

# EV Compacting garbage truck

## BJ5122ZYSEV-P1

## BJ5123ZYSEV-H1



**FOTON**  
福田汽车

## A brief introduction to Brock Foton



Beiqi Foton Motor Co., LTD. (Foton Motor for short) was founded in 1996 and listed on the Shanghai Stock Exchange in 1998. It is China's largest commercial vehicle enterprise with the most complete variety. In 2021, Foton Motor became the first commercial vehicle enterprise in the history of Chinese automobile industry to sell more than 10 million units, the first "dual independent" commercial vehicle enterprise in China, and the shortest commercial vehicle enterprise in the world to sell more than 10 million units. The company has exported 680,000 units overseas, ranking first in China's commercial vehicle export for 12 consecutive years. Its products cover 110 countries and regions around the world, and its brand value has reached 191.516 billion yuan, ranking first in China's commercial vehicle industry for 18 consecutive years.

Foton has established joint ventures and cooperation with Daimler, Cummins, ZF and other top global enterprises to create world-class quality super trucks and superpower chains. Now Foton has formed an automotive ecosystem integrating vehicle manufacturing, core parts and automotive aftermarket, with 23 brands in the three business segments. Covering trucks, business vehicles, pickup trucks, buses, construction machinery and environmental equipment, new energy vehicles and other six business units.

In 2016, Foton Automobile layout of environmental equipment industry, the acquisition of the European famous brand of environmental vehicles -- Germany BROCK, the formation of Foton Brock, adhering to the European technology and standards, relying on the technical advantages of Foton automobile, absorb and transform high-end environmental technology, fully adapt to various conditions, to integrated design and production, intelligent manufacturing, one-stop service and other core advantages, Foton X super power chain, to provide customers with sweeping, cleaning, garbage and suction truck hundreds of professional sanitation car products. At present, Foton Brock has owned the first unmanned demonstration application of environmental vehicles and hydrogen fuel environmental vehicles in China, becoming a leading brand of environmental vehicles with wide coverage, complete varieties and advanced technology, to help win the "blue sky protection battle".



## BJ5122ZYSEV-P1/BJ5123ZYSEV-H1

### Type A pure electric compression garbage truck

#### First, product introduction

BJ5122ZYSEV-P1/BJ5123ZYSEV-H1 compressed garbage truck is a rear-loading compressed type, which is a new generation rear-loading compressed garbage truck independently developed and designed by Brock Environmental Equipment Division on the basis of absorbing the advantages of a variety of similar products at home and abroad. The car is beautiful in appearance, excellent in performance, advanced in operation and control. It adopts post-loading compression and bidirectional compression technology to complete the collection and transfer of urban household garbage. It has strong loading capacity and large loading capacity, and its comprehensive performance has reached the advanced level of similar domestic products. Foton environmental sanitation pure electric special vehicle chassis, excellent quality, strong motor power. Mainly suitable for urban residential areas, communities, large factories, mines and institutions in buckets, bags and bulk household garbage collection and transportation, a variety of bucket (bucket) institutions, suitable for different users of a variety of garbage collection methods.



