

Crawler Robot Sewer Camera

User Manual



Model No: U99360

Please contact us at first time if you got issues with the product

Website After-sale: service@sanyipace.com

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Attention: The illustrations and screenshots of this manual are to explain the product's operation, which may be a little different from actual products due to the products' version upgrades and different production batches. If the content in this manual does not match your machine, please refer to the machine!

1. Notice

Dear users:

Thank you for choosing this product. For your safety and for your correct use of the robot to give full play to its various functions and performance, please read this manual carefully before using the product, and operate by the relevant installation, maintenance, and precautions in this manual. Make sure this product can provide valuable service for your work.

Precautions

1. Please read the instructions carefully before use.
2. Don't drop or press.
3. Do not turn on the power supply during installation, cleaning, and repair.
4. If the product has abnormal sound or smell during use, cut off the power supply immediately.
5. The power supply box is not waterproof, keep it dry.
6. Be sure to keep your hands and plug dry when plug-in or plug-off.
7. If the user disassembles the machine or there is a 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.

2. Scope of Product Use

- a. Household pipeline blockage inspection
- b. Pipe inspection camera, pipeline tools
- c. Rescue operations in narrow spaces
- d. For underground exploration
- e. Scientific research on underwater riverbeds
- f. Sewer system inspection
- g. Any other hard-to-reach locations/areas

3. Product Specification

---Robot Sewer Camera Body---

- All-metal anti-oxidation and corrosion-resistant body, IP68 waterproof.
- 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.
- Special-shaped non-skid tires, designed according to the force in the pipeline, are suitable for all kinds of wet and slippery scenes.
- Special tensile, scratch, and corrosion-resistant cable.

---Robot Sewer Camera Head---

- With front and rear 2-megapixel, high-definition, low illumination cameras.
- 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.
- Eight high-power lights (six in front and two in rear), headlight is adjustable. Good lighting effect.

---Robot Sewer Camera Features---

- All metal winch with automatic wire winding function. With the automatic meter count function, vehicle driving distance can be displayed synchronously and can appear in the screenshot.
- Real-time display when the machine is moving forward, backward, and turning left or right.
- With the tablet, installed operating software, is simple operation and easy to use.
- With photo and video functions.

---Robot Sewer Camera Power---

- Power input: 110V-220V, emergency inverter power supply can also be used.

4. Specifications

Part	Item	Specifications
Robot Sewer Camera	Material	High Strength Alloy Material
	Motoring Mode	Four-wheel Motoring
	Moving Mode	Four-wheel Crawling
	Speed	6.6ft-82ft/min 3 levels of adjustable speed
	Motor Power	100W
	Camera Pixel	2 Megapixel
	Lens Rotation Angle	360 Degrees Constant Speed Infinite Rotation
	Lens Flip Angle	190 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
	Size	522.5mm*212mm*198.5mm
Weight	9.8KG	
	Wire Frame Material	All Metal
	Cable Length	198ft & 394ft to choose

Wire Frame	Cable Material	Tensile, Scratch and Corrosion Resistant Cable
	Wire Winding Mode	Automatic Wire Winding
	Meter Count Mode	Electronic Counter
	Power Supply	110V-220V
	Wire Frame Size	400mm*444.7mm*300mm (standard)
	Wire Frame Weight	15.8KG (standard)

---Operating Environment and Conditions---

Pipe diameter: >300MM(12 in)

