



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
77800084

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF
MICHAEL AUSTIN
304-558-2402

RFQ COPY

ENVIROSIGHT
111 CANFIELD AVENUE UNIT B3
RANDOLPH NJ 07869

A&H Equipment Company—Authorized WV
 1124 McLaughlin Run Rd. Dealer
 Bridgeville, PA 15017

DIVISION OF HIGHWAYS
CONTRACT ADMINISTRATION DIV
MATERIALS TESTING SECTION
312 MICHIGAN AVENUE
CHARLESTON, WV
25311

DATE PRINTED 05/01/2008	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
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BID OPENING DATE: **05/21/2008** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	EA		625-84		
<p>CULVERT INSPECTION CAMERA SYSTEM</p> <p>TO PROVIDE CULVERT INSPECTION CAMERA SYSTEM</p> <p>PER THE ATTACHED SPECIFICATIONS</p> <p>QUESTIONS: WRITTEN QUESTIONS MUST BE RECEIVED BY CLOSE OF BUSINESS (5:00 PM EST.) ON WEDNESDAY 05/14/08 NO FURTHER QUESTIONS WILL BE ACCEPTED AFTER THE DATE STATED.</p> <p>SEND YOUR QUESTIONS TO: PURCHASING DIVISION ATTENTION MICHAEL AUSTIN 2019 WASHINGTON ST. E. CHARLESTON, WV 25305</p> <p>QUESTIONS MAY BE SENT VIA FAX, E-MAIL, OR REGULAR MAIL E-MAIL: MICHAEL.D.AUSTIN@WV.GOV FAX: 304-558-4115</p> <p>IT IS THE VENDORS RESPONSIBILITY TO VERIFY THAT THEIR QUESTIONS HAVE BEEN RECEIVED BY CALLING 304-558-2402.</p> <p>VENDOR PREFERENCE CERTIFICATE</p> <p>CERTIFICATION AND APPLICATION* IS HEREBY MADE FOR PREFERENCE IN ACCORDANCE WITH WEST VIRGINIA CODE, 5A-3-37 (DOES NOT APPLY TO CONSTRUCTION CONTRACTS).</p> <p>A. APPLICATION IS MADE FOR 2.5% PREFERENCE FOR THE REASON CHECKED:</p> <p>() BIDDER IS AN INDIVIDUAL RESIDENT VENDOR AND</p>						

RECEIVED

2008 MAY 19 A 8:15

CONTRACTS DIVISION
 STATE OF WV

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>James A. [Signature]</i>	TELEPHONE 412-257-1160	DATE 5/16/08
TITLE Sales Representative	FEIN 25-1095750	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



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ADDRESS CORRESPONDENCE TO ATTENTION OF
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 304-558-2402

RFQ COPY
 TYPE NAME/ADDRESS HERE

DIVISION OF HIGHWAYS
 CONTRACT ADMINISTRATION DIV
 MATERIALS TESTING SECTION
 312 MICHIGAN AVENUE
 CHARLESTON, WV
 25311

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
05/01/2008				

BID OPENING DATE: 05/21/2008 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>HAS RESIDED CONTINUOUSLY IN WEST VIRGINIA FOR FOUR (4) YEARS IMMEDIATELY PRECEDING THE DATE OF THIS CERTIFICATION; OR</p> <p>() BIDDER IS A PARTNERSHIP, ASSOCIATION OR CORPORATION RESIDENT VENDOR AND HAS MAINTAINED ITS HEAD-QUARTERS OR PRINCIPAL PLACE OF BUSINESS CONTINUOUSLY IN WEST VIRGINIA FOR FOUR (4) YEARS IMMEDIATELY PRECEDING THE DATE OF THIS CERTIFICATION; OR 80% OF THE OWNERSHIP INTEREST OF BIDDER IS HELD BY ANOTHER INDIVIDUAL, PARTNERSHIP, ASSOCIATION OR CORPORATION RESIDENT VENDOR WHO HAS MAINTAINED ITS HEADQUARTERS OR PRINCIPAL PLACE OF BUSINESS CONTINUOUSLY IN WEST VIRGINIA FOR FOUR (4) YEARS IMMEDIATELY PRECEDING THE DATE OF THIS CERTIFICATION; OR</p> <p>() BIDDER IS A CORPORATION NONRESIDENT VENDOR WHICH HAS AN AFFILIATE OR SUBSIDIARY WHICH EMPLOYS A MINIMUM OF ONE HUNDRED STATE RESIDENTS AND WHICH HAS MAINTAINED ITS HEADQUARTERS OR PRINCIPAL PLACE OF BUSINESS WITHIN WEST VIRGINIA CONTINUOUSLY FOR THE FOUR (4) YEARS IMMEDIATELY PRECEDING THE DATE OF THIS CERTIFICATION.</p> <p>B. APPLICATION IS MADE FOR 2.5% PREFERENCE FOR THE REASON CHECKED:</p> <p>() BIDDER IS A RESIDENT VENDOR WHO CERTIFIES THAT, DURING THE LIFE OF THE CONTRACT, ON AVERAGE AT LEAST 75% OF THE EMPLOYEES WORKING ON THE PROJECT BEING BID ARE RESIDENTS OF WEST VIRGINIA WHO HAVE RESIDED IN THE STATE CONTINUOUSLY FOR THE TWO YEARS IMMEDIATELY PRECEDING SUBMISSION OF THIS BID;</p> <p>OR</p> <p>() BIDDER IS A NONRESIDENT VENDOR EMPLOYING A MINIMUM OF ONE HUNDRED STATE RESIDENTS OR IS A</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE: *[Signature]* TELEPHONE: 412-257-1160 DATE: 5/16/08

TITLE: Sales Representative FEIN: 25-1095750
 ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFO, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED VENDOR



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ADDRESS CORRESPONDENCE TO ATTENTION OF
MICHAEL AUSTIN 304-558-2402

RFQ COPY
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VENDOR

SUPPLIER

DIVISION OF HIGHWAYS
 CONTRACT ADMINISTRATION DIV
 MATERIALS TESTING SECTION
 312 MICHIGAN AVENUE
 CHARLESTON, WV
 25311

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
05/01/2008				
BID OPENING DATE: 05/21/2008		BID OPENING TIME 01:30PM		

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>NONRESIDENT VENDOR WITH AN AFFILIATE OR SUBSIDIARY WHICH MAINTAINS ITS HEADQUARTERS OR PRINCIPAL PLACE OF BUSINESS WITHIN WEST VIRGINIA EMPLOYING A MINIMUM OF ONE HUNDRED STATE RESIDENTS WHO CERTIFIES THAT, DURING THE LIFE OF THE CONTRACT, ON AVERAGE AT LEAST 75% OF THE EMPLOYEES OR BIDDERS' AFFILIATE'S OR SUBSIDIARY'S EMPLOYEES ARE RESIDENTS OF WEST VIRGINIA WHO HAVE RESIDED IN THE STATE CONTINUOUSLY FOR THE TWO YEARS IMMEDIATELY PRECEDING SUBMISSION OF THIS BID.</p> <p>BIDDER UNDERSTANDS IF THE SECRETARY OF TAX & REVENUE DETERMINES THAT A BIDDER RECEIVING PREFERENCE HAS FAILED TO CONTINUE TO MEET THE REQUIREMENTS FOR SUCH PREFERENCE, THE SECRETARY MAY ORDER THE DIRECTOR OF PURCHASING TO: (A) RESCIND THE CONTRACT OR PURCHASE ORDER ISSUED; OR (B) ASSESS A PENALTY AGAINST SUCH BIDDER IN AN AMOUNT NOT TO EXCEED 5% OF THE BID AMOUNT AND THAT SUCH PENALTY WILL BE PAID TO THE CONTRACTING AGENCY OR DEDUCTED FROM ANY UNPAID BALANCE ON THE CONTRACT OR PURCHASE ORDER.</p> <p>BY SUBMISSION OF THIS CERTIFICATE, BIDDER AGREES TO DISCLOSE ANY REASONABLY REQUESTED INFORMATION TO THE PURCHASING DIVISION AND AUTHORIZES THE DEPARTMENT OF TAX AND REVENUE TO DISCLOSE TO THE DIRECTOR OF PURCHASING APPROPRIATE INFORMATION VERIFYING THAT BIDDER HAS PAID THE REQUIRED BUSINESS TAXES, PROVIDED THAT SUCH INFORMATION DOES NOT CONTAIN THE AMOUNTS OF TAXES PAID NOR ANY OTHER INFORMATION DEEMED BY THE TAX COMMISSIONER TO BE CONFIDENTIAL.</p> <p>UNDER PENALTY OF LAW FOR FALSE SWEARING (WEST VIRGINIA CODE 61-5-3), BIDDER HEREBY CERTIFIES THAT THIS CERTIFICATE IS TRUE AND ACCURATE IN ALL RESPECTS; AND THAT IF A CONTRACT IS ISSUED TO BIDDER AND IF ANYTHING CONTAINED WITHIN THIS CERTIFICATE CHANGES DURING THE</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
<i>[Signature]</i>	412-257-1160	5/16/08
TITLE	FEN	ADDRESS CHANGES TO BE NOTED ABOVE
Sales Representative	25-1095750	

