



Affordable. Reliable. Home Improvement.

MUNICIPAL PIPELINE DETECTION ROBOT

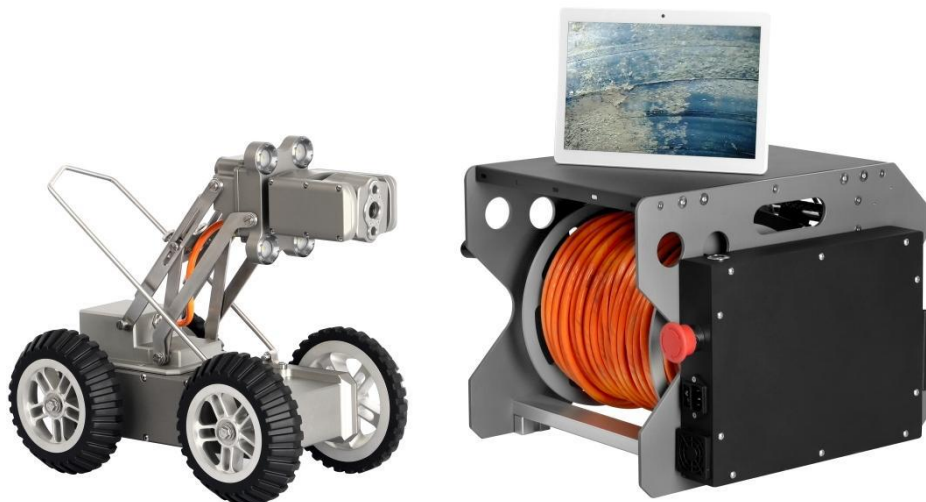
MODEL:WR030-120 , WR030-60

Technical Support and E-Warranty Certificate
www.vevor.com/support

VEVOR

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This is the original instruction, please read all manual instructions carefully before operating. VEVOR reserves a clear interpretation of our user manual. The appearance of the product shall be subject to the product you received. Please forgive us that we won't inform you again if there are any technology or software updates on our product.



Warning-To reduce the risk of injury, user must read instructions manual carefully.



CORRECT DISPOSAL

This product is subject to the provision of european Directive 2012/19/EU. The symbol showing a wheelie bin crossed through indicates that the product requires separate refuse collection in the

	European Union. This applies to the product and all accessories marked with this symbol. Products marked as such may not be discarded with normal domestic waste, but must be taken to a collection point for recycling electrical and electronic devices.
	FCC Information: CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment! This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: 1) This product may cause harmful interference. 2) This product must accept any interference received, including interference that may cause undesired operation. WARNING: Changes or modifications to this product not expressly approved by the party responsible for compliance could void the user's authority to operate the product. Note: This product has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules, These limits are designed to provide reasonable protection against harmful interference in a residential installation. This product generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this product does cause harmful interference to radio or television reception, which can be determined by turning the product off and on, the user is encouraged to try to correct the interference by one or more of the following measures. · Reorient or relocate the receiving antenna. · Increase the distance between the product and receiver. · Connect the product to an outlet on a circuit different from that to which the receiver is connected. · Consult the dealer or an experienced radio/TV technician for assistance.

SAFETY INSTRUCTIONS

WARNING:

Read this material before using this product. Failure to do so can result in serious injury.

Precautions

1. Please read the instruction carefully before use.
2. Don't drop or press.
3. Do not turn on power supply during installation, cleaning and repair.
4. If product has abnormal sound or smell during use, cut off power supply immediately.
5. Power supply box is not waterproof, keep it dry.
6. Be sure to keep hands and plug dry when plug in or plug off.
7. If the user disassembles the machine or there is loss, no warranty.
8. The operation of the product should be standardized, otherwise it will lead to bad camera and cable damage.
9. If the product is upgraded, the instruction may be different from the product without prior notice.

Features

1. All-metal anti-oxidation and corrosion resistant body, IP68 waterproof.
2. With front and rear 2 megapixel, high-definition, low illumination cameras.
3. The front camera is mounted on a Pan-Tilt, which can be adjusted horizontally to 360 degrees and vertically to ± 90 degrees. The height of the camera is adjustable.
4. Four motor driven wheels, all-time stand by and powerful. The driving speed of the machine can be adjusted in high, medium and low three levels.
5. Special shaped non-skid tire, designed according to the force in the pipeline, suitable for all kinds of wet and slippery scenes.
6. Eight high-power lights (six in front and two in rear), headlight is adjustable. Good lighting effect.