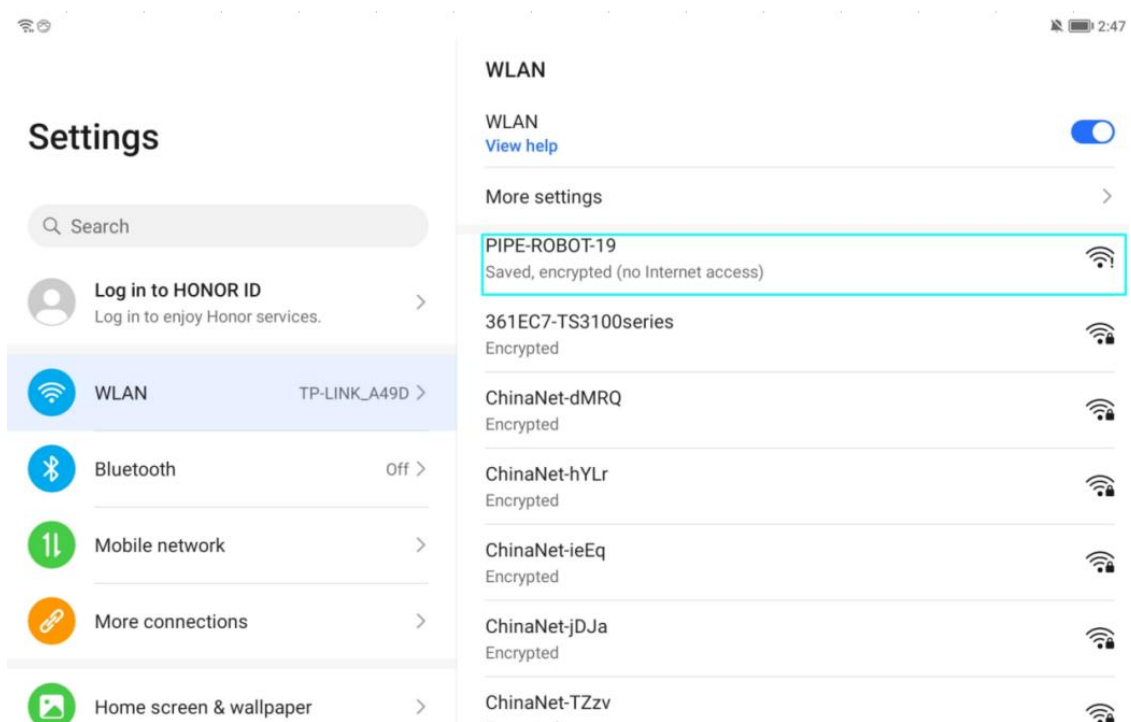
Temperature: -10 ° C - +50 ° C

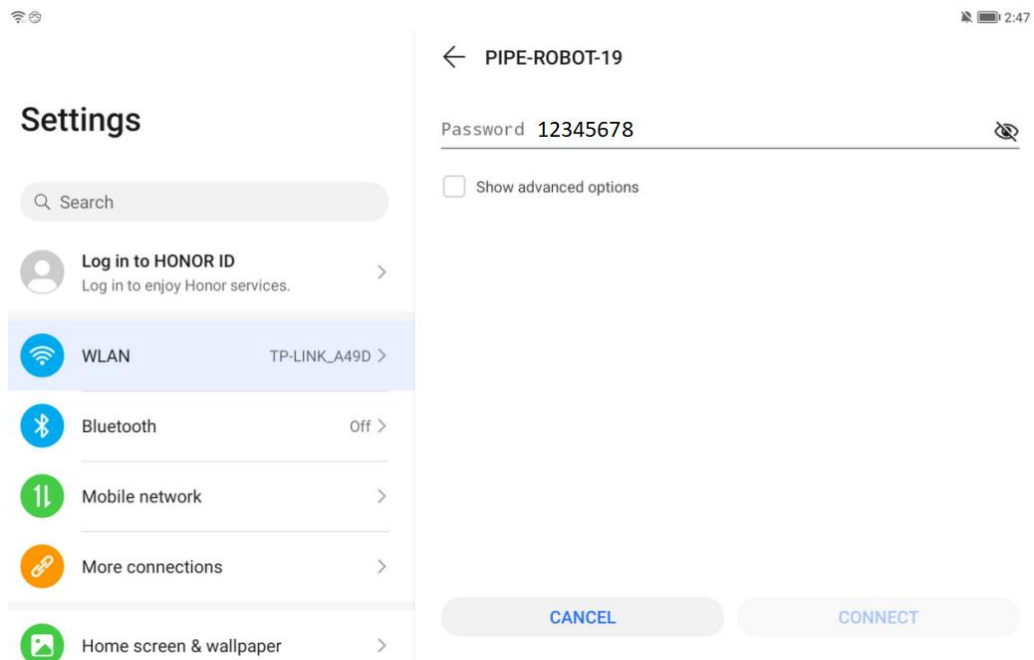
Relative humidity: 0%-95%, no condensation.

Atmospheric pressure: 70-106Kpa.

