



CITY of NOVI CITY COUNCIL

**Agenda Item 2
September 12, 2016**

SUBJECT: Approval to purchase a Ford E450 Camera Utility Van with a 16-foot box and equipped with IBAK pipeline inspection equipment, through the HGACBuy Cooperative Purchasing Program, in the amount of \$193,999.

SUBMITTING DEPARTMENT: Department of Public Services, Water and Sewer Division *BLC* *(74)*

CITY MANAGER APPROVAL: *[Signature]*

EXPENDITURE REQUIRED	\$ 193,999
AMOUNT BUDGETED	\$ 205,700
LINE ITEM NUMBER	592-592.00-984.009 (WTS015 Camera Utility Van)

BACKGROUND INFORMATION:

The purchase of a new camera utility van equipped with pipeline inspection equipment was approved in the FY 16-17 budget. This van and camera equipment will replace the Water and Sewer Division's existing camera inspection equipment that is mounted in an enclosed trailer. This camera system is being replaced because it has not been durable enough to handle the amount of use it gets, having experienced frequent breakdowns that have been costly and have resulted in considerable inspection crew downtime when the equipment is out of service. The new camera setup will allow for the 100,000 feet or more of sanitary sewer inspection that needs to be completed each year. Since the inspection equipment is contained in the van, rather than being pulled behind in a trailer, manholes will be much more accessible and disruption to traffic can be minimized.

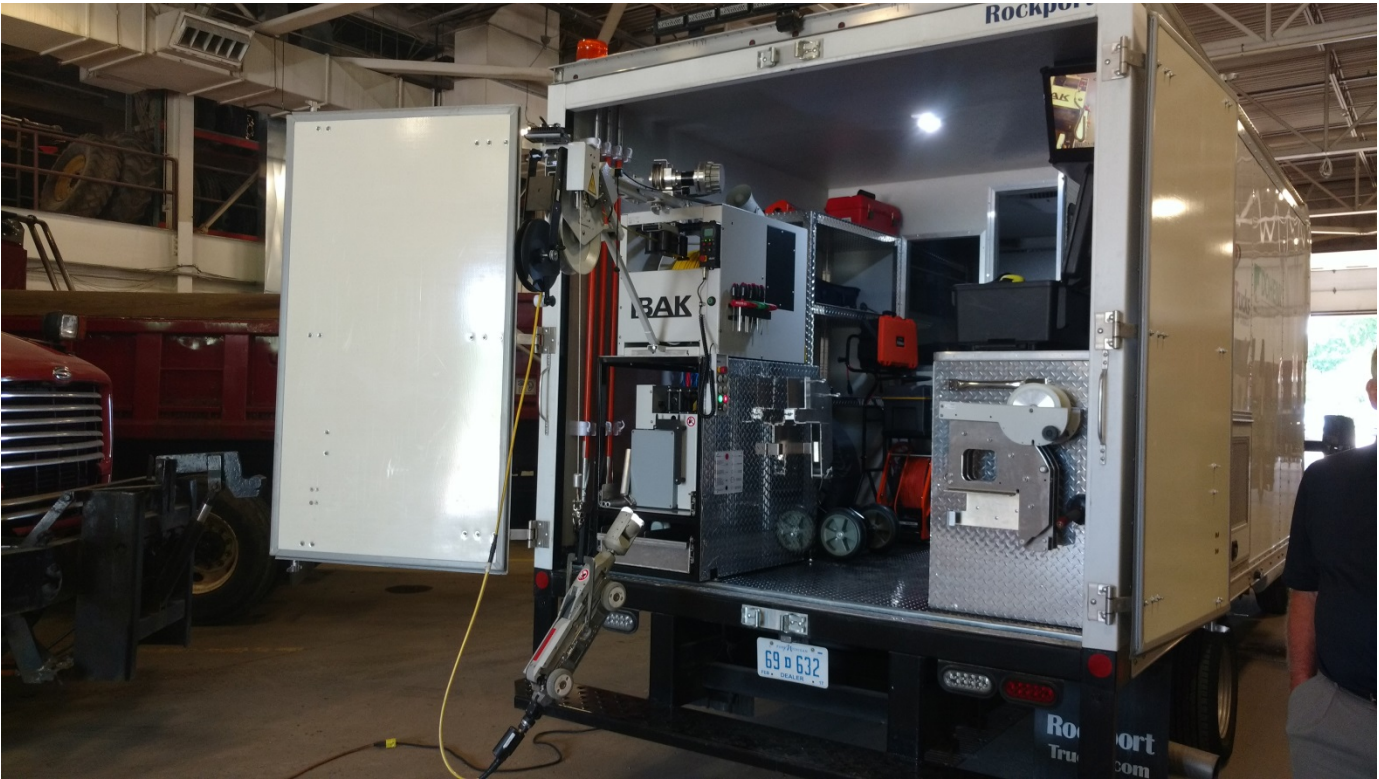
This van and inspection equipment will be purchased from the Jack Doheny Company with the purchase pricing based on the Houston-Galveston Area Council Cooperative Purchasing Program (HGACBuy).