7. All metal winch with automatic wire winding function. With automatic meter count function, vehicle driving distance can be displayed synchronously and can appear in the screenshot.
8. Special tensile, scratch and corrosion resistant cable.
9. Power input: 110V-220V, emergency inverter power supply can also be used.
10. Real-time display when machine is moving forward, backward and turning left or right.
11. With tablet, installed operating software, simple operation and easy to use.
12. With photo and video functions.

Specifications

Part	Item	Specifications			
		WR030 -120	WR030 -120	WR030 -60	WR030 -60
Robot	Material	High Strength Alloy Material			
	Motoring Mode	Four-wheel Motoring			
	Speed	Four-wheel Crawling			
	Motor Power	2-25 meters/min 3 levels speed, Adjustable			
	Motor Power	120W			
	Camera Pixel	2 Megapixel			
	Lens Rotation Angle	360 Degrees Constant Speed Infinite Rotation			
	Lens Flip Angle	180 Degrees			
	The Lens Material	Alloy Steel			
	Light Power	40W			
	Front Lens light Source	4 Main Headlights, 2 Auxiliary Lens Lights			
	Rear Lens Light Source	2			
	Lightness	Adjustable			
	Waterproof Grade	IP68			

Wire Frame	Wire Frame Material	All Metal			
	Cable Length	120m	120m	60m	60m
	Cable Material	Tensile, Scratch and Corrosion Resistant Cable			
	Wire Winding Mode	manual winding, automatic wiring			
	Meter Count Mode	Electronic Counter			
	Power Supply	110-120 V	220-240 V	110-120 V	220-240 V

