City of Bel Aire, Kansas

STAFF REPORT

DATE: 5/7/2024

TO: City Manager

FROM: Marty McGee

RE: Sewer Camera

BACKGROUND: The city is responsible for proper sewer maintenance and monitoring. Bel Aire has around 60.5 miles of sewer lines that require cleaning and televising to find and prevent any damage that may occur to sewer mains which is caused by the caustic nature of raw sewage as well as tree roots, shifting grounds, and on occasions damages caused by other utilities.

DISCUSSION: Staff sections off portions of the town each year to have cleaned and televised to maintain sewer functions and proper flow. This work has been outsourced in the previous years as we did not have the proper equipment to perform the tasks. This can become costly depending on the size and footage of the neighborhoods; as such we feel the city would benefit from having the correct equipment to perform this task.

In adhering to the City's purchasing policy, staff solicited bids from three companies, which are shown in the table below.

Contractors	Bid amount
Key Equipment (Rover X)	$125.400.00
Elliot Equipment Company (Aries)	$235,000.00
Insight Vision (Riezler); Generator not included.	$109,467.45
MPE Equipment	$104,995.00

FINANCIAL CONSIDERATIONS: Funding for this project will be taken from the sewer Operations funds.

POLICY DECISION: Staff is adhering to City policy in gathering a minimum of three bids.

RECOMENDATION: Staff recommends the City Council accept the bid from MPE Equipment in the amount of $104,995.00

Mobile Power Equipment LLC
711 Skylar Street
Springdale, AR 72762

Phone: 877-230-2744
info@mpesupplies.com

Quote - 04-29-24-002134

To:

E-mail: mmcgee@belaireks.gov

Phone: (316) 744-2888 X601

Bill To Ship To:

04/29/24 Marty McGee
Town of Belaire

Your Order #	Our Order #	Sales Rep.	FOB	Ship Via	Terms	Tax ID	Proposed Ship-
		MARTIN					

Quantity	Item	Description	Description	Discount %	Taxable	Unit Price	Total
1	IBEX	400FT	CRAWLER	25%		$88,995.00	$68,995.00
1	UPGRADE	EXTRA 600FT	LARGER REEL	40%		$10,000.00	$ 6,000.00
1	CCTV TRAILER			40%		$48,995.00	$30,000.00

Subtotal	$104,995.00
Tax	
Shipping	FREE
Deposit Paid	
Balance Due	$104,995.00

12V House Battery Standard

Ensures continuous power supply to LED lights, even in the absence of shore power.

Crafted Excellence

Learn more about how we are making our CCTV Pipe Inspection Crawler Trailer more Versatile than ever.

Contacts

- www.mpesupplies.com
- MPE Supplies 711 Skyler St Springdale, Arkansas 72762
- Tel: 1 (479) 215-6852
- Email: info@mpesupplies.com

Product Brochure

IBEX Robotic Pipe Inspection Crawler

The IBEX Robotic Pipe Inspection Crawler series crawling robot detection system uses an intelligent crawler motion mechanism as a mounting platform, equipped with an industrial-grade high-resolution color camera unit, a motion posture detection unit and an intelligent control image recording and processing terminal, as well as an auxiliary powerful lighting source and a cable retracting device. High-tech testing special products.

50 mm/1.96' in camera head, 700TVL resolution. Pan and tilt view head. 6-wheel crawler body for 100mm to 600mm. Crawler body for 100mm to 600mm pipes. 12.1' inch display controller (256GB hard disk). Remote control box. l20m/4.72' in cable reel with counter. Includes keyboard and mouse. 110/220V power supply. 48V battery optional. Cable guide appropriate for manhole and underground control. Hook to lower down the crawler. Tools and screws. Can generate reports.

CAMERA:

- Image Sensor: 1/3' Pixel CMOS
- Illumination: 0.01 LUX
- Resolution: 700TVL (PAL: 976 x 592; NTSC: 960 x 592)
- Focus: Motorized
- Light Source: 20x LED Lights
- Axial Rotation Pan:: 360°; Tilt: 180°
- Material: Aluminum
- Working Temperature: -20BCto55BC
- Diameter: 50mm
- Weight: 1.21 Kg
- Ingress Protection Pressure: IP68, S-18 PSI

CRAWLER SYSTEM:

- Use: 100-600mm diameter of pipes with 3 types of tires
- Control Unit: Wireless
- Power Supply: Battery and/or Adapter
- Direction: Moves forward, backwards, turn left or right with anti-overturning design
- Injected: PSI12PSI
- Underwater: Yes, up to 10m underwater
- Capability:
- Ingress Protection: IP68
- Working Temperature: -20BCto55BC

DISPLAY:

- Screen: Touch Screen Capability
- Display Size: 12.1' with 256GB
- Display: Data Speed, distance, pressure, Inclination sensor, time can be displayed on the screen
- Resolution: 1024x768
- Picture: Format JPEG
- Video Format: AVI/MPEG4
- Reports: Can generate a pipe report directly

CONTROLLER:

- Image Zoom: Push-button encoder control image zoom in and out more precisely
- Joystick: Wireless joystick, controls the front camera and motion crawling movement for user friendly interaction
- Working Distance: Up to 10m
- Counter: Electronic counter, distance can be directly displayed on the screen
- Cable Length: 120m, up to 300m
- Motorized Cable & Reel: The cable rolls in or out of the Reel automatically
- Dimensions: 780x410x490 (mm)
- PACKAGING AND DELIVERY:
- Packaging Details: In industrial ABS case and stable wooden box:
- Supply Ability: 20 Set/Sets per Month:

Other Sizes Available

- 394 ft/ 120m manual reel
- 492 ft/ 150m manual reel
- 656 ft/ 200m manual reel
- 984 ft/ 300m manual reel

INSIGHT VISION
Leading Edge Sewer Cameras

800.488.8177
SEWER CAMERA MANUFACTURER

600 Dekora Woods Blvd
Saukville, WI 53080. USA
Fax:262-268-9950
www.insightvisioncameras.com

RIEZLER CRAWLER CAMERA

COMPACT & PORTABLE MAINLINE CRAWLER

QUOTE

City of Bel Aire

Marty McGee

7651 E. Central Park Ave. Bel Aire, KS 67226

316-744-2888

mmcgee@belaireks.gov

Date: 03/26/2024

Quotation Prepared By: William Scovronski

Additional Info:
Shipping TBD.