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



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ADDRESS CORRESPONDENCE TO ATTENTION OF:
MICHAEL AUSTIN
304-558-2402

RODNEY

RFQ COPY
 TYPE NAME/ADDRESS HERE

S H I P T O

DIVISION OF HIGHWAYS
 CONTRACT ADMINISTRATION DIV
 MATERIALS TESTING SECTION
 312 MICHIGAN AVENUE
 CHARLESTON, WV
 25311

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
05/01/2008				

BID OPENING DATE: **05/21/2008** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>TERM OF THE CONTRACT, BIDDER WILL NOTIFY THE PURCHASING DIVISION IN WRITING IMMEDIATELY.</p> <p>BIDDER: <u>Not Applicable</u></p> <p>DATE: -----</p> <p>SIGNED: -----</p> <p>TITLE: -----</p> <p>* CHECK ANY COMBINATION OF PREFERENCE CONSIDERATION(S) IN EITHER "A" OR "B", OR BOTH "A" AND "B" WHICH YOU ARE ENTITLED TO RECEIVE. YOU MAY REQUEST UP TO THE MAXIMUM 5% PREFERENCE FOR BOTH "A" AND "B". (REV. 12/00)</p> <p>NOTICE</p> <p>A SIGNED BID MUST BE SUBMITTED TO:</p> <p>DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130</p> <p>THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:</p> <p>SEALED BID</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>[Signature]</i>	TELEPHONE 412-257-1160	DATE 5/16/08
TITLE Sales Representative	FEIN 25-1095750	ADDRESS CHANGES TO BE NOTED ABOVE

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**Request for
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PAGE
5

ADDRESS CORRESPONDENCE TO ATTENTION OF:
**MICHAEL AUSTIN
 304-558-2402**

RFQ COPY
 TYPE NAME/ADDRESS HERE

VENDOR

**A&H Equipment Company
 ENVIROSIGHT DISTRIBUTORS IN WEST VIRGINIA
 1124 McLaughlin Run Road
 Bridgeville, PA 15017**

SHIP TO

**DIVISION OF HIGHWAYS
 CONTRACT ADMINISTRATION DIV
 MATERIALS TESTING SECTION
 312 MICHIGAN AVENUE
 CHARLESTON, WV
 25311**

DATE PRINTED 05/01/2008	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
BID OPENING DATE: 05/21/2008		BID OPENING TIME: 01:30PM		

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
BUYER:				33		
RFQ. NO.:				77800084		
BID OPENING DATE:				05/21/2008		
BID OPENING TIME:				1:30 PM		
PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID:						
----- 412-257-4471 -----						
CONTACT PERSON (PLEASE PRINT CLEARLY):						
----- James Ahlborn -----						
***** THIS IS THE END OF RFQ 77800084 ***** TOTAL:						see below
Option 1A:				ENVIROSIGHT ROVVER 225 SYSTEM WITH AUTOMATIC REEL	\$ 65,593.69	
Option 1B:				ENVIROSIGHT ROVVER 225 SYSTEM-MANUAL REEL WITH AUTO ASSIST	\$ 59,157.97	
*Please Note: Full Specification & Quotations are Attached						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>James Ahlborn</i>	TELEPHONE 412-257-1160	DATE 5/16/08
TITLE Sales Representative	FEIN 25-1095750	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELLED 'VENDOR'

Culvert Camera System

System shall be capable of inspecting culverts and pipes from 9 – 60 inches and include the following:

1. color camera with tilt, pan, zoom and focus remotely controlled by the operator and camera output viewed in real time on a video screen by the operator.
2. Recording system to allow review of work at later date and making a copy of inspection available to others. The recorded video shall have at least the same image capability as the real time output.
3. Crawler capable of carrying the camera, travelling over debris usually found in culverts, making turns to navigate around corners in culvert and stopping at operators request to inspect culvert.
4. Control unit to manage the camera and the crawler.
5. A method of indicating the distance the camera and crawler have travelled into a culvert or pipe needs to be included so that location of obstructions or culvert failures can be determined.

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

West Virginia Code §5A-3-10a states: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

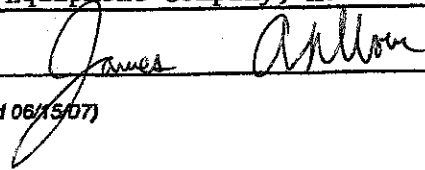
EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

LICENSING: Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agencies or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

CONFIDENTIALITY: The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures and rules. Vendors should visit www.state.wv.us/admin/purchase/privacy for the Notice of Agency Confidentiality Policies.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), it is hereby certified that the vendor acknowledges the information in this said affidavit and are in compliance with the requirements as stated.

Vendor's Name: A&H Equipment Company, Authorized Envirosight Dealer in state of West Virginia

Authorized Signature:  Date: 5/16/08

A&H EQUIPMENT COMPANY

**1124 McLAUGHLIN ROAD
BRIDGEVILLE, PA 15017**

**STATE OF WEST VIRGINIA
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON STREET EAST
POST OFFICE BOX 50130
CHARLESTON, WV 25305-0130
ATTN: MICHAEL AUSTIN**

MAY 17, 2008

DEAR MICHAEL,

FOLLOWING IS THE INFORMATION YOU REQUESTED FOR RFQ #77800084. A&H EQUIPMENT COMPANY IS THE CERTIFIED DISTRIBUTOR FOR ENVIROSIGHT PIPELINE INSPECTION CAMERAS IN THE STATE OF WEST VIRGINIA. WE ARE LOCATED JUST SOUTH OF PITTSBURGH, PA AND ARE ONE HOUR NORTH OF MORGANTOWN, WV..

INCLUDED IN THIS RFQ, I HAVE ADDED SPECIFICATIONS FOR THE ENVIROSIGHT ROVVER 225 SYSTEM. ALSO INCLUDED IS LITERATURE AND BENEFITS FOR OUR CULVERT INSPECTION CAMERA. WE HAVE PREVIOUSLY DEMONSTRATED THE EQUIPMENT FOR THE MATERIALS TESTING SECTION WITH GREAT SUCCESS AND HAVE PROVEN THAT THIS SYSTEM HAS THE CAPABILITY FOR PERFORMING EVERYTHING ASKED FOR TO THE HIGHEST LEVEL.

AFTER REVIEWING THE RFQ AND THE BENEFITS SECTION, YOU WILL SEE THAT THIS SYSTEM CAN BE OPERATED BY (1) ONE PERSON IN REMOTE AREAS.

PLEASE FEEL FREE TO CONTACT ME WITH ANY ADDITIONAL QUESTIONS.

SINCERELY,



JAMES AHLBORN

ENVIROSIGHT ROVVER 225 CAMERA SYSTEM

The Envirosight Rovver 225 Camera System offers true 9-60" inspection capabilities with it's short, steerable, six wheel driven crawler. It is ideal for a one man operation. The crawler is the lightest in it's class, at (50) fifty pounds, to inspect pipes up to 60". This crawler was demonstrated to the WV DOH as well as the Turnpike Division with high demonstration approval. The next sized crawler down that Envirosight offers is the Rovver 125 – previously demonstrated to the WV DOH Materials Testing Section. This crawler will inspect pipes from 6"-36" and weighs only 25 lbs.. To further detail the crawlers, please see below.

The Envirosight Rovver offers (3) three sized crawlers that are all compatible to the main control unit, cable reel and camera. The crawlers can be interchanged with one another to enable operator to inspect pipes from 4"-60". Following is the set of crawlers for the Rovver System:

Rovver 100 : Inspects 4"-8"/ weight 12 lbs./ length 10"

Rovver 125 : Inspects 6"-36"/weight 25 lbs./length 15"

Rovver 225 : Inspects 9"-60"/ weight 50 lbs./length 20"

- The WV DOH RFQ asked for a 9"-60" crawler, full steerability with the ability to travel over debris. The Rovver 225 does all that and more . At a later date, the other crawlers can be added if it is determined that smaller pipe diameters need inspected.**

ROVVER™ 225

The Ultimate Solution For Large-Diameter Pipe Inspection.

When you need an adjustable viewing height range and the power to inspect through rough terrain, ROVVER® 225 is the inspection crawler to use. For optimum large-diameter (9–60") pipe inspection, ROVVER 225's pendant-controlled lift platform adjusts camera height from 6–12", centering the camera in the pipe for optimum magnification and undistorted inspection in any direction. This rugged, all-wheel-drive crawler moves easily over debris and around multiple turns. A remotely-operated clutch releases the wheels for free-wheeling retrieval.

ROVVER 225 carries a pan/tilt, pan/tilt/zoom or forward viewing color video camera, plus retrieval, sensing or sampling equipment to distances as far as 660'. Its modular design and ability to inspect pipes with diameters larger than 9" make it ideally suited for a range of applications. ROVVER's remote pendant enables an operator to raise and lower the camera, change camera zoom and orientation, control focus and lighting, engage the clutch and steer the crawler around obstacles such as debris and offsets.

