha Zoomlion Environmental Industry Co., Ltd

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To customers

Dear customer, thank you for choosing the products produced by our company.

This document provides you with a detailed introduction to the overview, scope of application, main structure and performance characteristics, key technical parameters, and main advantages of our company's products, aiming to help you better understand this product. Please keep this document properly for future reference.

Due to continuous improvements and upgrades in product design, as well as variations in product specifications and models, the details of certain images and textual content in this document may differ from the product you possess. If you have any questions, please contact our sales staff.

Our company reserves the right to revise the content of the document due to technical improvements. Any changes will not be notified separately. We kindly ask for your understanding.

Thank you very much for your trust and support in our products. I sincerely wish you all the best.

ZBH5041ZYSBJY6 type compressed garbage truck

I. Product Overview

The ZBH5041ZYSBJY6 compressed garbage truck is independently developed and designed by Changsha Zoomlion Environmental Industry Co., Ltd. It is equipped with a blue license plate **and can be driven with a C license**. With low procurement and operational costs, it adopts rear-loading bidirectional compression technology, boasts strong loading capacity, high operational efficiency, excellent performance, and user-friendly control and operation methods. It is a reliable, efficient, and easy-to-operate garbage collection vehicle.

This product is not suitable for the collection and transportation of construction waste, industrial waste, and kitchen waste.

Right 45 °

Left 45 °

front

after

II. Functional Overview

It possesses multiple functions such as garbage collection, automatic loading and compaction of garbage, garbage transfer, and dumping.

