

#### North Carolina Sheriff's Association Heavy Equipment Procurement Program Bid 22-06-0426

**Group: Underground Pipeline Inspection** 

#### 4K Panoramo 150

Contract Discounted Sell Price: \$192,709.52

PANORAMO 150 4K 360° SYSTEM DELIVERY TBD

Inclinometer Unit for 76/86/PANO 150/LISY (requires software)

Additional Weight Kit for PANO150 (Heavy and Light)

BS 7 - Vehicle Mounted Control EDI for ALL SYSTEMS

KW505 HD (FO - PANORAMO capable) Synchronized Power Cable Reel

FOX2 FO4 HD 4K Dual Fiber Camera Cable Type 00/20 - 1640 feet

Foot switch for winch (KW505, KW310 and KW305 drums)

KUV 2.7 Cable Deflection Pulley for Standard and Fiber Optic Cable with holder and rope

19" Industrial PC Package

Pressure Test Set

IKAS Recorder & Capture Device

#### 4K Panoramo 2

Contract Discounted Sell Price: \$248,331.66

PANORAMO 2 4K - 360<sup>®</sup> CAMERA SYSTEM

PANORAMO Camera Elevator for PANO 2 / 4K (Required over 8" pipe)

PANORAMO Overturn Protection for PANORAMO 2 / 4K

PANORAMO Inclinometer Module for PANORAMO 2 / 4K

BS 7 - Vehicle Mounted Control EDI for ALL SYSTEMS

KW505 HD (FO - PANORAMO capable) Synchronized Power Cable Reel

FOX2 FO4 HD 4K Dual Fiber Camera Cable Type 00/20 - 1640 feet

Foot switch for winch (KW505, KW310 and KW305 drums)

KUV 2.7 Cable Deflection Pulley for Standard and Fiber Optic Cable with holder and rope

19" Industrial PC Package

**Pressure Test Set** 

**IKAS Recorder & Capture Device** 



**Core Plus Mainline** 

Contract Discounted Sell Price: \$89,744.35

**ORION Zoom** 

**T66 Camera Tractor** 

Camera Connection TYPE 2.1 for T66.1 HD with NON-HD Cameras

KW305.2 Synchronized Power Cable Reel

BS 3.5 - Vehicle Mounted Control EDI

KUV 2.7 Cable Deflection Pulley for Standard and Fiber Optic Cable with holder and rope

Pressure Test Set

IKAS Recorder & Capture Device

**Core HD Mainline** 

Contract Discounted Sell Price: \$125,340.17

**ORPHEUS HD Pan & Tilt with Zoom** 

T66 HD Camera Tractor

Camera Connection TYPE 2.1 HD for T66HD

BS 7 - Vehicle Mounted Control EDI for ALL SYSTEMS

KW505 HD (FO - PANORAMO capable) Synchronized Power Cable Reel

HD FO4 Camera Cable Type 00/12 - 1000 feet

KUV 2.7 Cable Deflection Pulley for Standard and Fiber Optic Cable with holder and rope

Pressure Test Set

IKAS Recorder & Capture Device

#### **Premium Mainline**

**Contract Discounted Sell Price: \$117,943.71** 

ORPHEUS 2.0 Pan & Tilt with Zoom

T76 Camera Tractor

CB 3.2S - T76/86 Camera Base Module

T76/86 Camera Elevator

KW305.2 Synchronized Power Cable Reel

Camera Cable Type 524/11 - 1000 feet

BS 3.5 - Vehicle Mounted Control EDI

KUV 2.7 Cable Deflection Pulley for Standard and Fiber Optic Cable with holder and rope

Pressure Test Set

**IKAS Recorder & Capture Device** 



**Lateral Launch** 

Contract Discounted Sell Price: \$162,741.07

ORION-L Zoom Navigating Pan & Tilt Push Camera

**T76 Camera Tractor** 

NEW LISY 3.2 - Synch Lateral Launch Module Package w/o Cable

LISY Camera Cable (soft cable) 500'

Propulsion Pushrod MP4 GF4 120' with 512 Hz transmitter

KW305.2 Synchronized Power Cable Reel

Camera Cable Type 524/11 - 1000 feet

BS 3.5 - Vehicle Mounted Control EDI

Foot switch for winch (KW505, KW310 and KW305 drums)

KUV 2.7 Cable Deflection Pulley for Standard and Fiber Optic Cable with holder and rope

Pressure Test Set

**IKAS Recorder & Capture Device** 

Mainlite

**Contract Discounted Sell Price: \$73,694.70** 

**ORION Zoom** 

**T66 Camera Tractor** 

Camera Connection TYPE 2.1 for T66.1 HD with NON-HD Cameras

KW 206 Cable Drum + Boom

KW 206 Camera Cable 524/11 - 656 ft. / 200m

**BP100 Portable Control Console** 

KW206 Mobile Rack

KUV 2.7 Cable Deflection Pulley for Standard and Fiber Optic Cable with holder and rope

**Pressure Test Set** 

**Mainlite PRO** 

Contract Discounted Sell Price: \$102,307.92

ORPHEUS 2.0 Pan & Tilt with Zoom

T76 Camera Tractor

CB 3.2S - T76/86 Camera Base Module

T76/86 Camera Elevator

KW 206 Cable Drum + Boom

KW 206 Camera Cable 524/11 - 656 ft. / 200m

**BP100 Portable Control Console** 

KW206 Mobile Rack

KUV 2.7 Cable Deflection Pulley for Standard and Fiber Optic Cable with holder and rope