QTY	DESCRIPTION	PART #	PRICE
1	MSE500 Control unit with RiVision Software	270058	15099.55
1	KTA-200 Power Reel with 656ft of cable	270017	24287.69
1	RSK-78 Pan & Tilt Camera	270021	11054.34
1	FWL-100 Crawler includes 4" wheels	270033	12465.08
1	Lift Hook with Holder	270040	561.15
1	Manual Elevator for pipe 12" and up	270039	2688.36
1	D96 Carbide wheels for 6" pipe	270035	1622.11
1	D97 Wheels for 8" pipe	270036	1097.18
1	D117 Wheels for 12" to 24" pipe	270038	1540.10
1	D1000 Wheel extensions for 16" to 40" pipe	270064	8036.04
1	ZBL-500 Additional Light for pipe 12" and up	270047	1868.17
1	RFK-100 Backeye Camera	270031	4000.68
3	5ft Fiberglass lowering poles	558006	438.0
1	Top Manhole Roller	558005	766.0
1	Down Hole Roller	178007	818.0
		SUBTOTAL	86342.45
		SALES TAX	
		SHIPPING	
		TOTAL	86342.45

Need Equipment Financing?
Visit www.insightvisioncameras.com/financing/ or call **800-488-8177** for more information

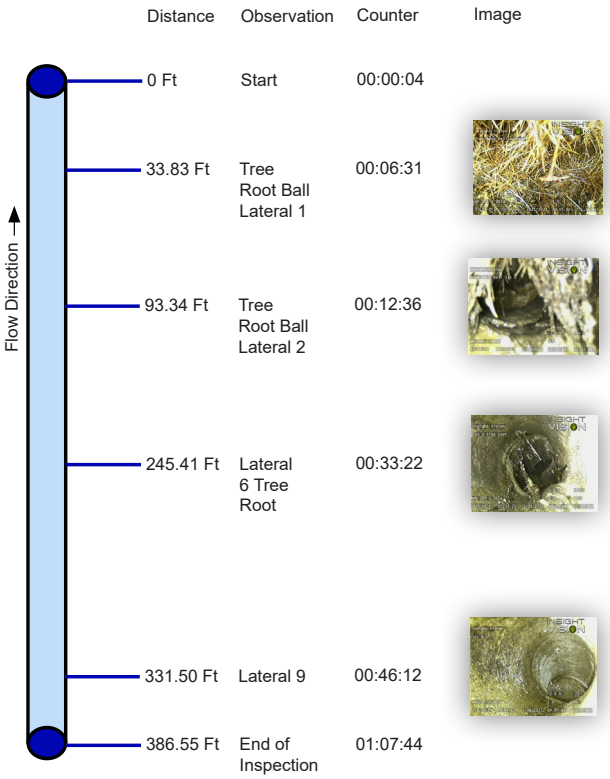
PO#: _____

This is a quotation on the goods named, subject to the conditions noted below:

Make orders payable to Alliance Technology, LLC. 600 Dekora Woods Blvd., Saukville, WI 53080. Wire transfer, check, Visa, Master Card, Amex (+2%) accepted. Payment in full is required prior to shipment. F.O.B. Saukville, WI. All prices quoted in U.S. dollars and valid for 30 days and do not include duties and applicable taxes. One (1) Year Limited Warranty.

RIEZLER SEWER INSPECTION SYSTEM

- **Reporting Made Easy From 4” to 80”**
- **Customizable To Your Needs**
- **Rugged**
- **Modular**
- **Easy-To-Use**



Box Enclosure:

Services
32"x47"x47" Aluminum Enclosure
- 4 Tie Down Rings
- 2 Vents
- Forklift Pockets
- Awning Style Door
- Side Access Generator Door
- Red Exterior/Black Interior Powdercoat
1 3,300.00 3,300.00
Services
Drawer System
- 2 200# 24"x11"x6" Drawers
(1 Clean Storage/1 Dirty Storage)
-Powdercoated Color Matched Frame
-Powdercoated Texture Black Pans
1 1,100.00 1,100.00
Services
110V AC Electrical System
-Generator Connection Cord
-2 Outlets for Drum & Controller Connections
-2 Outlets in Front for Misc. Use
-1 Outlets for Washdown Pump
-1 LED Light Strip for Interior
-2 Switches (1 Light/1 Pump)
1 550.00 550.00
Services
Washdown System
-10 Gal Water Tank
-3.3GPM Pressure Regulated Water Pump
(Switched)
-Slinky Hose w/ Spray Nozzle
1 825.00 825.00
Services
Generator Slide
21"x11"x2" Generator Slide
-200# Locking Drawer Slides
275.00 275.00

SUBTOAL: $20,125.00
Freight:
TAX:
TOTAL:$

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RIEZLER CRAWLER CAMERA
SYSTEM OVERVIEW

FWL-100 Accessories

Lifthook With Holder

Lift Fork

Camera Elevator

D84

D96

D97

D100

D117

D122

Wheel Transport Case

Control Unit

MSE-500

Reels

KTM-7X (125)

KTM-7X (200)

