Version number: official version

PM180/G1 foam fire truck

Technical specifications

(Pictures are for reference only)

Weave:		Audit:		Approve:	
Sign:					
Release Date:	Year, month, day				

徐工消防安全装备有限公司

XCMG FIRE-FIGHTING SAFETY EQUIPMENT CO., LTD

1. Product overview and characteristics

The PM180/G1 foam fire truck is a heavy-duty main battle fire truck with a large loading capacity and multi-occupant delivery capacity. This product not only has the function of low-pressure and large-flow individual combat to meet the fire fighting of cities, mines, factories, wharves, especially logistics and warehousing, but also can be equipped with a complete set of high-lifting fire trucks and used in conjunction with high-rise fire trucks to meet the fire extinguishing of high-rise buildings.

[Product Advantages & Highlights]

1. Strong power and strong bicycle combat ability

It adopts German Mercedes-Benz Arcos 4158E6 Class II chassis, engine power 426kw, strong power performance, reliable quality, advanced performance; The cab carries 2 people + the independent crew compartment carries 4 people (equipped with special air pager seats and independent air conditioning), which is suitable for centralized delivery of fire combat formations.

2. Strong fire fighting performance

The vehicle can be loaded with 10000kg water + 8000Kg foam liquid, and has strong single-vehicle fire fighting capabilities and liquid supply capabilities; It is equipped with imported American Hill 8FC high-flow 10000L/min fire pump, negative pressure automatic Class B foam system and American Elk 9000L/min fire cannon, achieving a maximum spray fire extinguishing operation radius of more than 100 meters and strong fire fighting performance.

The fire protection system configured by this vehicle not only has the function of low-pressure and large-flow individual combat, but also can be equipped with a complete set of high-lifting fire trucks and used in conjunction with high-rise fire fighting to meet the fire

extinguishing of high-rise buildings.

3. The fire protection system is convenient and fast to operate, and the degree of intelligence is high

The operation of the fire protection system is designed through humanized design, adopts centralized control from the rear, and is equipped with functions such as automatic pressure regulation of fire protection and one-click intelligent "water, foaming, cleaning", which is intelligent, simple, efficient, and highly humanized.

2. Main technical parameters

project		unit	parameter	Tolerance range
size parameter	Dimensions (length×width × height)	mm	11950×2550×3880	The announcement shall prevail
	wheelbase	mm	1750+4600+1350	—
Driving performance parameters	The number of passengers in the cab	person	2+4	—
	Engine power rating	Kw	426	National VI emissions
	curb weight	medical history	19150	The announcement shall prevail
	Full load quality	medical history	37600	The announcement shall prevail

	specific power			kW/t	≥11.3	—
	Maximum speed			km/h	90	—
	Approach angle			°	12	—
	Leaving the corner			°	8	—
	Maximum climb			%	30	—
Fire performance parameters	Liquid capacity	water		medical history	10000	The test report shall prevail
		Foam liquid		medical history	8000	
	Fire pump	Model		—	CB10/170-8FC	—
		Rated flow rate		L/s	≥160	The test report shall prevail
		Rated pressure		MPa	≥1.0	
		Water diversion time		s	≤100	
	Fire cannon	water cannon	Model	—	PLKD12/150-7500EXM	—
			Rated flow rate	L/s	150	The test report shall prevail
			Rated pressure	MPa	≤1.0	
			range	m	≥100	
		Foam cannon	Model	—	PLKD12/150-7500EXM	—
			Rated flow rate	L/s	150	The test report shall prevail
			Rated pressure	MPa	≤1.0	

			range	m	≥95	
		The swing range of the gun head	Pitch angle	°	≤-7～≥+45	—
			Turning angle	°	≥270	—