Pressure Test Set

5746 Broad Street, Sumter, SC 29154 800.527.4469 or 803.494.4430 803.494.4440 fax bids@jet-vac.com



**Mainlite XL** 

Contract Discounted Sell Price: \$77,069.98

**ORION Zoom** 

**T66 Camera Tractor** 

Camera Connection TYPE 2.1 for T66.1 HD with NON-HD Cameras

KW 306 Cable Drum + Boom

KW 306 Camera Cable 524/11 -1000 ft. / 300m

**BP100** Portable Control Console

KW306 Mobile Rack

KUV 2.7 Cable Deflection Pulley for Standard and Fiber Optic Cable with holder and rope

Pressure Test Set

#### **Mainlite XL PRO**

Contract Discounted Sell Price: \$105,683.20

ORPHEUS 2.0 Pan & Tilt with Zoom

T76 Camera Tractor

CB 3.2S - T76/86 Camera Base Module

T76/86 Camera Elevator

KW 306 Cable Drum + Boom

KW 306 Camera Cable 524/11 -1000 ft. / 300m

**BP100** Portable Control Console

KW306 Mobile Rack

KUV 2.7 Cable Deflection Pulley for Standard and Fiber Optic Cable with holder and rope

Pressure Test Set

#### **Micro Gator Cutter**

Contract Discounted Sell Price: \$298,140.81

MicroGATOR 2.0v

CutterCam 2.0

KW150 GATOR winch and cable

MicroGATOR 2.0 Toolkit

**BS7R Control Unit** 

**KUV 3.1R** 

Panther p100-50AL Compressor

**GATOR Power Isolator/Transformer** 

**GATOR 4th Axis** 

**GATOR Front Cam** 



Microlite	Contract Discounted Sell Price: \$26,138.58
MicroLite with AxialCam (non-removable)	
BP1 Portable Control Console (no joysticks)	

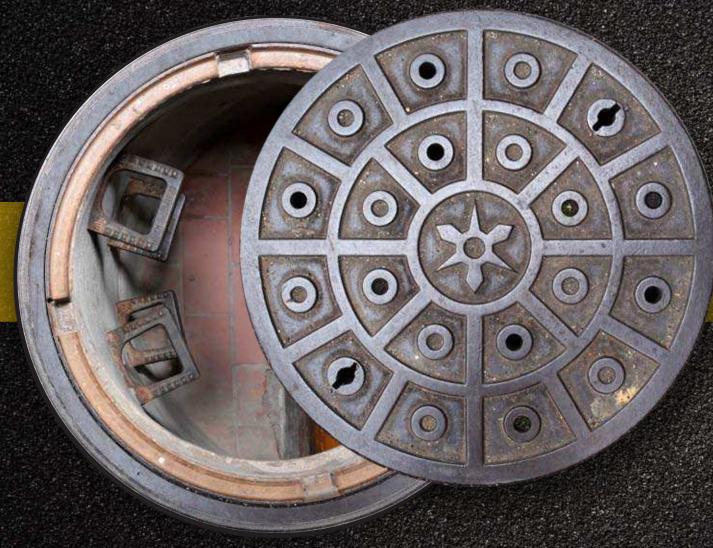
**Minilite with Camera** 

Contract Discounted Sell Price: \$49,827.14

BP1 Portable Control Console (no joysticks)
MiniLite 2.0 Frame and power supply

MiniLite Exchangeable Drum - 250 feet of Perfect Pushrod - Includes Toolkit

Orion or NANO Camera Head







We understand that our customers have many choices when it comes to pipeline inspection and rehabilitation equipment. We work hard to ensure that the equipment we provide is designed to do the job it was intended for and that it was manufactured to the highest quality standards.

Providing the best equipment is the first step in making sure our customers are successful. Providing best in class after-sales support, and our commitment to continue that support for years to come, is what truly sets us apart from the competition.

We come from a contracting background. Pumping septic tanks, installing pipe, inspecting pipe.... the company was founded by people who got their hands dirty. Our founders realized that there wasn't a good source for pipeline inspection equipment, or a company living up to the minimum standards of service after the sale. That's why we started RapidView IBAK North America, and it is why we work hard every day to make sure that our customers have what they need to be successful.

Rapide Mark North America

## You can trust the company that invented the industry!



## Quality and Service

We've all done it - bought something on the cheap and regretted it later...

Price is a huge factor, but it is not the only thing you need to consider when choosing your inspection equipment. What you really need is a piece of equipment that is going to last, and a system that is going to perform to your requirements and keep you productive.

Cheap equipment that breaks down often or doesn't work properly to begin with isn't a bargain, it is a drain on your resources and time. IBAK designs and manufactures the components that go into our systems. We don't rely on off-theshelf consumer products that may be discontinued next month. We manufacture over 85% of our product components so we can guarantee quality, reliability and availability of spare parts 10 years down the road.

Remember... Quality does make a difference!

"This is the best piece of equipment we've ever purchased." - Contractor

"It's obvious that the service team cares about the customer and enjoy their jobs. You should be proud of your team niractor

"Over the years we have tried almost every brand of inspection equipment. RapidView IBAK equipment is different. It works."

"We've been running our system 24 hours a day, for years. This system has given us a huge return on investment."



make simple repairs themselves, or in the field if necessary. Contact the RapidView service center to receive more information about these valuable tools. We also provide free hands-on repair and maintenance programs at our headquarters throughout the year. Please visit our website to learn more or register for a class!



Tech Tips, Reterms, Equipment in Action & More!

We stock over \$5 million in parts at our headquarters in Rochester, Indiana and many more throughout the country at our partner service centers!

We strive to get you back up and running quickly with repair time goals of 48-72 hours.

Nothing ever needs to be sent to Germany. All repairs are done in the United States or Canada.

Our equipment is quality-checked multiple times throughout the manufacturing process and prior to shipment.

IBAK products are manufactured to ISO 9001:2015 and ISO 14001:2015 standards.