KTA-200

KTA-300

Crawlers

FWL-100

FWL-150

Camera Heads

RIK-45

RSK-60

RSK-78

RZK-115

Accessories

Locating Sender

Cable Guide

Light

Rearview Camera

Stainless Steel Holder

FWL-150 Accessories

D160

D215

D15 Wheel Transmission

Elevator Extension

Lift Hook

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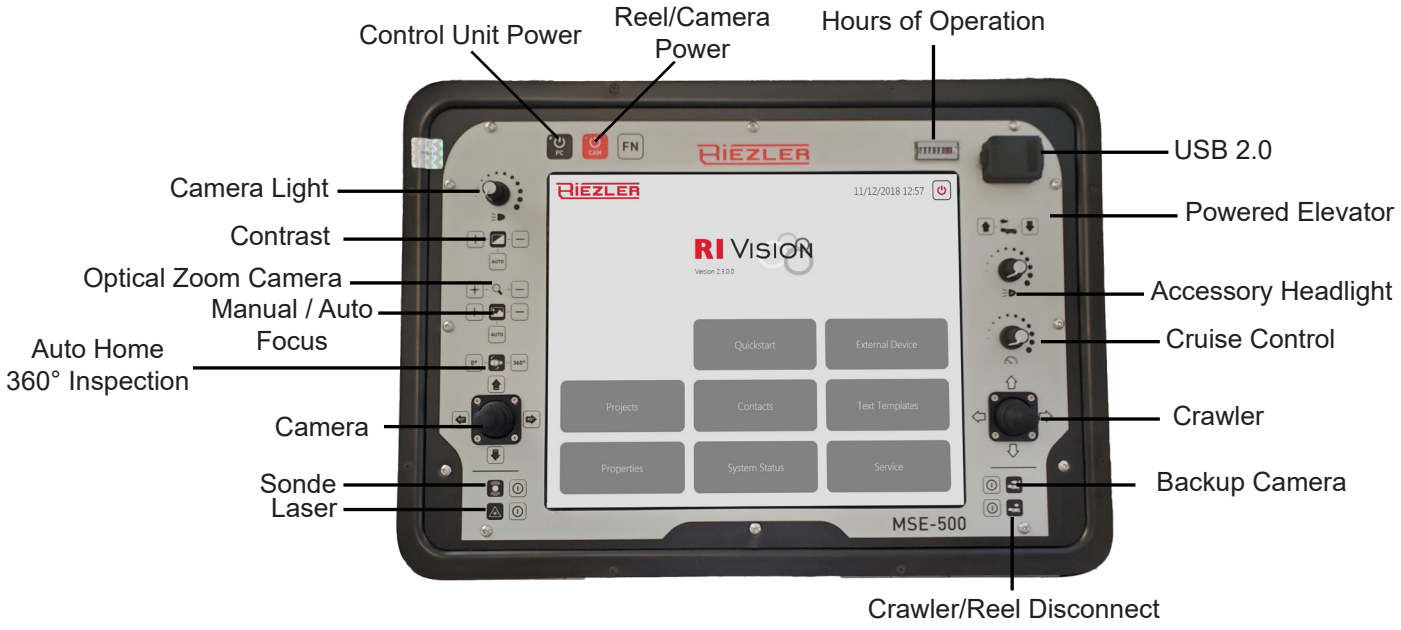
RIEZLER CRAWLER CAMERA
CONTROL UNIT

MSE-500 CONTROL UNIT

- High resolution daylight visible 12.4” (1024x768p) touchescreen display
- USB ports for optional keyboard / mouse for added control
- Videos and pictures saved on internal memory with option to export to USB device
- Industrial grade PC with 256 GB SSD harddrive (faster boot-up and loading times)
- Free software updates
- 2 x USB 2.0, 1 x RJ45, 1 x Video IN, 1 x Video OUT, 1 x HDMI
- 110-240 V AC power / max. 250 Watts

CONTROL UNIT SPECIFICATIONS	
Dimensions	19.3” L x 15” W x 11.4” H
Weight	22.1 lbs.



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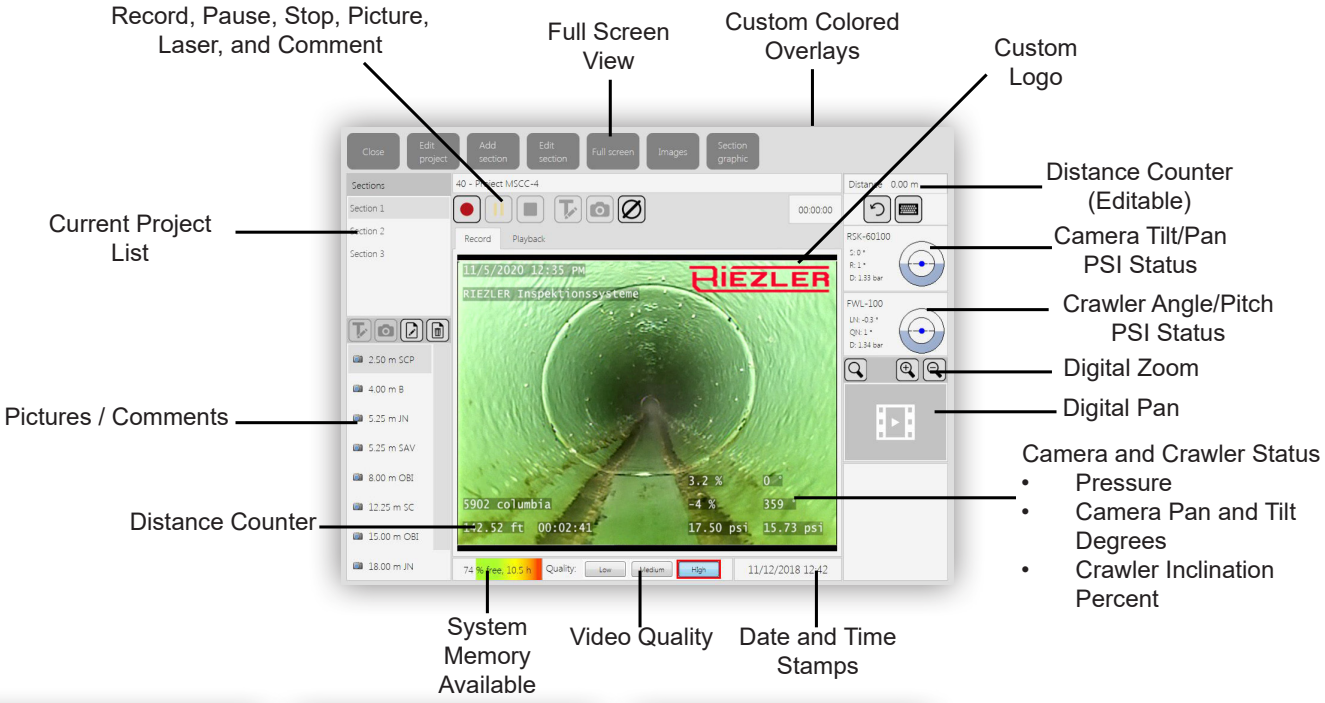
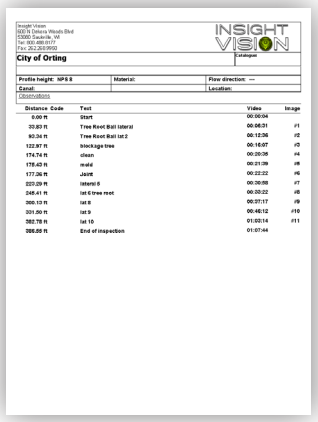
RIEZLER CRAWLER CAMERA
SOFTWARE