5. Tablet WIFI Connection and Control

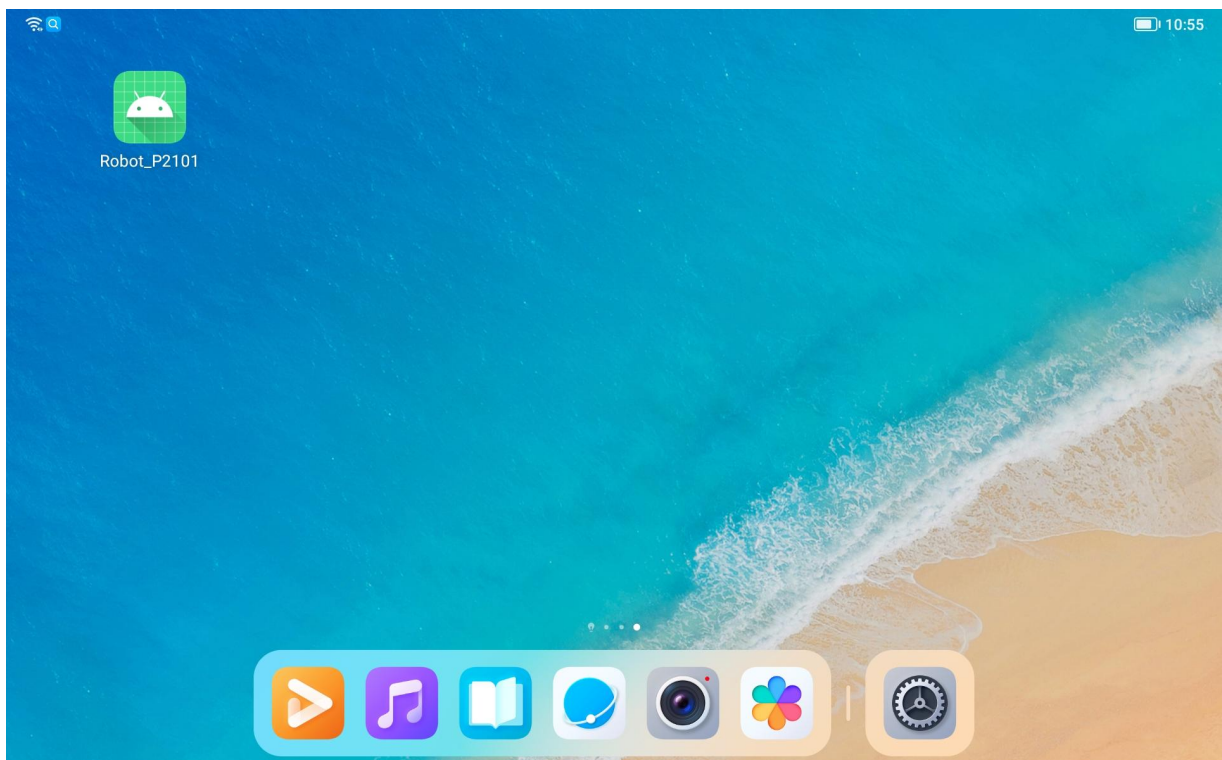
1. Tablet WIFI Connection: Open WIFI, and search for PIPE-Robot-19.