Full 1-year warranty on IBAK equipment

Industry's best commitment to spare parts availability

Free technical training throughout the year and free phone support during business hours.

Free SeptemberFest biennial training and customer appreciation event.

Over 20% of IBAK personnel are dedicated to research and development, resulting in almost all of the major advancements in our industry - today, and in the future.

We answer the phone. It is a simple thing, but we make sure we are available, and ready to help.

We are not afraid to say "no", but love saying "yes". Other manufacturers might make you promises they cannot keep, but we won't. Setting the expectation up front, we do everything we can to live by our word and provide you with service you can count on.

We've built a successful company because of our customers' success, not just by selling equipment. We understand this, and that is why we want to give our customers all the tools they need to be successful.

## How are we different?

RapidView and its dealers are committed to providing customers with the best equipment and service in the industry. We understand that time lost due to repairs or poor training are detrimental to your productivity and bottom line. We offer a variety of completely free training programs for our customers throughout the year, because we know however well-built, all equipment can break down. RapidView provides you the training, tools and support to conduct many repairs yourself.

When faced with a more complicated repair, you can be assured that our Service Techs will repair your equipment quickly and have it back to you as soon as possible. With millions of dollars of spare parts on hand, and decades of experience, our team strives to keep your equipment in the field being productive and helping you reach your goals.



#### PANORAMO® 4K

Perhaps the greatest innovation in pipeline inspection technology in decades, the PANORAMO® system has provided better data to engineers, reduced stress for operators, increased productivity and changed the way we inspect our underground infrastructure. Now, with the revolutionary PANORAMO® 4K technology, it provides even better image quality. Inspect more than twice as much pipe per day, reduce your operating costs by more than 30% compared to normal CCTV and provide system users with incredible high-definition imagery!

#### **Performance is Key**

PANORAMO® 4K is fast. Users collect data at a rate of up to 69 ft. (21m) per minute with PANORAMO® 2 4K, and 40 ft. (12m) per min with PANORAMO® 150 4K, without needing to stop. All this adds up to a technology that reduces your cost, increases your production and dramatically enhances your deliverables.

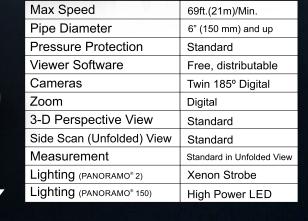


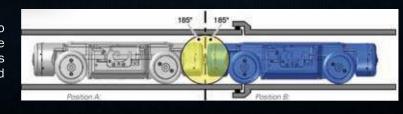


# IBAK PANORAMO®4K

#### The PANORAMO® Principle - Changing your process

IBAK designed PANORAMO® from the ground up to address the weaknesses of traditional video technology. The PANORAMO® method changes your current process into data collection in the field and data analysis back in the office. This division of labor increases safety, reduces mistakes and increases productivity. The technology enables your employees to work to their potential and avoid costly and time-consuming mistakes caused by inattention or stress.





**Technical Specifications** 

#### **Easy Data Collection - Amazing Results**

Inspecting a manhole with PANORAMO® SI 4K is as simple as 1-2-3. All you have to do is lower the unit into the manhole, turn it on, and pull it back up! No other system captures the quality or quantity of data that PANORAMO® SI 4K does.

#### **Types of Data**

The PANORAMO® SI 4K captures a complete 360° Perspective View of the manhole which you can view at any time, from any angle. The Unfolded View allows you to look at the entire manhole surface on one screen and the Geometric View allows you to measure features inside the manhole in three dimensional space. Simply export the Geometric View out to any CAD program to continue your analysis!

#### 100% Coverage | More than 4 times faster!

Other manhole inspection methods are slow, clumsy, and unsafe compared to PANORAMO $^{\circ}$  SI 4K . With its unique ability to capture every inch of the manhole from multiple angles - you will never miss an observation.

PANORAMO® SI 4K
New high-resolution

## IBAK PANORAMO®SI 4K

The PANORAMO® SI 4K has revolutionized the way system owners inspect their buried structures. Manholes, duct boxes, storm drains, and any other underground chamber can be inspected quickly and safely with this system. Keep your employees safe, increase the productivity and accuracy of your crews and provide data that helps system owners make informed decisions!

### Technical Specifications May Speed

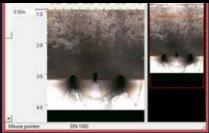
14"(35cm)/sec.
12" (300 mm)
Standard
Free, distributable
Twin 185° Digital
Digital
dxf
Available

# PANORAMO® SI 4K Portable Solution On board battery pack will keep you operating no matter where the manhole is!

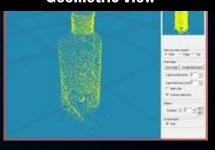
#### 360° Perspective

## 0.555 10 20 20 40

#### **Unfolded View**



#### **Geometric View**



NOW WITH 4X INCREASED RESOLUTION!

Set up over the shaft. 2



3



## Lateral Launch

#### **LISY 3.2 Technical Specifications**

Pipe Diameter	6" to 48" (150mm to 1200mm) with accessories		
Pressurized Protection		Standard	
Pan Range (articulation arm)		180°	
Tilt Range (articulation arm)		45°	
Push Speed		Variable control	
Overall Cable Length		600 ft. (182 m)	
Push Rod Length		120 ft. (36 m)	

#### **Safety and Reliability**

The LISY 3 was designed to be easy to use, simple to maintain and safe to operate. The synchronized LISY drum works with your existing IBAK cable drum to payout and retrieve the cables at the same time. This dramatically reduces the time you need to spend setting up or retrieving the system after the inspection.

#### The Choice of True Professionals

The LISY system will inspect 2" (50mm) and larger lateral pipelines from the mainline, depending on the launch camera chosen. The mainlines can be from 6" (150mm) to 48" (1200mm) diameter. The LISY has proven itself throughout the world to be the most capable and highest performing lateral launch system on the market today.