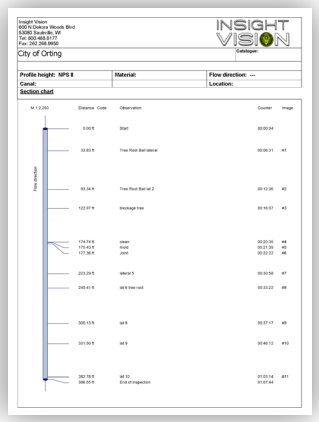
RI VISION

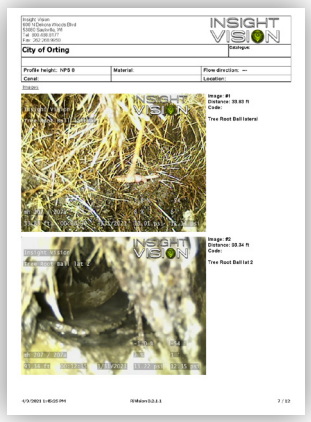
- Free software updates
- Continuous development of new features
- Integrated digital meter counter including sensor values
- Text database to create damage catalogues
- Multilingual user interface and reports
- Customizable interface (logos, business information, movable data fields)
- Modules to allow for measurement, inclination graphics, reports, and data transfer to 3rd party systems (ex. WinCan)

In-pipe Readout









Export To PDF

- Customizable Logo
- Timestamps to video
- Correlating pictures
- Job descriptions
- Damage descriptions
- Easily exported to a USB device

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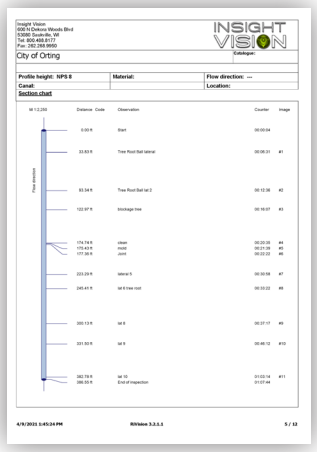
RIEZLER CRAWLER CAMERA
SOFTWARE MODULES

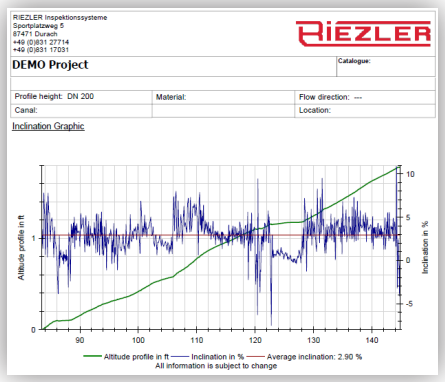
RI-VISION MODULES

RiVision Report
- Allows for the creation of country-specific damage catalog reports, directly at the control unit.
- Free updates, when damage catalogs change or are upgraded.
- Compatible with WinCan vX

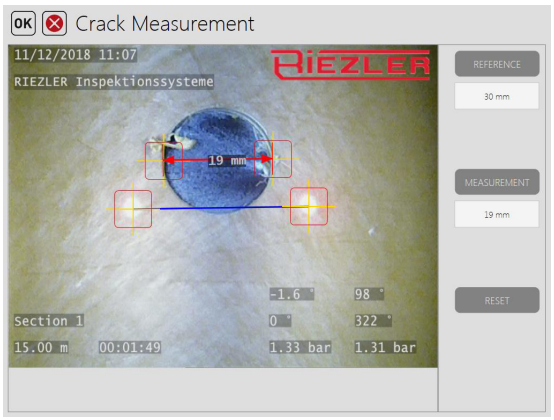


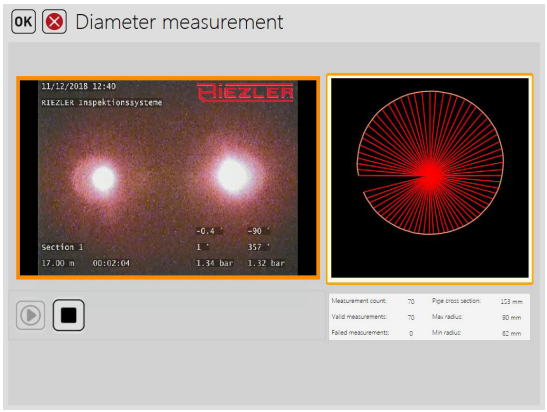
RiVision RS232
- Allows for the use of external systems, especially useful when recording inspections with third-party software (ex. WinCan vX) instead of RiVision.

RiVision Inclination
- Allows for the creation of inclination graphics automatically at the control unit.



RiVision Measurement
- Allows for precise measurement of cracks and deformations within the pipe, using the full potential of the pan and tilt cameras with integrated parallel lasers.
- Autonomously determine the diameter of the pipe with a touch of a button.





