

# Drop-Down Ladder Access Rack System

## INTRODUCTION

With fire apparatus getting taller and longer, firefighters have turned to electricity and hydraulics to help them get equipment on and off their truck. It is our mission to provide lifesaving equipment mount solutions with technology innovation in emergency service vehicles, prioritizing safety, speed, and efficiency in critical scenarios.

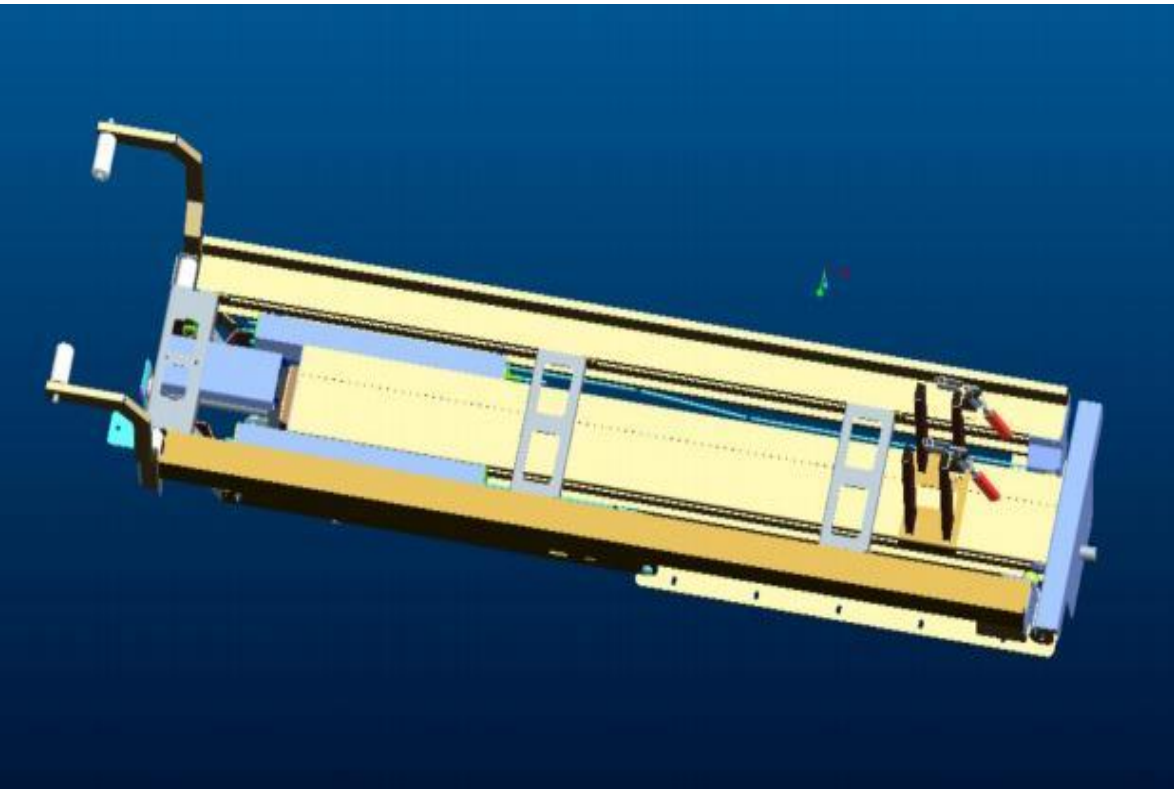
Our "**Drop-Down Ladder Access Rack System**" is air cylinder adopted, reliable, affordable, a specialized mechanism designed for the efficient storage and ease of use, allowing for quick deployment and storage with minimal physical exertion, which commonly used in rescue operations and utility services. This system is particularly useful in scenarios where rapid deployment and stowage of ladders are crucial.

## KEY FEATURES

- Model Number(15-meter drop-down ladder access rack system): ZISHU-15M-HF
- Packaging size(L\*W\*H):2480x590x380mm
- The system is mounted on the top of a vehicle and stores ladders horizontally, leaving more space for compartments below.
- It lowers the ladder from the stored position to a more accessible height at the rear of the vehicle when needed for firefighters or operators to reach. It is especially beneficial for large and heavy ladders that might be difficult to access and deploy manually from a standard rooftop position.
- By lowering the ladder to a safe & easy retrieval level, the system reduces the risk of strains and other common injuries that could occur when personnel attempt to access ladders stored at a higher position. It also speeds up the process of deploying the ladder, crucial in emergency situations.
- The system can be operated manually or mechanically powered by air cylinder systems. Powered by a new & improved, self-contained air cylinder piston/actuator providing a more parallel, even raising & lowering motion.
- Boom is solid, heavy-duty yet lightweight power-coated cast aluminum. Boom lowers ladders away from the rear of body, so that access to side compartments remains unrestricted.
- When not in use, the ladder is stored securely in a horizontal position. The rack system includes clamps, straps, or locking mechanisms to keep the ladder firmly in place during transit.
- Heavy-duty aluminum booms connect to the steel plate base, total weighted 140kg.