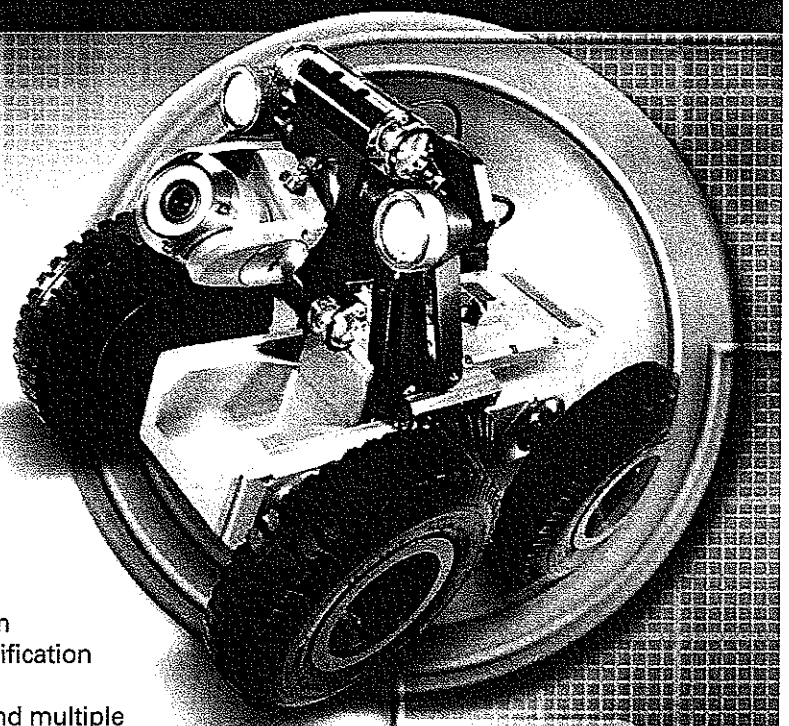
Applications

- Wastewater and storm water lines
- Oil and steam lines
- Service water intake lines

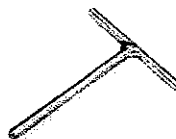
Features/Benefits

- Adjustable platform lifts camera above liquids/debris to view from pipe center line.
- Strong and steerable, it moves easily over and around debris and offsets.
- Quick disconnect simplifies use, reduces maintenance and speeds set-up.
- Handheld pendant controls lift platform, clutch, lighting, focus, travel direction and speed, and camera zoom and orientation.
- Rack-mount control unit integrates into operator's existing vehicle.
- Standard inclinometer for measuring and graphing grade.
- Survives damp and submerged environments (Crawler and camera rated IP68; reel rated IP63).
- Compatible with ROVVER 100 and ROVVER 125 crawlers, cameras and cables

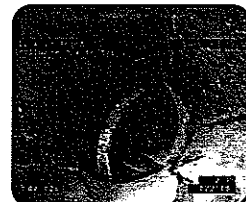
Rugged, Mobile and Easy-to-Use, The ROVVER 225 Crawler
Crawler Puts Unmatched Inspection Power in Your Hand.



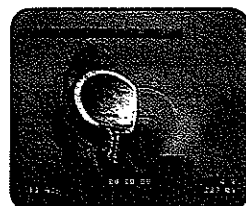
Below: One simple tool is all you need to swap out the ROVVER 225's cameras and cables.



•• Service Center Storm Culvert



•• Collapse Due to Tap-In.



•• Protruding Tap.



Specifications

*Specifications subject to change without notice.

Crawler

Dimensions	533mm (21") x 203mm (8") x 185mm (6.5") with small wheels
Weight	23.13 kg (51 lb)
Material	Brass, nickel plated, stainless steel, aluminum
Drive	Twin 40W DC motors, steerable 6-wheel drive, electric clutch for retrieval
SONDE	33 kHz
Depth Rating	IP68, 3' of water, 14.7 psi
Sensors	inclination ($\pm 10\%$), pressure

Camera

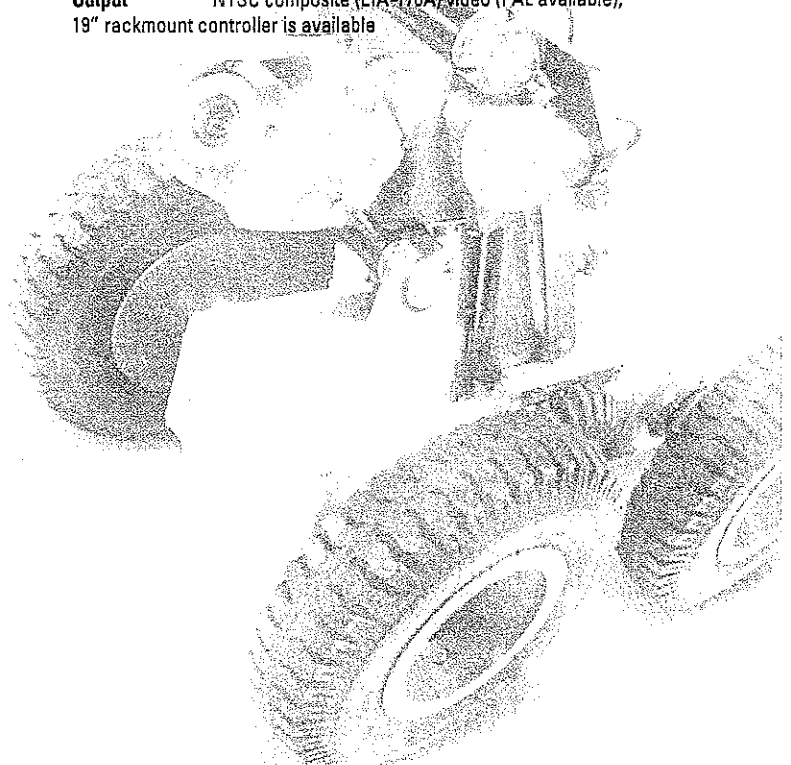
Type	0.5" color CCD camera, 1 lux sensitivity
Resolution	380,000 pixels, 420 HTV lines resolution
Zoom	optional 40:1 (10X optical; 4X digital)
Lens	4mm, f1.2, remote focus
Lens FOV	68° x 90° x 100° (VxHxD)
Focus	6mm (0.25") to infinity (remotely adjustable)
Dimensions	1.9" dia. x 2.75" long (axial); 3.2" dia. x 7.2" long (pan/tilt)
Camera Lift	Remote-operated for 9" to 28" pipe
Rating	IP68

Cable Drum

Cable	Standard Cable: 7 mm dia, 0.052 lb/ft Heavy-Duty Cable: 8.5 mm dia, 0.065 lb/ft <i>Both are multi-conductor with 227 kg (500 lb) Kevlar® strength member and polyurethane outer jacket. Both come in 101m (330'), 150m (492') and 200m (660') standard lengths, or custom lengths to 200m (660').</i>
Drum	Portable manual slip-ring cable drum with various cable lengths, or automatic motorized cable reel with level wind feature
Rating	IP63

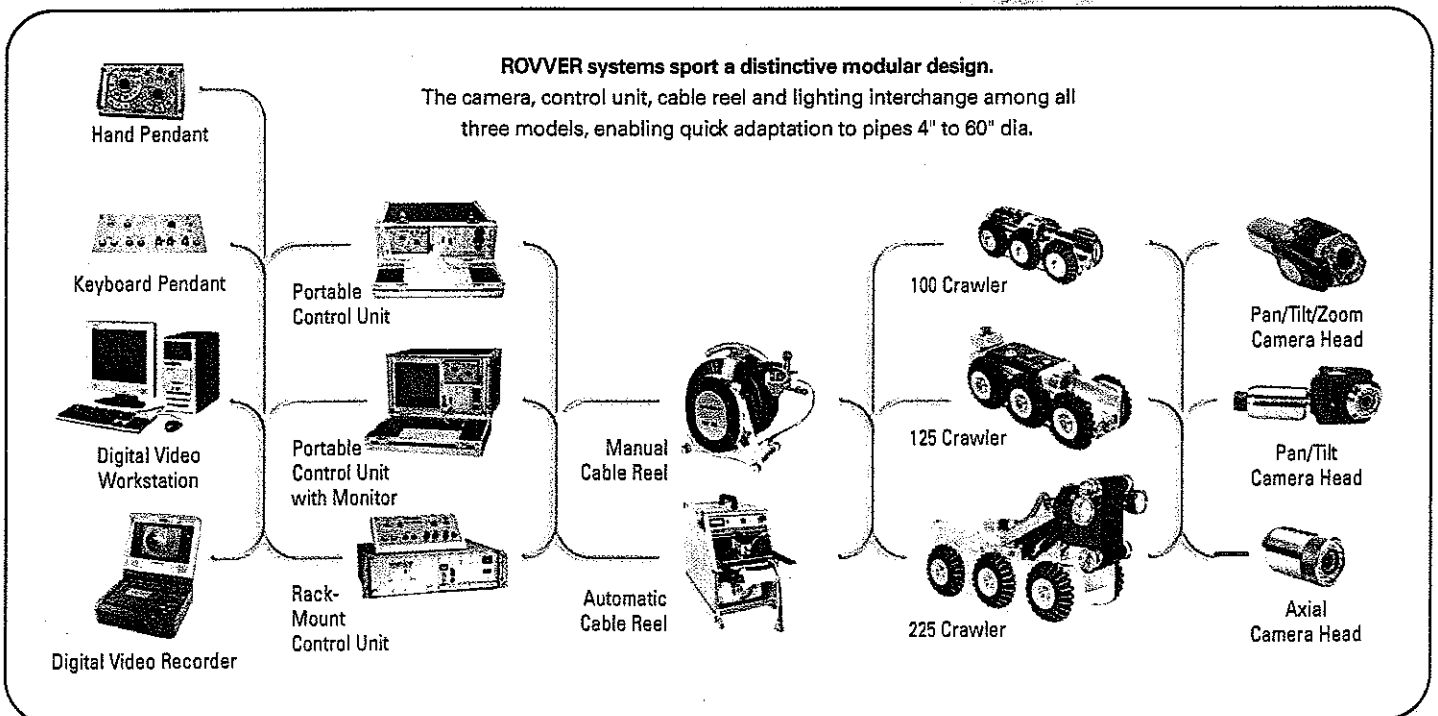
Control Unit

Size (dxwxh)	420mm (16.5") x 343mm (13.5") x 292mm (11.5")
Weight	18kg (40 lb)
Pendant Control	Left/right steering, crawler speed, light intensity, camera lift up/down, pan/tilt/zoom, clutch control, auxiliary light control, modular slide-in cards for upgrades/accessories
Power	110 Vac, 60 Hz (230 Vac optional)
Output	NTSC composite (EIA-170A) video (PAL available); 19" rackmount controller is available



ROVER systems sport a distinctive modular design.