Delivery of the equipment is anticipated within two weeks of award.

RECOMMENDED ACTION: Approval to purchase a Ford E450 Camera Utility Van with a 16-foot box and equipped with IBAK pipeline inspection equipment, through the HGACBuy Cooperative Purchasing Program, in the amount of \$193,999.

	1	2	Y	N
Mayor Gatt				
Mayor Pro Tem Staudt				
Council Member Burke				
Council Member Casey				

	1	2	Y	N
Council Member Markham				
Council Member Mutch				
Council Member Wrobel				



Inspection equipment at rear of van.



Command center controls inside van.



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NORTHVILLE MI 48167

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September 2, 2016

Mr. Scott Roselle/Mr. Ben Croy
Water & Sewer Asset Mgr.
City of Novi
26300 Lee BeGole Drive
Novi, MI 48375
P: 248-735-5644
F: 248-735-5659

Dear Sirs:

We are pleased to provide you with a budget proposal for the following IBAK pipeline inspection equipment mounted into a Ford E450 gasoline van with 16' box:

CAMERA

**ORION Zoom Pan and Tilt Camera With 3X Digital Zoom, With Case
(Requires Additional Software for Laser Measuring Capability)**

For 4" pipe and larger
LED lighting
Auto-uprighting, LED Lighting and 33Hz Transmitter for locate
Wide angle of view = 90°
Laser diameter, deformation, defect and object measurement (third-party software required - not included)
3X Digital Zoom (allows dynamic viewing up into laterals and further down the pipeline)

Orange fiberglass lifting poles with lift hook adapter
Pressure Test Set for JUNO / ORION / ORPHEUS, Hand pump with air dehumidifier and pressure gauge

CAMERA TRACTOR

T76 Steerable Large Camera Tractor

For operation in 5" pipe or larger

Lowering Claw, toolset and spare parts

Steerable Camera carriage with Zero Turn Radius and Auto Tilt Compensation (ATC)

Test adapter, lowering claw ASG5

Maintenance tools and Bolt Set

Wheel set 86 For 5," 6", 8", 10" Pipe

Applicators for Wheel Change

(2) sets of rubber tires for each wheel size

Camera Base Module for T76 Tractor (Required for operation of T76 as mainline tractor)

Includes integrated transmitter for location

Remote Elevator for T76 (Raises the camera to allow centering in pipeline) - lifts camera above water line in pipes with flow

Small Pneumatic Tires (set of 4) for T76 /86 / PANORAMO / LISY (Grey)

Large Pneumatic Tires (set of 4) for T76 /86 / PANORAMO / LISY (Black)

T76/86 Treaded Wheelset for 8" and up (Brown/Hard), Includes hubs and replaceable tires (set of four)

High-Traction Carbide Wheels for 8" Pipe

Tool Set for T76

Tractor Lowering Hook With Quick Disconnect

SYSTEM CONTROL UNIT

BS3.5 Control Unit Type, Vehicle Mounted Control Panel (includes extension cable to the drum)

Remote Command And Control Center With Touch Screen Color LCD Panel

Control Of The Camera And KRA Functions

Two (2) Multi-function Joysticks

LCD Display For Operating Functions

Built-in MPEG Recorder

10" color monitor with removable anti dazzle shield

In and output of video signal

RS232 interface

Data display generator

Operating voltage 90-240VAC

Integrated QWERTY Keyboard

Connection Cable KT180/KW180 to BK3/BE3 For permanent installation, length 16 feet

CABLE AND REEL

KW305 Cable Reel with Boom Work Light (1,000 Ft Standard Cable ONLY)

Synchronized Cable Extraction and Retraction

Includes Adaptor Cable to BK and BE

Automatic level wind assembly

For operation from the operator's and rear sections of vehicle

Remote control unit

Swivel boom

Electric footage meter transmitter with rear display digital indicator

For 1000 feet of camera cable 524/11

Motor driven tractor lowering winch

Boom Work Light 12V/55W

KUV 2.7 Cable Deflection Pulley for Fiber Optic and Standard Cable

Rack: KW Reel cabinet with 2 Aluminum sliding drawers (mandatory for LISY system)