# STANDARD EQUIPMENT

FOLD STATUS

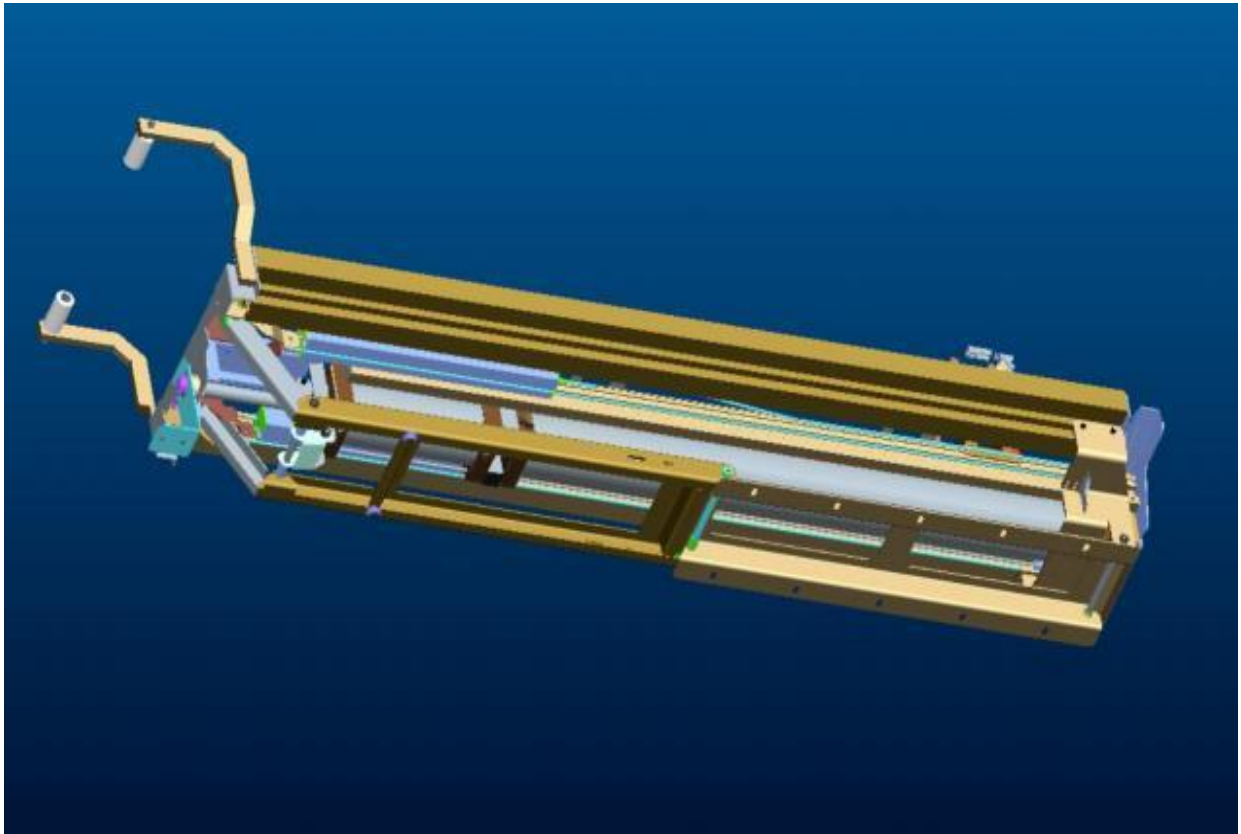


## UNFOLD STATUS

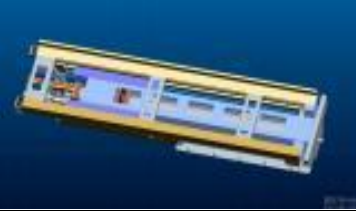






(EXTENDS OUTWARD BY ABOUT 2.2 METERS FROM THE ROOF OF APPARATUS)