#### **Productivity in the Field**

The ergonomic design and rugged construction of the LISY 3 system ensures that you will experience less breakdowns and more time in the field. The simplicity of operation will increase your productivity, providing a much greater return on investment.

#### **Cross Bore Inspection**

The LISY 3 has become the industry standard for large lateral assessment projects. Cities and contractors demand the performance and reliability that our systems can offer!

# The smaller NANO® cameras make reverse launching much easier!



#### Track Pipelines with 3D GeoSense®

This revolutionary system from IBAK gives you the power to map mainline and lateral pipelines with accuracy and speed. The new 3-D GeoSense® sensor tracks the movement of the camera as it travels through the lateral, capturing distance, position and depth in three dimensional space. This data is captured and displayed by your data logging software.



# Micro Gator 2.0

## **Cutters & Grinders**

Have you ever wished that you could have our high level of reliability, durability and attention to detail in your cutter system? Well, the wait is OVER! The MicroGATOR® 2.0 is the powerful, single-point electric reinstatement cutter manufactured to the exacting quality standards of IBAK. With longer cable lengths, powerful and quiet cutting motors, and drive units designed to withstand the toughest jobs, these cutters have already reset the industry's expectations.

Optional front camera connection lets you do PRE and POST inspections with the same unit, saving money and time!

The IBAK CutterCam® gives you an incredible view of the work area and keeps the lens clean with our unique air-curtain technology. Even if it does get dirty, simply wash it off and wipe it down with the on-board, remote wiper system!

#### **Dimensions**

Length	49.2" / 1250mm
Weight	121 lbs. / 55 kg
Cable Length	330 ft. or 500 ft.

#### **Camera Tractor**

Chassis Power	.27 hp / 200 Watt
Rotating Elbow	400°
Top Speed	40 ft. per minute

#### **Cutting Motors**

Brushless 3-phase electrical drive, water cooled			
Power 4.7 hp / 3500 Wat			
Max. RPM	10,000 rpm		

MicroGATOR® 2.0 BG 1 Motor allows users to install a front-viewing camera for better forward awareness and ease in traversing the pipeline.

"It is so quiet you can't tell that it is working. You don't have to disturb the homeowners with large air compressors or pumps." - Contractor

MicroGATOR® 2.0 features the option for our 4th-Axis articulation, which allows you ultimate control during cutting operations.

"Having one cutter do so many different sizes of pipes makes it easy." - Contractor

"The new GATOR is the most powerful cutter we've ever used." - Contractor

NEW MicroGATOR® 2.0 uses the same wheelsets as our popular T76 Tractor system for added modularity and versatility!

## Cameras







#### **AXIALCAM 2.0**

The AxialCam 2.0 version includes LED lighting, control and the ability to inspect 3"/75mm pipelines and up. For smaller diameter inspections please see the AxialCam 1.0 on MicroLite information page.

#### NANO<sup>®</sup>

While the NANO® is capable of traveling in pipelines as small as electronic upright picture 3" (75mm) in diameter, you will not be giving up power or flexibility. The NANO® has many of the same features of the larger ORION Zoom including: laser measurement, integrated location transmitter, bright LED lights, pressure regulation and full pan and tilt functionality!

#### NANO-L®

The NANO-L® is perfect for LISY Lateral Launching. The smaller camera, when used with our more flexible pushrods, will allow you to more easily launch "backwards" into laterals when traveling against the flow. The smaller size also means you can push around obstacles and pipe bends much easier.

#### ORION® 3.0 HD/SD Zoom

The HD/SD adaptive zoom camera can be used as a push camera or on a mainline tractor system in pipelines 4" (100mm) and up. Features include Pan & Tilt, integrated location transmitter, auto-uprighting, auto-iris, and adjustable focus. The ultimate in flexibility and modularity with powerful digital zoom and laser measurement!

#### ORION-L® 3.0 HD/SD Zoom

The ORION-L® 3.0 adds our unique lateral navigating stick, nicknamed "Kiel stick" which was named for the city in which it was created. This camera allows you to choose direction and "steer" into and around pipe fittings. The ORION-L® 3.0 HD/SD Zoom is perfect for industrial applications or lateral launching.

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FEATURES	CERBERUS	AXIALCAM	NANO	NANO-L	ORION 3 Zoom	ORION-L 3 Zoom	POLARIS	ORPHEUS Lite	ORPHEUS 2.0	ORPHEUS HD
Range (Diameters)	Lg. Diameter	2"/3" and Up	3" and Up	3" and Up	4" and Up	4" and Up	4" and Up	6" and Up	6" and Up	6" and Up
Sonde Transmitter	N/A	In Pushrod	In Camera	In Camera	In Camera	In Camera	In Camera	N/A	N/A	N/A
Pan & Tilt						•				•
Zoom						-		-	-	
Auto Iris								•		•
Always Upright Image					•				•	
Auto Focus								•		•
Laser Measurement			_		•					
Pushrod Capability					•					
Lateral Navigation						_				
E-Flip										•
High Definition Video					•	•				•

#### **Laser Measurement Definitions - What can I measure?**

Deformation: The amount the pipe is deformed from the anticipated circular shape (i.e. "crushed pipe")

Diameter: The diameter of the pipeline

Protrusion: The distance an object protrudes inside pipeline (i.e. a "protruding tap")

Width: A measurement on the pipe wall (i.e. "crack width")

## **ORPHEUS** \*\*\*\*



#### **POLARIS®**

The POLARIS allows for the ultimate flexibility when used in small diameter applications. The camera is mounted on a patented pivot arm that allows you to choose your direction when pushing around bends and junctions in the pipeline. All the while keeping the pipe view clear and allowing for laser measurement.