Camera Cable - 1000 feet, Type 524/11 Terminated with connectors, High strength, 2000lb. pull, Kevlar reinforced

COMPUTER HARDWARE

Standard 19" Rack Mount Computer with 19" LCD Flat Panel Monitor, Keyboard / Mouse Combo, 240 gB solid state hard disk for operating system, 2tB internal Hard Disk for data storage, Multi-Format Read / Write DVD Burner, 8gB RAM, PCI Express Slot Video Card, Windows Operating

CHASSIS

Current Model Ford E450 Gasoline 14,200 GVWR with 16' Hi-Cube body

BODY OUTFITTING

Inspection van body outfitting - Gasoline Chassis

5500 watt gasoline generator mounted above deck and tied to chassis fuel system

13,500 BTU roof mounted air conditioner with heat strip

Insulated, 7/16" plywood and White Kemplite covered walls

Black Diamond Plate design PVC floor covering

Partition wall with Diamond Plate and Windowed Door

Formica Cabinetry

Formica Countertop & lockable office file cabinet

7-Drawer Tool box

Roof mounted strobe light kit

Studio LCD Flat panel monitor with speakers

Rear Facing LCD Monitor in Equipment Room

Equipment washdown system: 30 gallon

Dual roof mounted 22 watt strobes installed

Carbon monoxide detector mounted in studio

Rear LED arrow board mounted

Rear vision camera with dash mounted monitor

Fiberglass Abrasion Resistant Safety Ring for Manhole

Note: Price does not include any applicable taxes.

PRICE: \$ 186,720.00

OPTIONAL EQUIPMENT

The following items are optional. If you would like any of the options, please add corresponding price to above amount:

RETRUS Back-Eye Camera	\$	4,949.00
5' Aluminum toolbox mounted under box body	\$	1,500.00
3' Aluminum toolbox mounted under box body	\$	580.00
Dual step bumper in lieu of standard bumper	\$	1,750.00

Note: This quotation expires in 30 days.

<i>Base Price</i>		<i>\$186,720</i>
<i>Optional Equipment</i>		<i>\$ 7,279</i>
TOTAL		\$193,999

Thank you for your consideration of this budget price proposal.

Sincerely yours,

Doug Kamienecki

Doug Kamienecki
Director - Inspection Products
248-349-0904 x 1069
DougKamienecki@DohenyCompanies.com

This quotation becomes a contract for delivery and payment of the merchandise listed above only when signed by the customer or one of its officers .

Customer: _____

By: _____

Date: _____

IBAK Pricing Effective 8/18/2014

Part Number	Part Description	Retail Price
MiniLite Push Camera Systems		
V0000315	MiniLite Compact Pushrod System with HYDRUS Camera (fixed)	\$ 18,250.00
V0000330	MiniLite Compact Pushrod System with HYDRUS 2 Camera	\$ 19,750.00
V0000310	MiniLite Compact Pushrod System with ORION Zoom Camera	\$ 26,750.00
V0000342	OPTIONAL Add-On for the Laser Diameter Measurement from MiniLite	\$ 1,150.00
V0000317	MiniLite Compact Pushrod System with ORION-L Zoom Camera	\$ 26,750.00
803752732	Anti-Glare Shield for MiniLite Monitor	\$ 310.00
V0000304	REPLACEMENT MiniLite Exchangeable Drum - 130 ft. Magic Pushrod	\$ 3,650.00
313206498	Toolkit for Pushrod Systems (Required for Systems Above)	\$ 135.00
V0000351	MiniLite UPGRADE to 250 feet of *PERFECT* Pushrod	\$ 750.00
V0000350	MiniLite Exchangeable Drum - 250 feet of *PERFECT* Pushrod	\$ 5,300.00
Cameras		
V0000199	HYDRUS 2 Pushrod Camera	\$ 4,548.00
V0000167	JUNO Axial View Camera	\$ 9,558.00
V0494018	ORION Zoom	\$ 17,950.00
V0494019	ORION-L Zoom Navigating Pan & Tilt Push Camera	\$ 17,950.00
V4010005	POLARIS Pan, Tilt, and Angle Camera	\$ 23,650.00
V4004003	ORPHEUS Pan & Tilt with Zoom	\$ 21,619.00
V4005001	ARGUS Pan & Tilt with Zoom	\$ 34,330.00
High Definition		
V4012001	PEGASUS HD Pan & Tilt with Zoom	\$ 43,500.00
V4011001	RETRUS Back-Eye Camera	\$ 4,949.00
V4007001	CERBERUS Handheld Camera	\$ 11,924.00
V7034001	Extension Kit for HSP or CERBERUS (for BK 3.5 or BE 3.1)	\$ 6,434.00
703420891	Extension Kit for HSP or CERBERUS (for BS 3.5)	\$ 4,040.00
704400090	Extension Kit for HSP or CERBERUS (for BS 5 or BS 7)	\$ 5,700.00
V8017003	Extension Kit to connect a KT180 to mainline cable from BS 5 or BS 7	\$ 7,110.00
704420031	Extension Kit for CERBERUS only to mainline cable from BS 5 or BS 7	\$ 2,550.00
803250020	MANHOLE CAMERA ADAPTER	\$ 5,568.00
Accessories		
V000021	MANHOLE CAMERA ADAPTER POLES	\$ 782.00
49806942	Camera Skid for HYDRUS 2, - 4" and up	\$ 230.00
49413241	Camera Skid for JUNO/ORION/ORION-L for 6" and up pipelines	\$ 837.00
V0494020	Rolling Camera Skid for JUNO/ORION/ORION-L for 6" and up pipelines	\$ 682.00
901601040	Pressure Test Set	\$ 455.00
ARGO Raft		
V9056001	ARGO Camera Raft	\$ 4,750.00
V9056002	ARGO adapter box to mount camera base modules (T76/T86)	\$ 5,125.00
V9056003	ARGO holder for Camera Adapter	\$ 1,200.00
905600601	Protection Cage for Camera Raft ARGO	\$ 825.00
802300430	Adapter - Soft cable directly to Camera	\$ 1,725.00
T66 Tractor		
V9052001	T66 Camera Tractor	\$ 11,620.00
905200831	Camera Connection TYPE 1 for T66	\$ 2,145.00
905200931	Camera Connection TYPE 2 for T66	\$ 1,170.00
905201031	Camera Connection TYPE 3 for T66	\$ 1,650.00