Operating Environment and Conditions

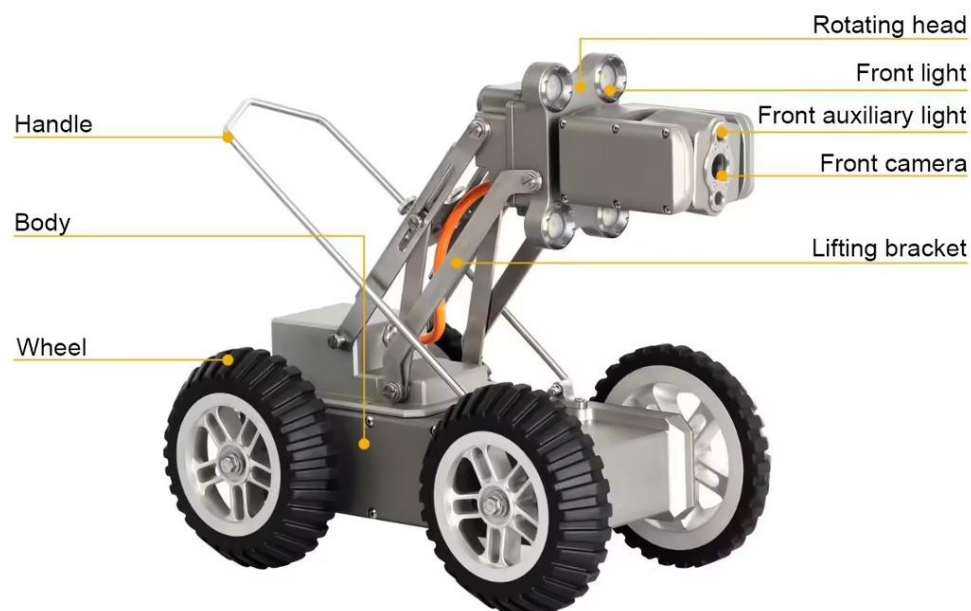
Pipe diameter: >300MM

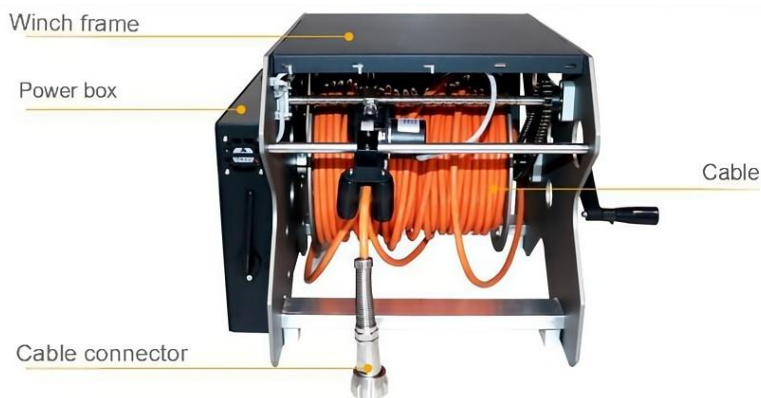
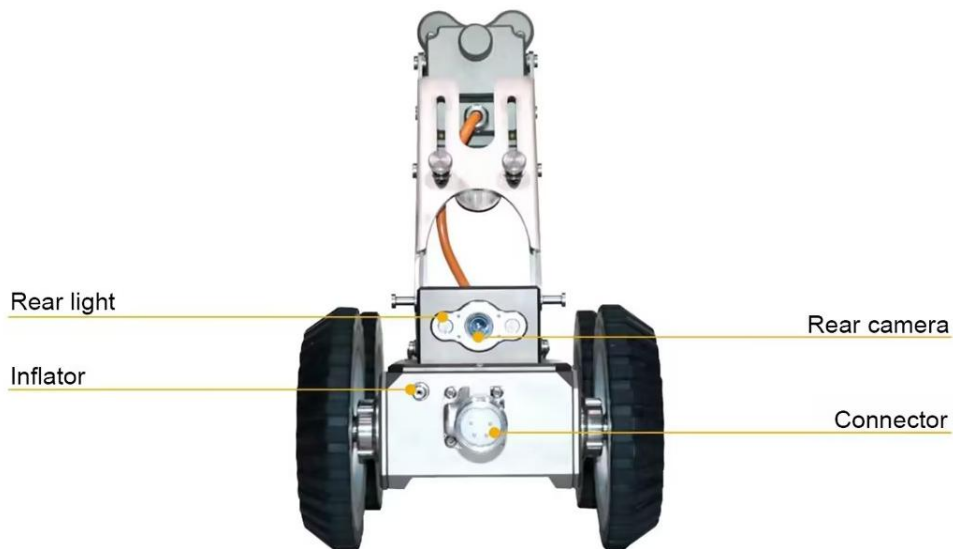
Temperature: -10 ° C - +50 ° C

Relative humidity: 0%-95%, no condensation.

Atmospheric pressure: 70-106Kpa.