Ladder Rack Base

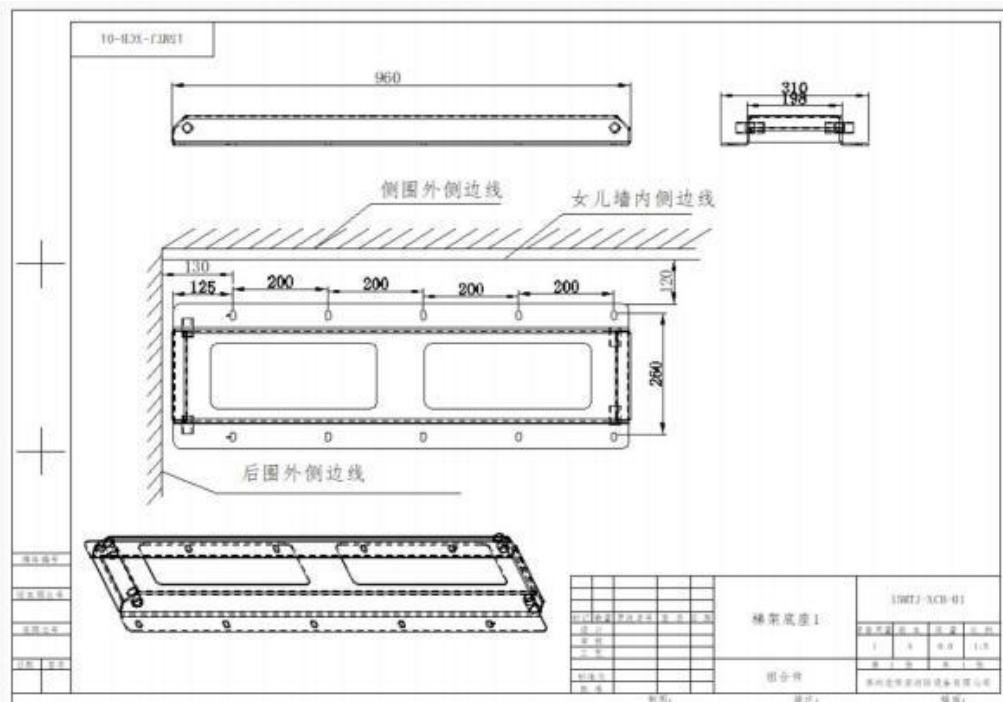


## PACKAGE LIST

Part Number	Description	Photo	Quantity	Accessories	Note
1	Base		1	M10*65mm 8pcs	Packed with Cellular board
2	Ladder supporting bracket		2	M10*30mm 8pcs	
3	Ladder pressing bracket		2	M6*70mm 4pcs	
4	Ladder Fixed Mount		2	M6*15mm 6pcs	
5	Rack Hold-Down Clamp		1	M6*30mm 2pcs	
8	Wired remote control		1	Waterproof connector 1pc	
9	Air Cylinder		1	Secure Hoop 2pcs	