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RIEZLER CRAWLER CAMERA
REEL OPTIONS

KTA-200 MOTORIZED REEL

- Automatic cable position
- Integrated control unit
- 492 - 656 feet of kevlar-reinforced, acid and abrasion resistant camera cable
- Manual or crawler sychronized feed mode
- Adjustable tractive force
- Meter counter with incremental position encoder and output shaft
- Customizable with multiple crawlers and camera heads to choose from

KTA-200 REEL SPECIFICATIONS	
Dimensions	34.7" L x 13.8" W x 18.9" H
Weight	110 lbs. with 200m Cable

KTA-300 MOTORIZED REEL

- Automatic cable position
- Integrated control unit
- 656 - 1000 feet of kevlar-reinforced, acid and abrasion resistant camera cable
- Manual or crawler sychronized feed mode
- Adjustable tractive force
- Meter counter with incremental position encoder and output shaft
- Customizable with multiple crawlers and camera heads to choose from

KTA-300 REEL SPECIFICATIONS	
Dimensions	37" L x 15.7" W x 22.4 H
Weight	170 lbs. with 300m Cable

KTM-7x(200) MANUAL REEL

- Stable stainless steel frame
- 656 feet of kevlar-reinforced cable
- Integrated digital meter counter
- Fully customizable with multiple crawlers and camera heads to choose from
- Adjustable break

200m REEL SPECIFICATIONS	
Dimensions	17.7" L x 14.6" W x 21.3" H
Weight	57 lbs. with 200m Cable

KTM-7x(125) MANUAL REEL

- Stable stainless steel frame
- 410 feet of kevlar-reinforced cable
- Integrated digital meter counter
- Fully customizable with multiple crawlers and camera heads to choose from
- Adjustable break

125m REEL SPECIFICATIONS	
Dimensions	17.7" L x 13.8" W x 21.3" H
Weight	43 lbs. with 125m Cable

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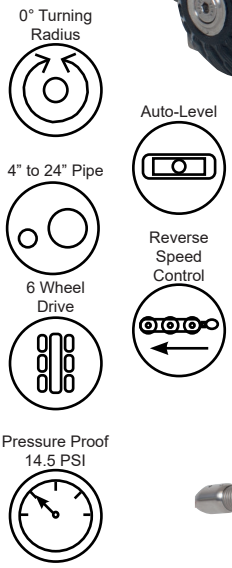
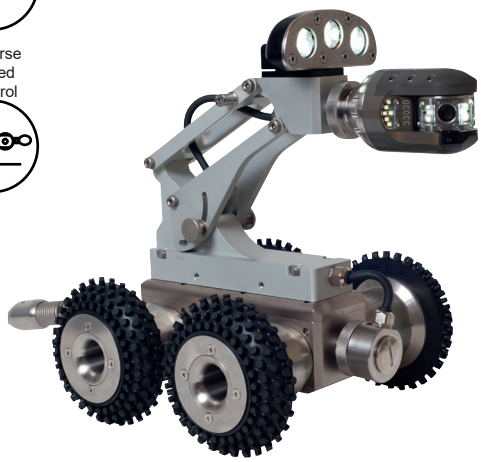
RIEZLER CRAWLER CAMERA

CRAWLER OPTIONS

FWL-100 CRAWLER

- Suitable for use in 4 to 24 inch pipe (with appropriate accessories)
- Speed control in reverse
- Steerable, with 6 powered wheels
- Mechanical camera elevator (optional)
- Pressure-proof till 14.5 PSI
- Internal pressure view
- Tilt measurements long. and lat. axis
- Power supply via control unit
- Fully customizable with multiple camera options

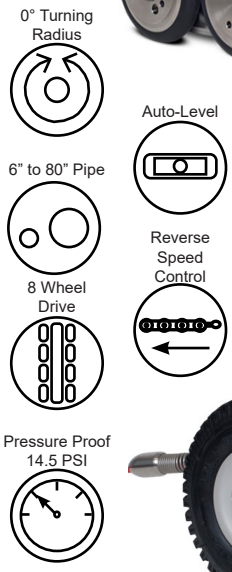


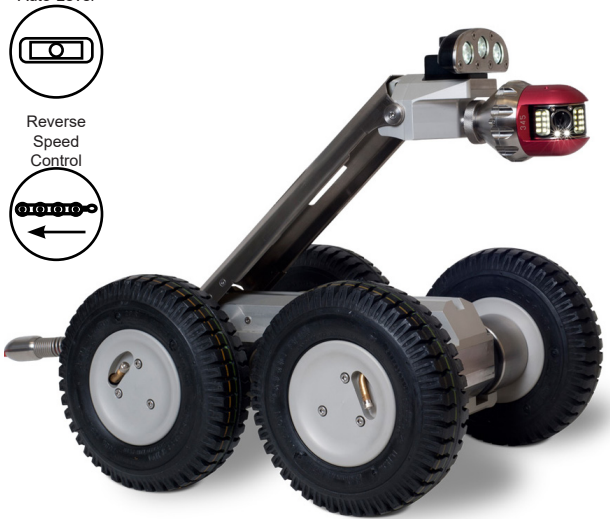


FWL-100 CRAWLER SPECIFICATIONS	
Dimensions	9.5" L x 3.4" W x 3.1" H
Weight	14.55 lbs.
Engine	2 BLDC-engine at 30 Watt
Materials	Brass / Stainless Steel

FWL-150 CRAWLER

- Suitable for use in 6 to 80 inch pipe (with appropriate accessories)
- Speed control in reverse
- Steerable, with 8 powered wheels
- Electrical powered camera elevator (stock)
- Pressure-proof till 14.5 PSI
- Internal pressure view
- Tilt measurements long. and lat. axis
- Power supply via control unit
- Fully customizable with multiple camera options





FWL-150 CRAWLER SPECIFICATIONS	
Dimensions	21.3" L x 5.1" W x 4.7" H
Weight	40.8 lbs.
Engine	2 BLDC-engine at 50 watt
Materials	Aluminum / Stainless Steel