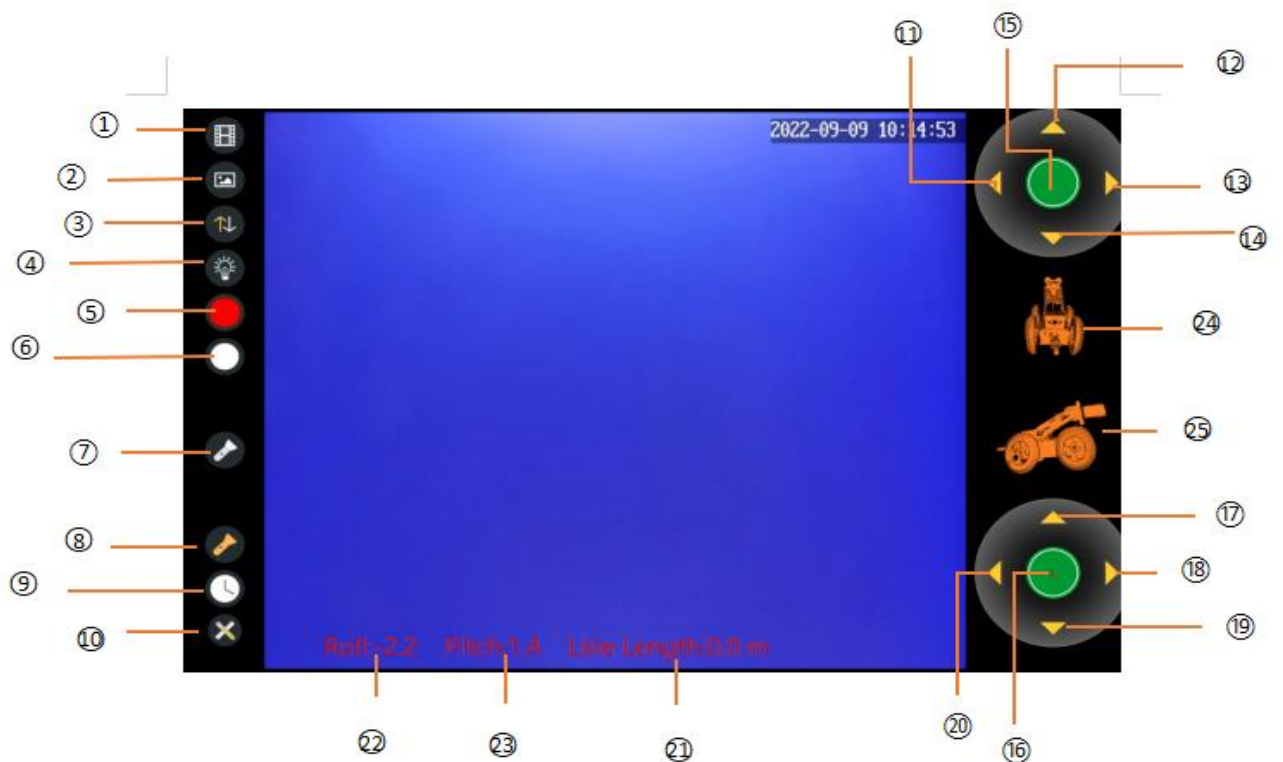
2. Enter the original password: 12345678, and connect to WIFI.

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





4. Interface function



Recording Function: ①Video Play ②Album ⑤Video Recording
⑥Photography

Light Control: ④Rear Light Switch ⑦Front Light Brightness Adjustment Switch ⑧Front Auxiliary Camera Light Brightness Adjustment Switch

180° Rotation Function of Camera: ③Front/Rear Camera ⑪Front Camera Left Rotation ⑫ Front Camera Upward Rotation ⑬Front Camera Right Rotation ⑭Front Camera Downward Rotation ⑮Front Camera Reset

Moving Function: ⑰Forward ⑱Backward ⑳Turning Left
⑲Turning Right ⑲High/Medium/Low Level Switch

Distance Count Function: ⑩Meter Counter Reset
⑳Cable Meter Display

Time Synchronization: ⑨Time Synchronization Button

Wheel Tilt Angle Display Function: ⑳Roll Angel ㉑Pitch Angel
㉒Roll Angle Three-dimensional Display
㉓Pitch Angle Three-dimensional Animation Display

6. How to Use

Preparation and Inspection Before Use:

1. Connect the robot machine with the winch and lock it tightly.
2. Ensure the front camera's horizontal, and axial automatic reset and zoom functions are normal.
3. Make sure to switch between front and rear cameras is normal.
4. Make sure the main light and auxiliary light are adjusted properly.
5. Make a robot machine that can flexibly go forward, backward, and turn left and right.
6. Make the cable 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 the device. Let the car body horizontally and slowly land, 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 them to meet the

image requirements.