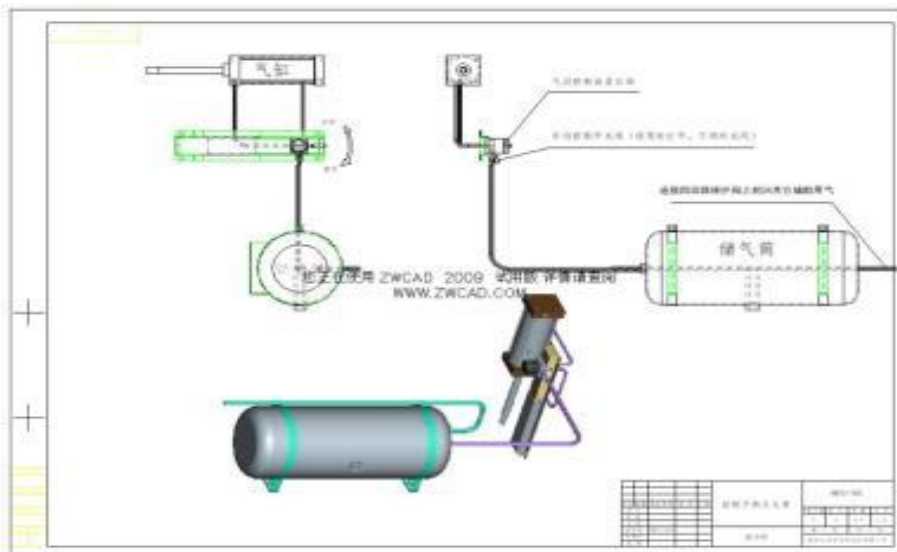
# GENERAL INSTALLATION INFORMATION

## BASE INSTALLATION DIMENSIONS



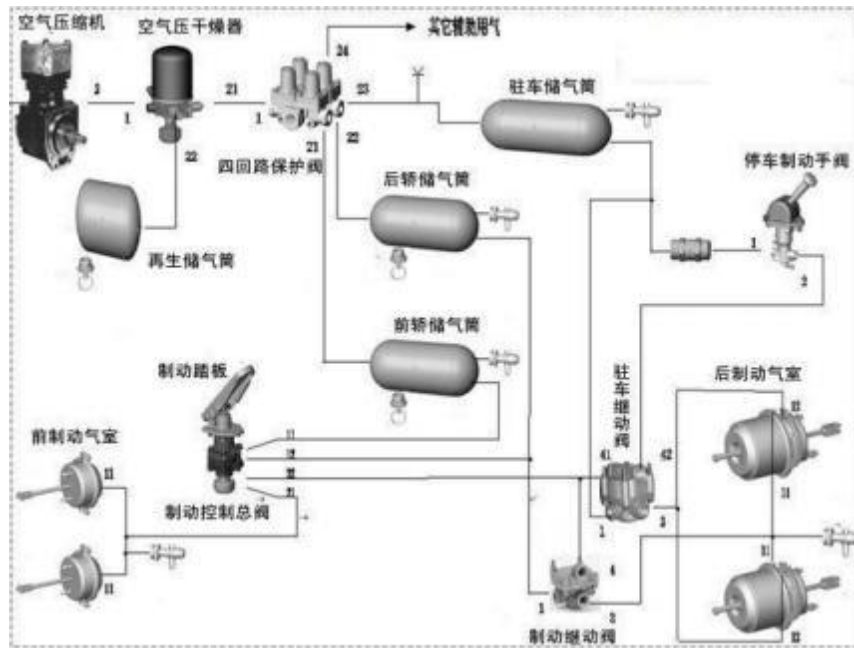
To enhance driving safety, an independent air supply system has been added. It is separated from the brake system by four circuit protection valves, ensuring that variations in air pressure do not affect the brake system. The air reservoir size is designed for a single round use for the rack lowering system. Continuous usage should be initiated after starting the vehicle.

