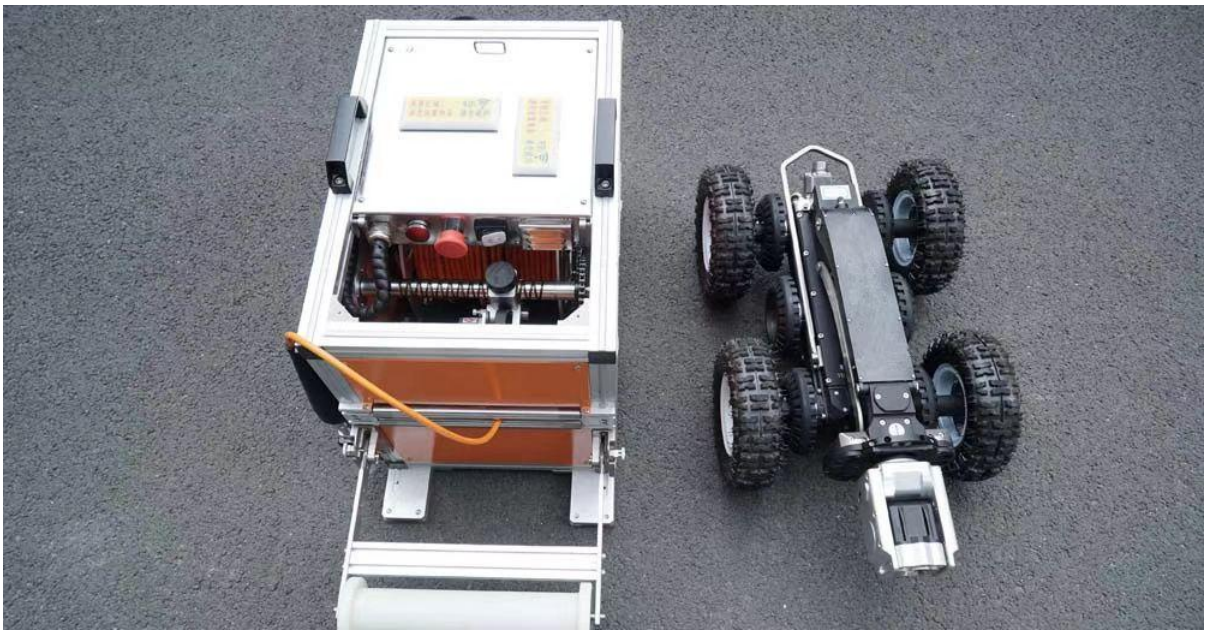
Pipe Robot



Product Introduction:

Seals large pipe robot, the leading pipe inspection product in China, is consist of CCTV crawler, cable car, and the smart controller. Seals examines the damage and deformation of the pipeline, the blockage of the pipeline, and the disordered discharge in the underground pipeline; it can also detect the concentration level of toxic gases, temperature, humidity, silt, and calculate the size of the obstacles in the pipe.

Functional Features:

1. Crawler: 2 million pixels front and rear camera, 1080P, anti-scratch, anti-condensation, defogging and laser measurement function, modular quick release design, a waterproof, dust proof, explosion-proof, and strong obstacle overcome ability; obstacle climbing anger is greater than ∠30°with an anti-rollover alarm

2. Cable car: a wireless connection between controller and cable car; automatic retractable cable function

3. Controller: universal APP for Android tablet and mobile phone; easy-to-use touch screen controller; the hand-grip controller is available

4. Reporting: data from the tablet can be easily imported to the software and generates professional inspection report.


Product Features:

1. HD camera: 2 million pixels front and rear camera, with defogging, anti-scratch, and anti-condensation functions

2. Lens defogging: effectively prevent the outer surface of the lens from fogging, and quickly remove the water drops on the lens during the inspection

3. Obstacles overcome ability: the crawler chassis can be enlarged; climbing angle over 30°；anti-overturn alert function.

4. Easy disassemble modular design: the camera, lifting frame and wheels can be quickly disassembled, and the camera can be directly connected to the crawler.

