

AFACO

AFACO SEWER REHAB TECH

PRODUCTION, SALE, SERVICE



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MADE IN IRAN

About AFACO:

AFACO is a leading group in Iran provides service and equipment in the fields of sewer and well CCTV inspection, High pressure waterjet cleaning, and sewer rehabilitation. The range of AFACO's production both in sewer CCTV robots and sewer jettors cover many application and requirement of the sewage modern industry. A number of high level qualified design engineers and technicians are engaged in research and development, which allows the company to maintain the innovative lead in its field. We are also a service provider and contractor in the field

tems. This opportunity has helped us examine the performance of our production in practice and improve their quality. AFACO also produces complete systems for deep water well CCTV inspection. We are committed to quality in products as well as in service.

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AFACO Sewer CCTV Crawler



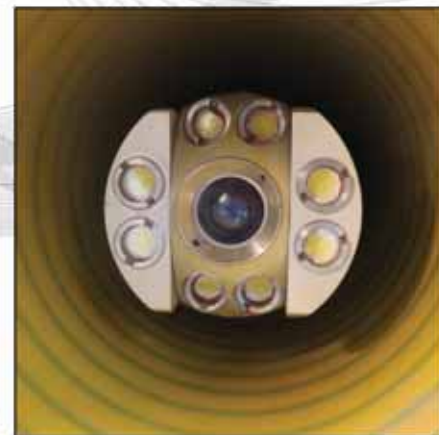
AFACO's CCTV inspection crawler can survey inside the sewer or drain line at the size of 200 mm to 1600 mm to determine their existing structural and service condition. In its head, the crawler contains a high resolution PTZ camera for inspecting various defects. The system is equipped with a laser sensor for measuring the ovality and pipe diameter. It is also equipped with a high resolution tilt sensor to measure and report the slope of the pipeline. The system has the ability to report a graphic scheme of pipeline from the starting manhole to the finishing one, including the illustration of possible defects in each location of the sewer line. The sealing system has passed the IP68 standard so the system can work even in a submerged situation. A high durability LED lighting system with controllable light intensity provides excellent illumination of the inspection area.



Technical System Data

Model	AFACO-PIC200LTPTZ-V115
Inspection range	DN 200 mm and up
Dimension	Ø 200 mm / Length 730 mm
Material	Stainless Steel & Anodised aluminium
Weight	approx. 47kg
Zoom	10.x Optical 4.x Digital
Lighting	8 Power LED-Adjustable lighting
Protection class	IP 68
Test Pressure	1 bar
Pressure monitoring	One sensor
Panning range	infinite
Tilting range	+/- 120°
Focus function/range	autofocus 1 cm - 1 m
Affective pixels	440000 Pixels
Explosion protection	yes- gas injection
Laser beam	Yes
Viewing range	+/- 150°
Permissible ambient temperature	0°C – +40°C during operation -30°C – +70°C for storage
Push operation	no
Cable length	120 - 300 m
Ovality and diameter mesurment sensor	yes
Gradiant mesurment sensor	yes
Temperature mesurment sensor	yes
Lifting system	adaptable hook- automatic lifter
Connector	detachable connector
Calble tension resistance	7000 N (approx700Kg)

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Technical System Data	
Model	AFACO-CB-PIC-V215
Dimension	560 mm / 420mm
Emergency Stop	yes
Setting display LCD	4" monicolor LCD
Speed control	yes (Camera & tractor)
Video input/output	yes
Keyboard	yes
Operating voltage	220 VAC, 50/60 Hz
Lighting control	adjustable with Key
Zoom control	adjustable with Key
Pan&Tilt movement control	yes with joystick
Crawler movement control	yes with joystick

The AFACO's control box for CCTV crawler is an ergonomically designed operation console for fixed installation in the inspection vehicle. Two separate joy sticks placed on the console control the main tractor and the PTZ camera. The lighting intensity, the tractor speed, and the camera functions can be controlled by independent buttons. The PC keyboard is also enclosed with the control box. The operator takes the advantage of an emergency stop button for emergency situation. The user-friendly design of control box makes the operation of AFACO's inspection systems easy and efficient.



AFACO Cable Reel

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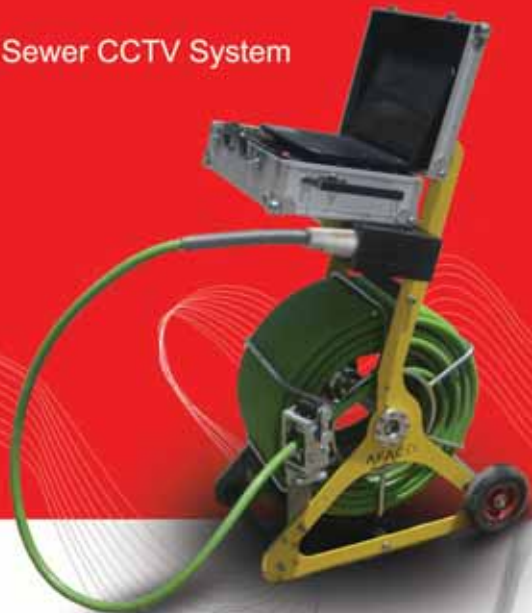
Technical System Data	
Model	AFACO-ACR200-V215
Max. cable length	200 m
Dimension	length 800 mm / 680 mm width / height 710 mm
Material	Steel and Aluminum
Weight	approx. 180kg
bearing capacity of cable	7000N
Protection class	IP 54
Cable length measurement	yes
Display digital counter	yes
Noise suppression system	yes
Automatic electric clutch	yes
Motor-driven	AC
Emergency-stop	yes
Cable sorting	automatic
Rotating arm	yes

The AFACO's cable reels are automatic AC-motor-actuated winches designed to hold from 120m to 350m of cable in their different models. The automatic sorter and the idler pulleys help arrange the cable on the winch. A high resolution encoder is assembled on the front arm pulley in order to measure the CCTV length and to record it on the sewer movie. The front rotatable arm is used for adjusting the crane and cable for the best positioning over the manhole entrance. An AC driver matches cable reel motor speed with the crawler and ensures that the cable rewind at a regular speed and prevents the over running of the crawler from the cable. All steel surfaces are sandblasted and painted with epoxy powder coated finish for the maximum endurance against corrosion.