Parts Introduction

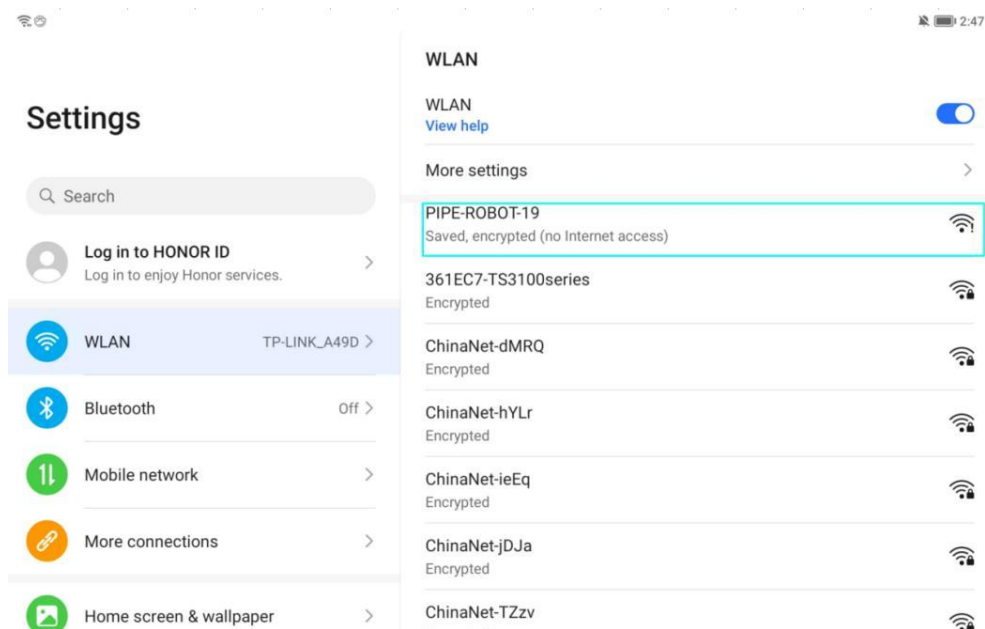




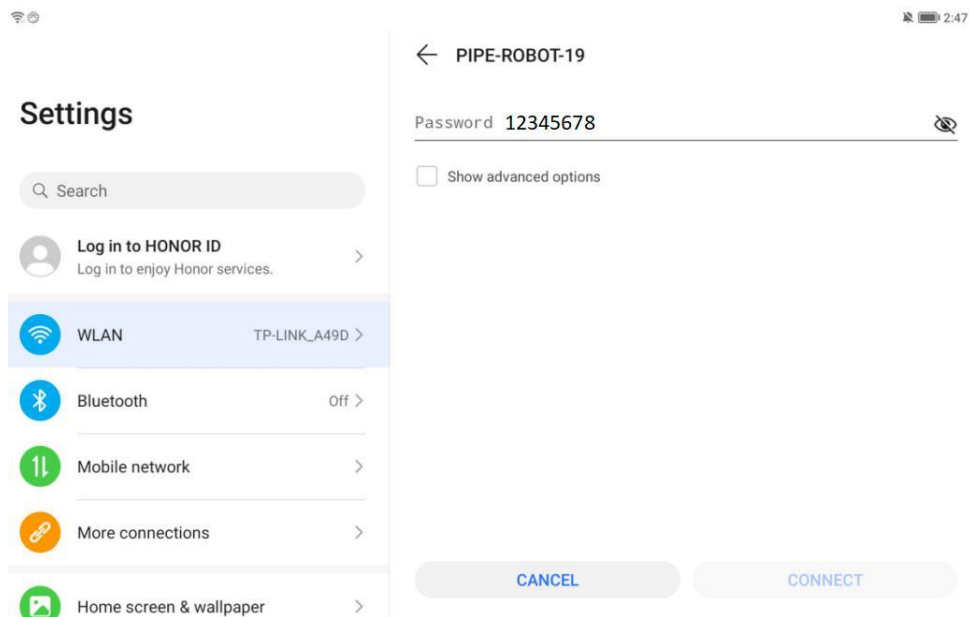


Tablet WIFI Connection and Control

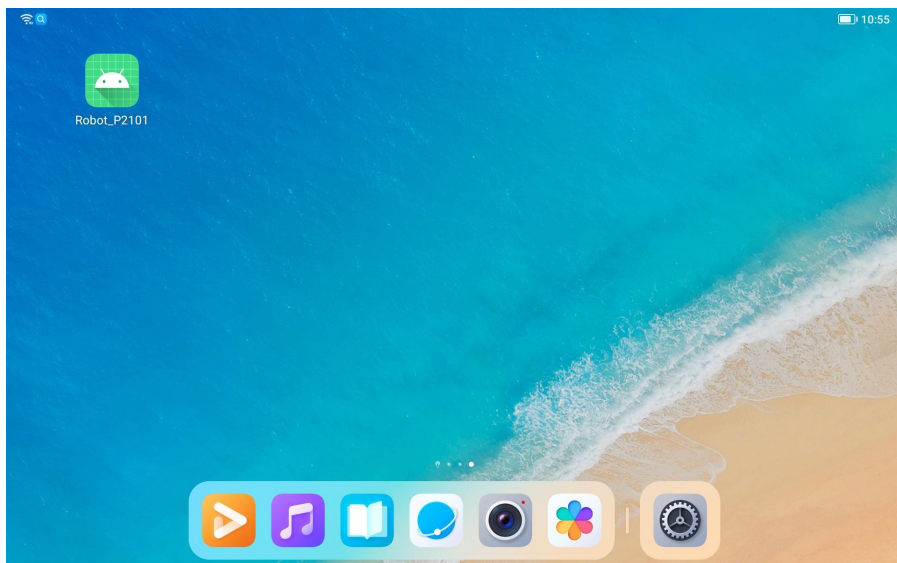
1. Tablet WIFI Connection: Open WIFI, search for PIPE-Robot-19.