The camera, control unit, cable reel and lighting interchange among all three models, enabling quick adaptation to pipes 4" to 60" dia.



BENEFITS: ENVIROSIGHT ROVVER 225

- **The HANDHELD REMOTE PENDANT CONTROL:**
The operator has the ability to operate at the control unit and/or at least 20 ft. away. The REMOTE PENDANT offers the following functions:
 - Automatic raise/lower of camera to center in pipes
 - Joystick used for steerability/forward/reverse
 - Joystick used for pan/tilt
 - Controls 40:1 Zoom In/out
 - Automatic focus w/ ability to convert to manual mode for pinpoint accuracy
 - Variable light control for Camera LED lights
 - Variable light control for auxiliary lights
 - Control to switch forward camera to rear camera
 - Variable speed control activating crawler

THIS FEATURE ALLOWS (1) ONE MAN OPERATION FOR PIPE/CULVERT INSPECTION.

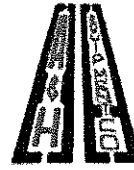
- **STANDARD INCLINOMETER & DISTANCE:**
The grade of the pipe will be measured and displayed on screen automatically during pipe inspection. The distance traveled will also be displayed on-screen continuously and both will record to dvd/vhs/ etc.. automatically.
- **AUTOMATIC CABLE REEL:**
This reel feeds cable out and retrieves cable automatically utilizing a motorized system w/ sensors to operate the cable drum @ the exact speed & direction of the crawler. The crawler and reel work together to eliminate need for crawler to pull cable off of the reel by itself, thus freeing up crawler for superior power & traction in the pipeline.

- **PRESSURIZATION INDICATORS:**
The crawler & camera have pressurization indicators built-in. These indicators allow operator to ensure that the system is pressurized and suitable for operation. The system is easily “charged” for submerged applications & is waterproofed.
- **FRONT & REAR VIEWING CAMERAS:**
The Rovver 225 offers a 40:1 Zoom Pan & Tilt Color Camera for standard inspection. The camera is made of 100% stainless steel. The Rovver 225 also offers as standard a Rear View Camera w/ lighting to assist operator in reverse or “coming back” to point of entry. This eliminates reversing “blind” These cameras are controlled by the remote pendant with a simple forward/reverse switch.
- **AUTOMATIC CAMERA HEIGHT ADJUSTMENT**
The crawler has an automatic adjustable platform lift To raise the camera above liquids/debris and to center the camera in pipes/culverts. This function is controlled by the handheld remote pendant.

1A)- 77800084

Recipient:

Michael Austin, Purchasing Division
 West Virginia Dept. of Administrati ...
 PO Box 50130
 2019 Washington St. East
 Charleston, WV 25305-0130
 USA
 304-558-2402, fax: 304-558-4115
 michael.d.austin@wv.gov

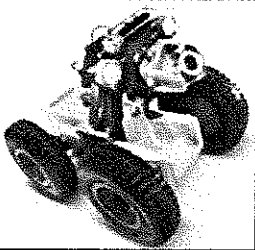
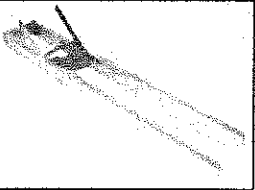
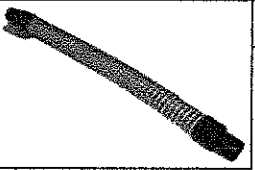


Jim Ahlborn, Sales Representative
 A&H Equipment Co.
 1124 McLaughlin Run Rd
 Bridgeville, PA 15017
 United States
 (412)257-1160, fax: (412)257-4471
 jdahlborn@comcast.net

Quote: 000008275

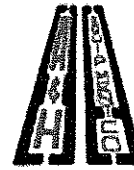
Date: May 13, 2008

Submitted by: A&H Equipment

	Part No.	Unit	Qty.	Extended
	E-046-0000-01	US \$64,500.00	1	US \$64,500.00
	ROVVER 225 Outpost / Portable Zoom System ROVVER 225 steerable crawler with set of 6 small wheel, set of 4 medium wheels, set of 4 large wheels, and BackEye camera. RA 200 motorized cable reel complete with 200 m of cable. Portable control unit with text generator, handheld pendant controller, and cherry keyboard. RC90 color pan/tilt/zoom camera with shipping case and spare windshield. Pressurization kit, lowering tool, tool kit and manual included.			
	E-000-0035-00	US \$327.07	1	US \$327.07
	Top Manhole Cable Roller Aluminum frame and rubber wheel with bearings protects cable from manhole top cover edge and reduces friction to improves crawler performance.			
	E-000-0036-00	US \$66.62	1	US \$66.62
	Tyger tail for manhole bottom cable protection 2 inch diameter rubber sleeve to protect cable from manhole bottom pipe entry.			
	SPCL	US \$200.00	1	US \$200.00
	TV/VCR Combination Player. 13" Color TV Screen with Built-in VCR for Real Time Recording.			

Recipient:

Michael Austin, Purchasing Division
West Virginia Dept. of Administrati ...
PO Box 50130
2019 Washington St. East
Charleston, WV 25305-0130
USA
304-558-2402, fax: 304-558-4115
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Quote: 000008275

Date: May 13, 2008

Submitted by: A&H Equipment

Part No.	Unit	Qty.	Extended
SPCL	US \$500.00	1	US \$500.00

Delivery & Training

Total: US \$65,593.69

Notes: This proposal may be withdrawn if not accepted within the period shown below. All equipment remains the property of the seller until sum stated above is paid in full. We propose to furnish labor and material, complete in accordance with above specifications, and subject to the conditions found on this agreement, for the sum stated above in accordance with the terms as specified.

Expiration Period: 30 days

Terms: Cash

FOB: Randolph, NJ

Currency: US \$

Respectfully Submitted,

A&H Equipment

The above, prices, specifications, and conditions are satisfactory and are hereby accepted. You are authorized for the work specified. Payment will be made as specified.

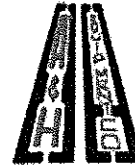
Accepted by _____

_____ Date

1B) - 77800084

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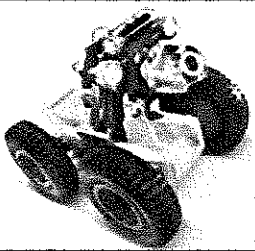


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Quote: 000008273

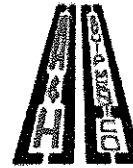
Date: May 13, 2008

Submitted by: A&H Equipment

Part No.	Unit	Qty.	Extended
 E-040-0952-00	US \$24,230.68	1	US \$24,230.68
ROVVER 225 Steerable Crawler Crawler with (6) small wheels, (4) medium wheels, (4) large wheels, control pendant, and necessary hardware			
E-016-0960-OUTP	US \$11,120.36	1	US \$11,120.36
Portable Control Unit customized for installation in OUTPOST I/O ports in front without fold down cover. Portable pendant can be operated away from the unit via a control cable-includes text generator (E-100-0130-05)			
E-064-0950-00	US \$22,806.25	1	US \$22,806.25
RC90 Zooming Pan/Tilt Camera (NTSC) Rovver RC90 Zooming Pan/Tilt Camera. 10:1 Optical Zoom plus 4:1 Digital Zoom. With Optional Laser Measurement			

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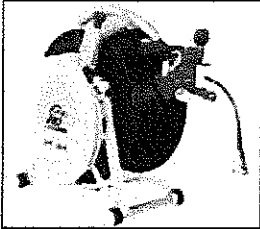
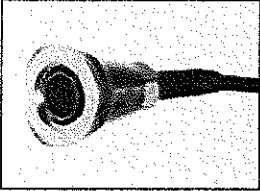


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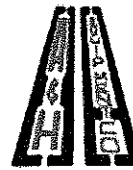
Date: May 13, 2008

Submitted by: A&H Equipment

	Part No. ▼	Unit ▼	Qty. ▼	Extended ▼
	E-044-0950-00	US \$7,431.25	1	US \$7,431.25
	RS200 Manual Cable Reel with Motorized Assist Cable reel with footage counter and motorized rewind assist. 200 meter capacity, requires cable.			
	E-200-1200-01	US \$5,475.74	1	US \$5,475.74
	200 Meter Cable Assembly Black GORE cable complete with connectors			
	SPCL	US \$200.00	1	US \$200.00
	TV/VCR Combination: 13" color screen TV w/ VCR Built-in for recording: Real time video.			