3. Main configuration

Vehicle Name	PM180/G1 foam fire truck
Vehicle chassis	
Chassis model	Arocs 4158E6
Drive form	8×4
Initiation mechanism	Model Number: OM473LA.6-55; Displacement: 15.569L; Rated power/speed: 426kw/1600r/min; Maximum torsion/speed: 2800N·m/1100r/min; Emission standard: National VI; Inline six-cylinder turbocharged intercooled direct injection diesel engine.
Gearbox	Mercedes-Benz 16-speed fully automatic transmission, intelligent shifting.
Power take-off	Chassis original imported full-power power take-off
Electrical system	Generator: 28V/100A; Battery: 2×12V/220A.h, battery box with lock.
Fuel tank	390L steel fuel tank with locking fuel cap and fuel filler with filter
Urea tank	25L urea tank
tyre	Specifications: 315/80 R22.5, full wire radial tires, a total

	of 12 tires; Spare tire: 1 (with the car).
cab	1. Mercedes-Benz Arocs standard short cab, number of occupants: 2 people, hydraulic lift and flip system; 2. The driver's air suspension is adjustable seat, the co-driver can fold the seat, and each seat is equipped with a three-point seat belt; 3. Electric doors and windows, electric heated rearview mirror, front lower mirror, right blind mirror, central lock, wide-angle rearview mirror on both sides; 4. Cab heating system, air conditioning system, intelligent maintenance system; 5. Radio with USB interface, reversing alarm device;
Braking system	1. Dual-circuit air brake system, front and rear disc brakes, brake clearance automatic adjustment; 2. Auxiliary function of standing hill start (anti-slip); 3. Mercedes-Benz electronically controlled intelligent braking system; 4. Intelligent braking system, standard ABS brake anti-lock device, ASR anti-side slip system, EBS electronic brake system and ESP electronic body stability system.
Separate crew compartment	
Separate crew compartment	1. Crew: 4 people, the seat is a special seat for fire fighting (can carry an air respirator); 2. The main body is an all-aluminum alloy structure, with high-grade flame retardant material interior; 3. Equipped with high-power overhead air conditioning and multi-functional intercom system; 4. Manual windows.

Fire water system		
Fire tank	material	304 stainless steel
	Plate thickness	The bottom plate and side panels are 4mm, and the top plate and partition plate are 3mm
	Liquid capacity	10000kg of water + 8000kg of foam
	The format of the anti-swing plate mesh in the tank is set with vertical and horizontal anti-swing plates	
	The water tank is equipped with a DN125 overflow pipe with an overflow cap	
	Water and foam tanks are equipped with electronic level gauges	
	The top of the tank is treated with anti-slip	
	The tank adopts a floating fixing method to reduce the impact force of the tank and ensure the safety of the tank	
	The surface of the tank is sprayed with anti-corrosion material	
	Water tank: equipped with 2 Φ450 manholes, with quick locking/opening function, when the pressure in the tank exceeds 0.1MPa, the pressure can be automatically relieved, and the manhole cover is painted green; Foam tank: with Φ450 manhole 1, with quick locking/opening function, when the pressure in the tank exceeds 0.1MPa, the pressure can be automatically relieved, and the manhole cover is painted yellow;	
water pump	Brand: American Hill; Model: CB10/170-8FC; Inlet diameter: DN200, outlet diameter: DN150; cast iron housing, copper impeller, stainless steel impeller shaft; Bare pump parameters: 170L/s@1.0MPa;	

<table>
<tr><td></td><td colspan="4">Vehicle pump parameters: ≥160L/s, 1.0MPa.</td></tr>
<tr><td>vacuum pump</td><td colspan="4">Domestic electric vacuum pump (24V);
The vacuum degree is ≥ 85kPa, and the maximum water diversion depth is ≥7 meters; Water diversion time ≤ 100 seconds.</td></tr>
<tr><td>Fire cannon</td><td colspan="4">Brand: Elk USA
Model: PLKD12/150-7500EXM water and foam dual-purpose electric remote control fire cannon;
Control mode: electric;
Naked gun parameters: 150L/s@1.2MPa;
Vehicle cannon parameters: ≤10MPa, 150L/s;
Turning angle: ≥270° , pitch angle ≤-7° ~≥+45° ;
150m wireless remote control operation.</td></tr>
<tr><td>Foam system</td><td colspan="4">Fully automatic foam system, large flow, can be applied to various types of B foam, mixing ratio: 1-10%.</td></tr>
<tr><td rowspan="2">Waterway control</td><td colspan="4">Waterway control mode: electronically controlled pneumatic + manual emergency control</td></tr>
<tr><td colspan="4">Control panel location: rear side of the car body</td></tr>
<tr><td>Fire pipeline</td><td colspan="4">Aluminum alloy tube</td></tr>
<tr><td rowspan="4">Fire interface configuration</td><td>interface</td><td>specification</td><td>valve</td><td>location</td></tr>
<tr><td>External suction interface</td><td>4×DN150</td><td>Manual butterfly valve with stuffy cover</td><td>Rear side of the car body</td></tr>
<tr><td>Water gun interface</td><td>8×DN80</td><td>Globe valve</td><td>Both sides of the car body</td></tr>
<tr><td>Upper Gun Interface (Valve)</td><td>1×DN150</td><td>Pneumatic butterfly valve</td><td>Pump room</td></tr>
</table>