#### **ORPHEUS Lite®**

This more economic version of the extremely popular ORPHEUS 2.0 provides great value for customers wanting to complete standard pipeline inspection work. Oriented vertically, the camera is quick to inspect laterals at 12 o'clock. Bright LEDs, auto-focus, auto-iris, upright picture control and E-Flip make this a great camera for 6" (150mm) and up pipelines!



#### ORPHEUS®2.0

This mainline camera has an incredible feature list including pan & tilt, 120x Zoom, LED lighting, laser measurement, auto-iris, auto-focus, upright picture control, cross-joint illumination, and E-flip picture control. The ORPHEUS® is the core to any mainline system inspecting 6" (150mm) and up pipelines.

## The True Next Generation of Inspection... High Definition!

You probably have a high-definition TV at home. Truth is, your mobile phone probably has a higher resolution than your current CCTV inspection system. The time has come to bring dramatically higher visual fidelity to the sewer inspection market. If you are a municipality interested in working with the best video data available or a contractor wishing to leverage the quality of your services - our line of HD cameras is for you!

The purpose of all CCTV systems is to capture images that allow system owners to make important rehabilitation decisions. Why settle for the low-resolution of a standard CCTV system? Now you can inspect in stunning High-Definition! Give system owners the information they need and avoid blurry, out of focus pictures. Our system is the only one in the world designed from the ground up to be 100% HD, ensuring that you capture clean, crisp video and high-resolution pictures.



#### Track Pipelines with 3-D GeoSense®

This revolutionary system from IBAK gives you the power to map mainline and lateral pipelines with accuracy and speed. The new 3-D GeoSense® sensor tracks the movement of the camera as it travels through the lateral, capturing distance, position and depth in three dimensional space. This data is captured and displayed by your data logging software.

The NANO®, ORION®, POLARIS® and ORPHEUS® cameras have the option of having the 3D GeoSense® sensor installed when you order them. This powerful new tool opens up new options for acquiring and using positional data for underground utilities. Please contact your representative for more information, or to schedule a demonstration!

#### **Cross-Joint Illumination**

The ORPHEUS® 2.0 and ORPHEUS® 2.0 HD cameras utilize unique lights set into the camera head at an angle specifically to illuminate inside pipe joints and gaps. These lights let you see clearly into these areas without obscuring shadows!



#### **CERBERUS®**

Manned entry camera which connects directly to your mainline cable. Includes full duplex two-way communication and safety harness.



OIN HEED EN	7 110	100111	near opeomeanems	
Туре		Pan, Tilt & Zoom		
Imager			Full HD CMOS	
TV Frames/Se	cond		30 fps	
Protection Clas	Protection Class		IP 68/Pressure Monitored	
Autofocus Intellig		Intellig	gent, One-Push Design	
Zoom			10x Optical, 12x DIGITAL	
Laser Measurement			Linear and LaserScan*	
Pan/Tilt Range		240° (+/- 120°)		
Pan/Tilt Presets		45°, 90°, Joint insp.		
Lighting Power LED		er LED	, Joint Gap Illumination	

Requires third party software and possibly system update.

## **Tractors**

#### **C**amera Tractors - Functionality and Flexibility

A critical part of the inspection system, the tractor carries the camera into the pipeline. If you can't get the camera there, you aren't going to see it - so make sure that you choose the correct tractor for your application. While each tractor has its own unique strengths, you can usually make your decision based upon the expected inspection length required, and the diameter of the pipelines you will be inspecting. Our tractors are designed and engineered to work in pipeline environments. Compact, powerful, durable, and agile, our tractors will provide you with years of dependable operation.

FEATURES	T66/T66HD	T76/T76HD	T86/T86HD
Range (Diameters)	4" (100mm) and up	6" (150mm) and up	8" (200mm) and up
Zero Radius Steering	<b>✓</b>	<b>✓</b>	
Tractor Range (pull distance)	up to 1000' (300m)	up to 1640' (500m)	up to 2000' (600m)
2-Axis, Pivoting Connector	<b>✓</b>	<b>*</b>	<b>✓</b>
Automatic Tilt Compensation (ATC)	<b>✓</b>	<b>*</b>	
Location Transmitter on Camera Base		<b>*</b>	<b>✓</b>
LISY Attachment (optional)		<b>~</b>	<b>✓</b>
Elevator Attachment (optional)	Manual	Electric	Electric



#### Heavy by design

Our equipment is designed to be compact and heavy. Why should a tractor be heavy? Traction is only achieved by friction between the contact surface (wheel) and the pipe wall. Our systems pull longer distances and through slippery lines because we build them out of dense materials that provide the maximum traction!

# HD CCTV HIGH DEFINITION SEWER CAMERAS

#### **HD Camera Tractors**

Each camera tractor and its associated base modules are available in HD version. There are many possible configurations which allow you great flexibility and superior image quality!



## Reels and Cable

#### **Lowering Winch**

KW 305/310 and KW 505 cable reels include a built-in lowering winch for tractor and camera systems. This powerful winch makes inserting or removing the equipment from the pipeline easier and safer. It reduces the chance that equipment will be dropped, reducing the strain on your back and your wallet.

#### KW 305 / KW 310(FO) Synchronized Cable Reel

The KW 305 is our most popular reel for use in mainline and lateral launch inspections. Features include: adjustable boom and optional work light, integrated power winch for lowering and retrieving equipment, automatic level-wind, fully synchronized cable management, and a remote control pendant for tractor and lateral launch functions. Capacity is up to 1000 feet (300m) of high-strength cable. The KW 310 (FO) reel maintains the same footprint as the KW 305, but can use up to 1000 feet (300m) of high-strength, low weight fiber optic cable for use with HD cameras and PANORAMO®

#### KW 505 Synchronized Cable Reel with Fiber Optic Capability

The KW 505 has all the same great features of the KW 310 and accepts up to 2000 feet (600m) of high-strength fiber-optic cable or standard high-strength cable. The KW 505 allows longer distance inspections and has the capability of transmitting the data from PANORAMO® 360° Pipeline Scanners and HD cameras.