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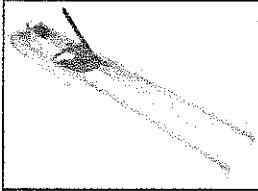
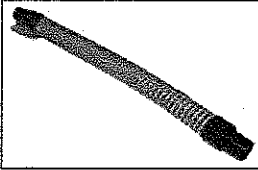


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Bridgeville, PA 15017
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(412)257-1160, fax: (412)257-4471
jdahlborn@comcast.net

Quote: 0000008273

Date: May 13, 2008

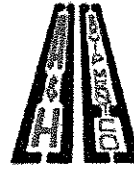
Submitted by: A&H Equipment

	Part No.	Unit	Qty.	Extended
	E-000-0035-00	US \$327.07	1	US \$327.07
	<p>Top Manhole Cable Roller Aluminum frame and rubber wheel with bearings protects cable from manhole top cover edge and reduces friction to improves crawler performance.</p>			
	E-000-0036-00	US \$66.62	1	US \$66.62
	<p>Tyger tail for manhole bottom cable protection 2 inch diameter rubber sleeve to protect cable from manhole bottom pipe entry.</p>			
	SPCL	US \$500.00	1	US \$500.00
	<p>Delivery and training to customer</p>			
	SPCL	US \$-13,000.00	1	US \$-13,000.00
	<p>Discount: Complete Rower 225 Portable Zoom System w/ Manual Reel w/ assist & addition of Rearview (Backeye) Camera.</p>			

Total: US \$59,157.97

Recipient:

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Quote: 000008273

Date: May 13, 2008

Submitted by: A&H Equipment

Part No.

Unit

Qty.

Extended

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Expiration Period: 30 days

Terms: Cash

FOB: Randolph, NJ

Currency: US \$

Respectfully Submitted,

A&H Equipment

The above, prices, specifications, and conditions are satisfactory and are hereby accepted. You are authorized for the work specified. Payment will be made as specified.

Accepted by

Date

CITY OF WHEELING



2516 MAIN STREET
P.O. BOX 6348
WHEELING, WEST VIRGINIA 26003

Water Pollution Control Division
(304) 234-3874 (Telephone)
(304) 234-3873 (FAX)
fit4ak@aol.com (e-mail)

May 16, 2008

Dear Sir or Madam:

This letter is to inform anyone that A&H Equipment is very reliable on their service. They go beyond their experience and expectations on any matter that deals with their equipment or other companies for whom they sell. They can be very competitive in bids on anything you may need for your business.

As a representative of the City of Wheeling Water Pollution Control Division, I would very highly recommend A&H Equipment for anything and everything that your business would need. If they do not have it, they will get it.

In particular, Wheeling WPCD currently runs an Envirosight Rovver System with two crawlers, the 125 and the 225. This camera system has been the most reliable, efficient and cost effective system that we have ever run. It is perfect for 6" - 8" pipes and tight inverts as well as performing in pipe diameters up to 60". We are completely satisfied with the Envirosight Rovver Camera System.

If you have any questions or need any additional information, please contact me at your earliest convenience at (304) 234-3874.

Sincerely,

A handwritten signature in black ink that reads "Rich Taylor". The signature is written in a cursive, flowing style.

Rich Taylor
CSO Coordinator
City of Wheeling WPCD



Headquarters

111 Canfield Ave., Unit A14
 Randolph, NJ 07869

Toll Free: 866.9ENVIRO (936.8476)

Direct: 973.252.6700

Fax: 973.252.1176

Specification: Steerable Motorized Crawler for 9-60" Dia. Pipe.

	Yes	No
1. The system shall include a gear driven; all wheel drive tractor to carry the camera for rapid remote inspection of pipes ranging from 9" to 48" diameter.	<input type="checkbox"/>	<input type="checkbox"/>
2. The tractor shall provide sufficient traction, under suitable conditions, to tow 660 feet of transmission cable. Such traction shall be provided by six gear driven wheels with tapered tires.	<input type="checkbox"/>	<input type="checkbox"/>
3. Tractors propelled by belts or continuous tracks will not be acceptable.	<input type="checkbox"/>	
4. The camera shall be easily removable from the tractor unit with a T-bar tool to facilitate service. This connector shall have a lifetime warranty.	<input type="checkbox"/>	<input type="checkbox"/>
5. The tractor shall be manufactured from machined solid brass and stainless steel and have a minimum weight of 50 lbs.	<input type="checkbox"/>	<input type="checkbox"/>
6. The tractor shall allow for axial camera to be fully enclosed (not sticking out in front of crawler) to provide for short length and added durability.	<input type="checkbox"/>	<input type="checkbox"/>
7. The tractor shall have a minimum size of 20" (487mm) long by 8.11" (206mm) wide and have a camera raise device that will raise the camera by 6.14" (156mm.)	<input type="checkbox"/>	<input type="checkbox"/>
8. The tractor shall include 3 wheel sizes and assorted spacers suitable to accommodate pipe inspection in 9" through 48" pipes. Spacers and wheels sizes shall attach with a keyway and single screw. No plates or spacer-bars will be accepted.	<input type="checkbox"/>	<input type="checkbox"/>
9. The tractor shall include 20 watts of additional on-board lighting remotely controlled via the CCU.	<input type="checkbox"/>	<input type="checkbox"/>
10. The tractor shall have forward/reverse and left/right steerable movement via the pendant control on the CCU.	<input type="checkbox"/>	<input type="checkbox"/>
11. The tractor shall have a visible internal pressure indicator allowing the operator to detect a pressure loss. A solid red indicator will show if the system is over-pressurized, green indicator when the system is holding between 5 and 10 lbs of pressure and blinking red indicator for when pressure is below 5 lbs.	<input type="checkbox"/>	<input type="checkbox"/>
12. The water depth rating shall not be less than 1 bar or 33 feet.	<input type="checkbox"/>	<input type="checkbox"/>



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Specification: Steerable Motorized Crawler for 9-60" Dia. Pipe.

- | | Yes | No |
|---|--------------------------|--------------------------|
| 13. The tractor shall have machined key fitting on all 6 axles to facilitate easy use and ensure an exact fit. Machined axle key must be able to be replaced in the field without having to replace the axle. | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. The tractor shall have a tilting rear cable connector that points vertically when deploying the system into a manhole but can tilt into a horizontal position during operation. | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. The tractor shall have a strain relief system for the cable that is comprised of (2) high strength steel cables and a aluminum capture device to secure to cable. | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. The tractor shall allow for a 512 Hz integral sonde to allow for locating crawler with a receiver. | <input type="checkbox"/> | <input type="checkbox"/> |
| 17. The tractor shall allow for future SSET camera technology upgrade. | <input type="checkbox"/> | <input type="checkbox"/> |



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Specification: Zooming Pan/Tilt Color Camera

	Yes	No
1. The pan & tilt camera must connect directly to the cable, and minimum 4", 5.5" and 9" ID crawler without modification to the cable, control unit or any other part of the system.	<input type="checkbox"/>	<input type="checkbox"/>
2. When connected to any crawler there can not be external wires, connectors, clamps or tie-downs.	<input type="checkbox"/>	<input type="checkbox"/>
3. The camera will pan (+/- 175°) and tilt (+/- 135°) allowing for full view of laterals and joints.	<input type="checkbox"/>	<input type="checkbox"/>
4. Camera will have the ability to view behind crawlers to inspect upstream lateral rubber seal on gravity flow PVC pipes.	<input type="checkbox"/>	<input type="checkbox"/>
5. Pan and tilt will have mechanical stops to avoid slip-ring maintenance issues and prevent camera from inadvertently being directly positioned into dirty flow at bottom of pipe.	<input type="checkbox"/>	<input type="checkbox"/>
6. Camera must have 10X optical 4X digital zoom capability for viewing up laterals and magnifying observations.	<input type="checkbox"/>	<input type="checkbox"/>
7. Camera construction shall include all solid-state circuitry designed to withstand shocks and vibrations while being pushed, pulled or propelled through the pipe.	<input type="checkbox"/>	<input type="checkbox"/>
8. All camera electronics shall be of modular construction for ease of exchange and repair, and shall be designed to facilitate future upgrades.	<input type="checkbox"/>	<input type="checkbox"/>
9. The front of the camera housing shall have a windshield made of impact resistant, distortion-free material.	<input type="checkbox"/>	<input type="checkbox"/>
10. The housing shall be fully sealed and waterproof (IP68) to withstand external pressure up to 15 psi without damage or leaking.	<input type="checkbox"/>	<input type="checkbox"/>
11. The camera power supply shall be provided from a solid-state power source and the camera input shall be 12 volts DC. The lighting for the camera shall be supplied through an isolated power supply and shall regulate the light voltage up to a nominal 36 volts DC.	<input type="checkbox"/>	<input type="checkbox"/>
12. Pan/Tilt Motor power 12V/3Watt.	<input type="checkbox"/>	<input type="checkbox"/>
13. The camera shall be designed for easy removal and installation from the cable or tractor by using a single T-bar tool to keyed stainless steel waterproof swivel loc-tite camera and cable connections. Other types of connectors will not be acceptable.	<input type="checkbox"/>	<input type="checkbox"/>