The AFACO's equipped van consists of two separate parts as the operator room and the back space for the crawler, the cable reel and other equipment. The operator room is the place where an ergonomically designed environment is provided for the operator to efficiently operate the system. The van is equipped with a 150 liters water tank and an electric water pump for cleaning purposes. A power generator located in the rear space provides electricity for CCTV operation, the lighting and the projector system. Using a camera in the rear space and a 10 inches monitor in the cabin, the operator is able to watch the rear space of the van near the manhole during the operation.



The portable AFACO's push rod is a manual sewer CCTV system that contains a high resolution camera allows to inspect, view and record pipes and ducts ranging from 100 mm up to 500 mm. It contains a manual coiler which holds 30 to 100 meters of cable-rod in different models. The specific high strength stress cable-rod of the system provides long reach and can navigate tight bends. The mechanical properties of the cable-rod jacket optimized for sewer and pipe inspection application. The sealing system has passed the IP68 standard so the system can work even in a submerged situation. A length measuring device (mechanical encoder) is also an option which can be assembled on the coiler. The control box contains a 14 inch laptop connected to the camera and special control keys in order to control the camera options (zoom, focus, etc.) and the light intensity.

Technical System Data	
Model	AFACO-PRC100Z-V215
Inspection range	DN 100 mm and up
Dimension	Ø 80 mm / Length 200 mm
Material	Stainless Steel & Anodized aluminium
Weight	35 kg
Zoom control	yes
Lighting	8 Power LED-Adjustable lighting
Protection class	IP68
Test Pressure	1 bar
Focus function/range	autofocus 1 cm - 1 m
Affective pixels	440000 Pixels
Viewing range	+/- 150°
Permissible ambient temperature	0°C to +40°C during operation -30°C to +70°C for storage
Push operation	yes
Cable length	30-70m
Ovality and diameter mesurement sensor	no
Gradiant mesurement sensor	no
Temperature mesurement sensor	no
Lifting system	no
Connector	detachable connector
Cable tension resistance	5000 N (approx 500Kg)



AFACO's deep water wells and boreholes CCTV PTZ inspection cameras operate in 6" to 48" diameter and down to 350 meters in depth. The pan and tilt cameras provide a wide down view and a detailed 360° sidewalls scan view. A sidewalls view helps an operator examine wall, corrosion, bridging, well screen, gravel pack, mineral incrustation build-up, perforation blockage, deformation and ovality problems, or other physical damage. AFACO can provide a complete truck, or van arrangements that are completely equipped for immediate CCTV operation. The systems benefits an automatic cable reel including 350 meters of a reinforced cable rated for 5000 newton breaking strength. The camera is positioned in the center of well or bore hole by the means of four adaptable arms expand to fit in different diameter.

Technical System Data	
Model	AFACO-WIC150-PTZ-V115
Inspection range	DN 150 mm and up
Dimension	Ø 138 mm / Length 700 mm
Material	Stainless Steel & Anodized aluminium
Weight	approx. 17kg
Zoom control	10.x Optical 4.x Digital
Lighting	10 Power LED-Adjustable lighting
Test Pressure	40 bar
Panning range	infinite
Tilting range	+/- 90°
Focus function/range	autofocus 1 cm - 1 m
Affective pixels	440000 Pixels
Viewing range	+/- 150°
Permissible ambient temperature	0°C to +40°C during operation -30°C to +70°C for storage
Push operation	no
Laser beam	no
Cable length	120 - 350 m
Ovality and diameter mesurment sensor	no
Water temperature mesurment sensor	option
Lifting system	cable
Connector	detachable connector
Cable tension resistance	5000 N (approx 500Kg)



Technical System Data	
Model	AFACO-Jetter150B125L
Pump pressure	150 bar
Flow	125 l/min
Main hose reel	100 m 3/4"
Auxiliary hose reel	70 m 1/2"
Reel Drive	Hydro motor
Hoses working pressure	220 bar
Hoses bursting pressure	600 bar
Automatic sorter	option
Safety valves	bypass valve
Projectors	yes
Hydraulic oil pressure indicator	yes
Water pressure indicator	yes
working hour counters	option
Drive type	PTO/Split Shaft/ Independent Diesel

AFACO's high pressure sewer jetters are powerful solutions for cleaning sewer & drain lines from 150 mm up to 1200 mm. Water from the high pressure pump is delivered to the nozzle through high pressure jetting hose all designed for the pressure and flow of the system. Every nozzle is designed to direct high pressure streams of water to pull the high pressure jetting hose through the pipe and to remove sand, stones, bottles, cans, grease, sludge and other similar debris from sanitary sewer and storm drain lines. AFACO's Jetting meets the standard in the high pressure water jetting production. Our jetters are engineered to be reliable and meet the diverse needs of our customers. Our jetters are engineered to be reliable and meet the diverse needs of our customers. Our trailer and truck-mounted jetters are available with a variety of engine and pump configurations, water tanks, and other equipment.