#### **Synchronization**

The KW 305, KW 310 and KW 505 cable reels feature synchronized cable retraction and payout. This reduces wear on the cable, increases production, and greatly reduces the chance that you will back over your cable during retrieval.

#### Cable Reels - Makingyour job easier.

Often overlooked, the cable reel is one of the most important pieces of the inspection system. IBAK's line of cable reels are designed specifically to work with IBAK equipment and to withstand the harsh environments that you encounter. All mainline cable is Kevlar reinforced and coated for protection. Our standard mainline cables are rated at over 2000 lbs. (900kg) pull strength. Special cable reel features like synchronized operation, automatic level winds, and remote controls make your job easier. Our fiber-optic drums use special cable that is stronger and lighter than traditional coax cable.

				Fiber Optic	Cable Reels
<b>FEATURES</b>	KW 206	KW 306	KW 305	KW 310	KW 505
Range (Distance)	656' (180m)	1000'(300m)	1000'(300m)	1000'(300m)	2000'(600m) 4K 1650' (500m)
Mainline Inspection	<b>&gt;</b>	<b>✓</b>	>	<b>&gt;</b>	<b>✓</b>
Cable Retraction	Power Assist	Power Rewind	Full Synchro	Full Synchro	Full Synchro
Built-In Tractor Lowering Winch			<b>~</b>	<b>✓</b>	<b>✓</b>
Fiber Optic Capability				<b>✓</b>	<b>✓</b>
HD Operation				<b>→</b>	<b>✓</b>
4K Available				<b>✓</b>	<b>✓</b>

#### KW 206 Compact Cable Reel (right)

The KW 206 reel was designed to be compact, powerful and easy to maintain. This design is based on decades of manufacturing expertise and real world project requirements. This drum includes an automatic level wind, powerful retrieval motor, rear tractor/winch controls and an emergency stop switch.

## What is the difference between "Powered" and "Synchronized" Cable Retrieval?

All our cable drums are capable of retrieving the down-hole equipment efficiently and quickly. Cable drums with Synchronized cable retrieval add a smart sensor on the cable boom which tells the drum to speed up, or slow down, according to cable slack. Drums with this feature require less monitoring and can increase the safety of personnel. Powered drums lack this special sensor and are controlled by the operator.

#### Portability

The KW 206 and KW 306 drums are built so compactly that you can deploy them in our specially designed Mobile Rack systems.

#### KW 306 Compact Cable Reel (right)

The KW 306 is the larger brother of the KW 206. Sharing the same core features, the KW 306 is larger to accommodate up to 1000 linear feet of cable. Whether mounted in a vehicle, ATV or trailer, this drum is a compact, economical option for most mainline inspections.

#### Booms

One of two types of booms are required to help protect the cable. The mounted version (pictured above) or the mobile version (not pictured).

#### Compatibility

The KW 206 and KW 306 drums were designed to work with the new generation controllers (BP1/2/10/100). Please note that currently there is no integration with these drums for advanced inspection systems such as LISY, HD or PANORAMO® 4K equipment.





# Controllers BP 1 BP 2

#### **Controllers - Efficiency and Convenience**

The best equipment in the world demands a control system to match. What good would a race car be if you had to reach behind the seat to shift the transmission? We take the time to solicit feedback from operators in the field. IBAK has been manufacturing sewer inspection equipment for over 50 years and we've learned a lot about what makes a system easy to use and efficient. IBAK equipment is designed with the operator in mind. Everything can be controlled by simple movements - the operator feels in complete control and can accomplish their tasks quickly and without strain. You can be sure that when you use IBAK equipment you are in control and getting the job done.

#### Communication

All fixed mounted controllers and BP Mounts come standard with a bi-directional system allowing users to communicate with employees at the rear of the vehicle.

**BP 100** 

#### Mounting

BP Portable controllers can be mounted on a Mobile Rack for off-road inspections, or a BP Truck Desk-Mount for use in a vehicle application. Each sold separately.

#### BP1 | BP2 | BP100 Portable Controller (Pictured above)

The portable controllers were designed to be easy to use, economical and versatile. The large screen provides you with control at the touch of your finger. The BP 2 and the BP 100 feature multi-directional joysticks for control of camera and tractor functions. All portable controllers come with IKAS Recorder software pre-installed, so that you can start capturing video and sharing it immediately. These controllers were designed with the future in mind, and are easily updated when new equipment becomes available. BP Portable Controllers are used with the MainLite® compact cable reels, MicroLite® small diameter push camera or the MiniLite® push system.



**Modularity** 

Each piece of IBAK equipment is designed to meet the users needs - today and in the future! When you purchase a piece of IBAK equipment you can rest easy knowing that you will have support from all future equipment. A great example is our control systems which automatically adapt to whatever equipment has been attached, then loads the appropriate firmware and the correct control and diagnostics interface. This saves system resources, reduces overall equipment expenditures and makes the operator's interface less cluttered with options that aren't required.

