

FLM5180ZYSDG6K

Garbage Compactor Truck

FULONGMA GROUP CO., LTD.

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INTRODUCTION

1. Overview

The FLM5180ZYSDG6K garbage compactor truck adopts the EQ1185LJ9CDE type truck chassis of DONGFENG. It is a new type of sanitation special vehicle specially used for collecting and transporting garbage. The vehicle mainly collects and transports urban domestic garbage, and is an ideal garbage collection and transportation vehicle for urban sanitation departments, factories, mines and wharfs. The product can be equipped with different types of lifting devices according to user needs.



Right 45°



Left



Front



Rear

2. Functions

This product adopts an intelligent control system, with automatic and manual dual control modes, which can control the operation of garbage trucks in the cab, the middle of the vehicle, and the rear of the vehicle. Equipped with two-way compression function, providing high compression efficiency and large garbage loading capacity. When unloading, after the hopper is lifted into place, the packer plate and carrier plate can automatically realize a cycle to remove the garbage remaining in the hopper. Equipped with a large-capacity sewage tank to effectively prevent secondary pollution caused by sewage leakage.

According to user needs, it can be equipped with various types of bin lifter and bucket lifter. The efficient and convenient lifting support device and the cam clamping device of the bin lifter carefully designed, which provides the possibility to configure a variety of lifting devices.

3. Applications

The vehicle mainly collects and transports urban domestic garbage, and is an ideal garbage collection and transportation vehicle for urban sanitation departments, factories, mines and wharfs.

4. Structure & Characteristics



4.1 Chassis

Chassis: Modified with EQ1185LJ9CDE truck chassis of DONGFENG, with strong power and strong bearing capacity.

Engine: DONGFENG CUMMINS B6.2NS6B210 diesel engine is used, with a rated power of 154kW, a rated speed of 2300r/min, and the emission reaches the China VI standard.

4.2 Garbage Tank

The effective volume of the garbage tank is 12.5m³. The main components such as the garbage tank are made of B480GNQR high-strength weathering steel plate produced by Shanghai Baosteel, and adopt the arc-shaped design, which is simple and beautiful and with large effective volume, outstanding overall structural performance and strong impact resistance. The high-strength U-shaped integrally formed truss groove of Japanese technology is used as the movable guide rail of the garbage ejector, which has strong compression capacity and good deformation resistance.

The garbage tank is equipped with an ejector, which can slide along the guide rails on the side. It has three functions: a. Push the garbage out of the garbage tank when dumping. b. Sealed the front end of the garbage tank. c. Reversely compress the garbage in the garbage tank to improve the compaction of the garbage.

4.3 Sewage Tank

There are three sewage tanks, the left and right sewage tank has a volume of 235L and 295L, and the sewage tank at the bottom of the hopper has a volume of 310L. Combined with the diversion sewage collection device, the sewage leaking between the hopper and the garbage tank body due to the failure of the sealing strip can be drained to these special sewage collection tanks. It is also equipped with a flexible, reliable and easy-to-adjust sewage tank cleaning door sealing device, which can effectively prevent secondary pollution caused by sewage leakage.

4.4 Hopper

The hopper is composed of a packer plate, a carrier plate and other components, which are used to complete the crushing, compacting and pressing of the garbage into the garbage tank. The effective volume of the hopper is 1.1 m³, the working cycle time of compression is

not more than 17 seconds, the compression density of garbage is between 0.65-0.8 t/m³, and the maximum crushing compression force is 162kN.

When loading garbage, the ejector will be pushed into place first, and then starts to load garbage. For the oil cylinder of the ejector mechanism has a certain back pressure, the ejector retraction resistance is generated. The ejector will retract only when the pushing force of the garbage is greater than the resistance of the ejector. Therefore, when the garbage enters the garbage tank from the hopper, it will be initially compacted. The continuous loading of garbage causes the push plate to be continuously retracted into position, and the garbage is further compacted in the process.