	Suction interface in the tank	1×DN200 1×DN150	Pneumatic butterfly valve	Pump room
	Tank water injection interface	8×DN80	The interface is equipped with a stuffy cover	Both sides of the middle of the car body
	Foam tank liquid injection interface	1×DN65 1×DN50	It comes with a stuffy cover	Appropriate location
	Tank sewage interface	1×DN40	Manual ball valve	Appropriate location
	Foam tank outlet	1×DN40	Manual valve with DN50 interface	Appropriate location
	Foam outer suction port	1×DN80	Pneumatic valves	Appropriate location
	Interface form: Buckle type or snap type (fast) can be selected, and it **is recommended to use the internal buckle interface in cold areas.**			
Electrical control system				
Pump chamber control system	modular XCMG control panel; Equipped with a 10-inch LCD display, it can display the opening status of each control valve and pipeline, display the real-time pressure, flow rate and foam mixing ratio of the fire protection system, display the real-time liquid level of the water tank and foam tank, and display the real-time speed of			

	the engine and fire pump.
Warning lights and sirens	Siren and amplification device installed in the cab, power: 100W; a 1.8m long row of red strobe warning lights is installed at the front end of the top of the cab; There are 4 sets of flashing warning lights on both sides of the body.
Sign lights and lights	The car body is equipped with safety side marker lights, rear profile lights, and yellow turn signals on both sides; Lighting is provided in the pump room and equipment box; The side and rear of the car body are equipped with external lights to ensure night operation.
Automatic charging device	The battery can be charged with 220V mains, and the charging plug will automatically fall off when the fire truck starts.
Imaging system	Driving monitoring system (navigation, driving record, reversing image integrated)
Main structural parts	
Pump room, equipment box and hoarding	Material: The skeleton is an aluminum alloy profile welded frame, and the interior panel is an aluminum alloy flat plate
	Roller shutter door: all equipment compartments and pump rooms adopt roller shutter doors with locks;
	Flap pedal: using mechanical spring and locking pin locking;
	Equipment layout: Utilization of internal space and equipment layout principles: (1) All equipment is placed to ensure that the team members do not interfere with each other when the battle unfolds; (2) Place equipment according to the frequency of use and the weight and shape of the equipment;

	(3) Place equipment according to the logical relationship between combat formation and equipment use; (4) Place equipment scientifically according to human behavior.
Subframe	The through-type subframe design technology is adopted to improve the stability and service life of the vehicle, increase the maintenance space, and make the vehicle easy to maintain.
Other configurations	
Optional configuration	Optional in the northern cold region: pump room insulation and heating device; Vehicle spray self-protection system; Electric ladder frame; 360-degree intelligent driving monitoring system.

4. Description of main components

1. Fire protection system

The fire protection system adopts the original imported American Hill CB10/170-8FC fire pump, with a large flow rate of 10000L/min; The foam system adopts XCMG's self-made high-flow negative pressure automatic foam system, which can be applied to all kinds of foams. It is equipped with an Elk 7500EXM fire cannon imported from the United States, and the foam car is equipped with a foam gun head. The whole vehicle adopts pneumatic valve control, sets up an intelligent fire control system, is equipped with a controller and LCD display, and is equipped with a one-button operation button, which can effectively improve the efficiency of fire protection operations.

