
ZBH5091ZYSBJE6B2 type 9-ton Japanese-style compression vehicle

Product Introduction

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Product Introduction of ZBH5091ZYSEJE6 Compressed Garbage Truck

I. Product Overview

The ZBH5091ZYSBJE6 compressed garbage truck is a rear-loading compressed garbage truck independently developed and designed by Changsha Zoomlion Environmental Industry Co., Ltd. The product utilizes the BJ1096VEJDA-50 chassis produced by Beijing Foton Motor Co., Ltd., and its upper body adopts rear-loading bidirectional compression technology, featuring strong loading capacity and high efficiency.



Right 45 °, left 45 °



Before and after

II. Functional Overview

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

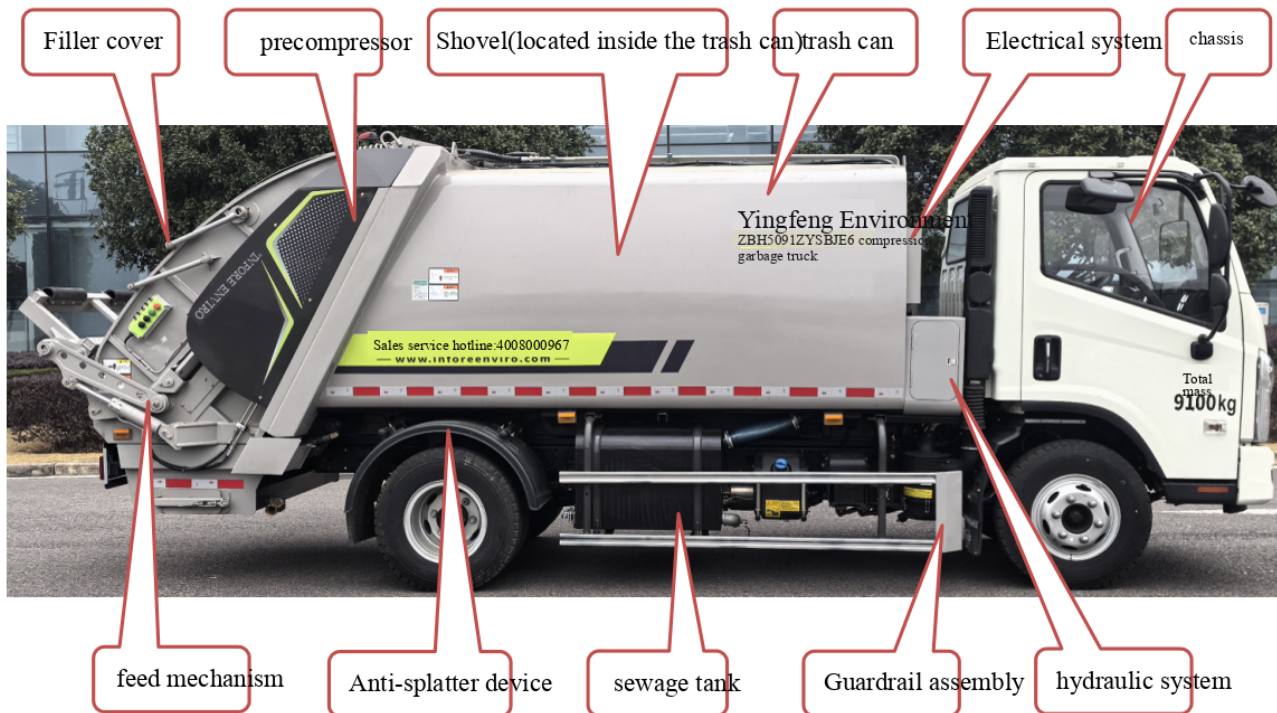
III. Scope of application

It is primarily used for the collection and transfer of domestic waste in barrels, bags, and bulk form in urban residential areas, communities, large factories and mines, institutions, colleges, and narrow streets in old urban areas.

It is not applicable to the collection and transfer of construction waste, industrial waste, and kitchen waste.

IV. Main structure and performance characteristics

The ZBH5091ZYSBJE6 compression-type garbage truck is primarily composed of a Class II chassis, garbage bin, filler, push shovel, feeding mechanism, hydraulic system, electrical system, and other components. Specific descriptions are as follows:



1. Chassis

chassis

The vehicle is modified using the BJ1096VEJDA-50 Type 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 engine used is the Q25A-160C60 diesel engine from Anhui Quanchai Power Co., Ltd., with a rated power of 116 kW and a rated speed of 3000 r/min.

2. Upper garment structure

Pushing shovel

The push shovel, welded from high-quality profiles and high-quality carbon steel panels, serves as 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. 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 key parts of the inner cavity are made of high-quality, corrosion-resistant weathering steel, which has high ultimate strength, strong corrosion resistance, and a long service life, making it particularly suitable for corrosive working environments. The side panels are made using full-panel molding technology, and the curved surface design improves the overall frame rigidity while enhancing aesthetics. The bottom of the garbage bin is designed with an independent locking mechanism for the filler.

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 face of the filler is equipped with a horseshoe-shaped sealing strip, which forms a sealing structure with the rear end face of the garbage bin, effectively preventing sewage leakage.

feed mechanism

The feeding mechanism is the component that transfers the garbage from the trash can into the filling bucket. If the feeding mechanism is of the tipping bucket type, it can accommodate trash cans of different volumes, depending on the range of trash cans it is designed to accommodate.

Filler cover

The filler lid is a component used to shield the filling hopper, preventing litter from scattering and odors from leaking out. It is driven to open and close by a cylinder.

sewage tank

The sewage tank is a component used for storing sewage. It is fixed to the chassis via a fixed bracket and connected to the bottom of the garbage bin through a hose, collecting sewage from the garbage bin and increasing the product's sewage storage capacity.