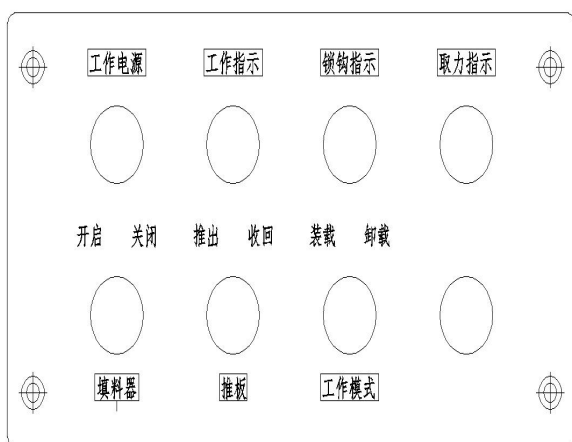
4.5 Lifting Mechanism

According to user needs, it can be equipped with various bin lifters and bucket lifters with a wide range of applications, including 240L bin lifter, 240L bin lifter compatible with 330L trash cans, 240L bin lifter compatible with 660L trash cans, 240L bin lifter compatible with 330L and 660L trash cans, bucket lifter, bucket lifter compatible with trash cans.

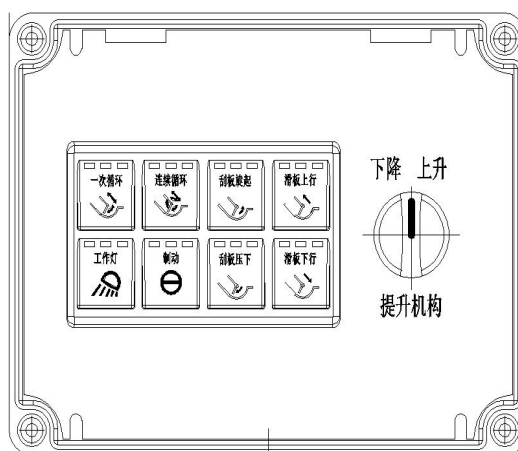
4.6 Control

Driving Operations

The driving can be carried out according to the driving method of a general truck. Before driving, the hopper should be closed in place, the power take-off should be in a disengaged state, and the power switch on the front control box panel should be turned off.



In-cab Control Panel



Rear Control Panel (Right side of hopper)

4.6.1 Operation before each device works

Working Operations

The transmission is in neutral.

Stop the truck at the designated spot (not on an incline), apply the handbrake, and put the transmission in neutral. Confirm that the copper ball valve in the hydraulic oil tank outlet line is in the open position.

Depress the clutch pedal to start the chassis engine, operate the power take-off push rod to engage it, release the clutch pedal slowly, and the gear oil pump starts to run. At this time, the multi-way valves are all in the neutral position, and the hydraulic system is in the unloading state, ready for operation.

4.6.2 Garbage compression cycle operation

When the engine is at idle speed, press the power switch button and the compression cycle button on the front control box panel, then the automatic throttle device starts to work, so that the engine speed rises to the working speed of the compression cycle. At the same time, the hydraulic system drives the working device to complete the various actions of the compression cycle in turn, until the packer plate returns to its original position and automatically stops working. At the end of a single cycle, the automatic throttle also stops working and the engine returns to idle.

Continue to fill the hopper with garbage for the next compression cycle. Repeat this until the garbage tank is full of garbage.

4.6.3 The operation of hopper and the unloading operation of the ejector

Turn on the power supply of the control box in the cab first, then turn the work transfer switch to the unloading position, and then turn the hopper switch to the ON position. At this time, the hopper starts to lift, until the buzzer stops, turn the ejector switch to the push-out gear, the ejector starts to push out, and let go when the garbage is pushed out completely. After confirming that the garbage is unloaded, turn the ejector switch to the retracted position to fully retract the ejector, and then turn the hopper switch to the OFF position until the hopper is closed in place and the hook is locked.

4.6.4 Brake operation

There is a brake button on the rear control box. Press the brake button and the compression action stops immediately. You can also use the twist button to rotate the packer plate, and the reverse button to lift the carrier plate. After troubleshooting, you need to press the compression cycle button again to resume normal operation. When the hopper or the ejector movement encounters an emergency, loosen the handle of the multi-way valve, and the working device will stop working.