The front view is the rear view



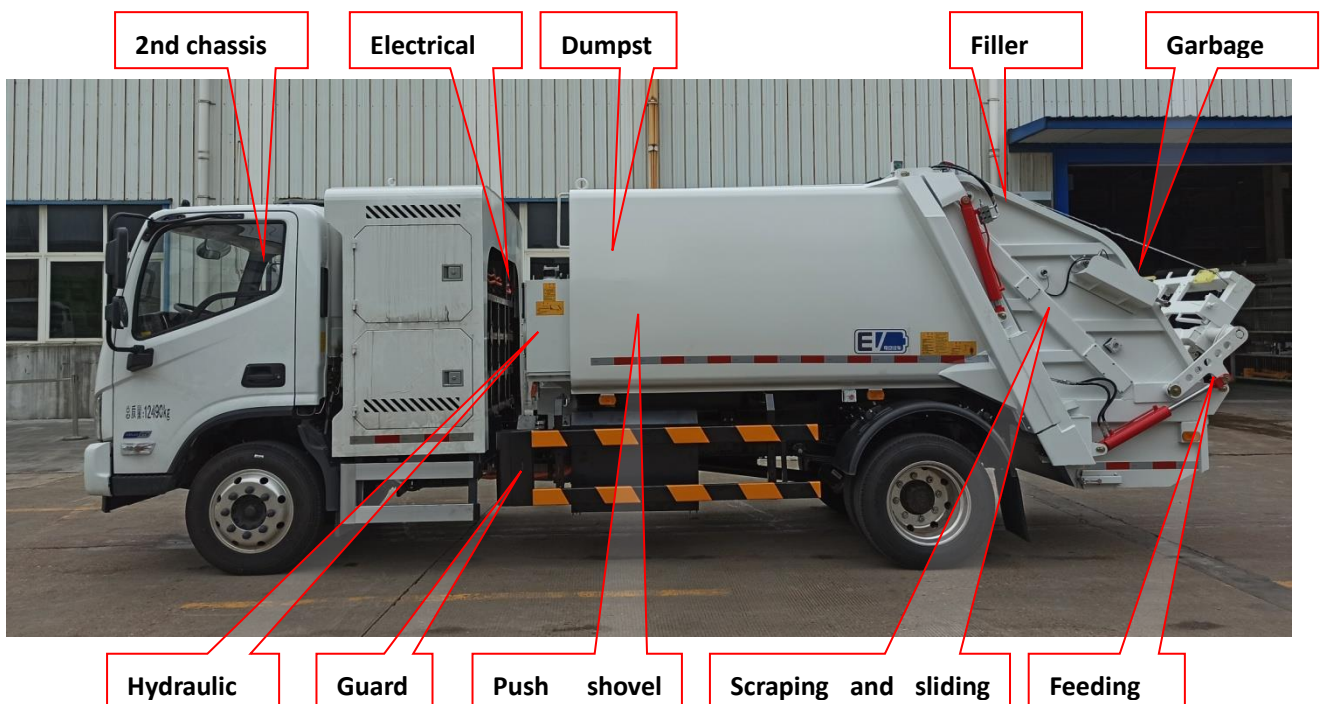
Right 45° Left 45°

## Two, working principle:

**Garbage compression filling process:** when the stuffing bucket is full of garbage, the scraper opens, ready to insert loose garbage, skateboard drives the scraper to move down together, into the garbage for crushing and compression for the first time, scraper forward turn, further compacted garbage, scraper in place with the skateboard moving upward, the garbage compacted filling into the garbage bin, and back to the starting position. In the continuous filling process of garbage, the push shovel under the action of extrusion pressure to overcome the back pressure step by step, so that the garbage evenly filled the whole garbage bin, the process of automation, no manual participation.

**Garbage transfer and unloading:** after the garbage truck is full of garbage, the garbage bin is completely closed, which will not pollute the environment during the transfer. When the garbage truck discharges the garbage in the treatment (or landfill) field, it first lifts the filler, opens the rear end of the dumpster, and the push shovel originally in the front end of the dumpster moves backward to push out the garbage in the dumpster along the horizontal direction.

## Three, the main performance and characteristics:



### 1. Foton Environmental Sanitation pure electric special vehicle chassis:

- ① European technical standards production, strong bearing capacity, long endurance, low noise, smooth driving.
- ② Special chassis designed for compression garbage truck
- ③ New cab, original factory heating and cooling air conditioning, GPS positioning device and travel recorder with satellite positioning function, can reflect the real-time operating conditions, PTO fixed speed function.

### 2. International famous brand engine:

- ① Permanent magnet synchronous motor, rated power 80kW, rated speed 1500r/min.
- ② Strong power, low noise, large battery power, stable and reliable performance.

### 3. vehicle control system:

The vehicle electric control system adopts the on-board control system (CAN line), which can realize the integration of the electric control system (one-button control).

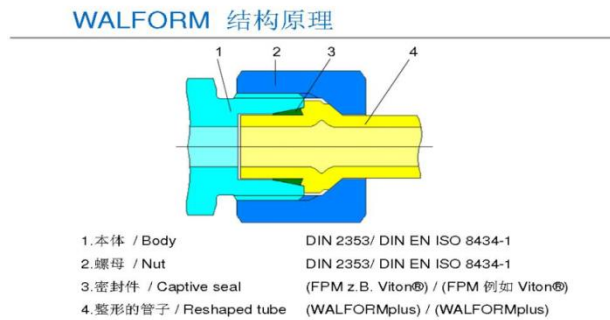
Compared with similar products in the industry using PLC controller, using CAN line control can realize fault voice alarm, through self-diagnosis, early warning processing, job record feedback function, to achieve early warning and automatic fault display, convenient maintenance, and better reliability.



Cab operation panel

#### 4. Stable hydraulic system:

- ① Hydraulic system pipeline adopts international general DIN24° standard.
- ② The hydraulic steel pipe adopts galvanized precision seamless steel pipe, the use of Eaton Walform extrusion molding, CNC bending molding, beautiful appearance, strong pressure resistance, repeatable disassembly, put an end to the problem of hydraulic oil leakage.