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Specification: Zooming Pan/Tilt Color Camera

	Yes	No
14. Camera illumination must be provided with a minimum of 28 field-replaceable LED's that have a 50 degree lighting angle and provide 45000mcd/piece to light pipes up to 60" diameter.	<input type="checkbox"/>	<input type="checkbox"/>
15. The camera shall have a visible internal pressure indicator allowing the operator to detect a pressure loss. A solid red indicator will show if the system is over-pressurized, green indicator when the system is holding between 5 and 10 lbs of pressure and blinking red indicator for when pressure is below 5 lbs.	<input type="checkbox"/>	<input type="checkbox"/>
16. Camera shall have shraeder valve for purge and pressurization of camera-body. Pressurization prevents the ingress of water during an accident and provides a dry air internal environment to prevent fogging of inner lens during changing external temperatures.	<input type="checkbox"/>	<input type="checkbox"/>
17. Camera will pan and tilt at the same time to increase speed of inspection and home position placement when continuing forward. Cameras that require a two-step process by having to pan and then separately tilt will be deemed unacceptable.	<input type="checkbox"/>	<input type="checkbox"/>
18. Camera must not weigh more than 3.75 lb. / 1.7kg.	<input type="checkbox"/>	<input type="checkbox"/>
19. Camera must have a maximum size of (79mm x 110mm x 75mm) in order to fit into a diameter of 3.5" / 88mm.	<input type="checkbox"/>	<input type="checkbox"/>
20. Side stainless plates must be a minimum or 13mm for increased durability when inserting the camera in a manhole.	<input type="checkbox"/>	<input type="checkbox"/>
21. Rotation axle must be made of a minimum of 15mm stainless steel.	<input type="checkbox"/>	<input type="checkbox"/>
22. Following camera functions must be able to be controlled via a remote pendant:		
a. Single click for normal Zoom IN/OUT.	<input type="checkbox"/>	<input type="checkbox"/>
b. Double Click same button for full IN/OUT Zoom position.	<input type="checkbox"/>	<input type="checkbox"/>
c. Hold down for longer than 1 .5 sec for fast zoom IN/OUT.	<input type="checkbox"/>	<input type="checkbox"/>
d. Shutter speed button for Up, Down and Auto.	<input type="checkbox"/>	<input type="checkbox"/>
e. Focus button for far, near and auto.	<input type="checkbox"/>	<input type="checkbox"/>
f. Button for centering pan and tilt to center forward position.	<input type="checkbox"/>	<input type="checkbox"/>



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Specification: Zooming Pan/Tilt Color Camera

	Yes	No
g. Double click home button to set wide zoom setting.	<input type="checkbox"/>	<input type="checkbox"/>
h. Joystick control of pan and tilt.	<input type="checkbox"/>	<input type="checkbox"/>
i. Rheostat control of lighting.	<input type="checkbox"/>	<input type="checkbox"/>
23. Pan and tilt must have integrated clutch for pan and tilt motor.	<input type="checkbox"/>	<input type="checkbox"/>



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Specification: Motorized Auto-Sensing Cable Drum

	Yes	No
1. A cable drum shall be provided to contain the cable for camera and crawler operation.	<input type="checkbox"/>	<input type="checkbox"/>
2. The hub of the cable drum shall be equipped with a continuous contact slipping assembly to allow the cable to be dispensed and retrieved while the camera and tractor are operational.	<input type="checkbox"/>	<input type="checkbox"/>
3. The slip ring contacts shall be of an alloy of gold and rhodium and must be housed in an environmentally sealed housing.	<input type="checkbox"/>	<input type="checkbox"/>
4. Cable feed out and retrieval must happen AUTOMATICALLY via a motorized system with sensors that operate the cable drum at the exact speed and direction of the crawler. Cable is paid-out or "pushed" toward the crawler so the crawler does not have to pull the cable off the reel and reduce power and traction. Cable reels that require operator control or lack the ability to operate in tandem with speed and direction of the crawler without adjustment will be deemed unacceptable.	<input type="checkbox"/>	<input type="checkbox"/>
5. Cable reel must have a level wind system which neatly rolls and stores cable without excessive loops or tangling.	<input type="checkbox"/>	<input type="checkbox"/>
6. The cable drum must have a red lighted emergency stop switch.	<input type="checkbox"/>	<input type="checkbox"/>
7. To further enhance safety, the cable drum must have an automatic shut down if the cable reel is tilted beyond 30 degrees.	<input type="checkbox"/>	<input type="checkbox"/>
8. The cable drum must have a normal and inverse switch which allows the crawler controls to be used normally if the crawler was to flip and be operated in an upside down position.	<input type="checkbox"/>	<input type="checkbox"/>
9. The cable drum must be able to operate in both automatic and manual modes.	<input type="checkbox"/>	<input type="checkbox"/>
10. System must have back-up manual crank arm in case of power loss.	<input type="checkbox"/>	<input type="checkbox"/>
11. Front panel must have LCD readout of footage.	<input type="checkbox"/>	<input type="checkbox"/>
12. System must have outward cable rolling arm to help with pressures of cable when crawler is being reversed and for allowing for easy deployment when crawler is moving forward. Roller and arms must be able to be stored in an upright position when not in use to facilitate portability.	<input type="checkbox"/>	<input type="checkbox"/>



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Specification: Motorized Auto-Sensing Cable Drum

	Yes	No
13. Cable reel system must have overheat sensor protection so motors will not be destroyed if the reel were to pull on an object that is not moving for a long period of time.	<input type="checkbox"/>	<input type="checkbox"/>
14. The cable drum must have speed and torque controls to adjust for different pipe conditions and user preferences.	<input type="checkbox"/>	<input type="checkbox"/>
15. The cable reel shall not weigh more than 95 lbs. with 660 feet of cable.	<input type="checkbox"/>	<input type="checkbox"/>
16. Cable reel must have top handle to be able to be carried easily into the field.	<input type="checkbox"/>	<input type="checkbox"/>
17. Cable reel system must come with 20' control cable to control unit and have ability to work with a 165 foot extension cable.	<input type="checkbox"/>	<input type="checkbox"/>
18. Cable drum must come with stationary mounting plate where cable drum remains secure, but can easily be removed for maintenance, shipping or portable use without the use of any tools or loose hardware.	<input type="checkbox"/>	<input type="checkbox"/>
19. Cable drum must come in a single UPS capable shipping case.	<input type="checkbox"/>	<input type="checkbox"/>
20. The system shall include a footage counter attached to the counter arm assembly which extends from the cable drum.	<input type="checkbox"/>	<input type="checkbox"/>
21. The footage counter assembly shall be constructed of machined aluminum parts and shall include the necessary guide wheels to maintain cable tension.	<input type="checkbox"/>	<input type="checkbox"/>
22. The footage counter shall measure passage of the cable from the wheel graduated in 0.1-foot steps up to 660 feet.	<input type="checkbox"/>	<input type="checkbox"/>
23. The footage counter shall function electronically and transmit footage data for monitor display and video recording.	<input type="checkbox"/>	<input type="checkbox"/>
24. Size of cable drum must not be greater than 14" x 21" x 20" (W x L x H).	<input type="checkbox"/>	<input type="checkbox"/>
25. Cable drum not to pull more than 2 amps at 115V.	<input type="checkbox"/>	<input type="checkbox"/>
26. Cable drum must work with minimum 4" ID pipe crawler and minimum 9" pipe ID crawler without any modifications.	<input type="checkbox"/>	<input type="checkbox"/>



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ROVVER Inspection Equipment Advantages

Company

Envirosight is a New Jersey-based manufacturer of video equipment located in Randolph. Our proximity makes it efficient and easy for New Jersey customers to get service and training.

System

Overall, ROVVER has been an extremely successful municipal system due to ease of use, innovative features and portability. It consumes less power, allowing it to run off a small vehicle's inverter or small generator.

The ROVVER system was developed 17 years ago. Since inception, many new upgrades and advancements have been made available. This philosophy continues with future planned upgrades such as:

- SSET / DigiSewer Technology
- Zoom camera
- Laser profiler
- Rear-viewing camera

An investment made in current ROVVER technology comes with the assurance that future enhancements will be made available on an upgrade basis.

The ROVVER system is compact and easy to install into existing vehicles without significant modification, power sources or tooling. It has the reputation of being the easiest to use crawler system; a single handheld pendant operates all functions, which allows for easy training and operation by several technicians. No expertise is required.

Cable Reel

The cable reel automatically pays out and retrieves cable, allowing for single-person operation. Other systems have motorized reels, but are not automatic.

The cable reel automatically manages cable to the exact speed and direction of the crawler to prevent running over the cable or getting stuck.

The cable reel weighs just 90 pounds (lightest in the industry) with the maximum length of cable, making it more portable, easier to remove during service, and well-suited for performing inspections in off-road and easement locations.

Cable

ROVVER cable is thinnest and lightest in the industry, allowing for very easy operation and the use of a crawler that is much smaller than other systems.