Accessories

V6021001	ZSW 65 Additional Lighthouse	\$ 3,743.00
V9052005	Camera Tractor Height Attachment for T66	\$ 4,330.00
905255021	T66 Overturn Protection Kit	\$ 1,150.00
905211031	Additional Weight Kit for T66 (Heavy and Light)	\$ 672.00
905210091	Treaded Wheel set for 5" pipe for T66 / 6" for PANORAMO 150 (HARD)	\$ 589.00
905210191	Treaded Wheel set for 6" pipe for T66 / 8" for PANORAMO 150 (HARD)	\$ 805.00
905210991	Treaded Wheel set for 8" pipe for T66 / 10" for PANORAMO 150 (HARD)	\$ 1,100.00
905212391	Treaded Wheel set for 5" pipe for T66 / 6" for PANORAMO 150 (SOFT)	\$ 589.00
905212491	Treaded Wheel set for 6" pipe for T66 / 8" for PANORAMO 150 (SOFT)	\$ 805.00
905212591	Treaded Wheel set for 8" pipe for T66 / 10" for PANORAMO 150 (SOFT)	\$ 1,100.00
905210291	Granulated Wheel set for 5" pipe for T66 / 6" for PANORAMO 150	\$ 682.00
905210591	Granulated Wheel set for 6" pipe for T66 / 8" for PANORAMO 150	\$ 837.00
902202491	Wheel set 140-6, for 10" pipe and up	\$ 1,375.00
900401491	Granulated Wheel set for RAD120 for PVC (requires 902202191)	\$ 465.00
902202191	Wheelset Adapters T76 to T66/PANORAMO 150 Hub	\$ 735.00
HT0006	High-Traction Carbide (Fine Grit) Wheels for 6" pipe	\$ 670.00
905215791	Tungsten Carbide Wheels for T66 in 4" and up	\$ 800.00
905215991	Tungsten Carbide Wheels for T66 / PANO 150 in 6" and up	\$ 1,100.00
902211090	T66/PANORAMO 150 Pneumatic Wheels for large pipe w/ adapters	\$ 1,254.00
V0000228	Inclinometer Unit for T66/76/86/PANORAMO 150 (requires software)	\$ 2,970.00
900600130	Inclinometer Adjustment Tool	\$ 990.00

T76 Tractor

V9044001	T76 Camera Tractor	\$ 20,495.00
904020021	T76/86 Camera Base Module (Required for Mainline Operation)	\$ 3,910.00
904116031	T76/86 Camera Elevator	\$ 6,720.00

High Definition

V9049001	T76 HD Camera Tractor	\$ 20,495.00
V9040013	T76/86 HD Camera Base Module (Required for Mainline Operation)	\$ 5,325.00
904116031	T76/86 Camera Elevator	\$ 6,720.00