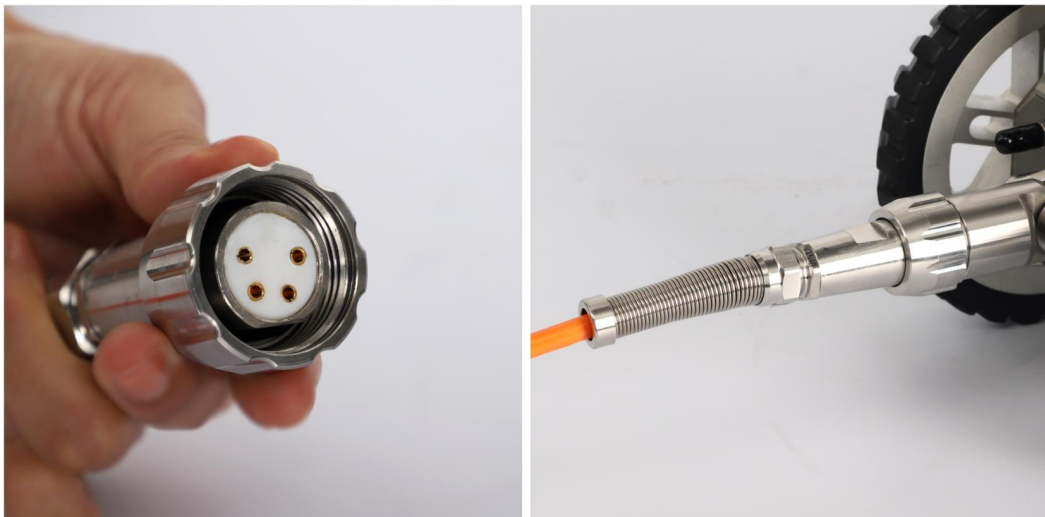
4. After the cable transmission is normal, the vehicle speed can be adjusted according to the detective's requirements.
5. During the process, pay close attention to the state of various parameters, especially the information on the vehicle's tilt state, to prevent the vehicle from overturning.
6. When the vehicle is retreating, turn on the rear-view camera, and the cable winding machine speed should be matched with the reverse key to slow down the speed and retract the 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.

7. How to Connect The System

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



Figure 1: 110-220V

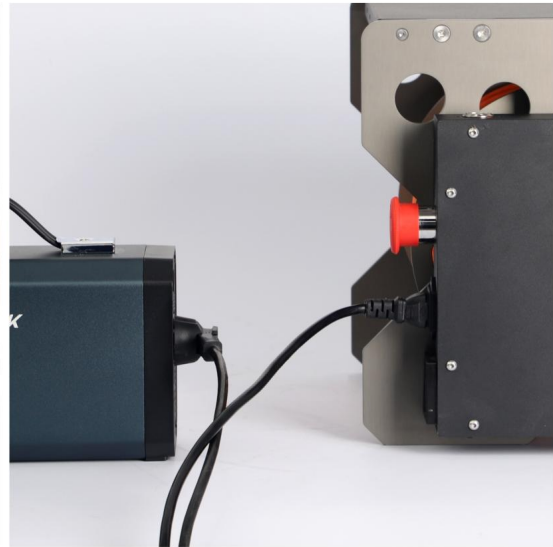
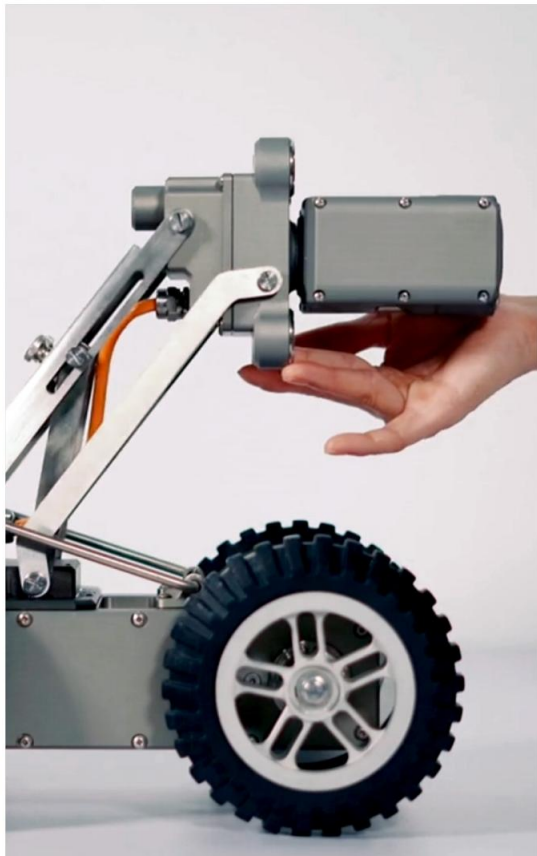


Figure 2: Inverter (Inverter is not included)

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:

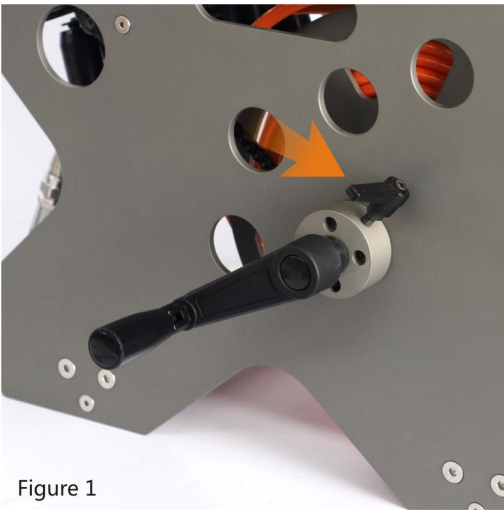
lift the handle when pulling the device body,
do not lift the cable



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



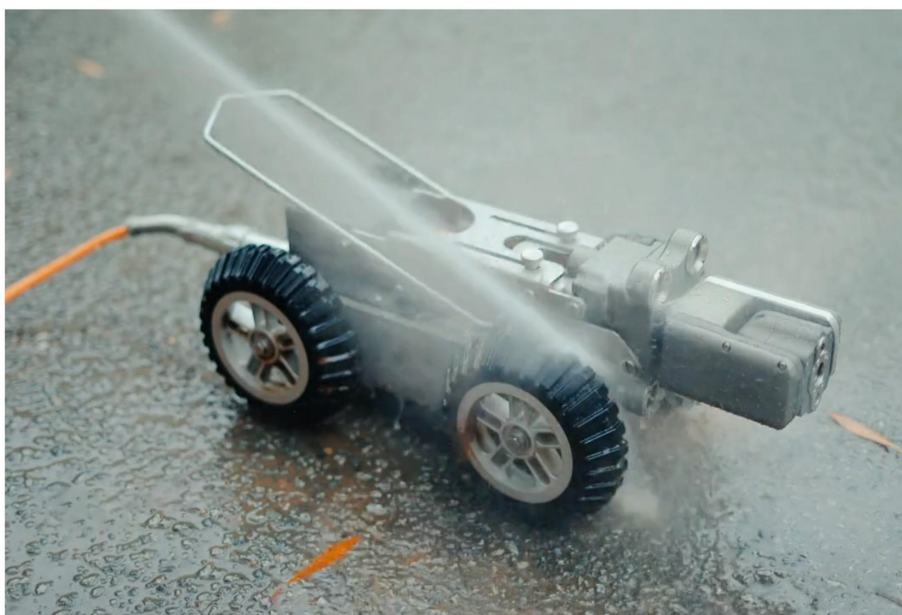
Retract cable:

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

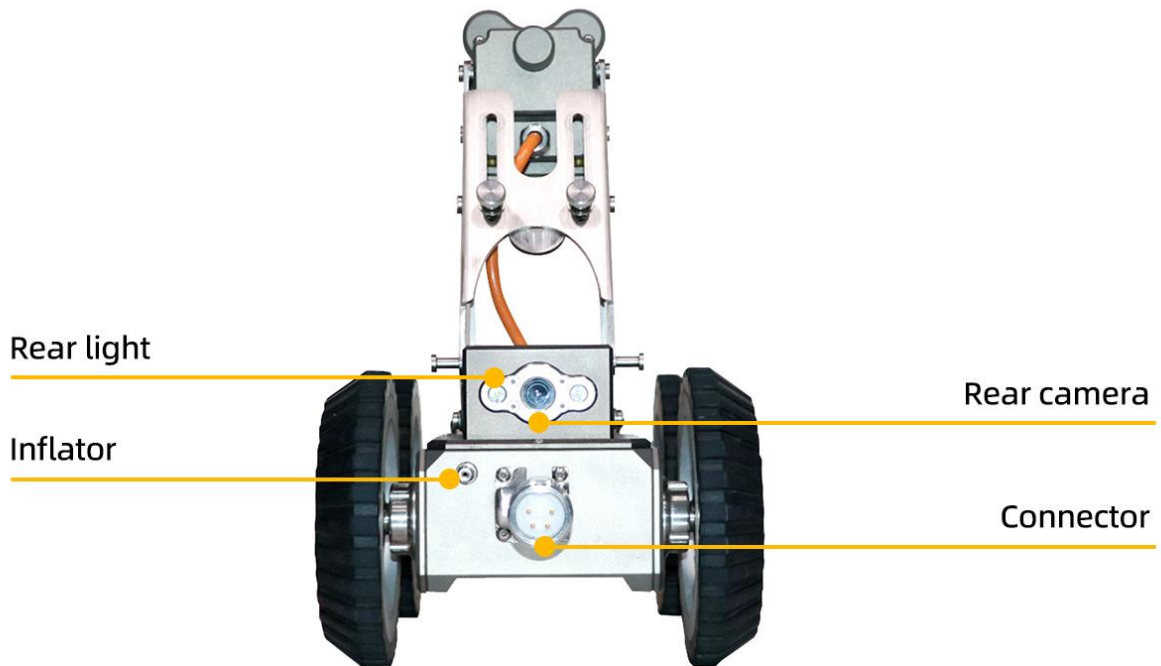
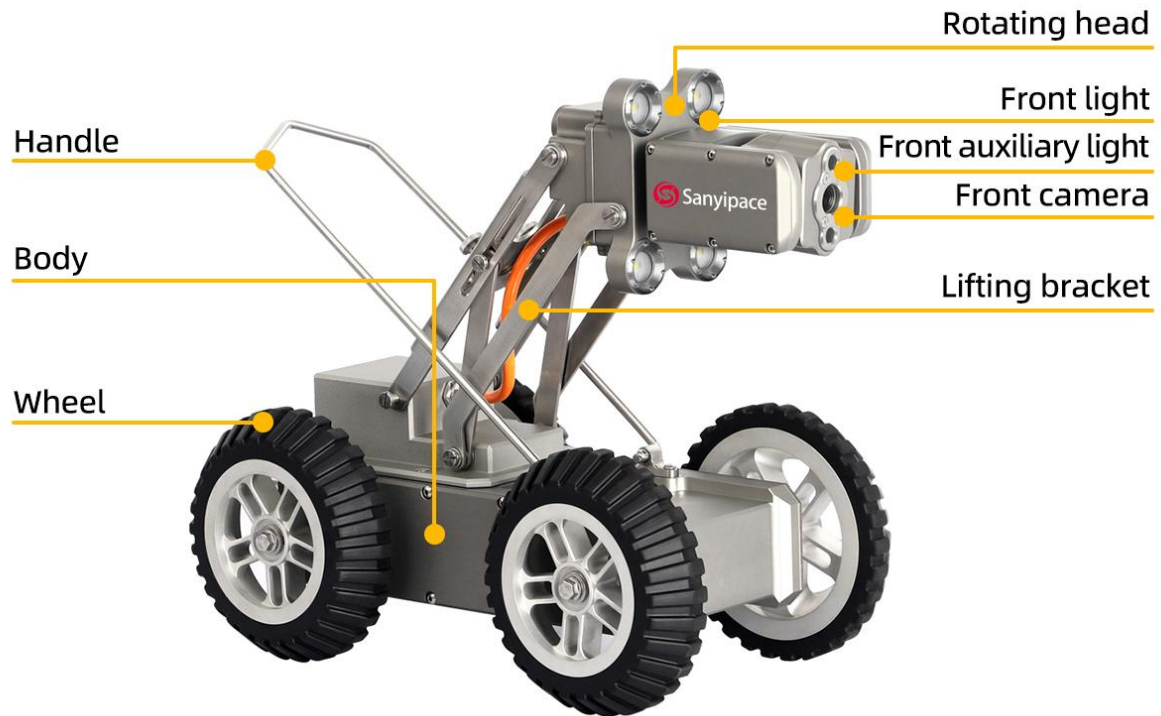


Maintenance after used:

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



8. Structure & Accessories



Winch frame

Power box

Cable

Cable connector



Retract cable handle

Power switch

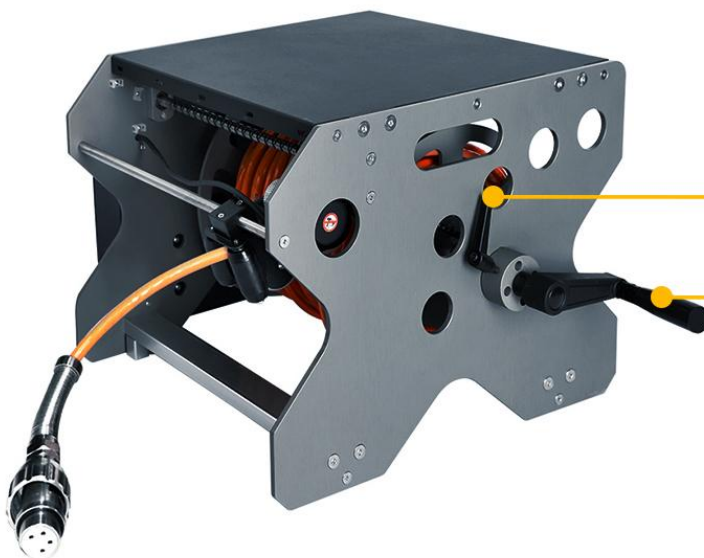
Emergency brake switch

Power plug

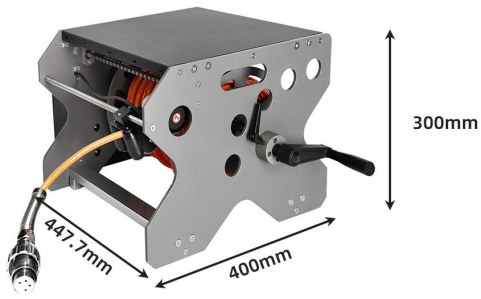
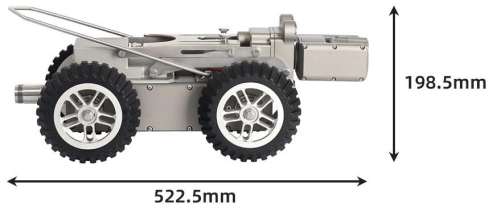
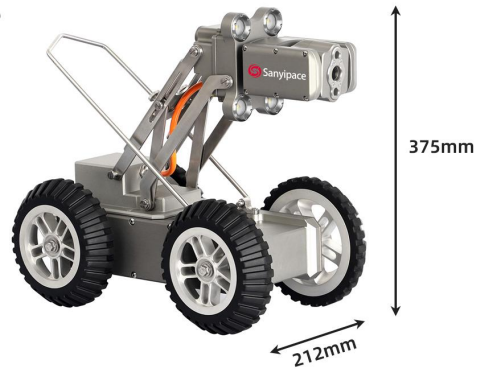


Retract cable brake

Release cable handle



Product Size



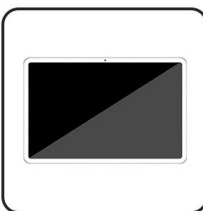
Package List



Metal body with camera



Metal frame with cable



Display screen

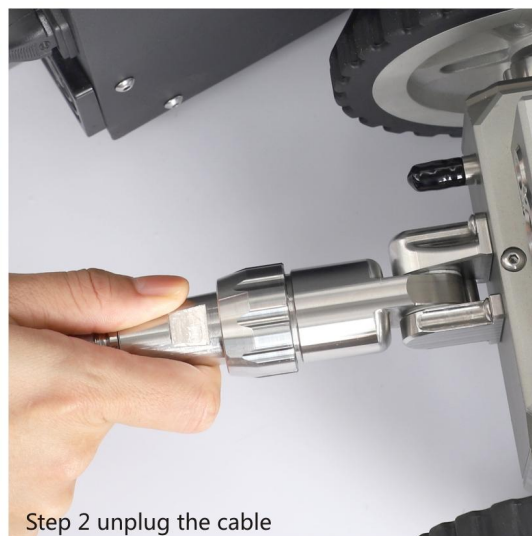


Power cable

9. Trouble & Troubleshooting



Unplug the cable connector until power off



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



cable rolling

Trouble	Troubleshooting
No power	<ol style="list-style-type: none"> 1. Check whether the 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.	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 1. Check whether the computer's WIFI connection is well. 2. Restart the computer and reconnect the WIFI.
The Tail Joint of the robot Cannot be Inserted	<ol style="list-style-type: none"> 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 get in touch with our after-sales service email service@sanyipace.com .

How to 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 and stored.

10. Warranty

We provide a one-year product quality warranty from the date of purchase and provide free lifetime product technical support. For normal faults or quality problems within the warranty period, we provide free replacement or repair services. For damage caused by manual operation, we will charge the cost of product parts for repair. Our technical support team is at your service 24 hours a day. If you encounter any problems during use, please feel free to contact us.

----Contact Us----

Go to our website to download the user manual or view more products:

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