Specialists in Pipeline Inspection

www.envirosight.com



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Crawler

The 6-wheel steerable crawler is the industry's shortest in length and lightest in weight. This allows for easy and safe use.

Crawler size, weight and steerability also provide extreme versatility for storm and sanitary pipeline applications.

Even though it is small, the crawler does not lack any capability. It can be outfitted with camera raise devices, rear-view camera, auxiliary lighting and several types of cameras within minutes.

Camera

All ROVER cameras use LED illumination technology and come with lifetime warranty.

Cost of Ownership

90% of ROVER customers experience cost of ownership that is less than \$5,000 within 3 years. This is the lowest in the industry; less than 3% of Envirosight revenue is generated from repairs compared to 30-50% for other manufacturers.

ROVVER™ 125

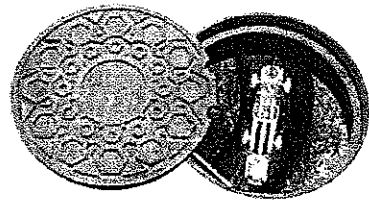
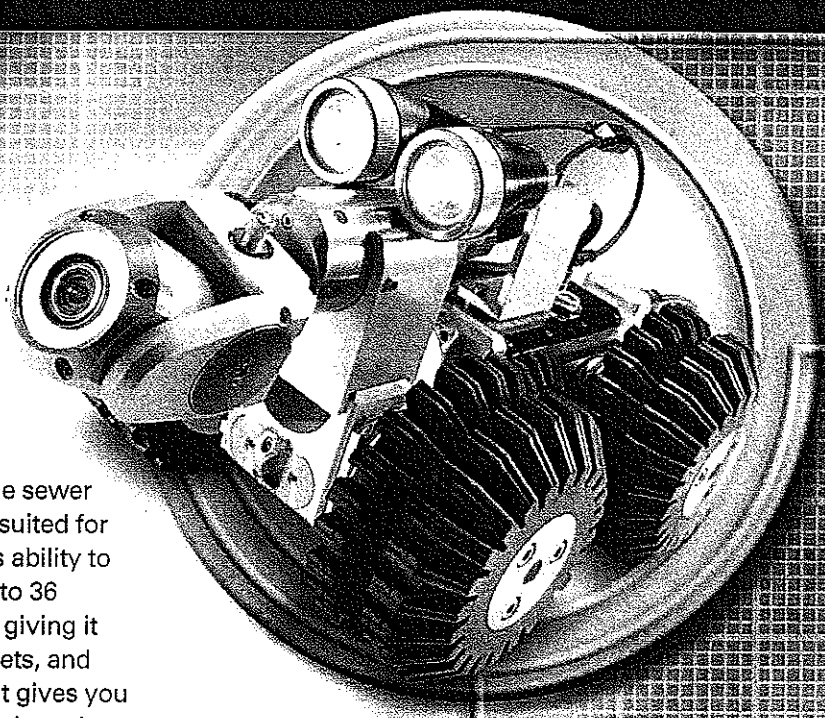
Fast, Portable Solution
for Environmental
Pipe Inspections.

The ROVVER® 125 is the most portable and versatile sewer inspection crawler on the market today. It is ideally suited for many applications due to its modular design and its ability to inspect inside pipes with diameters ranging from 6 to 36 inches. It is the smallest crawler in its class, thereby giving it the ability to pass through restricted pipe, large offsets, and protruding pipe taps. The ROVVER's remote pendant gives you the ability to control focus, lighting, zoom, camera orientation, steering and travel direction.

Features/Benefits:

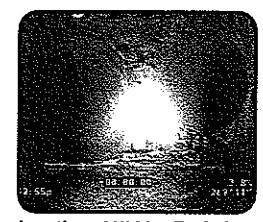
- Modularity allows a single system to view 6" to 36" lines
- Small profile allows for long runs and panning/tilting in 6" to 36" Ø pipe
- Quick-disconnect allows for easy use, low maintenance and time savings
- Handheld pendant for control of lighting, focus, speed, pan/tilt, zoom and steering
- Rack-mount control unit integrates into existing vehicle
- Waterproof for damp and submerged areas (crawler/camera rated IP68; reel rated IP63)
- NRTL listed and labelled for Safe Use in Sewer Applications
- Standard inclinometer

Rugged, Mobile and Easy-to-Use. The ROVVER 125 Robotic Crawler. Put the Power of ROVVER 125 in Your Hands.

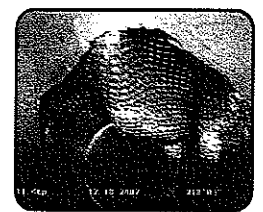


Above: Short wheelbase and steerability allow ROVVER 125 to travel with ease through 45 degree sewer inverts.

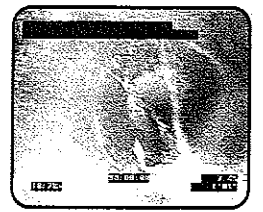
Below: One simple tool is all you need to swap out the ROVVER 125's cameras and cables.



•• Location of Hidden/Buried Stormwater Vault



•• Failed Outer Pipe Patch



•• Severe Water Infiltration

Specifications

*Specifications subject to change without notice.

Crawler

Dimensions	305mm (12") x 121mm (4.75") x 95mm (3.75")
Weight	7.25 kg (16 lb)
Material	Brass, nickel plated, stainless steel, aluminum
Rating	IP68
Drive	Twin 20W DC motors, 6-wheel drive, steerable

Camera

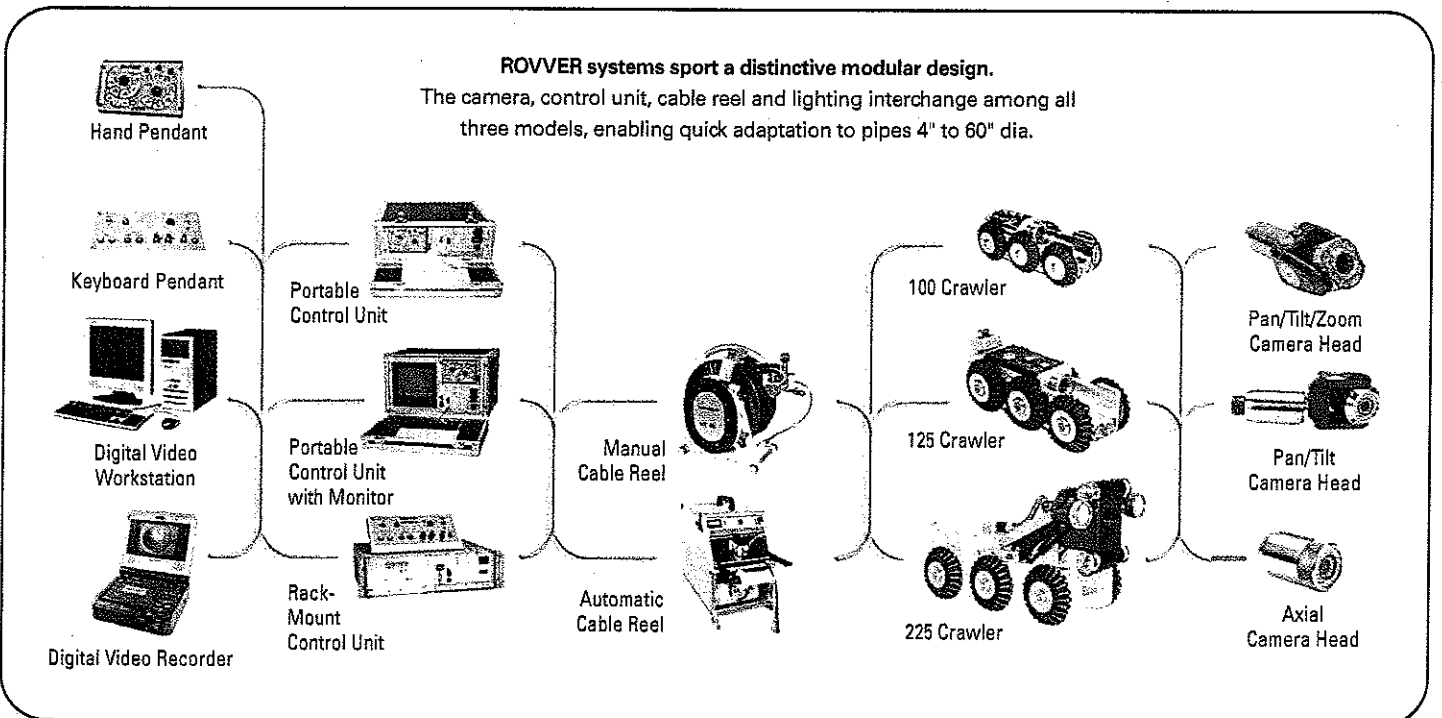
Type	0.5" color CCD camera, 1 lux sensitivity
Resolution	380,000 pixels, 420 HTV lines resolution
Zoom	optional 40:1 (10X optical; 4X digital)
Lens	4mm, f1.2, remote focus
Lens FOV	68° x 90° x 100° (VxHxD)
Focus	8mm (0.25") to infinity (remotely adjustable)
Dimensions	2" dia. x 2.9" long
Rating	IP68

Cable Drum

Cable	Standard Cable: 7 mm dia, 0.052 lb/ft Heavy-Duty Cable: 8.5 mm dia, 0.065 lb/ft <i>Both are multi-conductor with 227 kg (500 lb) Kevlar® strength member and polyurethane outer jacket. Both come in 101m (330'), 150m (492') and 200m (660') standard lengths, or custom lengths to 200m (660').</i>
Drum	Portable manual slip-ring cable drum with various cable lengths, or automatic motorized cable reel with level wind feature
Rating	IP63

Control Unit

Size (dxwxh)	420mm (16.5") x 343mm (13.5") x 292mm (11.5")
Weight	18kg (40 lb)
Pendant Control	Left/right steering, pan/tilt/zoom, crawler speed, light intensity, modular slide-in cards for upgrades/accessories
Power	110 Vac, 60 Hz
Output	NTSC composite (EIA-170A) video (PAL available); 19" rackmount controller is available



ROVVER™ 225

The Ultimate Solution
For Large-Diameter
Pipe Inspection.