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RIEZLER CRAWLER CAMERA

CAMERA OPTIONS

	RIK-45	RSK-78	RSK-60	RZK-115
Self Leveling	X	X	X	X
Auto Pan 90°		X	X	X
Auto 360 Inspection		X	X	X
Pressure Supervision and Alarm		X	X	X
Swivel Range		+/- 110°	+/- 115°	+/- 125°
Parallel Laser			X	X
Pipe Size	3” - 16”	4” - 48”	3” - 24”	6” - 80”
Waterproof	72.5 PSI or 130’ Depth	72.5 PSI or 130’ Depth	72.5 PSI or 130’ Depth	72.5 PSI or 130’ Depth
LED Lights	12	18 Dimmable	18 Dimmable	30 Dimmable
Lens Angle	85°	85°	68°	4° - 68°
Focus	Fixed	Adjustable	Adjustable	Adjustable and Auto Focus
Zoom	3x Digital From MSE-500	3x Digital From MSE-500	3x Digital From MSE-500	10x Optical 32x Digital
Image Sensor	1/2.8” Color-CMOS	1/2.8” Farb-CMOS	1/4” Color-CMOS	1/3” Color-CMOS
Resolution	700 lines	700 lines	420 lines	700 lines
Dimensions	1.77” Diameter 2.75” Long	3.1” Diameter 4.3” Long	2.36” Diameter 3.94” Long	4.5” Diameter 6.3” Long
Weight	1 Lb	2.1 Lbs	1.5 Lbs	4.8 Lbs

*All values based on ideal pipe conditions

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RIEZLER CRAWLER CAMERA
ACCESSORIES

FWL-100 Accessories

Lowering Fork

Used to lower the small crawler into the pipe

Lift Hook With Holder

33 feet of rope with lift hook and holder

Camera Elevator

Usable in 12"+ pipe
Mechanical

Wheel

D84
Usable in 6"+ pipe

Wheel

D96
Usable in 6"+ pipe
Metal-grit traction

Wheel

D97
Usable in 8"+ pipe

Wheel

D100
Usable from 8"+ pipe
Metal-grit traction

Wheel

D117
Usable in 12"+ pipe

Wheel

D122
Usable in 12"+ pipe
Recommended for ducts or flat areas

Wheel Transport Case

Stores the spare wheel sets when not in use.

FWL-150 Accessories

D15 Wheel Transmis-sion

Used in 20"+ pipe

Wheel

D160
Usable in 12"+ pipe

Wheel

D215
Spare wheel for the D15 Wheel Transmission

Elevator Extension

Allows the crawler to inspect pipes 40" - 80"+

Lift Hook

33 feet of rope with lift hook

Accessories for Both

Rear Camera

RFK-100
Usable from 4"+ pipe

Cable Guide

33 feet of rope with stainless steel cable guide

Locating Sender 512khz

Used to be able to locate the crawler underground

Additional Light

ZBL-500
Usable from 12"+ pipe
9 ultrabright LEDs

Stainless Steel Holder

Stainless steel holder for the MSE-500 control unit

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RIEZLER CRAWLER CAMERA
SERVICE

Insight Vision focuses on providing quick and efficient service for our customers. Most of the service work is done right at our home facility in Saukville, WI. Our expert service technicians are trained to diagnose and repair our full line of camera systems. Unlike some of our competitors, our typical repairs do not take weeks or months to complete.

What to Expect

- One on one customer service
- Expert service technicians
- Quick repair turnaround times (typical repair completed in less than 48 hours)
- Over the phone trouble shooting
- Speak directly to a person, no robotic call ques
- Smooth service experience

3/18/24

City of Bel Aire
Attn: Mr. Marty McGee
7651 E Central Park Avenue
Bel Aire, KS 67226

Re: Envirosight Rovver X

Dear Marty,

Thank you for the opportunity to supply a proposal for the state-of-the-art Rovver X Camera System and Outpost. The Envirosight Rovver X is unequaled in performance, capability, expandability, and reliability by having little resistance in the pipe allowing quick, accurate, state of the art reporting capabilities. It is simple yet powerful and is raising the bar and setting the standard for underground inspection systems.

Rovver X is the one system that lets you do everything: control inspections, view and record digital video, log observations, generate reports, and link directly to asset-management software:

- Steerable 6-wheel drive maneuvers past obstacles.
- Modular design adapts to pipe of any size, condition and material.
- Compact system footprint can be deployed from any size vehicle.
- Digital controls automatically update to the latest features and support self-diagnostics.
- Scalable design supports lateral launch, side-scanning and laser profiling.
- WinCan VX included with every system purchase.

Rovver X, with its enhanced range, unmatched portability, simplified 3-piece system layout and powerful touchscreen controller, is the simplest to operate system on the market and yet the most advanced at the same time. The new pendant captures a day's worth of MPEG video and JPEG still images, lets you enter observations, upload to WinCan via the cloud and USB, and connects via Rovver-Link for remote diagnostics and firmware updates. In addition, RovverX offers a detachable remote-operated camera lift, three on-board cameras, and integrated sensor packages.

The rugged, weatherproof **Outpost** inspection transport enclosure powers, protects and organizes all your sewer inspection equipment, including crawler, cable reel, monitor and computer. A slide-out drawer holds 500 lb of accessories, and a partitioned video compartment stows the crawler, controller, reel, computer and monitor. The Outpost fits securely in the back of a UTV or truck.