2. Enter the original password: 12345678, connect to WIFI.

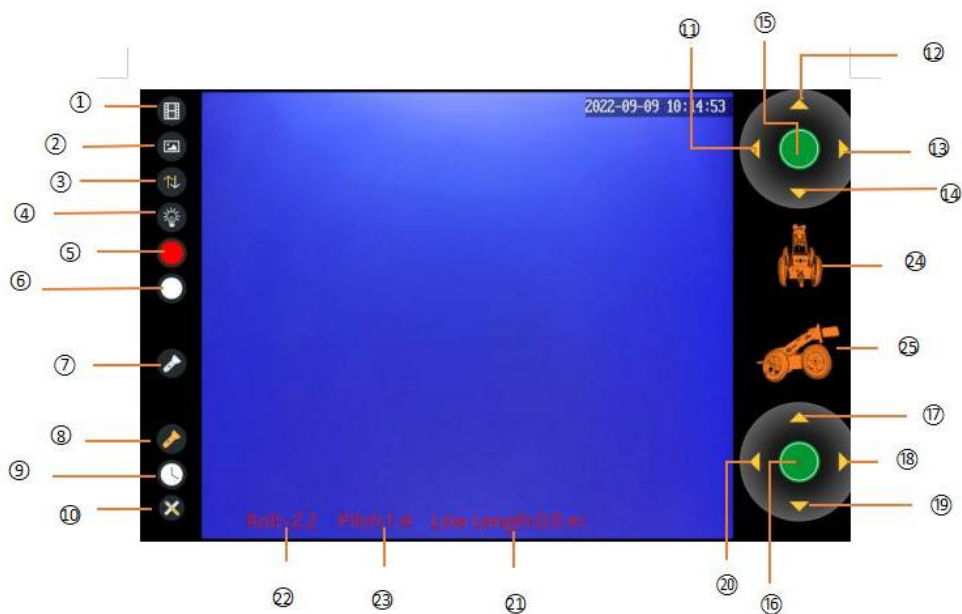


3. Enter the interface: open the icon of the installed robot program and click GO to enter the control interface.





4. Key Functions:



Recording Function:

1. Video Play
2. Album
5. Video Recording
6. Photography

Light Control:

- 4.Rear Light Switch 7.Front Light Brightness Adjusting Switch
- 8.Front Auxiliary Camera Light Brightness Adjusting Switch

180° Rotation Function of Camera:

- 3.Front/Rear Camera 11.Front Camera Left Rotation
- 12.Front Camera Upward Rotation 13.Front Camera Right Rotation
- 14.Front Camera Downward Rotation 15.Front Camera Reset

Moving Function:

- 16.High/Medium/Low Level Switch 17.Forward 18.Turning Right
- 19.Back word 20.Turning Left

Distance Count Function:

- 10.Meter Counter Reset 21.Cable Meter Display

Time Synchronization:

- 9.Time Synchronization Button

Wheel Tilt Angle Display Function:

- 22.Roll Angel 23.Pitch Angel 24.Roll Angle Three-dimensional Display
- 25.Pitch Angle Three-dimensional Animation Display

Operation and Use

Preparation and Inspection Before Use:

1. Connect the robot machine with the winch and lock it tightly.
2. Make sure that the front camera horizontal, axial automatic reset function and zoom function is normal.
3. Make sure to switch between front and rear cameras is normal.
4. Make main light and auxiliary light are adjusted properly.
5. Make robot machine can flexibly go forward, backward, turn left and right.
6. Make cable to release and retract properly.
7. Make sure to press the emergency stop button to shut down the robot system.