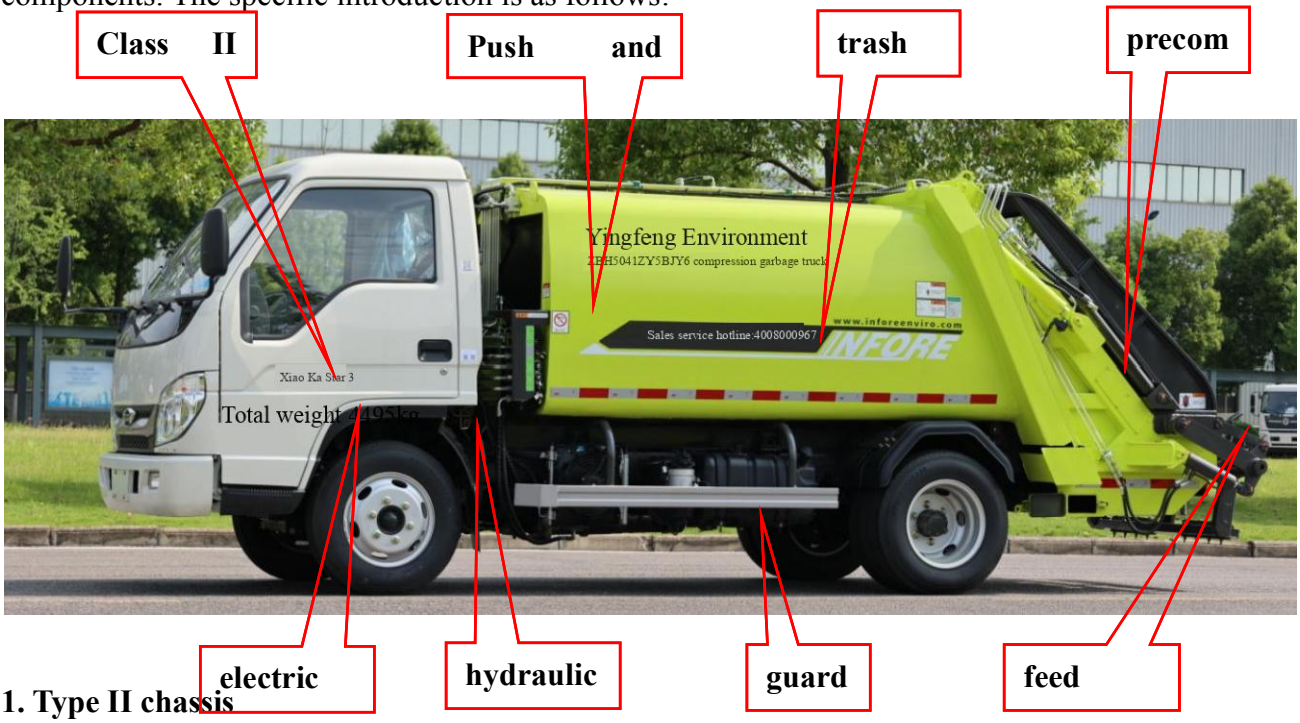
3 Scope of Application

This product is a brand-new independently developed solution primarily targeting the industry pain points of inconvenient collection and transportation of household waste in residential areas,

commercial buildings, underground parking garages, and other similar settings.

IV. Main structure and performance characteristics

The ZBH5041ZYSBJY6 compression garbage truck is mainly composed of a Class II chassis, garbage bin, filler, push shovel, feeding mechanism, hydraulic system, electrical system, and other components. The specific introduction is as follows:



1. Type II chassis

chassis

The vehicle is modified using the BJ1045V9JB5-54 Class II chassis produced by Beijing Foton Motor Co., Ltd. It boasts strong power and high load capacity. The chassis is reliable and meets the China VI emission standards.

engine

The diesel engine Q23-115C60 from Anhui Quanchai Power Co., Ltd. is adopted, with a rated power of 85 kW at 3000 r/min.

2. Top structure

Pushing shovel

The pusher, welded from high-quality profiles and high-quality carbon steel panels, is the component responsible for unloading the product. It is arranged inside the garbage bin and slides along the bin's track under the drive of a hydraulic cylinder to complete the unloading operation.

trash can

The garbage bin is a component of this product used for collecting and storing household waste, and it also serves as the connecting base for important components such as the filler. Its reasonable structural design and material selection ensure optimal product performance. The side panels utilize integral panel molding technology, and the curved surface design enhances the overall frame rigidity while also increasing aesthetics. The bottom of the garbage bin is designed with a filler locking mechanism.

precompressor

The filler is the component of this product that compresses and reduces the volume of

household waste. The compression mechanism on the filler completes the compression of the waste in the filling bucket through the sliding motion of the sliding plate and the rotating motion of the scraper, and then loads it into the garbage bin. The bottom of the filler is designed with a sewage tank to enhance the sewage storage capacity of the product; the front end of the filler is equipped with a horseshoe-shaped sealing strip, which forms a sealing structure with the rear end of the garbage bin, effectively preventing sewage leakage.

feed mechanism

The feeding mechanism is the component that empties the garbage from the garbage collection container into the filling bucket. If the feeding mechanism is of the bucket-turning type, it can accommodate garbage cans of different capacities depending on the range of application of the garbage can. The process of emptying garbage into the filling bucket is achieved through a four-bar linkage mechanism driven by a hydraulic cylinder.

Guardrail assembly

The guardrail assembly is assembled from high-quality carbon steel beams and brackets, presenting an elegant and pleasing appearance.

3. Operation mode of homework

The vehicle adopts a control mode of "controller + CAN bus operation panel". During operation, each execution action can be controlled with one button, making the operation simple and convenient. The vehicle operation is achieved by two operating devices, one located in the cab and the other at the right rear of the vehicle.

Control panel. Located on the central console in the cab, it is primarily used for vehicle unloading operations and maintenance mode operations.

Control Panel

The rear control box is installed on the right side of the tail of the vehicle filler, and it serves as a functional button for operators to perform tasks such as lifting and unloading barrels (or buckets), as well as compacting and filling work.