2. Tank assembly

The tank is placed in the form of exposure. The tank body is connected to the auxiliary beam by a special elastic high-quality

rubber element, which floats and slows down the impact of the start-stop process.

The total volume is 18000L, and the material is stainless steel. The top of the water tank is equipped with a manhole with a diameter of ≥ 450mm, and the tank lid with a quick opening/locking device is added to facilitate personnel to enter and exit the tank for cleaning and maintenance. The liquid tank is equipped with an overflow and pressure relief device. The bottom of the tank is equipped with a sewage outlet, a ball valve, and a pipe tooth (DN40) buckle. The pitcher is equipped with an electronic water level display; There is a filter at the interface between the water tank and the water pump, which is easy to clean and maintain.

8 water inlet pipes (DN80) for filling water into the tank are installed in the lower part of the tank, arranged on the left and right sides of the car, and the piping teeth (DN80) light alloy material interface and stuffy cover; 1 DN80 line for pump filling the tank with pneumatic valve.

3. Hoarding and pump room equipment box

The body hoarding is made of all-aluminum alloy material. The interior panel of the equipment box is made of aluminum alloy flat plate, and there is an aluminum alloy rolling door outside; The layout of the equipment compartment adopts the principle of ergonomics, the fixed arrangement of the equipment is compact and reasonable, the equipment is easy to access, the equipment box is equipped with automatic lighting, and there is a drainage trough.

5. Main configuration table

serial number	Part name	brand
1	chassis	German Mercedes

2	Fire pump	American Hill
3	Fire cannon	Elk, USA
4	Fire Fighting Fluid Tank (18 tons)	XCMG Fire Protection

6. Random spare parts and packing list

6.1. Fire truck spare parts table

serial number	Name, specification and model	unit	quantity	remark
1	O-ring 175×5.3	piece	2	
2	Fuse 10A 5×20	piece	2	
3	Fuse 15A 5×20	piece	2	
4	Fuse 20A 5×20	piece	2	

6.2. Fire truck tools on board

serial number	Name, specification and model	unit	quantity	remark
1	Cassette Fire Hose 16-80-20	volume	8	
2	Cassette Fire Hose 16-65-20	volume	8	
3	DC switch water gun QZG3.5/7.5	item	2	
4	Deflected DC Spray Water Gun QLD6.0/8	item	2	
5	Foam Tube Gun QP8/0.7	item	2	
6	KXK65 (Inner Buckle)/80 (Female) Special-shaped Interface	item	2	
7	KJK80 (male)/65 (female) medium voltage cassette reducer	item	4	
8	FJ150 male/80 male× 2-1.6 two water collectors	item	1	
9	FIII80 雄/65 雌×3-2.5 三分水器	item	2	
10	Suction pipe wrench FS150	item	2	

11	Hook head wrench 78-85	item	1	
12	Rubber hammer JFRC-12	item	1	
13	Ground hydrant wrench FS450	item	1	
14	Underground hydrant wrench FBX800	item	1	
15	Dry powder fire extinguisher 8kg	item	1	
16	Water belt bridge protection	item	2	
17	Water hose wrapping cloth	item	8	
18	Hose hook	item	8	
19	Fire Sharp Axe GFJ815	handful	1	
20	Rechargeable portable light	piece	2	
21	Φ150×2000 suction pipe	root	4	
22	Φ150 Quick plug water filter assembly	item	1	
23	150 Male snail rings	item	1	
24	Allen wrench 3-17	cover	1	
25	Live wrench 6 inches	item	1	
26	Live wrench 12 inches	item	1	
27	Slotted screwdriver 150×6	item	1	
28	Phillips screwdriver 150×6	item	1	
29	Carp tongs 8 inches	item	1	

6.3. Fire truck packing list

serial number	Name	unit	quantity	remark
1	PM180/G1 product certificate	portion	1	
2	PM180/G1 Operation/Maintenance Manual	volume	1	
3	PM180/G1 parts atlas	volume	1	
4	Fire cannon instruction manual	portion	1	Purchased items come

				with their own
5	Fire pump instruction manual	portion	1	Purchased items come with their own
6	Documents specified in the chassis	portion	1	According to the original packaging

7. Vehicle photos (for reference only)


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