- ③ The three-stage filtration system is adopted to ensure that the cleanliness of the hydraulic system is above NAS9 level. Level 1: hydraulic parts are cleaned by special high pressure equipment before loading. Level 2: hydraulic oil is filled by fine filter device before filling. Level 3: After the completion of vehicle debugging, replace the hydraulic oil in the system and refill the hydraulic oil.

#### 5. Ergonomic operation mechanism: The vehicle has a good man-machine operation interface

- ① All operation keys are integrated with the dashboard of the cab, and do not occupy other space of the cab.
- ② Operation functions can be operated in the cab, reducing the driver's labor intensity, more safe, comfortable, flexible and convenient.
- ③ The manual operation box is located in the right back of the box, convenient to get off the car manual operation.



#### **6. Dustbin:**

- ① The bottom plate is concave structure, and the oil cylinder has no pressure on the bottom plate to prolong the service life.
- ② The side and top surface are circular curved surface, the box body has low dead weight, strong loading capacity, and the DORA runs fast and beautiful appearance.  
The slide way is integrated with the box body, which is firm and reliable, more smooth and reduces the unloading residue.
- ③ The interior of the garbage box adopts the internationally famous Aksu heavy anti-corrosion spraying treatment, the use of high temperature paint, good corrosion resistance.

#### **7. Reasonable sewage collection system:**

- ① Special sewage collection box, collection ability is stronger.
- ② Sealing cover design, integral parts, easy to wash, effectively prevent secondary pollution.
- ③ Large diameter sewage outlet, sewage efficiency is higher, anti-congestion.

#### **8, filling device:**

- ① The filler 3D hydraulic lock automatically locks, effectively preventing sewage leakage.  
The special structure of the sink can effectively prevent the splash of sewage.
- ② Automatic buffering function, avoid the strong impact of the filling body on the box, so as to form a good protection for the box and seal strip, prolong the service life of the product.
- ③ Both sides of the loading body are equipped with an emergency stop button, which can stop the operation in emergency.
- (4) Side leakage prevention technology, double sealing strip + lengthening box water retaining edge and bending inward + side water box, three lines of defense to ensure no leakage of sewage.

#### **9. Skateboard movement:**

- ① wear-resistant nylon slider, more reasonable and advanced structure, small friction, less noise, energy saving and consumption reduction.
- ② Higher strength, self-lubrication, normal use without replacement.



**10. Diversified options:**

According to different user needs, can choose to install tipping bucket, tipping bucket two kinds of packing mechanism.

(See the picture below)



**Tipping bucket**



**Tipping bucket packing  
mechanism**

#### Four, the main technical parameters:

Main technical parameters		
Product trademark	Brock brand	Foton
Product model number	BJ5122ZYSEV-P1	BJ5123ZYSEV-H1
GVW	12T	
Chassis model number	BJ1128EVJA	
Total mass (Kg)	12490	
Rated load weight (Kg)	3595 3895	
Mass of reconditioning (Kg)	8700 8400	
Overall dimensions (mm)	7770 x 2400 x 2640 (tilting the barrel) 7450 x 2400 x 2640 (tipping bucket)	
Approach Angle/departure Angle (°)	16/12	
Number of shafts	2	
Wheelbase (mm)	4200	
Maximum speed (Km/h)	85	
Number of tires	6	
Tire specifications	245/70 r19. 5	
Fuel brand	CATL	
Electricity (kwh)	229	
Range (km)	420 km	
Motor model	FTTB080C	
Power (kw)/ HP (PS)	160/217	
Technical parameters of the jacket		
Filling device working cycle time (s)	25 or less	
Discharging device first working cycle time (s)	40 or less	
Feeding form/volume	Tilting bucket type (240/660L) Tilting bucket type (1 square)	
Compression method	Both ways	
Effective bin volume (m <sup>3</sup> )	6.5	
Filler Volume (m <sup>3</sup> )	0.6	
Effective volume of sewage tank (m <sup>3</sup> )	0.36	
Hydraulic system pressure (MPa)	16	
Push-shovel back pressure (MPa)	12	

## V. Main advantages of the product

### 1. Superior performance

#### **Environmental protection:**

- Reasonable working speed and excellent components, control vehicle noise, reduce noise pollution;
- The combination surface of the filler and the dustbin adopts double rubber seal, and the sewage diversion device is arranged in the sealing place, which can divert the sewage to the sewage tank of the filler, effectively eliminate the sewage leakage, reduce environmental pollution;
- The filling device cover adopts cylinder control to open and close, which can completely cover the filling device feeding port, eliminate the garbage dust flying phenomenon caused by the rear airflow disturbance in the process of transfer, and reduce the odor pollution;