Right rear operation box

V. Main Technical Parameters of the Product

project		unit	Parameters
whole car ginseng number	curb weight	kg	3865
	Maximum allowable total mass	kg	4495
	rated load capacity	kg	500
	wheelbase	mm	2850
	Overall dimensions (length × width × height)	mm	5995×2000×2140
	Garbage bin capacity	m^3	5
	Ground clearance	mm	209
	Approach/departure angle	°	20/15
bottom plate ginseng number	Chassis model, category, manufacturer	BJ1045V9JB5-54, Type II chassis Beijing Foton Motor Co., Ltd	
	Engine model, manufacturer	Q23-115C60, Anhui Quanchai Power Co., Ltd	
	engine power	85 kW /3000 r/min	
	Number of passengers	2	
make, do, create, compose,	Compress cycle time	s	≤15
	Material loading cycle time	s	≤10
	Unloading cycle time	s	≤45
	hydraulic system pressure	MPa	18 (large pump), 16 (small pump)
	Control method	/	automatic

project		unit	Parameters
write, etc. karma sex can			
line speed sex can	Maximum speed	km/h	105
	maximum gradeability	%	20
	Minimum turning diameter	m	12.14

VI. Main advantages of the product

1. Superior performance

1 Low operating costs and high trafficability

With a C-class driving license, the operating cost is low; featuring a unique low-profile design, **the vehicle stands at a height of 2.14m,** with a width of 2m and a wheelbase of 2.85m. Its small turning radius ensures good overall maneuverability, **facilitating easy passing and U-turns.** It is particularly suitable for collecting and transporting household waste **in narrow areas such as back streets and underground garages.**

2 Strong loading capacity and high operational efficiency

Utilizing bidirectional compression technology, it boasts strong compression capability and high loading capacity. The hydraulic system employs a dual oil pump, ensuring that the compression and filling cycle and the feeding cycle are interconnected without interference. The feeding cycle is ≤10s, and the compression cycle is ≤15s, resulting in high loading efficiency.

Bidirectional compression

Dual oil pump

3 High adaptability and high reliability of the feeding mechanism

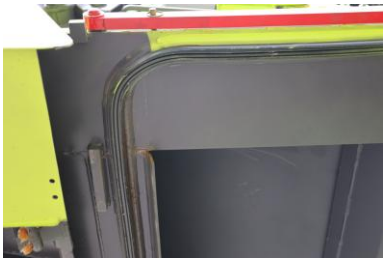
The standard feeding mechanism can handle 120L/240L trash cans, providing a wide range of adaptability. Equipped with a vulcanized rubber bucket stopper, it can buffer the collision between the trash can and the bucket stopper when the feeding mechanism tilts the can into place, reducing impact noise and preventing plastic trash cans from breaking or falling into the filling bucket due to inertia during tilting.

Vulcanized rubber barrel stopper

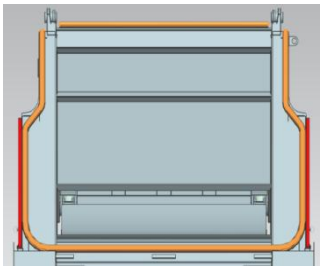
4 Independent locking mechanism and excellent sealing technology

An adjustable locking mechanism controlled by an independent hydraulic cylinder is employed to secure the filler. Simultaneously, a horseshoe-shaped silicone sealing strip is utilized, forming three sealing surfaces. The sealing strip extends around the entire perimeter of the filler, ensuring a comprehensive seal around the joint surface between the filler and the garbage bin, effectively preventing secondary pollution.

Adjustable locking mechanism



Silicone sealing strip



Fully sealed structure

5 Humanized operation control

The operation control boxes are installed in the cab and at the rear of the loader, respectively. The control panel in the cab can control the pushing, shoveling, unloading, and selection of operation modes, while the operation control box at the rear of the loader controls the operations of the compression mechanism and the feeding mechanism, making the operation very convenient. Especially in landfills, operators can complete unloading without getting off the vehicle.