## AIR CYLINDER WORKING PRINCIPLE



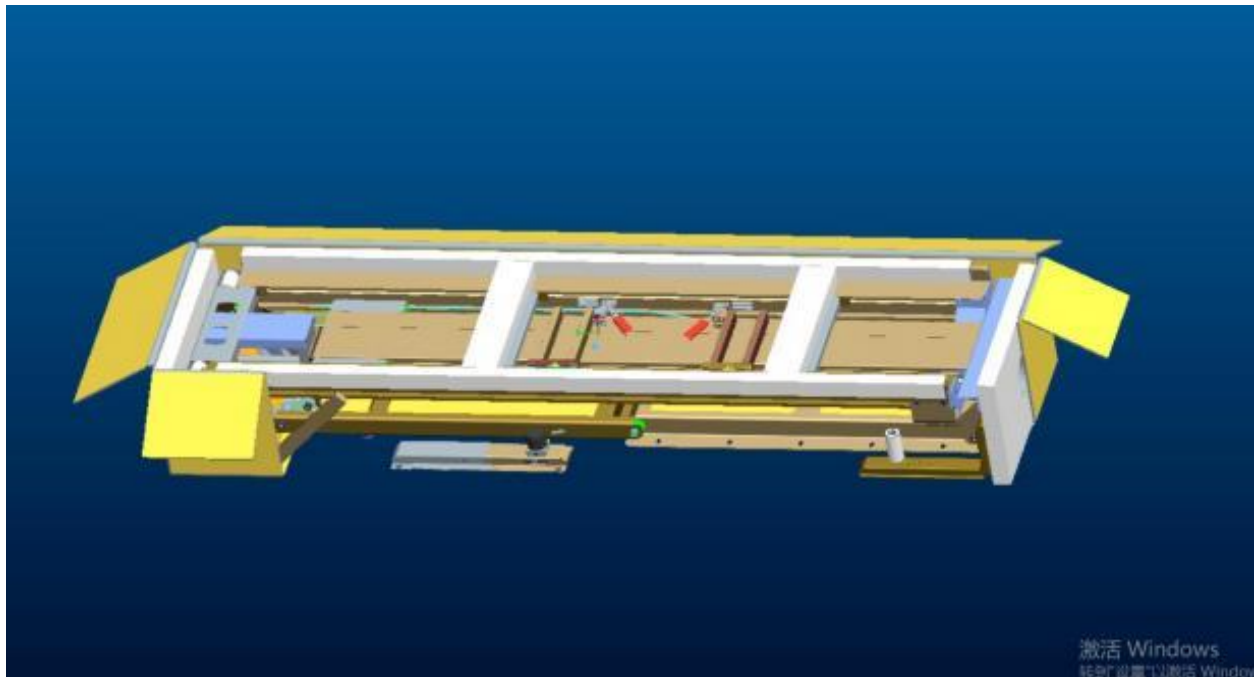
## TRUCK AIR SYSTEM SCHEMATIC

(Connect Air-Intake-Port to #24-other auxiliary air outlets on four circuit protection valves)