When you need an adjustable viewing height range and the power to inspect through rough terrain, ROVVER® 225 is the inspection crawler to use. For optimum large-diameter (9–60") pipe inspection, ROVVER 225's pendant-controlled lift platform adjusts camera height from 6–12", centering the camera in the pipe for optimum magnification and undistorted inspection in any direction. This rugged, all-wheel-drive crawler moves easily over debris and around multiple turns. A remotely-operated clutch releases the wheels for free-wheeling retrieval.

ROVVER 225 carries a pan/tilt, pan/tilt/zoom or forward viewing color video camera, plus retrieval, sensing or sampling equipment to distances as far as 660'. Its modular design and ability to inspect pipes with diameters larger than 9" make it ideally suited for a range of applications. ROVVER's remote pendant enables an operator to raise and lower the camera, change camera zoom and orientation, control focus and lighting, engage the clutch and steer the crawler around obstacles such as debris and offsets.

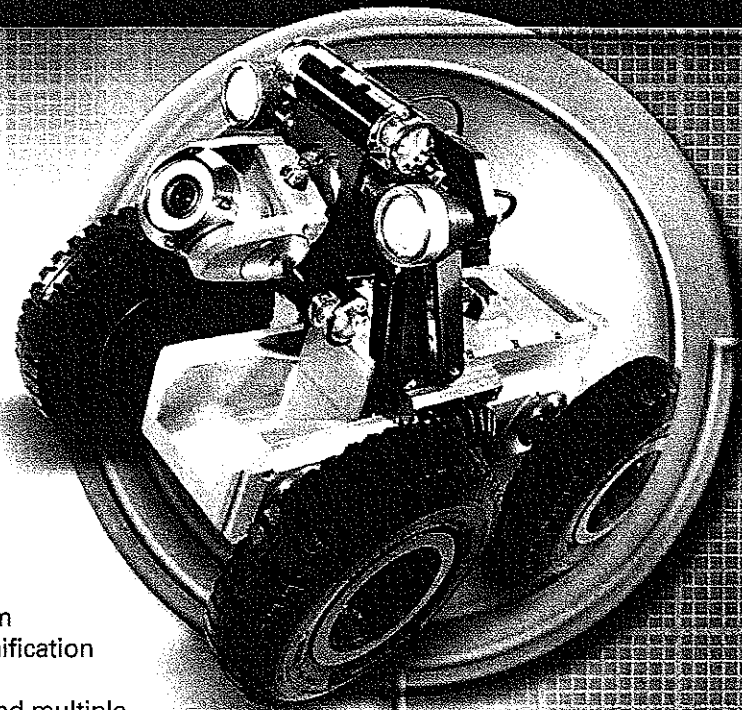
Applications

- Wastewater and storm water lines
- Oil and steam lines
- Service water intake lines

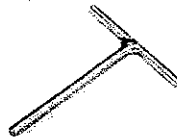
Features/Benefits

- Adjustable platform lifts camera above liquids/debris to view from pipe center line.
- Strong and steerable, it moves easily over and around debris and offsets.
- Quick disconnect simplifies use, reduces maintenance and speeds set-up.
- Handheld pendant controls lift platform, clutch, lighting, focus, travel direction and speed, and camera zoom and orientation.
- Rack-mount control unit integrates into operator's existing vehicle.
- Standard inclinometer for measuring and graphing grade.
- Survives damp and submerged environments (Crawler and camera rated IP68; reel rated IP63).
- Compatible with ROVVER 100 and ROVVER 125 crawlers, cameras and cables

Rugged, Mobile and Easy-to-Use, The ROVVER 225 is a
Crawler Plus Unmatched Inspection Power in Your Hand.



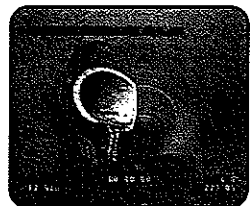
Below: One simple tool is all you need to swap out the ROVVER 225's cameras and cables.



•• Service Center Storm Culvert



•• Collapse Due to Tap-In.



•• Protruding Tap.



Specifications

*Specifications subject to change without notice.

Crawler

Dimensions	533mm (21") x 203mm (8") x 165mm (6.5") with small wheels
Weight	23.13 kg (51 lb)
Material	Brass, nickel plated, stainless steel, aluminum
Drive	Twin 40W DC motors, steerable 6-wheel drive, electric clutch for retrieval
SONDE	33 kHz
Depth Rating	IP68, 3' of water, 14.7 psi
Sensors	inclination ($\pm 10\%$), pressure

Camera

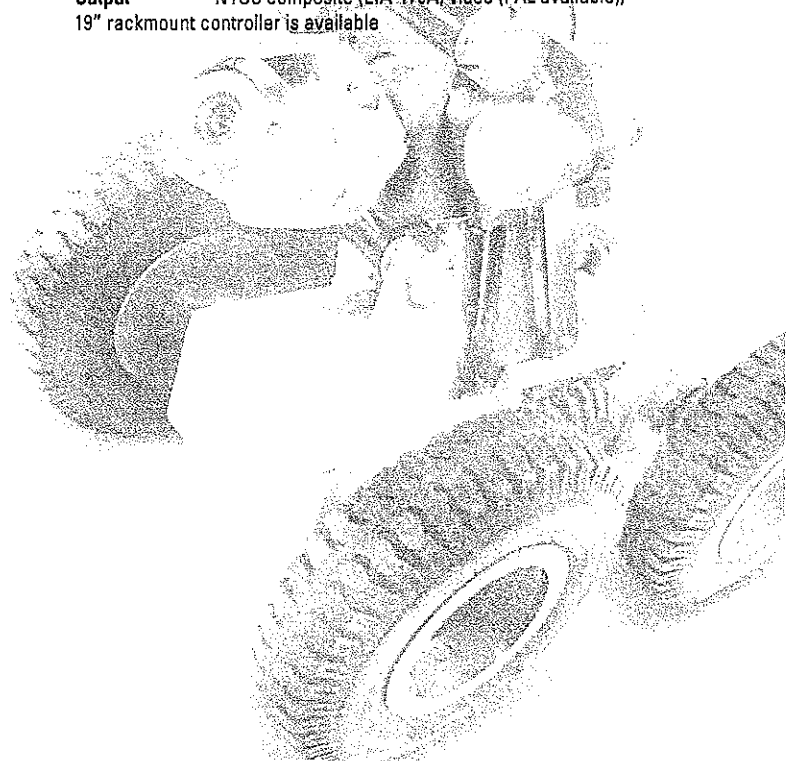
Type	0.5" color CCD camera, 1 lux sensitivity
Resolution	380,000 pixels, 420 HTV lines resolution
Zoom	optional 40:1 (10X optical; 4X digital)
Lens	4mm, f1.2, remote focus
Lens FOV	68° x 90° x 100° (VxHxD)
Focus	6mm (0.25") to infinity (remotely adjustable)
Dimensions	1.9" dia. x 2.75" long (axial); 3.2" dia. x 7.2" long (pan/tilt)
Camera Lift	Remote-operated for 9" to 28" pipe
Rating	IP68

Cable Drum

Cable	Standard Cable: 7 mm dia, 0.052 lb/ft Heavy-Duty Cable: 8.5 mm dia, 0.065 lb/ft <i>Both are multi-conductor with 227 kg (500 lb) Kevlar® strength member and polyurethane outer jacket. Both come in 101m (330'), 150m (492') and 200m (660') standard lengths, or custom lengths to 200m (660').</i>
Drum	Portable manual slip-ring cable drum with various cable lengths, or automatic motorized cable reel with level wind feature
Rating	IP63

Control Unit

Size (dxwxh)	420mm (16.5") x 343mm (13.5") x 292mm (11.5")
Weight	18kg (40 lb)
Pendant Control	Left/right steering, crawler speed, light intensity, camera lift up/down, pan/tilt/zoom, clutch control, auxiliary light control, modular slide-in cards for upgrades/accessories
Power	110 Vac, 60 Hz (230 Vac optional)
Output	NTSC composite (EIA-170A) video (PAL available); 19" rackmount controller is available



ROVER systems sport a distinctive modular design.

The camera, control unit, cable reel and lighting interchange among all three models, enabling quick adaptation to pipes 4" to 60" dia.