5. Handheld controller: touch screen operation with app; match up with hand-grip controller; easy-to-operate and portable

6. Intelligent retractable cable: cable car with automatic retractable cable matching with the running speed of the crawler that improves inspection efficiency

Technical Parameter:

Crawler	Dimensions	808*420*481mm（9-inch wheels, the highest position of the lifting frame）
		808*189*114mm（4-inch wheels, no the lifting frame）
	Applicable Pipe Diameter	DN200-3000
	Protection Class	IP68, waterproof, dust proof, explosion-proof
	Lens Rotation	360°axial rotation, 180°radial rotation
	Camera Head	2 million pixels
		Resolution：1920*1080
		10x optical zoom
	Rear View Mirror Lens	2 million pixels, resolution: 1920*1080
	Near Light Illumination	4pcs high bright LED cold white light source
	Far Light Illumination	10pcs high brightness LED light source
	Tail Light Illumination	2pcs high bright LED cold white light source
	Front Mount PT Camera	One-touch heating and defogging function, mirror scratching, anti-condensation

	Steering	Dual motor differential design, 360° in site steering
	Drive	6-wheel drive; Imported motor drive
	Camera Lifting	Electric lifting frame can be directly connected to the crawler after being disassembled
	Operating Temperature	-10~55°C
	Tire	4", 5", 6" and 9" are standard wheels, 8" and 10" are optional
	Communication	Robot and cable car communicate via 2-core cable
Cable Car	Dimensions and Weight	710*390*480mm, 41kg(without battery)
	Data Communication	Cable cart to terminal via WIFI connection or cable connection
	Protection Class	IP65
	Cable Length	Standard 120m
	Cable Tension	One-way 250kg
	Count Meter Function	100m counting accuracy ±5mm
	Power Supply	cable car power supply, over 8 hours battery life
Tablet Controller	Man-robot Control mode	Touch screen operation with the app, match up with the hand-grip controller
	Memory Cards	64G（Optional larger capacity available）
	Display Unit	Wireless + wired communication HD display, professional eye protection mode Anti-glare, anti-reflective
	Endurance Time	About 8H (the specific time depends on the use environment)
Hand-Grip Controller(Optional)	Dimensions and Weight	102*153*63mm handheld, 280g
	Wireless Type	Bluetooth 6m (under normal conditions)
Tablet Terminal Control Software	Information Display	Real-time display of date and time, crawler inclination (pipe slope), air pressure, distance counter (released cable length), inspection video, camera azimuth, lens height, anti-overturn alarm, air pressure alarm, customized text writing on video, calculate the pipe diameter, the slop curve, etc., detecting pipeline defects and generate reports according to relevant standards
	Inspection Analysis	Pipe defects analysis; use controller to capture the defects images manually
	Control Function	It controls the forward, backward, steering, stop, speed of the crawler, automatic retracting cable, automated robot driving; lifting, lowering, lighting adjustment of the lens holder; horizontal, vertical rotation, and the center position returning of the lens ; focusing and zooming of camera; simultaneous display of front and rear camera, camera preset motion, defect length laser calibration, lens defogging, etc.

Working Process:

1. Put the device into the pipe, start pipe inspection and video recording

2. Tablet controller records and saves pipeline internal image/video

3. Export the image/video data from the tablet and import the data into the report generation software that comes with the product.

4. Quickly generate an inspection report

Application Scope:

1. Municipal rainwater and sewer pipeline inspection

Municipal drainage network is one of the important infrastructure of the city, in urban life, the drainage network is as indispensable as the blood vessels of the human body, and the installation of pipes in the construction of the network is an important hidden project, is the core of the quality of the entire project, pipeline inspection robot to drainage network inside the peep detection is good to grasp the pipeline situation.

2.Endoscopic detection of box culvert culvert

Using drainage pipe inspection robots, high-definition endoscopic cameras and other CCTV inspection systems, we can realize endoscopic inspection of dangerous areas such as box culverts and culverts.

3.Mine endoscopic inspection

There are a large number of unknown mining areas in many resource consolidation mines in China, and water damage, fire, sudden collapse of the roof and other disasters induced by the mining areas can be eliminated by using crawling robots to detect the hidden dangers.

4.Completion and acceptance of pipe gallery project

Urban pipeline corridor projects such as electricity, communications, gas, water supply and drainage and other municipal pipelines are completed and can be inspected using pipeline inspection robots, and then carry out maintenance and repair.