



LLX5106GXFPM35/L Type Foam Fire Truck

Technical Specification Document



Shandong Province Tianhe Fire Vehicle
Equipment Co., Ltd.



一、 Vehicle Description:

1. Overview

The LLX5106GXFPM35/L foam fire truck is modified from a Class II chassis of the QL1110ANLWY cargo vehicle manufactured by Keiyou Automobile Co., Ltd. It features a double-row cab capable of accommodating 3+3 passengers and a total fuel capacity of PM35/L (2,500 kg water and 1,000 kg foam). The tank is constructed from high-quality stainless steel and equipped with a CB10/30-XZ fire pump and a PL8/24 dual-purpose water-and-foam nozzle. The vehicle offers centralized operation and easy maintenance.

The chassis has obtained national mandatory product certification; engine emissions comply with the limits specified in Phase VI of GB 17691-2018 (National Standard VI), and the vehicle's fire safety performance meets the requirements of GB 7956.

2. Main Parameter Table of the Vehicle

name	Technical Parameters and Requirements
overall dimension	7280×2230×3130mm
Full load mass	10230kg
Liquid volume	Water: 2500 kg; Foam: 1000 kg.
engine power rating	151kW
maximum speed	100km/h
effluent standard	country VI
pump rated flow rate	30L/s@1.0Mpa
Roof cannon	Flow rate: 24 L/s; range: water ≥ 52 m, foam ≥ 42 m.
Number of crew members	3 + 3 people
Specific power	151/10=15.1
approach angle	≥22°
departure angle	≥14°



II. Chassis

1. Main chassis parameters:

Chassis Model	QL1110ANLWY	
manufacturer	Seiling Automobile Co., Ltd.	
Braking Method	Air Braking	
engine type	4HK1-TCG61	
engine power rating	151kW	
engine displacement	5193mL	
Engine Emission Standards	country VI	
wheel base	4175mm	
Driving Method	4×2	
Maximum allowable total weight	10550kg	
Minimum turning diameter	16m	
Maximum Torque	650N·m	
maximum speed	100km/h	
Transmission Type	hand movement	

3. Cockpit

structure	Flat-top design; four doors; double-row seating.
Number of drivers and passengers	3 + 3 people
Air breathing apparatus seat	 Three units are equipped with our company's independently developed air respirator seats protected by intellectual property rights Patent No. ZL 2016 2 0101094.6), ensuring safe, comfortable riding and easy



	oper at i on.
Driver's Position	Left Position
equipment	Install a fire control dashboard and warning light control box on the original vehicle's instrument panel, with additional components added. 1. Alarm device; 2. Force-limiting control handle; 3. Additional power and gas circuit switches; 4. Carriage lighting fixtures, rear lights, strobe light switches, etc.; The cab can be flipped to facilitate engine maintenance.

4. Force limiter

model	YTQ250A-1.4 Full Power
Force applicator output form	Flange output: same as the steering system and engine

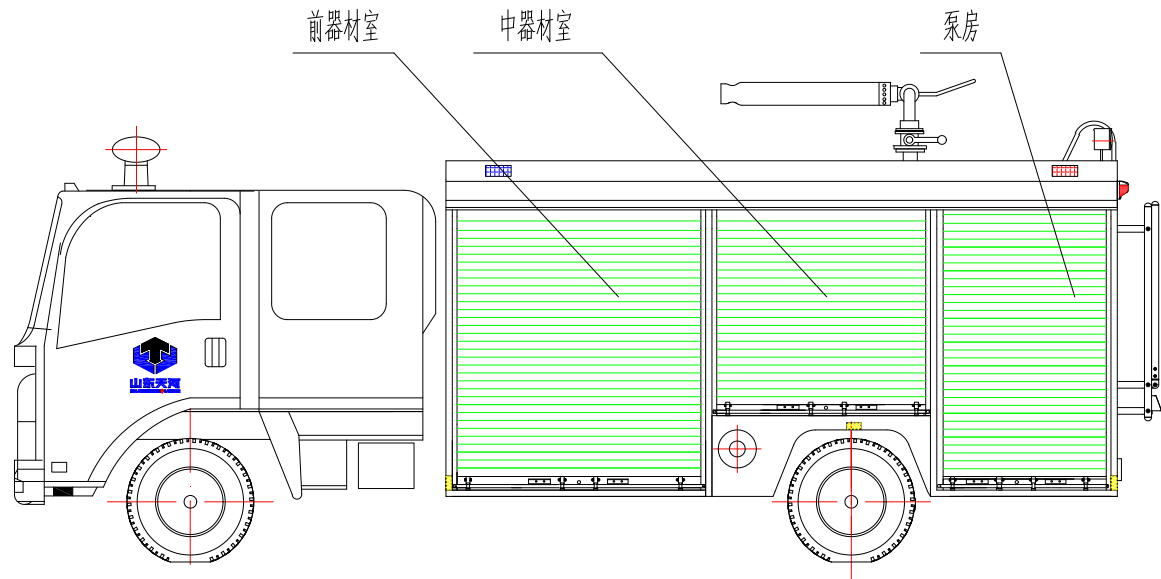
III. Upperwear

(I) Overall Layout

Overall fix up	Integrated structure: front equipment compartment, central concealed liquid reservoir, rear pump chamber
	The central internal liquid storage tank is equipped with side accessory chambers on both sides.
	Three aluminum alloy rolling doors are installed on each side, with a top-opening door at the rear.
	A boarding ladder is installed at the rear, while the roof features a ladder frame and a water-absorbing hose mounting device.