			Fiber Optic	Controllers
FEATURES	BP 1/2/100	BS 3.5	BS 7.0	BS 5.0
Pushrod Control	<b>✓</b>	<b>~</b>	<b>~</b>	<b>✓</b>
Portable with Digital Recording	✓			
Mounting	Portable or Fixed	Fixed	Fixed	Fixed
Lateral Launch Control		<b>✓</b>	<b>~</b>	<b>~</b>
Tractor Control	✓	✓	<b>~</b>	<b>~</b>
PANORAMO® Control			<b>→</b>	<b>→</b>
Text Entry (On Screen Display)	✓	<b>✓</b>	<b>→</b>	<b>~</b>
Fiber Optic Reel Control			<b>→</b>	✓
Up to 2000' Cable Supported				<b>✓</b>
High-Definition Capable			<b>✓</b>	✓



#### BS 10 MainLite Controller (Pictured Left)

The BS 10 controller was designed for vehicle mounted installations of the compact KW 206 and KW 306 cable drums. These drums contain the power supply requirements of the down-hole equipment, and therefore the controller itself can be slimmer, lighter and hidden from view. This controller includes an interface cable between the drum and the required computer. The desk component of the BS 10 is a keyboard surround with ergonomic joysticks, power on/off, microphone and 6 quick-keys for preset controls.

#### BS 3.5 / BS 7.0 Mainline Controller (Pictured Right)

The BS 3.5 and BS 7.0 controllers are the ultimate in ergonomic controller design. The controllers feature a small main unit which is easily mountable under the desk or in any electronic control rack. The remote control board acts as your diagnostic and control interface. All system functions are easily accessed by this small desktop unit. System information is displayed on a color LCD touchscreen. Camera and tractor movements, focus, iris, cruise control and lateral launch commands are controlled from the dual multi-axis joysticks. The BS 7.0 controller is the standard fiber optic controller. This controller functions exactly like the BS 3.5 controller but includes a larger power supply and supports fiber optic camera systems like PANORAMO and PANORAMO SI.

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#### BS 5.0 Mainline Controller (Pictured Left)

Our most powerful fiber optic controller is the BS 5.0. The BS 5.0 controller utilizes a unique remote control panel which can be positioned on your workspace and control any piece of equipment quickly and easily. The BS 5.0 controller is the only control system capable of performing inspection lengths of up to 2000' (600m). If you need the greatest inspection distance and the brightest lighting, the BS 5.0 controller is your number one choice.

## **IKAS** Evolution Software

The IKAS® evolution is the newest generation of IBAK's powerful sewer analysis software, now available and supported in North America! Intuitive by design, the inspector is in full control of acquisition and sewer data analysis. PACP and LACP data interface capable, IKAS evolution can be adapted to the needs of modern sewer inspection and each individual user's workflow. IKAS evolution is available in four base bundles with over two dozen extension options available for advanced inspections including; Full HD, 3D-GeoSense, Laser Measurement, and LaserScan profile analysis. Contact your RapidView representative to build the software package that meets your needs and budget!





#### MOBILE

#### **IKAS Mobile**

The IKAS evolution Bundle for IBAK Mobile Systems includes the IKAS evolution base system and the IBAK Mobile Systems MPEG Encoding to include PANORAMO systems. PACP and LACP data interface capable, this bundle is perfect for IBAK Mobile Systems with the BP1, BP2, or BP100 compact control units.

#### **VEHICLE**

The IKAS evolution Bundle for IBAK Vehicle Systems is the ultimate software bundle for sewer data acquisition. This bundle includes IKAS evolution base as well as IBAK Vehicle Systems MPEG Encoding. In addition, the TV-Inspection bundle includes Full-HD, PANORAMO, Lateral systems, and Maps. Selective measurements also include diameter, deformation, and defects using laser.

#### **OFFICE**

The IKAS evolution Bundle for Office Workstations implements the years of IBAK know-how into an awesome office workstation experience. The Office Bundle provides the ease of use for the thorough management of sewer videos and PANORAMO films and photos. PACP and LACP data interface capable, this bundle provides full capability for data analysis and report generation.



## **Compact Systems**

The market spoke, and IBAK listened. The MainLite® product line is the most sophisticated, compact, rugged and easy-to-use mainline inspection system we have ever designed. The MainLite® systems are adaptable, capable, and ready to go at the push of a button. We are offering these systems in affordable packages that can meet your needs whether you are a small town, large municipality or successful inspection contractor.



#### **Compact and Portable**

The MainLite® system is based around two very compact cable drums (KW 206 and KW 306) and the revolutionary BP series multi-function computer controllers. The entire unit can be mounted in a truck, or used in portable applications with the addition of our new MainLite® Portable Cart, which provides seating and an ergonomic mount for the BP 100 controller.

## Affordable packages to fit all your inspection needs...

#### **MainLite®**

BP 100, T66 Crawler for 4" and up, ORION Zoom camera, KW 206 drum with 656' (200m) of cable and accessories.

#### **MainLite® PRO**

BP 100, T76 Crawler for 6" and up, powered elevator, ORPHEUS 2.0 camera, KW 206 drum with 656' (200m) of cable and accessories.

#### MainLite® XL

BP 100, T66 Crawler for 4" and up, ORION Zoom camera, KW 306 drum with 1000' (300m) of cable and accessories.

#### MainLite® PRO XL

BP 100, T76 Crawler for 6" and up, powered elevator, ORPHEUS 2.0 camera, KW 306 drum with 1000' (300m) of cable and accessories.

#### **Highlighted features**

BP 100	٦	Touch Screen, built-in Windows 10		
Recordin	Recording Built in capture card + Software			
Portabilit	У	Large wheels on cart for offroad		
Which tractors will it work with? T66 and T76			T66 and T76	
KW 206	F	Power rewind, level wind, 656' (200m)		
KW 306	F	Power rewind, level wind,1000' (300m)		

## Our most flexible and popular package!

This package contains all the inspection equipment you need to conduct video inspections in 6" (125mm) to over 48" (1200mm) pipe. With the more powerful synchronized cable reel, 1000' (300m) capability, larger more powerful tractor and ORPHEUS $^{\circ}$  2.0 camera you will be able to conduct inspections with speed and accuracy. The built in cable winch lowers the tractor into the manhole, reducing stress on personnel and helps prevent damage. This is the perfect system for contractors and cities who conduct normal mainline inspections, but require the capability to inspect larger lines.