Accessories

V6023001	ZSW 75 Additional Light Ring	\$ 4,949.00
903911531	Additional Weight for T76 - 17 lbs.	\$ 1,140.00
903911031	XL Additional Weight for T76 - 38 lbs.	\$ 1,350.00
902405121	Large Tractor Extension "HORSE" (requires 902406090 for T76)	\$ 7,950.00
902406090	Tractor Extension (mounting bracket for T76)	\$ 2,650.00
903915531	Oval Pipe - Overturn protection for T76	\$ 2,103.00
900406690	Small Pneumatic Tires for T76/86/PANORAMO/LISY (Grey)	\$ 1,238.00
904110390	Large Pneumatic Tires for T76/86/PANORAMO/LISY (Black)	\$ 1,270.00
904100890	X-Large Pneumatic Tires for T76/86/PANORAMO/LISY (Black)	\$ 1,825.00
V0000228	Inclinometer Unit for T66/76/86/PANORAMO 150/LISY (requires software)	\$ 2,970.00
900600130	Inclinometer Adjustment Tool	\$ 990.00
900410391	T76/86/PANO 2 Treaded Wheelset for 8" and up (Hard)	\$ 1,300.00
900410491	T76/86/PANO 2 Treaded Wheelset for 8" and up (Soft)	\$ 1,238.00
900401691	Granulated Wheel set RAD 100-4 for 6" PVC for T76/86/PANO 2/LISY	\$ 465.00
900401491	Granulated Wheel set RAD120 for 8" PVC for T76/86/PANO 2/LISY	\$ 465.00
900401591	Granulated Wheel set RAD150 for 10" PVC for T76/86/PANO 2/LISY	\$ 650.00
HT0008	High-Traction Carbide Wheels for 8"	\$ 750.00
900406691	Tungsten Carbide Wheels for T76/86/PANO 2 in 8" and up	\$ 1,325.00
904116031	Temperature Sensor for T66/76/86/PANO 2/PANO 150/LISY	\$ 2,784.00

904020021	T76/86 Camera Base Module (Required for Mainline Operation)	\$ 3,910.00
904116031	T76/86 Camera Elevator	\$ 6,720.00

Accessories

V6023001	ZSW 75 Additional Light Ring	\$ 4,949.00
904115031	Additional Weight for T86 - 20 lbs.	\$ 1,675.00
902405121	Large Tractor Extension "HORSE" (requires 902408090 for T86)	\$ 7,950.00
902408090	Tractor Extension (mounting bracket for T86)	\$ 2,650.00
904111031	Oval Pipe - Overturn Protection from T86	\$ 1,702.00
900406690	Small Pneumatic Tires for T76/86/PANORAMO/LISY (Grey)	\$ 1,238.00
904110390	Large Pneumatic Tires for T76/86/PANORAMO/LISY (Black)	\$ 1,270.00
904100890	X-Large Pneumatic Tires for T76/86/PANORAMO/LISY (Black)	\$ 1,825.00
V0000228	Inclinometer Unit for T66/76/86/PANORAMO 150/LISY (requires software)	\$ 2,970.00
900600130	Inclinometer Adjustment Tool	\$ 990.00
900410391	T76/86/ PANO 2 Treaded Wheelset for 8" and up (Hard)	\$ 1,300.00
HT0008	High-Traction Carbide Wheels for 8"	\$ 750.00
900406691	Tungsten Carbide Wheels for T76/86/PANO 2 in 8" and up	\$ 1,325.00
900410491	T76/86/PANO 2 Treaded Wheelset for 8" and up (Soft)	\$ 1,238.00
900401491	Granulated Wheel set RAD120 for 8" PVC for T76/86/PANO 2/LISY	\$ 465.00
900401591	Granulated Wheel set RAD150 for 10" PVC for T76/86/PANO 2/LISY	\$ 650.00
904116031	Temperature Sensor for T66/76/86/PANO 2/PANO 150/LISY	\$ 2,784.00

LISY Lateral Launch

V9053011	LISY 3 - Synch Lateral Launch Module Package	\$ 55,990.00
V9053010	LISY 3 - Manual Lateral Launch Module Package	\$ 49,955.00

Accessories

V9053004	LISY 3 Large Diameter Package	\$ 7,424.00
V9053005	LISY 3 Extra Large Diameter Package	\$ 3,280.00
V9053014	Cleaning Accessory Package for LISY 3	\$ 6,850.00
905302331	LISY "Holster" Bracket to hold LISY when off tractor	\$ 380.00