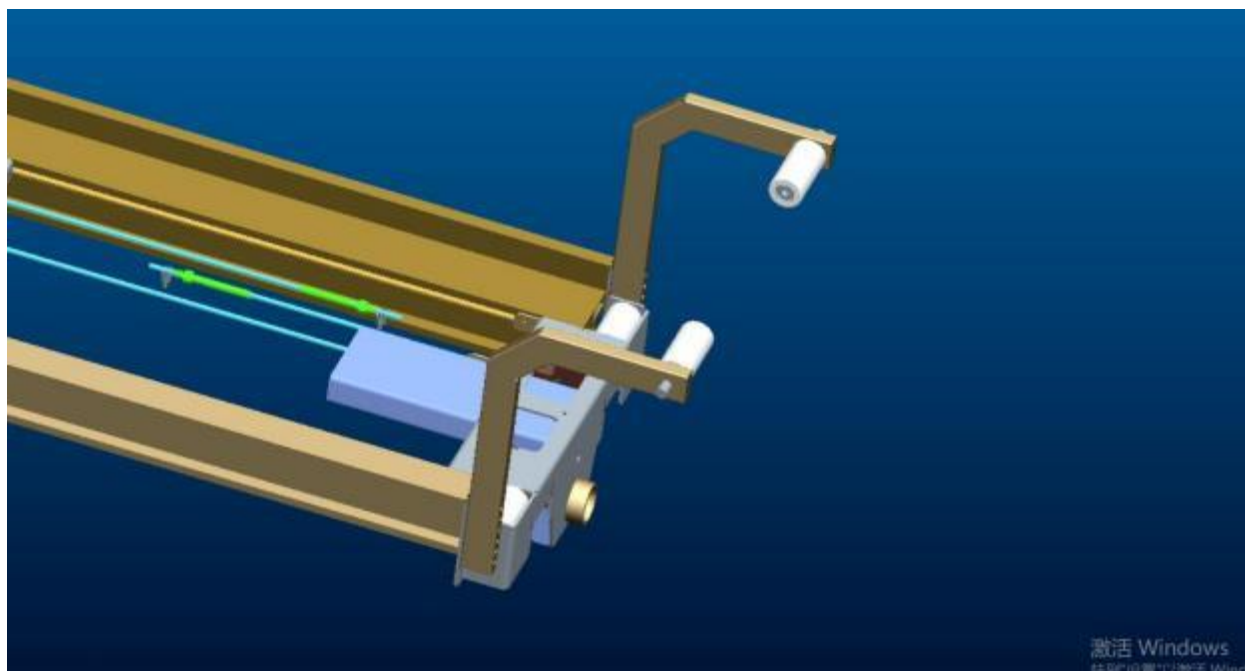


Packing status of ladder access rack system

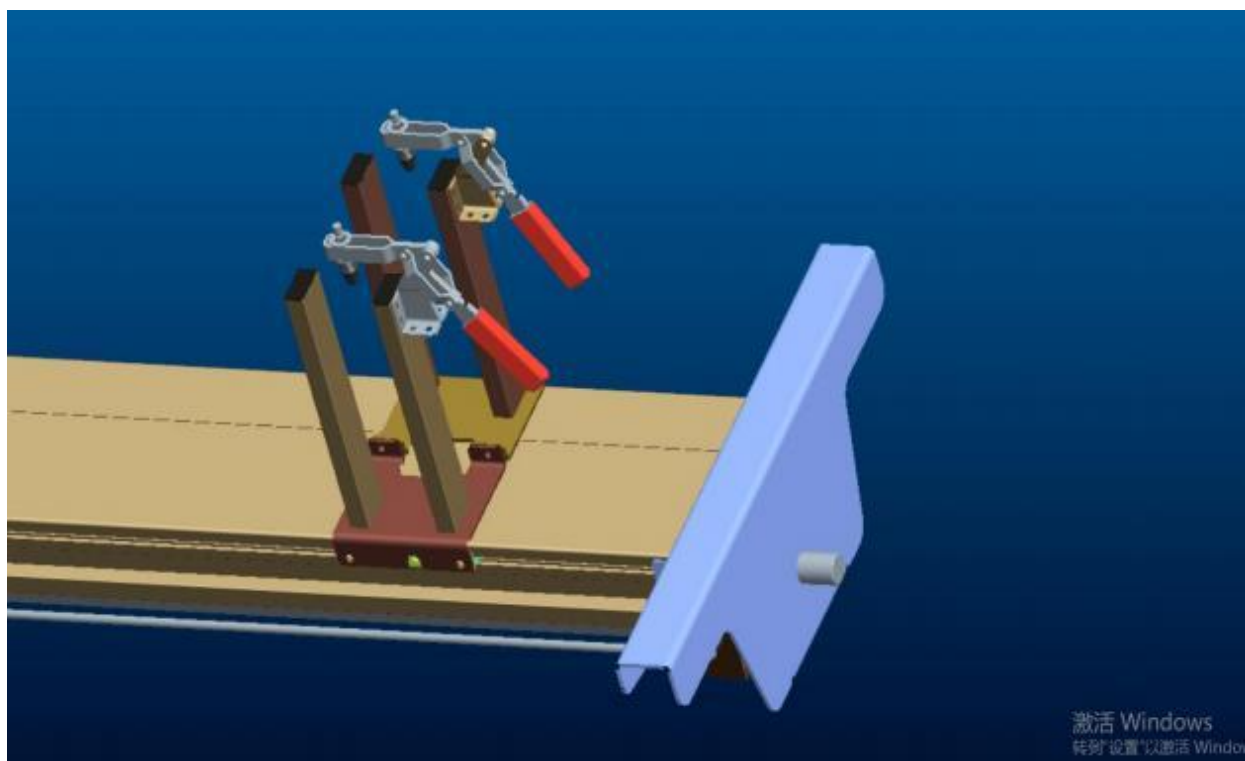
(Seven-layer cardboard box packaging 2480x590x380mm)



Ladder pressing bracket installation position (the second hole from the top)