Operating procedures, methods, precautions and prevention measures for errors during startup and use:

1. Hanging the robot machine to the sling, the body should be kept horizontally and slowly downward, and avoid shaking and friction to damage device. Let the car body horizontally and slowly landing, head up, tail down. When the body is landed, remove the sling.
2. Start the control system, control the vehicle slowly forward, move the cable to the pipe entrance and fix it.
3. Turn on the main light and auxiliary light, and adjust to meet the image requirements.
4. After the cable transmission is normal, the vehicle speed can be adjusted according to the detective requirements.
5. During the process, pay close attention to the state of various parameters, especially the information of vehicle tilt state, to prevent the vehicle from overturning.
6. When the vehicle is retreating, turn on rear-view camera, and the cable winding machine speed should be match with the reverse key to slow down the speed and retract cable.
7. When turning in the pipe, drive slowly to prevent rollover.
8. After the inspection, stop the robot machine in an appropriate position, hang the sling hanger on the robot, and slowly lift it.

System Connection

Connect cable and body connector

Note:

1. Align pinhole position
2. Check integrity of waterproof ring
3. be sure the connector is clean

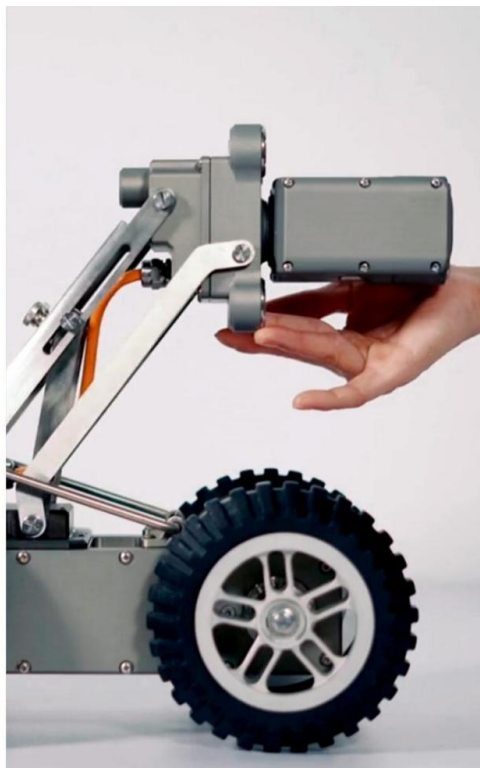


Connect the power supply(example)



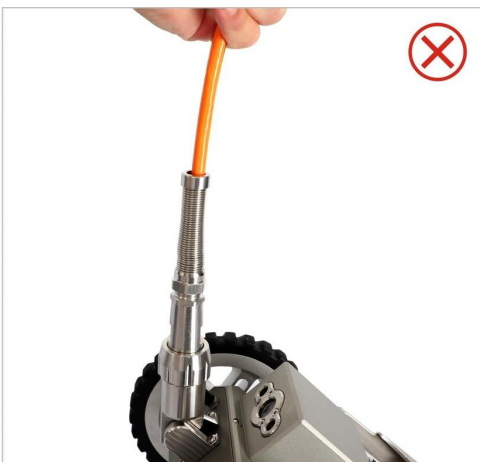
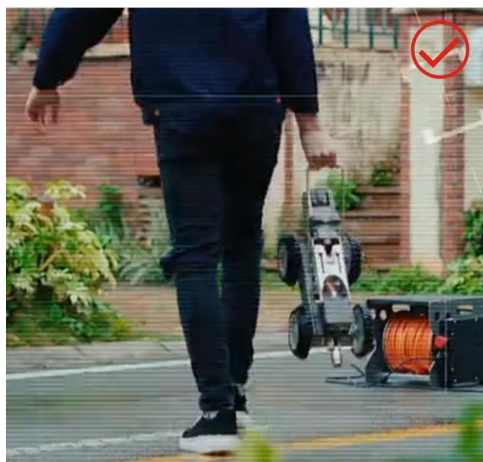
Front camera lifting:

loosen the screw firstly, then adjusting the height of the camera,get a suitable position, and then tighten the screw.



Put the device body into the demand position:

lift the handle when pulling the device body, do not lift the cable.