2. Excellent quality

Operation panel in the cab

Tail operation box

(1) The electrical system is advanced and reliable

Adopting the cutting-edge "CAN bus + dedicated controller mode" and equipped with a safety relay box, the system effectively protects the circuit. Proximity switches, plugs, and sheaths are sourced from top-tier engineering brands, while the rear operation box and wiring harness are sourced from imported brands, featuring automotive-grade wiring harness technology and an IP65 protection level. The system is safe and reliable, with a low failure rate.

controller

Fuse relay box

Top-tier brand proximity switch

Operation box in the rear area after import

Automotive grade wiring harness process

(2) The motion hinge point is stable, reliable, and easy to maintain

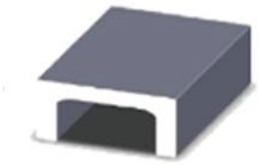
Self-lubricating bearings are installed at the motion hinge points of the feeding mechanism and compression mechanism to **reduce wear at the shaft holes**, effectively extending product lifespan and reducing maintenance costs.

self-lubricating bearing

(3) The filler track is solid and reliable

The filler slide track adopts specially-made profiles, with a strength 25% higher than that of ordinary carbon steel, ensuring a long service life. Additionally, it adopts an integrated slider structure, with the slider material being high-quality, high-wear-resistant MC nylon, featuring

self-lubricating capabilities and self-waste-removal abilities, making it reliable and durable.



Autocratic profile skateboard track, integrated slider

(4) Advanced manufacturing technology, crafted with precision

Utilizing cutting and forming equipment, tooling, grinding tools, welding robots, and other equipment, combined with advanced processes, the products are produced with high precision, good consistency, guaranteed quality, and are reliable and durable.

Box tooling

Filling device tooling

welding robot

Welding process

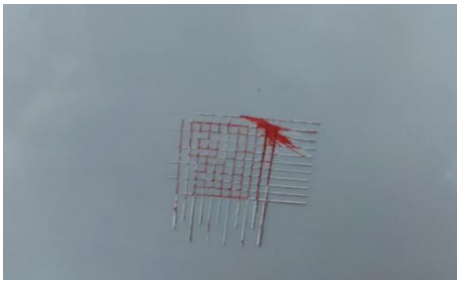
(5) Advanced painting technology, corrosion-resistant and durable

Adopting internationally mature bus painting processes, the components undergo processes such as shot blasting, degreasing, and drying, achieving a rust removal grade of Sa2.5. Subsequently, primer and topcoat are applied, with a paint film thickness of ≥40μm. The entire vehicle exhibits

good paint adhesion, excellent corrosion resistance, and a topcoat that is full-bodied, high-gloss, and has good freshness reflection.

Shot blasting line

Robot electrostatic spraying system



Paint adhesion level 1

Topcoat appearance

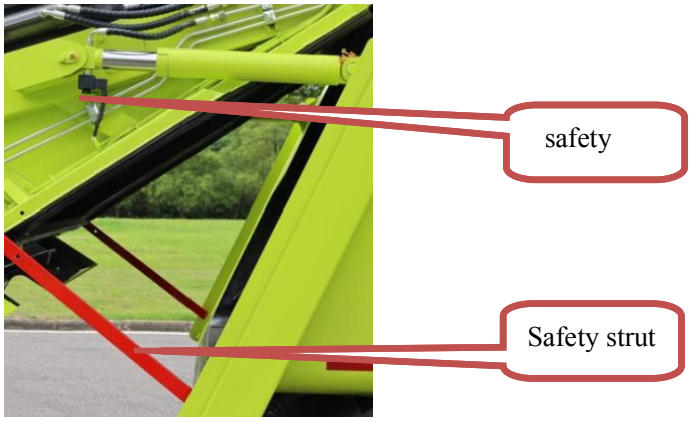
3. Safe and reliable

(1) Configure alarm device

The equipped sound alarm system can give audible warnings during unloading and maintenance operations, reminding operators to operate cautiously.

(2) Safety protection design of the filler

The lifting cylinder of the filler is equipped with a safety valve, ensuring that even in the event of a burst oil pipe, the pressure filling mechanism will not suddenly descend, thus preventing severe accidents. Additionally, a safety brace rod is installed on the filler to prevent it from descending and causing injury.



safety protection