5. Main Specifications

Items	Specifications
Chassis Model	EQ1185LJ9CDE
Chassis Manufacturer	Dongfeng Motor Co., Ltd.
Emission Standard	China VI
Engine Model	B6.2NS6B210
Maximum Net Power/Rotation Speed (kw/(r/min))	151/1800
Rated Power/Rotation Speed (kw/(r/min))	154/2300
Displacement (ml)	6200
Maximum Torque/Rotation Speed (N.m/(r/min))	850/1100
Transmission Model	DT0690
Transmission Type	Manual
Tires	295/80R22.5 18PR
Wheelbase (mm)	4500
Wheel Track (Front/Rear) (mm)	1862/1806
Ground Clearance (mm)	≥240
Gradeability (%)	≥30

Turning Radius (m)	≤19.5			
GVW (kg)	18000			
Configurations	Type-A	Type-B	Type-C	Type-D
Dimension (L×W×H) (mm)	8855	8370	8665	8580
	2500	2500	2500	2500
	3025	3025	3025	3485
Curb Weight (kg)	9980	9690	10120	10220
Payload (kg)	7825	8115	7685	7585
Front/Rear Overhang (mm)	1260/2790	1260/2610	1260/2610	1260/2450
Rear Extension (mm)	305		295	370
Approach/Departure Angle (°)	19/15	19/15	19/15	19/15
Top Speed (km/h)	105			
Passengers	3			
Hopper Volume (m³)	1.1			
Hopper Entrance Width (mm)	1870			
Hopper Entrance Height (Empty) (mm)	≤1280			
Compression Method	Bidirectional			
Compression Cycle Time (s)	≤17			
Unloading Cycle Time (s)	≤55			
Lifting Cycle Time (s)	≤11			
Garbage Tank Volume (m³)	15.5			
Garbage Tank Available Volume (m³)	12.5			
Garbage Tank Material	B480GNQR+Q345B+Q235B			
Garbage Tank Thickness (mm)	4			
Sewage Tank Volume (L)	840 = Front (L&R) (235+295) + Rear 310			
Sewage Tank Material	Q235B			

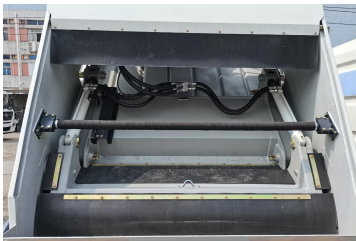
Sewage Tank Thickness (mm)	3
Garbage Compression Density (t/m ³)	0.65-0.8
Maximum Crushing Force (kN)	162
Maximum Pushing Force (kN)	187
Hydraulic System Pressure (MPa)	21
Air Conditioning	Warm/Cold

6. Advantages

No.	Advantages	Descriptions
1	Outstanding Performance	The product adopts a modular design, and can be equipped with a variety of compatible lifting mechanisms such as bin lifter, bucket lifter, which has a high-cost performance.
2	Good Quality	The main components such as the garbage tank are made of B480GNQR high-strength weathering steel plate produced by Shanghai Baosteel, and adopt the arc-shaped design, which is simple and beautiful, with large effective volume, outstanding overall structural performance and strong impact resistance.
3	Safe & Reliable	This product pays attention to the use of safety, and the special design of protective devices and safety devices can effectively prevent various safety problems during operation.
4	User-friendly Experience	The driver can complete various operations of garbage loading and unloading in the cab. And the operation mode can be selected according to the actual situation: control box button control or multi-way valve handle operation, and a wireless remote interface is reserved.
5	Easy	The sewage tank has a cleaning door for maintenance. There is a

	Maintenance	detachable window at the chute of the compression mechanism to facilitate the replacement of wearing parts.
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7. Working Devices

No.	Items	Descriptions
1	Lifting Mechanism	
	Functions	Used to lift trash cans.
	Structure & Characteristics	Lifting time: $\leq 11s$ Driven by hydraulic cylinders on the left and right sides, it can lift 2 trash cans at the same time.
2	Compression Mechanism	
	Functions	For the compression and filling of garbage.
	Structure & Characteristics	Compression cycle time: $\leq 17s$ Maximum crushing force: 162kN The lifting operation and the pressing operation can be carried out at the same time to improve the work efficiency.