#### **High efficiency:**

- Adopt bidirectional compression technology, high garbage compression ratio, strong loading capacity;
- Large volume of the filling hopper, high efficiency of the filling operation, the cycle time of the feeding operation is less than 10s(tilting bucket type);

#### **Intelligent:**

- Different from the traditional PLC control mode commonly used in the domestic industry, the products in the control mode of learning from foreign advanced and mature technology, using the current most advanced "CAN bus + special controller mode", high degree of automation, reliability  
Good, low failure rate, long service life;



Ubeli controller



Chassis integrated CAN

- The engine power output control is the throttle control through the electrical system to realize automatic control, to ensure that the garbage truck in each operating state, the engine can automatically select the acceleration and idle state, avoid the power loss and system heating, reduce fuel consumption, good economy.
- Multimedia real-time monitoring system can be selected to monitor filling, loading, unloading and astern information, to protect the safety of vehicle operation.

**Large sewage capacity:**

The structure of two sewage boxes on the right side of the dumpster and the lower part of the filler makes full use of the space of the vehicle, and the sewage capacity is strong.



Rear sewage



Side sewage tank

**High adaptability:**

Different users can select different tipping bucket (bucket) mechanisms according to different garbage collection methods: plastic garbage can (240 liters, 660 liters), tipping bucket mechanism (1000L).

**Strong corrosion resistance:**

- Rubbish bins, shovels, fillers and other main parts in contact with garbage are made of high-strength weathering steel or wear-resistant steel. The overall performance of the structure is outstanding, with strong corrosion resistance and wear resistance.

**2. High safety:**

The side of the dustbin is equipped with an anti-fall switch to prevent the wrong operation of the filling device after lifting, which leads to the filling device falling and threatens the safety of people; The product is equipped with an alarm device, involving the safety of the operation can alarm prompts the operator to operate cautiously; Advanced hydraulic lifting safety circuit, in the filling device lifting process, even if the tubing burst, the filling device will not suddenly fall causing malignant accidents; The dustbin is provided with a safety pole, to avoid the filling device down wounding; Safety labels are posted on the products to guide the operators to operate safely.

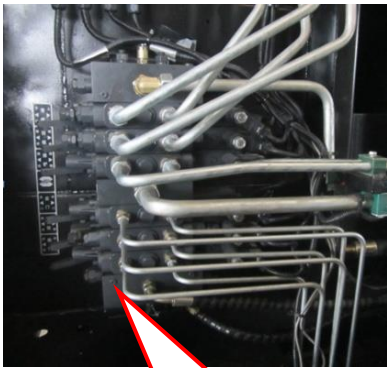


Anti-fall buttons

Safety pole

### 3. good quality

Hydraulic oil pump, hydraulic cylinder are domestic famous brands, the product is equipped with high quality and low noise multi way valve with proportional characteristics, can effectively eliminate the fluid impact noise at the moment of hydraulic reversing, improve the current garbage truck products when the work of disturbing problems. The industry takes the lead in the reversing valve inlet design of hydraulic oil fine filter, maximize the purification of hydraulic oil, to avoid the hydraulic valve stuck fault, improve the reliability of the product. The key components of the electrical system all use well-known components at home and abroad, such as: proximity switch and control button, improve the reliability of the garbage truck.



High quality  
low noise



Hydraulic oil  
concentrate



German P+F  
proximity

### 4. easy to operate:

The operation control box is installed in the driver's room and the rear of the car, the operation control box in the driver's room can control the extrusion discharge and select the operation mode, the operation control box in the rear of the car controls the operation of the filling mechanism and the lifting mechanism, the operation is very convenient, especially in the landfill, the operator does not need to get off the car to complete the discharge, (optional remote control system).



## 5. fine design

### **Pipeline layout beautiful and reliable:**

Hydraulic system adopts extrusion pipeline, beautiful appearance, repeated disassembly good, compared with ordinary welded steel pipe can reduce the impact of impurities on the performance of the hydraulic system, compared with the sleeve pipe can eliminate the leakage of hydraulic oil.



Optional



Extruded

### **Appearance and modeling beautiful and generous:**

The horizontal section of the dustbin is a rectangular frame, the longitudinal section is a trapezoidal frame, both sides and the top surface are arc shape, the whole machine is beautiful and generous.

**普罗科** × *城市因我而美*  
**BROCK**

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