Control Units

V1972001	BK 3.5 - Portable Control Panel	\$ 18,250.00
V1972002	PC Module for BK 3.5 (Optional)	\$ 3,008.00
V8042002	BP4 Control Console	\$ 11,500.00
V1974002	BS 3.5 - Vehicle Mounted Control Panel	\$ 15,540.00
V1976002	BS 7 - Vehicle Mounted Control Panel for ALL SYSTEMS	\$ 29,438.00
V1962002	BS 5 High Power Advanced Operations CONTROL UNIT	\$ 34,980.00
1966012	BEV5 Power Distribution Unit (Required for BS 5)	\$ 2,820.00

Reels and Cable

V0000164	KT180 Portable Cable Reel	\$ 10,795.00
902313020	KUV 5.5 Cable Deflection Pulley for Standard Cable (Highly Recommended)	\$ 357.00
V0000165	KW180 Powered Cable Reel	\$ 12,270.00
802007021	KW180 Swivel Boom (Recommended)	\$ 1,752.00
802010090	Boom Work Light for KW reels (Optional)	\$ 279.00
902313020	KUV 5.5 Cable Deflection Pulley for Standard Cable (Highly Recommended)	\$ 357.00
V8042001	KW104 Portable Cable Winch	\$ 21,500.00
80069040	Camera Cable 524/11, for KW104	\$ 3,250.00
V8042003	KW204 Portable Cable Winch	\$ 28,900.00
80069140	Camera Cable 524/11, for KW204	\$ 4,985.00
V8026001	KW305 Synchronized Power Cable Reel	\$ 28,430.00
904350020	KUV 2.7 Cable Deflection Pulley for Standard and Fiber Optic Cable with Holder and Rope (Highly Recommended)	\$ 650.00

904350020	KUV 2.7 Cable Deflection Pulley for Standard and Fiber Optic Cable with Holder and Rope (Highly Recommended)	\$ 650.00
V8029005	KW505 (FO - PANORAMO capable) Synchronized Power Cable Reel	\$ 30,619.00
904350020	KUV 2.7 Cable Deflection Pulley for Standard and Fiber Optic cable with holder and rope (Highly Recommended)	\$ 650.00

High Definition

V8029011	KW505 HD (FO - PANORAMO capable) Synchronized Power Cable Reel	\$ 31,500.00
904350020	KUV 2.7 Cable Deflection Pulley for Standard and Fiber Optic cable with holder and rope (Highly Recommended)	\$ 650.00

Reels and Cable (Continued)

Camera Cable

80016940	Camera Cable Type 524/11 - 656 feet	\$ 4,022.00
80017040	Camera Cable Type 524/11 - 1000 feet	\$ 5,042.00
80069200	FO2 Camera Cable Type 00/12 - 1000 ft.	\$ 9,250.00
80069300	FO2 Camera Cable Type 00/12 - 1640 ft.	\$ 13,170.00
80069400	FO2 Camera Cable Type 00/12 2000 feet - Requires BS 5	\$ 14,950.00

High Definition

80068830	HD/FO2 Camera Cable Type 00/12 - 1650 ft.	\$ 13,170.00
800628140	KKA-16-12 HD to Standard Cable Adapter (Required if using Non-HD)	\$ 1,780.00

Accessories

802010090	Boom Work Light for KW reels	\$ 279.00
703300040	Remote Control FB180 for KT180 and KW180	\$ 774.00
802300430	Adapter - Soft cable directly to Camera	\$ 1,725.00
V7034001	Extension Kit for HSP or CERBERUS (for BK 3.5 or BE 3.1)	\$ 6,434.00
703420891	Extension Kit for HSP or CERBERUS (for BS 3.5)	\$ 4,040.00
704400090	Extension Kit for HSP or CERBERUS (for BS 5 or BS 7)	\$ 5,700.00
V8017003	Extension Kit to connect a KT180 to mainline cable from BS 5 or BS 7	\$ 7,110.00
704420031	Extension Kit for CERBERUS only to mainline cable from BS 5 or BS 7	\$ 2,550.00
902313020	KUV 5.5 Cable Deflection Pulley for Standard Cable with Rope	\$ 357.00
904350020	KUV 2.7 Cable Deflection Pulley for Standard and Fiber Optic cable with Holder and Rope (Highly Recommended for use with any cable)	\$ 650.00
802617031	KW305/505 Upper Deflection Pulley	\$ 990.00
900300130	KUV 3 Top Manhole Deflection Pulley	\$ 1,207.00
V000021	Guide Poles for Tractor Retrieval or Manhole Adapter	\$ 782.00
800500841	Foot switch for winch (KW505 and KW305)	\$ 929.00
V4420471	Fiber Optic Cable Re-termination Kit	\$ 4,518.00
83775091	Add on Footage Counter	\$ 3,125.00

