



I. General description and features of the product

The YT32K1 scaling ladder fire-fighting vehicle, based on the proven techniques of this company, has specially realized the breakthrough with respect to the design, development and manufacturing technologies of the superstructure scaling ladder, the turntable leveling technology, dual-helix & dual-direction winch telescoping technology, multi-mode operation curve control technology, independent working platform leveling technology and other core technologies, and it is a urban major fighting vehicle which has integrated the high-altitude rescue and fire extinguishment. It features high mobility and flexibility, good adaptability to grounds, quick rescue, and high technical safety, and is widely applied in the fire fighting operation and rescue in the mid-rise and high-rise buildings in the urban area, mines, oil fields and factories, being the preferred equipment for fire extinguishment of the mid-rise and high-rise buildings and rescue of the persons in distress and properties.

II. Advantages and highlights of the product

1. The YT32K1 chassis is equipped with Benz 3344 Category II chassis, featuring the leading-edge performance, high bearing capacity, compliance with China Emission Stage IV standard and sufficient power reserve (320kw/29t).
2. The fire-fighting system is fully featured, with outstanding pump and monitor performance. America Darley PSP1500 pump system, with a vacuum pump, is equipped, and is driven by the full-power PTO, with sufficient power reserve. The America Akron 3578 electric platform water monitor is provided. The water inlet and outlet and the control valves are fully equipped for easy operation. The vehicle is equipped with a 4.95t fire liquid tank, including 2.95t water and 2t foam, as well as the aluminum alloy telescoping water pipe to make the superstructure lighter.
3. Based on PLC and CAN bus distribution control, the automatic leveling of the substructure, real-time leveling of the superstructure, weighing of load on the platform, ultrasonic collision detection of the platform, posture dynamic monitoring and single-key operation demonstration are allowed, being technically advanced.
 - ◇ Advanced scaling ladder telescoping technology, which can realize the automatic deceleration and stop of the telescoping ladder to make the ladder work more stably.
 - ◇ Multi-mode working curve control, which can effectively improve the rescue capacity of the scaling ladder vehicle to maximize its performance.
 - ◇ Advanced superstructure leveling technology, which can effectively improve the vehicle's adaptability to the grounds, and can coordinate with the substructure, with the maximum leveling angle $\geq 7^\circ$.
4. The independent working platform is provided, featuring quick installation and removal, and it can realize the operation under various working conditions.
 - ◇ Without working platform: The bridging operation is allowed to increase the rescue capacity, with the maximum rescue range up to 30m, and at most 12 people can be rescued in a single operation. Furthermore, it is allowed to directly connect a water monitor to the scaling ladder for high injection operation.
 - ◇ With working platform: The rescue and fire fighting operation can be performed via the working platform.

5. Quick and highly efficient operation, high rescue capacity, outrigger actuation time of 30s; the time for the platform to reach its maximum working height and rotate by 90° is 50s.

III. Technical parameters

Outline dimensions: (length × width × height)		11430×2500×3960mm	
Gross weight		29200kg	
Loading capacity of the working platform		300kg	
Maximum working height		32m	
Maximum working range		26m	
Time of extension of the outriggers		≤30s	
Time for the ladder frame to reach its maximum lifting height and rotate by 90°		≤120s	
Fire fighting performance	Fire pump	Rated flow (L/s)	≥50
		Rated pressure (MPa)	≥1.2
	Fire monitor	Model	3578
		Rated flow (L/s)	48
		Rated pressure (MPa)	≤0.8
		Injection range (m)	≥65m

Main features

Vehicle chassis		
Chassis model	Benz Actros3344 6×4	
Engine	Engine power: 320kw/ 1800rpm;	
Power take-off	Full-power power take-off: NMV200; Side power take-off: MB-NA121-1b.	
Fire water system		
Fire tank	Material:	stainless steel ;
	Liquid capacity loading	Water loading capacity: 2950kg; foam loading capacity: 2000kg
Water pump	America Darley PSP1500 single-stage centrifugal water pump ; Flow: 95 L/S @ 1.0 MPa, 50 L/S @ 1.7 MPa.	
Vacuum pump	Darley AP00954 electric slide vane vacuum pump (24V); Vacuum ≥-85kPa; water suction depth ≥7m; water suction time: less than 50s.	

Foam system	Ring-pumping type Category B foam proportional mixing system.
Fire monitor	America Akron: 3578 electric remote control fire monitor. wireless remote control within an effective distance of $\geq 100\text{m}$.
Electric control system	
Console	<p>Location of the superstructure console: Left side of the turntable (with a seat) and the working platform. The wired communicator is provided between two consoles.</p> <p>Computer display screen: the colored LCD display screen is used. The screen can display the curves of the scaling ladder luffing and telescoping operations, the orientation of the scaling ladder and the cab, the working height, luffing angle and working radius of the scaling ladder, and the, load of the working platform 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	
Optional features	<p>1) Additionally installed in the northern cold area: fire water pipeline purging, water outlet electrically-heated ball valve.</p> <p>2) Electric system: On-board radio and interphone; one 24V charger outlet; reserved onboard radio interface in the cab.</p>