general arrangement diagram



(II) Carriage

material quality	The main frame structure is constructed using high-quality welded aluminum square tubes; the outer and inner sealing panels are made of 1.5 mm thick flat aluminum sheets, while the floor surface employs 3 mm thick flat aluminum sheets.
Box Door	The rolling shutter features an aluminum alloy handle mechanism, offering excellent sealing performance and dust-proof functionality.
Heating Device	Install independent heating fans in the pump room (for cold regions north of the Yangtze River).

(III) Carrying Solution Tank

structure	It is equipped with internal anti-slip plates and manholes in the compartments, complying with national standards. The tank body consists of a water tank and a foam tank, separated by a foam partition wall.
material quality	High-quality stainless steel, with a thickness ratio of 4:4:2 (base plate: side plates: anti-slip plate)
capacity	Water: 2500 kg; Foam: 1000 kg



water pot set up	Manhole: One DN450 manhole is installed, equipped with quick-locking/opening mechanisms and an automatic pressure relief device. The tank lid, independently developed by our company and protected by intellectual property rights, features automatic pressure relief, rapid locking, and opening capabilities, effectively preventing deformation or tearing of the tank due to instantaneous high pressure.	
	Overflow outlet: The water tank is equipped with one DN80 overflow outlet.	
	Residual Water/Liquid Outlet: Install one DN40 water tank outlet and one DN40 foam tank outlet, both equipped with ball valves.	
	Water injection ports: One DN65 water injection port is installed on each side of the vehicle body.	

IV. Fire Protection System

It consists of fire pumps, fire cannons, control systems, and piping systems.

1. Fire pump

model	CB10/30-XZ Type Fire Pump for Vehicles	
manufacturer	Shanghai Xiongzheng Fire Protection Equipment Co., Ltd.	
type	Atmospheric pressure centrifugal pump	
rated flow	30L/s	
rated pressure	1.0 MPa	
Maximum water absorption depth	7m	



Water Diversion Device	Piston vacuum pump	
Growth Rate and Gear Ratio	1.542	
Water diversion time	≤35s	

2. Fire Extinguishing Equipment

2.1 PM35/L Fire Extinguishing System

model	PL24 Dual-purpose Firefighting Cannon	
manufacturer	Chengdu West Fire Protection Machinery Co., Ltd.	
rated flow	24/s@1.0MPa	
angle of rotation	360 (Horizontal rotation)	
Up-and-down Angle	- 45 to +70	
range	The foam depth is ≥ 52 m, and the water depth is ≥ 42 m.	

3. Pipeline System

Pipeline Material	seamless steel tube	
Water intake pipeline	The water pump features a single DN125 inlet, located at the rear of the vehicle body.	
Water Injection Pipeline	There is one DN65 side water inlet on each side of the carriage. The pump room is equipped with one	



	DN80 upper water inlet.	
Water Discharge Pipeline	There is one DN65 outlet on each side (left and right).	

4. Foam Ratio Mixer (PM35/L)

model	PH64	
manufacturer	Rong Shen	
Range Ratio	3%~7%	
injection mode	Negative pressure inhalation	
hybrid mode	Ring-pump mixing	
control	hand movement	

5、electric accessory

Additional Electrical Equipment	Independent Circuit	
supplementary lighting	Both the equipment cabinet and the pump room are equipped with lighting fixtures.	
	External lighting fixtures are installed above the rolling doors on both sides of the vehicle body.	
	The instrument panel is equipped with lighting lamps.	
strobe light	Red and blue strobe lights are installed on both sides of the vehicle body.	
attention device	One row of 1.2-meter-long red LED warning lights installed on the top of the cab.	
	100W alarm device, with its control box located below the driver's seat.	
Automatic Charging and Inflation Device	Equipped with an automatic inflation and charging device that enables intelligent charging and inflation of the vehicle battery; it automatically detaches upon vehicle startup or can be manually separated.	

VI. Surface Treatment:



pigment :	The main color of the vehicle's exterior surface is R03 Fire Red.
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VII. On-board Equipment

(1) Equipment Setup:

1	According to fire safety operational requirements and procedures, retrieve or place items at the nearest location.
2	Use specialized clamps that are resistant to corrosion, vibration, detachment, and scratching for secure fixation.
3	Clear labeling for multiple users without interference.

(2) On-board firefighting equipment (to be configured according to the brand and model specified by the customer)