PANORAMO Systems

4702018	PANORAMO - PCI Baumer Interface card (Required for all PANORAMO systems)	\$ 2,304.00
V9051001	PANORAMO 2 - 360° CAMERA SYSTEM	\$ 139,750.00
V0001020	PANORAMO Camera Elevator (Required for over 8" pipe)	\$ 7,265.00
905131041	PANORAMO Inclinator Module for PANORAMO 2	\$ 5,383.00
905135031	PANORAMO Overturn Protection for PANORAMO 2	\$ 1,517.00
900406691	Tungsten Carbide Wheels for T76/86/PANO 2 in 8" and up	\$ 1,325.00

V9055001	PANORAMO 150 - 360° CAMERA SYSTEM	\$ 95,568.00
905215991	Tungsten Carbide Wheels for T66/PANORAMO 150 in 6" and up	\$ 1,100.00
V0000228	Inclinometer Unit for T66/76/86/PANORAMO 150 (requires software)	\$ 2,970.00
905210091	Treaded Wheel set for 5" pipe for T66 / 6" for PANORAMO 150 (Hard)	\$ 589.00

905212391	Treaded Wheel set for 5" pipe for T66 / 6" for PANORAMO 150 (Soft)	\$ 589.00
905212491	Treaded Wheel set for 6" pipe for T66 / 8" for PANORAMO 150 (Soft)	\$ 805.00
905212591	Treaded Wheel set for 8" pipe for T66 / 10" for PANORAMO 150 (Soft)	\$ 1,100.00
905210291	Granulated Wheel set for 5" pipe for T66/PANORAMO 150	\$ 682.00
905210591	Granulated Wheel set for 6" pipe for T66/PANORAMO 150	\$ 837.00
V0000228	Inclinometer Unit for T66/76/86/PANORAMO 150 (requires software)	\$ 2,970.00
900600130	Inclinometer Adjustment Tool	\$ 990.00
905501631	Additional Weight Kit for PANO150 (Heavy and Light)	\$ 995.00

PANORAMO Systems - Continued

V4008001	PANORAMO SI Manhole Inspection System	\$ 85,052.00
802970021	Positioning device for PANORAMO SI on KW reels	\$ 845.00

PANORAMO SI Portable Configuration Equipment

V0000250	Mounting Kit for PANORAMO SI Unit (required cables and controls)	\$ 2,333.00
V8020011	Cable Winch KW180 (FO) Complete for SI	\$ 25,068.00
80068730	Cable 100m (Fiber Optic) for KW180(FO) Type 00/12	\$ 5,925.00
V0000238	BE5 PANORAMO SI Controller (SI only)	\$ 9,210.00
VZ000307	PANORAMO SI Stand-Alone Control Case and Reel Platform	\$ 6,999.00
V0001017SIA	19" Industrial PANORAMO SI PC Package STAND ALONE Unit	\$ 3,980.00
4702018	PANORAMO - PCI Baumer Interface Card	\$ 2,304.00

Computer Systems

V0001017	19" Industrial PC Package	\$ 2,807.00
V0001017R	19" Industrial PANORAMO PC Package	\$ 3,475.00
4702018	PANORAMO - PCI Baumer Interface Card	\$ 2,304.00
V0001017SIA	19" Industrial PANORAMO SI PC Package STAND ALONE Unit	\$ 3,980.00
4702018	PANORAMO - PCI Baumer Interface Card	\$ 2,304.00

Inspection Vehicles and Conversions

VZ000700	Chassis for Conversion - Note: part number for various chassis that may be used. Please contact your representative for current chassis pricing.	\$ 39,900.00
VZ000750	Inspection Box and Conversion for GAS Chassis	\$ 35,500.00
VZ000751	Inspection Box and Conversion for DIESEL Chassis	\$ 38,310.00
VZ000752	Sprinter Cargo Van Conversion	\$ 33,450.00
VZ000760	Inspection Trailer Complete	\$ 30,520.00

Outfitting Options

VZ000900	17"-20" LCD Professional Quality CCTV/Computer monitor (4:3 aspect)	\$ 1,210.00
VZ000903	15" Rear-mounted LCD Monitor	\$ 780.00
VZ000904	Consumer Grade DVD Recording System	\$ 290.00
VZ000912	Computer Rack for PANORAMO PC and BS 5	\$ 675.00