Rovver X features include:

- State-of-the-art camera system with solid-state circuitry
- Open-standard Can-bus Communication protocol (software driven system ensures infinite upgrade ability)
- Utilizes reliable RAM drive with a capacity to hold 64 hours of video recording
- RC90X pan/tilt/zoom (120x zoom) camera with dual lasers (lasers can be calibrated for easy measurement of observations)
- 10 optical, 12 digital zoom, with 40 LED's with Lifetime Warranty and proportional control
- Rovver X 6-wheel steerable crawler with inclination/pitch sensors and Sondra transmitter with on/off switch
- Auto-updating pendant controller uses CANbus with viewing, text generation, crawler control, camera control, cable reel control, digital video and still image recording, full digital output and auto reel with 1000' of cable
- VC500 pendant is 8" hand held color touch-screen monitor with 800 x 600 display resolution
- Report generating capability (exportable)
- Presets for viewing laterals or inspecting joints
- Video can be downloaded via USB flash drive or the cloud
- Twin multifunction joysticks with proportional control (crawler and camera)
- Automatic cable reel with 1000' of cable (1650' optional)
- Clutch
- Remote internet-based diagnostics, diagnostic services and firmware upgrades
- Built-in inspection menus with drop down menus for easy annotation, able to capture mpeg and jpeg
- Cruise control
- Integral rear view camera
- Built-in Sonde with on/off
- Multiple wheel sets available for variety of pipe composition and sizes
- Pressurization sensor
- Roll sensor

- Infinite upgrade ability and expandability (readily accepts DigiSewer, Laser Profilier and SAT Lateral Launch)
- Auto populates WinCan v8 database software
- Optional carriage, elevator lift kit, and auxiliary light with back up camera available

One (1) New Envirosight Rovver X System includes: VC500 pendant controller with desk-mount and US –Connector PC-VC, RCX90 camera, RX130 crawler with backeye camera, inclination, sonde, clutch, RAX300 cable reel with wireless remote and 300M of orange Gore cable. Additional accessories include emergency stop cable for reel, mounting frame for reel, lifting tool, 2" tiger tail, pressurization kit. Quick-change wheels system (**including 6 hubs, 6 small rubber wheels, 4 medium rubber wheels, 4 large rubber wheels and 2 climber wheels**). WinCan VX Entry License

Envirosight OutPost : Honda generator and Washdown system

Total Equipment Price for Envirosight Rovver X in Outpost: $ 125,400.00

Available Additional Wheels -
Four (4) XL Rubber Quick Change Wheels: $ Included
Four (4) Medium Aggressive Quick-Change Wheels: $ Included

Total Lump Sum Amount: $ 125,400.00
Freight, Delivery, and Lifetime Training for Operators and Mechanics Included

*Sample photos

Thank you for your consideration of Key Equipment & Supply Co. and Envirosight. If you have any questions, or would like additional information, please don't hesitate to contact me at 913-915-7801.

Respectfully,

Nate Miller
Territory Manager
Key Equipment & Supply Co.

*Sample photos

St. Louis
Key Equipment & Quality Rents
13507 Northwest Industrial Drive
Bridgeton, MO 63044
800-325-4323

Kansas City
Key Equipment & Quality Rents
6716 Berger Avenue
Kansas City, KS 66111
800-262-0149

Springfield
Key Equipment & Quality Rents
1315 Ottis Street
Springfield, IL 62703
217-313-7408

REF Quote Line 1 – Outfitting & System Details

1 Tandem axle trailer, 7'x14' body, 9990 GVWR. See detailed spec for full vehicle specifications, to which Aries will include:
- 1 Vehicle exterior lighting package, including
  - 2 Amber LED strobe lights, 1ea mounted front and rear of roof
- 2 Flood lights, rear work area illumination

1 Honda EU7000iS commercial grade generator, 120V, 60 Hz to which Aries will include:
- 1 Tongue mount bracket and ground strap
- 1 Interconnect to shore connector
- 1 Guard and remote
- 1 Auxiliary battery, 12V DC and case, mounted on tongue frame
- 1 DC converter, 45A
- 1 35' cord and house power receptacle with integrated cover, mounted front of trailer
- 1 System engineering panel to include:
  - 1 Generator voltage and frequency meter, digital

1 Trailer control room interior including:
- 1 Lonplate non-skid floor covering
- 1 White laminated surface wall and ceiling covering
- 1 Bulkhead wall with Plexiglas window and swing passage door to equipment room
- 1 Low profile roof mounted air conditioner, 11000 BTU
- 1 Wall mounted 1500-watt heater
- 1 Wall-mounted USB port at desktop
- 1 Ergonomically contoured and finished control desk
- 1 LED lighting system with dimmer switch
  - 1 LED dome light with timer and switch by walkthrough door
- 1 Standard electrical upfitting package
- 1 Operator chair, swivel with casters
- 1 Padded bench seat with storage underneath
- 1 Closet/cabinet/storage space, 74"H, minimum 4-removable shelves
  - 1 Printer shelf

1 Trailer equipment room interior including:
- 1 Lonplate non-skid floor covering
- 1 White laminated surface wall and ceiling covering
- 1 Standard electrical upfitting package
- 1 LED lighting system
  - 1 LED dome light with timer and switch by walkthrough door
- 1 Set equipment storage hooks
- 1 Set of tie down rings along floor, shipped loose
- 1 Fire extinguisher, 10lb, 4A60 B:C rating, OSHA/DOT-approved
- 1 Work bench with Lonplate worktop and vise
  - 1 Storage shelves over work bench with light underneath
- 1 7-drawer tool chest with locking hasp

1 Equipment storage shelf, 3-levels, 36x18, between reel and bulkhead
1 Downhole pole storage brackets, door mounted
1 Storage drawer mounted under TV reel

1 Water wash down system for equipment clean-up including:
1 Water storage tank, 19-gallon
1 Set of fill, vent and drain connections
1 Water tank demand pump
1 25' retractable wash down hose with spring-loaded hand nozzle

2 22" LCD flat panel monitor, TV/PC viewing, mounted to control room desktop
1 22" LCD flat panel monitor, TV/PC viewing, mounted rear viewing in equipment room

1 Ultra compact computer system, including:
1 Compact PC housing, with features including:
Intel 11th Gen Core i5-1135G7 processor
16GB of RAM
512GB solid state hard drive, storage
(4) HDMI ports
(6) USB ports, (4) USB3.2 (front) + (2) USB3.2 (back)
Ethernet port on rear of chassis
AX201 WiFi 6 + Bluetooth 5.2
1 Wireless keyboard and optical mouse
1 Windows 11 Pro operating system, 64-bit