Turn on the power switch 2
(the indicator light is on)

Open the cable reel brake

The power plug turns the brake lever 90 degrees from Figure 1 to figure 2

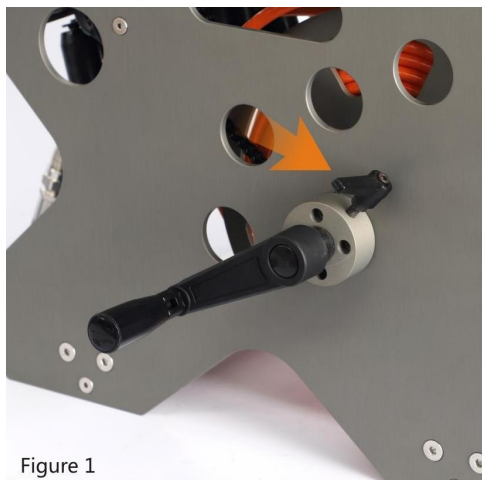


Figure 1



Figure 2

Release the cable:

Pull the cable out automatically when the device moves forward



Pull out the cable by hand as shown



Can not shake the handle counterclockwise to release the cable as shown



It will cause the consequences of loose wires as shown

Retract cable:

While turning the handle clockwise, slowly pull the cable out by hand to ensure that the cable is closely



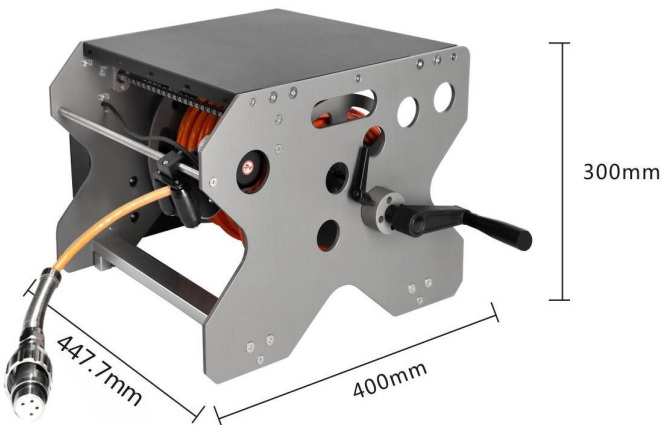
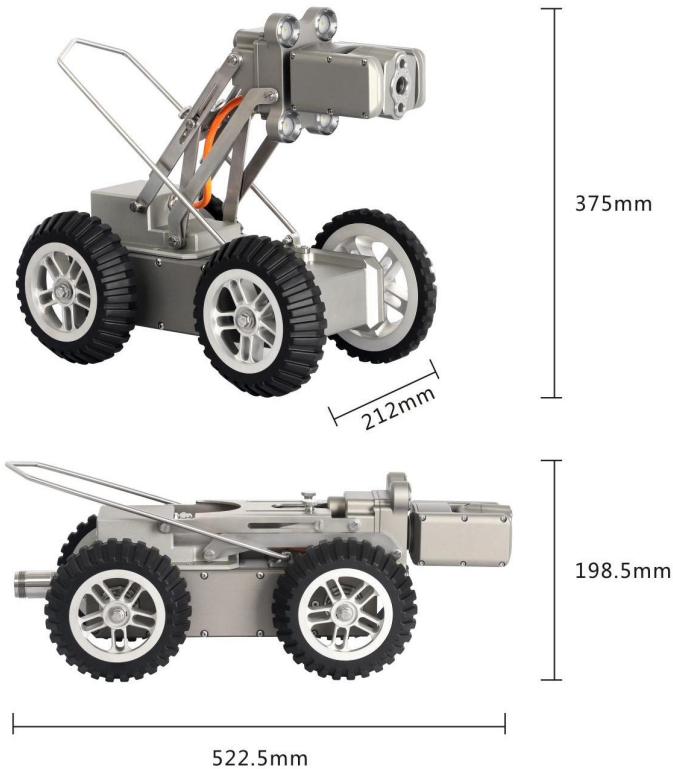
Maintenance after used:

1. Clean the body (do not pull the cable when cleaning)
2. Wipe it with a dry cloth



Product Size

Product Size



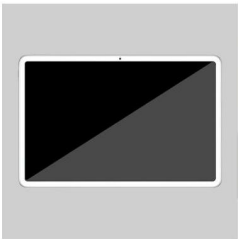
Package List



Metal body with camera



Metal frame with cable



Display screen



Power cable

Attention

Protect PTZ camera:



