



## I. General description and features of the product

The JP60A1 lifting high-injection fire-fighting vehicle is a kind of large-sized and well-equipped fire-fighting equipment which has integrated the water tanker, foam fire truck and high-injection vehicle, suitable for fire extinguishment in the oil field, petrochemical enterprises, urban high-rise buildings, and various types of large-sized warehouses. It has following features: The vehicle is equipped with imported high-flow fire pump and dual-monitor system: one monitor is located at the top end of the boom frame for the high-altitude fire fighting operation, and the other on the top of pump chamber. It is also provided with a pneumatic lifting mechanism for fire fighting operation whist moving, being suitable for extinguishment of mobile fires, such as the oil tank truck. Various moving mechanisms are provided with electro-hydraulic proportional control to achieve smooth operation and good micro control. The vehicle is equipped with complete safety protection devices, wired remote control, fire scene real-time monitoring system and other advanced features.

## II. Advantages and highlights of the product

### 1. Powerful fire fighting performance

1) Advanced system features: America Darley PSP1500 fire pump and America Akron 3578/5177/3626 electric fire monitors are applied. They can satisfy the requirements of high-altitude & high-pressure fire extinguishing operation.

2) Complete features of the fire-fighting system: The vehicle-mounted stainless steel fire tank has an effective liquid loading capacity up to 6.5t, including 4.5t water and 1.1t foam liquid, being the largest one at the same level in China. America Darley FSB120-C fully-automatic foam proportional mixing system, with the mixture ratio of 0.5-10%, is applied, which can be used to extinguish Category A and B fires.

3) The vehicle is equipped with the roof lifting monitor and a control system in the cab for fire fighting operation whist moving, in order to widen the scope of application.

### 2. Safe and reliable control system

The vehicle is based on PLC and CAN bus distributed control, and the boom frame is subject to the zoned deceleration control strategy; furthermore, 22 safety protection features are provided to improve the safety level. The large-sized LCD monitor is provided to offer rich information on the man-machine interface and clearer fault diagnosis prompt information for subsequent service and maintenance.

### 3. Stable and efficient control

The hydraulic system is provided with a highly-efficient control system which is composed of advanced load sensing pump and load sensing valve to obtain low starting pressure and good cost performance, as well as stable action and good micro-control.

4. This vehicle permits the operation on a single side to satisfy the requirements for operation in a narrow space.

## III. Technical parameters

Major performance parameters of the vehicle
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Outline dimensions: (length × width × height)	13420×2500×4000mm		
Gross weight	40450kg		
Maximum working height	60m		
Maximum working radius	22m		
Time of extension of the outriggers	≤40s		
Time for the boom frame to reach its rated lifting height and rotate by 90°	≤195s		
Liquid loading capacity	Water	5350kg	
	Foam	1100 kg	
Fire pump	Rated flow	50 L/s	
	Rated pressure	1.8MPa	
Fire monitor	Model	3578+3626	3578+3626
	Rated flow	48 L/s	48 L/s
	Rated pressure	0.6MPa	0.6MPa
	Injection range	60m (water)	55m (foam)

#### IV. Main features

Vehicle chassis	
Chassis model	Benz Actros4144
Engine	Engine power: 320kw(435hp)/ 1,800rpm;
Power take-off	Full-power power take-off: NMV200; Side power take-off: MB-NA124-10C.
Fire water system	
Fire tank	Material: 304L stainless steel; plate thickness: 4mm in the case of bottom plates and side plates, or 3mm in the case of other plates
Water pump	America Darley PSP1500 single-stage centrifugal water pump ; Flow: 5400 L/min @ 1.0MPa
Vacuum pump	Darley AP00954 electric slide vane vacuum pump (24V); Vacuum ≥85kPa; water suction depth ≥7m; water suction time: less than 50s.
Foam system	Darley FSB120-C automatic foam proportional mixing system, with the mixture ratio of 0.5-10%. Attached with a set of manual foam proportional mixer.
Fire monitor	Boom frame monitor and vehicle roof lifting monitor, two groups of water monitors

	<p>America AKRON: 3578+5177/3626, water &amp; foam electric remote-control fire monitor.</p> <p>Flow adjustment range: 950~4800L/min; working pressure: 0.7MPa.</p> <p>Horizontal rotating angle: <math>\pm 45^\circ</math>; angle of elevation: <math>90^\circ</math>; angle of dip: <math>45^\circ</math>.</p> <p>Wireless remote control within an effective distance of 100m.</p>
Electric control system	
Console	<p>Location of the superstructure console: Left side of the turntable (with a seat).</p> <p>Vehicle control type: operation interface, computer control.</p> <p>Computer display screen: the colored LCD display screen is used. The screen can display the curves of the boom frame luffing and telescoping operations, the orientation of the boom frame and the cab, the working height, luffing angle and working radius of the boom frame and other data, and the query of faults via the screen is also permitted.</p>
Leveling of the outrigger	Automatic leveling + manual leveling
Other features	
Ordinary features	Fire scene monitoring system, centralized lubricating system, gasoline engine pump standby power system, anemograph, reversing monitor
Optional features	<p>Additionally installed in the northern cold area: water pipeline purging, water outlet electrically-heated ball valve;</p> <p>Onboard radio and interphone,</p>