1 HDMI video capture device and wiring for Pipetech Inspect

1 Aries DC400 Voyager All-in-One Desktop Controller, including:
1 7" color flat touch-screen status & diagnostics monitor
1 Sealed connector for interconnect cable to reel
1 Camera controls
1 Tractor controls
1 Reel controls
1 Internal digital video recorder & controls
1 Internal overlay module with footage & inclination
1 Alphanumeric full "QWERTY" keyboard for video titling and report data input
1 Storage and transportation case
1 Video amplifier/distributor box

1 Truck mount inter-connect cable

1 Aries HD400 Voyager zoom, rotate & horizontal pan camera w/ high-intensity LED lighting and integrated self-cleaning lens wiper system, including:
Voyager zoom pan and tilt camera w/ multi-axis infinite rotation
Integrated on-demand self-cleaning lens wiper system
120X zoom (10X optical & 12X digital)
High-resolution 1080(V) x 1920(H) output

Auto-focus with manual override
Auto-iris with manual override
Maintenance-free directional white LED lighting that follows the camera's field of view
High-sensitivity camera sensor for low-light applications
"Starlite" low-light level amplification feature with (4) user selectable amplification steps
Automatic home feature with forks at top and bottom of camera head
"One Touch Scanning" feature with (2) user selectable continuous joint scan presets
"Quick Look" preset view positions (6) (Up, Down, Right, Left, Lat R, Lat L)
Robust, environmentally sealed camera for use in live pipe, including:
Scratch-resistant sapphire lens window
Camera recessed behind forks for frontal impact protection
Rubber bumpers on forks
Camera housing with hardened metal finishes and non-corrosive metals
Recessed fasteners & no camera protrusions
Proportionately slowed camera movements when zooming
Fast-check internal pressure monitoring system
On-screen camera diagnostics functions including:
Camera internal pressure, temperature, operating hours, internal power regulated voltage value, camera model, serial number, firmware revision, control error recognition, LED current value.

1 Camera storage and transport case
1 Camera nitrogen recharge kit

1 Aries TR400 Voyager steerable self-propelled transporter for 6" relined to 24" lines, including:
1 Transporter assembly with continuous duty 120-Watt brushless drive motors
6 Rubber wheels, 3-3/8" diameter for 6" lines
4 Rubber wheels, 4-3/8" diameter for 8-12" lines
4 Rubber wheels, 5" diameter for 12-18" lines
4 Extended hub dually rubber wheels, 5" diameter for 18-21" lines
1 Remotely operated electric camera lifting mechanism
1 Fast-check pressure monitoring system
1 Rear viewing camera with LED lighting
1 Auxiliary detachable light head
1 512 Hz internal locating beacon
1 Integrated inclinometer system
1 Storage and transport case
1 Set maintenance parts

2 Carbide impregnated high traction wheels, 3⅛" diameter for 6" lines
2 Carbide impregnated high traction wheels, 3⅞" diameter for 8-12" lines
2 Carbide impregnated high traction wheels, 5" diameter for 12-18" lines
2 Extended hub carbide impregnated high traction wheels, 5" diameter for 18-24" lines

1 Large diameter pipe kit with geared side rails and 8" diameter rubber tires for operation up to 36" lines

1 PR400 Voyager cable and reel assembly, including:
1 Lightweight aluminum frame

1 Drum and motor assembly with electric clutch
1 Cable level wind assembly with one-button adjustment
1 Sealed continuous contact 6-conductor slip ring assembly
1 Distance meter encoder
1 Emergency stop push button switch
1 1200’ of 6-conductor Kevlar-strengthened cable with water-block to prevent wicking
1 AC power switch
1 120 VAC power input plug with cord
1 Cable guide rollers on extendable Downrigger assembly with single-button deployment and spring-loaded top roller for easy cable removal.
1 Drum tensioner control with knob for fine adjustment
1 CANbus controlled cable management system
1 6-pin cable termination
1 HC400 Handheld pendant with 15’ coiled cable for at-manhole operation of reel & transporter.

1 Cable manhole guide system including:
1 Manhole top roller assembly
1 Tiger tail bottom cable guide
1 Insertion and extractor pole assembly and tractor adapter with three (3) Quick lock fiberglass extension poles.
5 Additional fiberglass extension poles

2 Operation / maintenance and spare parts manuals
1 Maintenance tool kit
1 Delivery of system
1 One-year warranty, TV system

REF Order Line 2 – Trailer Details

Trailer, 7’x14' Tandem Axle, 9990 lb. GVWR
Standard Construction
Interior dimensions: 80" wide x 83" high x 168" long
Gross Vehicle Weight Rating: 9990 lbs
Dexter independent torsion suspension axles
Trailer-rated radial tires
Modular-styled wheels w/E-coat prime & powder coat finish
All-wheel electric brakes w/12V breakaway switch, battery included
Welded in place safety chains
Phosphate power washed and all exposed metal painted
Z-Tech undercoated frame
Long life coating on all fasteners
Automotive style weather stripping
Formed steel rear header with recessed clearance lights
Double 8” I-Beam Mainframe
12” on-center Floor Members
.030 exterior aluminum with 16” on-center wall posts

Aluminum fenders
Aluminum roof with 24” on-center bows
ABS molded license plate holder with light

Additional Construction
Extended triple tube tongue with switchable 2-5/16” ball hitch and pintle eye
ATP stone guard on front of trailer
Reinforced roof for air conditioning unit, centered 36” from front of trailer, with 25ft stub 10ga/2c cable
Stabilizer jacks at corners
32” curbside door with bar lock, 22” from front of trailer
Double swing full opening rear doors with semi-style cam locks
Interior finished in white vinyl
Steel floor reinforcing plate on crossmembers at RR body door, 44”
Non-powered roof vent, centered at 18” from back of rear door framing
12V dome light, centered 150” from front of trailer, with switches at rear door and side door
9” backing strips inside of rear doors, (1) at bottom of each door and (1) at height of 53” of each door

REF Order Line 3 – On-Site

1 Day(s) of in-field training by Aries staff on Aries equipment

Budget Figure - $235,000

- This is erring on the high side to accommodate for possible trailer price increase and other possible price fluctuation.