Guardrail assembly

The guardrail assembly is assembled from high-quality carbon steel beams and brackets, presenting an elegant and attractive 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 key, making the operation simple. The vehicle operation is achieved by two operating devices, one located in the cab and the other on the right side of the rear of the vehicle.



Driver's cab 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. The rear cover rotary switch is only applicable to the feeding mechanism of the barrel-turning type:



Rear area operation box

V. Main Technical Parameters of the Product

project		unit	Parameters
wh ole car gin se ng nu mb er	curb weight	kg	5500 (bucket-turning type), 5600 (dump-type)
	Maximum allowable total mass	kg	9100
	rated load capacity	kg	3405 (turnover barrel type), 3305 (dump type)
	wheelbase	mm	3360
	Overall dimensions (length × width × height)	mm	6995 (bucket-turning type), 6620 (dump-type) × 2140 × 2550
	Effective volume of garbage bin	m ³	≥6.8
	Total volume of sewage tank	L	380
	Ground clearance	mm	180
	Approach/departure angle	°	21/13
bot to m pla te gin se ng nu mb er	Chassis model, category, and manufacturer	BJ1096VEJDA-50, Type II chassis, Beijing Foton Motor Co., Ltd	
	Engine model, manufacturer	Q25A-160C60, Anhui Quanchai Power Co., Ltd	
	Rated power/speed of engine	kW/r/min	116/3000
	Number of passengers	a	3
ma ke,	Compress cycle time	s	≤13
	Material loading cycle time	s	≤9 (tumbler type)

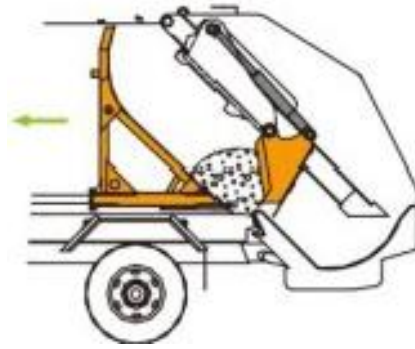
	project	unit	Parameters
do, cre ate , co mp os e, wr ite, etc . kar ma se x ca n	Unloading cycle time	s	≤ 45
	hydraulic system pressure	MPa	18
lin e sp ee d se x ca n	Maximum speed	km/h	90
	maximum gradeability	%	≥ 20
	Minimum turning diameter	m	14.5

VI. Main Advantages of the Product

1. Superior performance

(1) 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 interfering with each other. The feeding cycle is $\leq 9s$, and the compression cycle is $\leq 13s$, resulting in high loading efficiency.



Bidirectional compression



Dual oil pump

(2) High adaptability and reliability of the feeding mechanism

The standard feeding mechanism can handle 120L/240L trash cans, offering a wide range of adaptability. Equipped with a vulcanized rubber-covered can-retaining rod, it cushions the collision between the trash can and the rod 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 rod

(3) Independent locking mechanism and excellent sealing technology

An adjustable locking mechanism controlled by an independent hydraulic cylinder is adopted to lock the filler. Simultaneously, a horseshoe-shaped silicone sealing strip is employed, forming three sealing surfaces. The sealing strip covers the entire circumference of the filler, ensuring a fully sealed joint between the filler and the garbage bin, effectively preventing secondary pollution.



Adjustable locking mechanism Silicone sealing strip

(4) Large sewage holding capacity

The entire vehicle has been optimized in layout, with a sewage tank designed on the right side of the product's garbage bin and beneath the filler, providing strong sewage holding capacity.



(5) Good environmental protection performance

The filler cover fully covers the filler feeding port, eliminating the phenomenon of dust and debris flying caused by airflow disturbance at the rear of the vehicle during transportation, while also reducing odor pollution.



(6) User-friendly operation control

The operation control boxes are installed in the cab and at the tail 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 tail 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.



Driver's cab operation panel

Tail operation box

2. Excellent quality

(1) The electrical system is advanced and reliable

Adopting the cutting-edge "CAN bus + dedicated controller mode" and equipped with a safety

relay box, it 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 technology



(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 the service life of the product and reducing maintenance costs.



self-lubricating bearing

(3) The loader track is solid and reliable

The filler slide track adopts specially-made profiles, with a strength 25% higher than that of ordinary carbon steel and a long service life. At the same time, it adopts an integrated slider structure, with the slider material being high-quality, high-wear-resistant MC nylon, which has self-lubricating

function and self-waste-removal ability, making it reliable and durable.



Automatic 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 product has high manufacturing precision, good consistency, guaranteed quality, and is reliable and durable.



Box tooling



Filler tooling



Welding Robot Weld Seam 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 $\geq 40\mu\text{m}$. 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 audible alarm system can emit audible warnings during unloading and maintenance operations, prompting operators to operate cautiously.

(2) Safety protection design of the filler

The lifting cylinder of the filler is equipped with a safety balance valve, ensuring that even in the event of a burst oil pipe, the pressing and filling mechanism will not suddenly descend, thus preventing severe accidents. Additionally, the filler is fitted with a safety brace rod to prevent injury caused by its descent.



safety

Safety strut

VII. Feeding mechanism device

serial num	name	image	Structural and performance characteristics	Remarks

ber				
1	Tilting mechanism (240L plastic barrel)		It can be fitted with 120L/240L trash cans;	Standard Configuration
2	Tilting mechanism (240L+660L plastic drums)		It can be adapted to 120L/240L/660L trash cans; The remaining performance characteristics are the same as the standard configuration mentioned above.	Optional configuration
3	Tipping mechanism		Equip with a 1000L garbage bin; Other performance features are the same as the standard configuration mentioned above.	Optional configuration