3	Hopper Hook	
	Functions	Used for locking between hopper and tank.
	Structure & Characteristics	Driven by hydraulic cylinders to avoid over-locking. Adjustable bolts ensure a reliable connection.
4	Hopper Brace & Safety Inter-lock	
	Functions	Used as a safety device after the hopper is lifted.
	Structure & Characteristics	There are many safety protection measures such as the interlock switch of the hopper to prevent falling, the safety brace, and the self-locking function of the lifting cylinder of the hopper to ensure the safety of personnel.
5	Ejector	
	Functions	Used for unloading.
	Structure & Characteristics	Unloading cycle time: $\leq 55s$ The high-strength U-shaped integrally formed truss groove is used as the movable guide rail of the ejector, which has strong compression capacity and good deformation resistance.

6	Sewage Tank Maintenance Door	
	Functions	To clean the sewage tank.
	Structure & Characteristics	Simple operation and large opening area for easy flushing.
7	Sewage Collection Mechanism	
	Functions	Used to collect a small amount of sewage leaking out between the tank and the hopper.
	Structure & Characteristics	Drain the sewage leaking between the hopper and the garbage tank body due to the failure of the sealing strip to the special sewage tank.

8. Optional Selected

No.	Items	Descriptions
1	Aluminum Side Guard	
	Functions	It is used to protect the side of the truck body to prevent people and

		objects from being involved in the bottom of the truck.
	Structure & Characteristics	Lightweight and convenient, won't rust.
2	Bin Lifter for 240L Plastic Trash Cans with Weighting System	
	Functions	Used for lifting 240L standard plastic trash cans and weighting.
	Structure & Characteristics	It is easy to disassemble and assemble, and the weight of each bin of garbage can be accurately recorded, which is convenient for monitoring and statistics.
3	Bin Lifter for 330L Iron Trash Cans	
	Functions	Used for lifting 330L iron trash cans.
	Structure &	The hook plate can be replaced, which is convenient to adapt to

	Characteristics	different sizes of trash cans.
4	Bin Lifter for 240L, 330L Trash Cans	
	Functions	Used to lift 240L and 330L iron trash cans.
	Structure & Characteristics	Two 240-liter trash cans can be lifted at the same time, and the hook plate can be replaced, which is convenient to adapt to iron trash cans of different sizes.
5	Bin Lifter for 240L, 660L Trash Cans	
	Functions	Used to lift 240L and 660L trash cans.
	Structure & Characteristics	It is equipped with a retractable support arm, which can be adapted to different sizes of 660-liter trash cans by replacing the support arm.

6	Bin Lifter for 240L, 330L, 660L Trash Cans	
	Functions	Used to lift 240L, 330L and 660L trash cans.
	Structure & Characteristics	It is equipped with a retractable hook plate and support arm. By replacing the hook plate and support arm, it can adapt to 330L iron trash cans and 660L trash cans of different sizes.
7	No Bin Lifter	
	Functions	It is convenient for bagged garbage to be thrown into manually, or bulky garbage to be thrown directly.
	Structure & Characteristics	There is no lifting mechanism, which is convenient to stop and throw at any time.

8	Touch-ground Bucket Lifter			
	Functions	Used to lift the garbage in bucket.		
	Structure & Characteristics	It is not easy to leak, the parts are universal, and it is convenient to exchange with other lifting mechanisms.		
9	Bucket Lifter Compatible with Trash cans			
	Functions	Used to lift 240L trash cans and garbage in the bucket.		
	Structure & Characteristics	It has a wide range of applications, which can be used to lift trash cans and bulk waste.		

10	Large Bucket Lifter	
	Functions	Used to lift the garbage poured into the bucket.
	Structure & Characteristics	Increase the bucket capacity, not easy to spill, and can be used for bulk garbage feeding.
11	Bucket Lifter (Hainan Style)	
	Functions	It is convenient for flatbed truck to unload garbage.
	Structure & Characteristics	High volume and high lifting capacity.