Safety and Visibility

VZ000800	High Profile Strobe Safety Beacon Light Mounted on Roof of Vehicle	\$ 255.00
VZ000801	Two High Profile Strobe Safety Beacon Lights Mounted on Roof of Vehicle	\$ 420.00
VZ000808	One High Dome Super LED Safety Beacon Mounted on Roof of Vehicle	\$ 685.00
VZ000809	Two High Dome Super LED Safety Beacons Mounted on Roof of Vehicle	\$ 1,125.00
VZ000802	Rear LED Arrow Board Mounted	\$ 860.00
VZ000811	Hide-Away Super-LED Safety Light Kit (4 LEDs Mounted in Head and Tail)	\$ 720.00
VZ000804	Dual BASIC LED Rear Work Light Package Mounted on Rear of Vehicle	\$ 365.00
VZ000807	Dual PREMIUM LED Rear Work Light Package Mounted on Rear of Vehic	\$ 910.00
VZ000805	Rear Vision Camera w/ Mounted Monitor	\$ 670.00
VZ000810	Premium Safety Light Package UPGRADE	\$ 4,620.00

Washdown and Maintenance

VZ000701	14 Gallon Fresh Water Washdown System	\$ 475.00
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Equipment Rack and Storage

VZ000305	Low Profile Reel Cabinet with Aluminum Drawers	\$ 1,226.00
VZ000306	KW Reel Cabinet with 2 Sliding Aluminum Drawers	\$ 1,875.00
VZ000308	KW Reel Cabinet for Cutter	\$ 945.00
VZ000709	Insulation Upgrade (Studio and Work area)	\$ 2,650.00
VZ000711	Pro-Air Model 432 Floor Mounted Auxiliary Rear Heater (32,000 BTU)	\$ 1,250.00

Misc. Options

VZ000907	Rack Mounted Slide Out Drawer	\$ 160.00
VZ000806	Stowable Rear Canopy	\$ 1,000.00

GATOR® Cutting & Grinding Robots**FLEXIGATOR**

V1054211	FlexiGATOR® 1.5 Portable Cutting & Grinding Robot	\$ 105,000.00
V1055177	Additional Tool Kit	\$ 3,500.00
1052664	Pushrod to attach to hybrid cable for propulsion	\$ 1,500.00

MINIGATOR

V1055468	MiniGATOR® 1.5 Cutting & Grinding Robot	\$ 84,950.00
V1050389	Color Pan Head Camera 1.5 for Mini/Alli GATOR 1.5	\$ 8,700.00
V1055967	Tool Kit for GATOR®s	\$ 8,050.00
V1055844	Ovoid Pipe Mount-Stage 1 for Mini/Alli GATOR 1.5 for 200/300 mm, 250/375mm, 300/450mm	\$ 14,750.00
V1055457	Multi-Cable Reel with 500 ft. of Cable	\$ 123,500.00

MiniGATOR® Options and Accessories

V1052493	4th Axis for Mini/Alli GATOR® Cutting Head	\$ 6,125.00
V1048050	Large Diameter Accessory Package - MiniGATOR up to 24" diameter	\$ 24,250.00

ALLIGATOR

V1050389	AlliGATOR® 1.5 Cutting & Grinding Robot	\$ 94,250.00
V1050389	Color Pan Head Camera 1.5 for Mini/Alli GATOR 1.5	\$ 8,700.00
V1055967	Tool Kit for GATOR®s	\$ 8,050.00
V1055844	Ovoid Pipe Mount-Stage 1 for Mini/Alli GATOR 1.5 for 200/300 mm, 250/375mm, 300/450mm	\$ 14,750.00
V1054206	Ovoid Pipe Mount-Stage 2 for Alli GATOR for 300/450mm, 400/600mm	\$ 14,500.00
V1054207	Ovoid Pipe Mount-Stage 3 for Alli GATOR for 500/750mm, 600/900mm	\$ 9,450.00
V1055457	Multi-Cable Reel with 500ft. Of Cable	\$ 123,500.00

AlliGATOR® Options and Accessories

V1052493	4th Axis for Mini/Alli GATOR® Cutting Head	\$ 6,125.00
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Cutter Accessories and Extras

VZ000308	Reel Cabinet for Cutter Drum and Storage	\$ 2,000.00
VZ000152	Panther P15 TC Silent Air Compressor	\$ 950.00
V1059999	Bosch Impact Driver for Wheel Installation/Removal	\$ 300.00
VZ000325	Fold-Away Bumper Crane, 750lb. Capacity, Electric	\$ 5,650.00