1. Do not hit the front camera



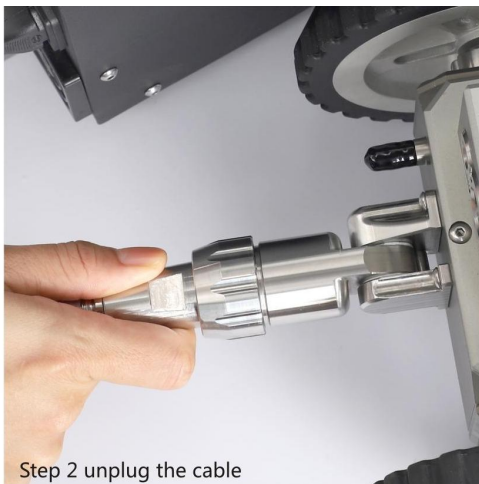
2. Do not rotate the camera horizontally manually



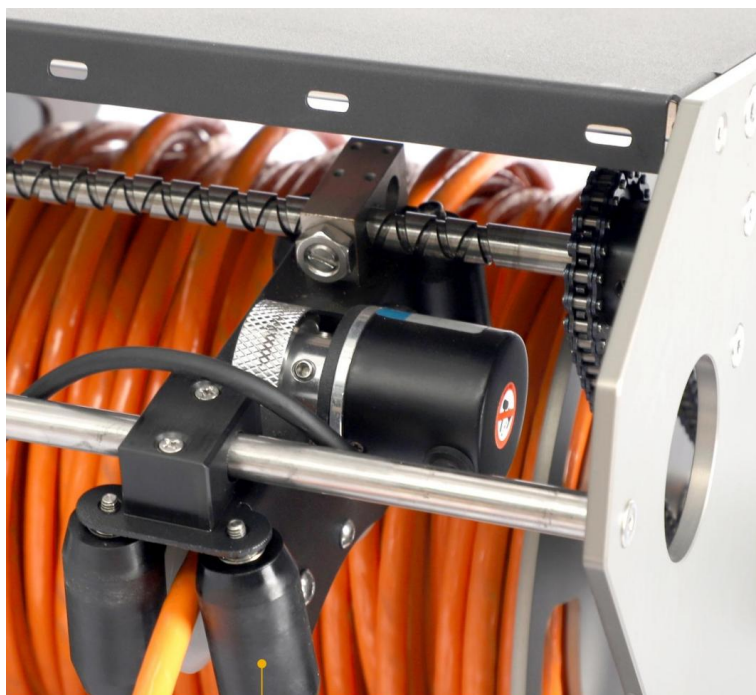
3. Do not rotate the camera vertically manually



Unplug the cable connector until power off



Clean up cable rolling bearing timely to keep it clean and smooth



Fault Analysis and Troubleshooting

Fault Analysis	Cause of the Fault and Precautions
No Power	1. Check whether power is correctly connected. 2. Check whether the main switch indicator is steady on or whether the plug is in good contact. 3. Whether the emergency stop button is locked.
The robot can walk, no image	1. Check whether the interface is locked. 2. Switch cameras and check whether they have images.
No Meter Measurement Number Display or big measurement Error	1. Check whether the meter counter wheel and cable are in good contact, and whether there is dirt blocking the meter counter wheel. 2. Restart device and tablet.
Remote Control Failure	1. Check whether the computer WIFI connection is well. 2. Restart the computer and reconnect the WIFI.
The Tail Joint of the robot Cannot be Inserted	1. Check whether the joint vacancy is one to one aligned. 2. Check whether the plug at the end of the vehicle is deformed.
Note	If the fault cannot be solved, do not disassemble by yourself. Please contact after-sales maintenance personnel.

Care and Maintenance

1. Daily maintenance and care: The machine must be kept clean and tidy, and shall not be placed in places with volatile or corrosive substances. Personnel shall be appointed for daily maintenance and cleaning after each use. The storage place must be kept dry. Desiccant can be used if necessary.
2. Maintenance cycle: quality and measurement inspection(maintenance) once a year, measurement qualified should be unified stored.

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