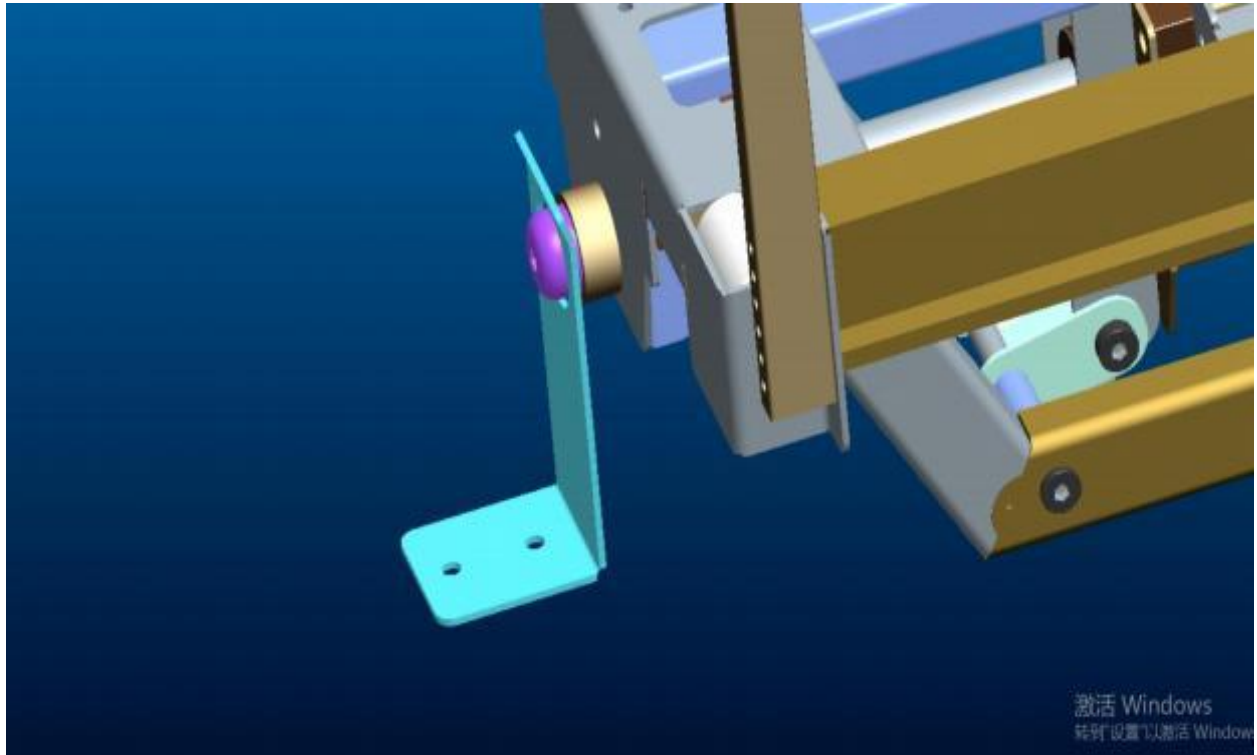


Ladder fixed mount Installation position

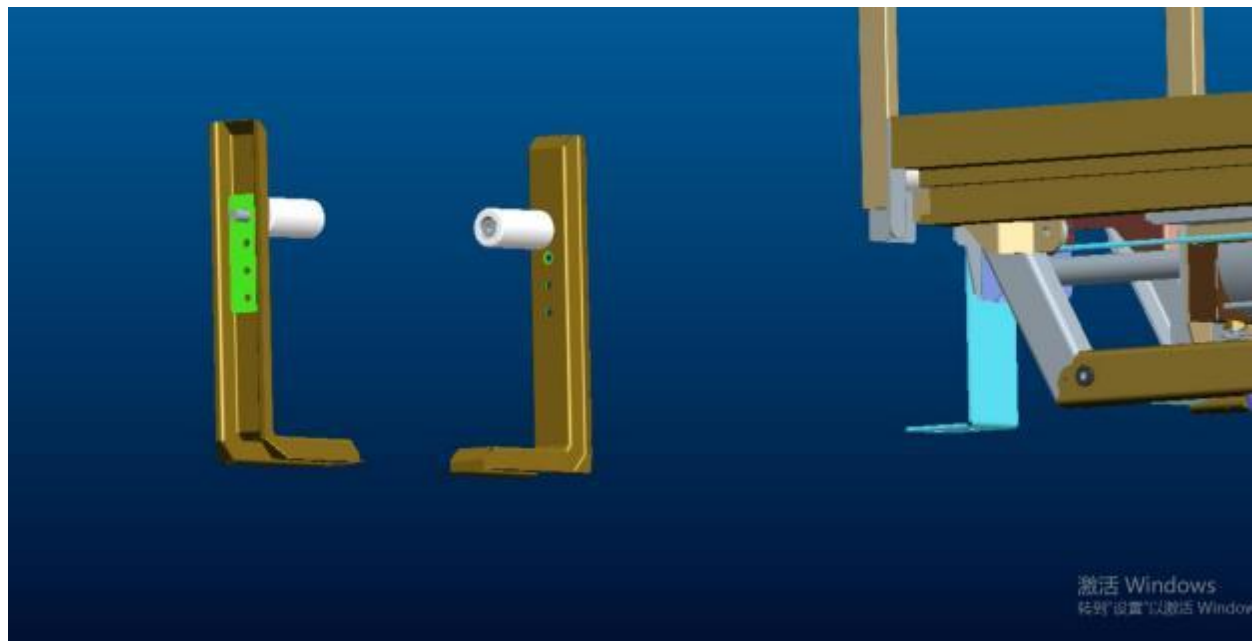




### Rack Hold-Down clamp for driving safety



Ladder supporting bracket installation position  
(Maintains a distance of 1500mm from the main body)



Wired remote control and air source switch installation position  
(At rear end of the pump room)