#### PREMIUM Mainline System

Part Number	P00004
Capabilities	5" (125mm) and up

#### **Technical Specifications**

Camera	ORPHEUS® 2.0 -Pan, Tilt & Zoom
Tractor	T76 Tractor with Lift*
Reel	KW 305 Synchronized Reel
Cable	1000' (300m) of high strength cable
Controller	BS3.5 Control Center

\*Optional granulated wheels shown



**Package** 

## **MiniLite Push Cameras**

#### The Professional's Push Camera - The MINILITE® 2.0 Push System

The MiniLite Pushrod System is a compact and versatile platform for inspection of small diameter pipelines. The system works with AxialCam 2, NANO, NANO-L, ORION Zoom, ORION-L Zoom, and POLARIS cameras. The MiniLite features our computer-enabled controller design. With a bright 10" touch screen and a built-in Windows PC, this controller is ready right out of the box. The new multifunction joystick allows precise control of our pan & tilt cameras.

Dimensions	
Size	12.6"x26.75"x24.8"
Weight	40 lbs. (Reel and Controller)
Cable Length (Perfect Pushrod)	250 ft. / 75m

Control Console	
Monitor	10" High-Resolution Touch Screen
Built-in Computer	Windows 10 operating system
Video Storage/Recording	On internal hard drive, MPEG-4 AVC/H.264
Multifunction Joystick	Built-in
Keyboard	On screen or external option
3D GeoSense Capable	YES (Requires 3D enabled Camera)

Cable Reel	
Extension Kits to KW reels	Option available
Length Counter	Standard
Replaceable Pushrod Reel	Standard

Power Source	
Rechargeable Batteries	(2) 18V Makita Batteries
18V Charger	Batteries and Charger Included

**Perfect Pushrod** - Original design with a soft cable on the inside and a strenghtening fiber-glass rod, surrounded by a protective PVC sheath.

**Magic Pushrod** - A high-strength gel rod design that allows for longer pushes and more rigidity.





## **MicroLite Push Cameras**

#### Small, capable and easy to use...

The MicroLite Push reel is our small, lightweight push system that includes the features and ergonomic design you expect from IBAK. Designed for use with the AxialCAM 1 (hard mounted) or the removable AxialCAM 2 camera.

The system is very compact and capable with 100 feet (30m) of Perfect Pushrod. Utilizing two rechargeable batteries for hours of operation, it is easily carried into work sites. The system was designed to use any of the BP Portable Controllers (BP 1/2/100) which allow you to easily control system functions, record video and capture images. Add IKAS software to log your observations and provide your customers with exceptional reports.

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Size	13.7"x 22.4"x 18.5"
Weight	5.7 lbs. (with Controller)
Cable Length (Perfect Pushrod)	100' / 30m

#### Control Console (BP 1 optional)

Monitor	10" High-Resolution Touch Screen
Built-in Computer	Windows 10 operating system
Video Storage/Recording	On internal hard drive, MPEG-4 AVC/H.264
Keyboard	On screen or external option

#### Cable Reel

Length Counter	Standard
Replaceable Pushrod Reel	Standard

#### **Power Source**

Rechargeable Batteries	(2) 18V Makita Batteries
18V Charger	Batteries and Charger Included

#### AxialCam 1.0

The hard-mounted AxialCam 1.0 is permanently mounted to 100' (30m) of Perfect Pushrod. Capable of inspecting 2" pipelines (50mm), it is our smallest camera. Bright, LED lighting and auto-uprighting features mean you don't have to sacrifice image quality or performance in this small package.

#### NEW Adaptive HD/SD camera technology

The new ORION 3.0 cameras bring a new level of modularity and performance to the customer. When connected to an HD capable tractor, the unit provides ultra-sharp HD video. And, when connected to a standard definition push cable or tractor it will automatically switch to standard definition mode. This innovation allows customers who use high-defiition IBAK systems to use the same camera for mainline inspections, push and LISY lateral launch applications.

The ORION 3.0 is the latest innovation designed to reduce customer cost, increase product flexibility and bring users more value. Ask your representative for more information!



## Common Accessories

#### **GOING THE DISTANCE**

**TRACTION** 

IS KEY!

The key factor in determining maximum distance is TRACTION! As the unit travels out into the pipeline, weight of the trailing cable becomes greater, occasionally overcoming the tractors TRACTION and causing slippage. You can achieve greater TRACTION by selecting the correct wheel set and/or utilizing additional weights and accessories.

TRACTION is obtained by wheels that provide more friction on the pipe surface or knobby tires that provide grip on debris, pipe joints, etc. TRACTION is enhanced by adding more down force (weight) on those wheels to ensure maximum contact with the surface it is navigating.

#### **Upper Deflection Pulley**

A must-have for offroad manholes. Supports and directs the camera

cable laterally for remote setups.

#### **ARGO Raft System**

When you have larger water-filled lines, the ARGO Camera Raft can get the job done! Add one to your system to inspect those large interceptors.

#### **Wheel Sets**

Standard Wheels - Soft rubber conforms to pipe walls and get better with age. Pneumatic Wheels - Air-filled tires that provide good traction and clearance. Granulated Wheels - Rubber composite that is perfect for plastic or relined pipe. Treaded Wheels - Hard rubber tires that work well on offset joints and hard debris. High Traction Wheels - Metal cast wheels with maximum traction for plastic or relined pipe.



Check out our
Accessories Catalog
for a full list of
accessories!

#### **RETRUS Reverse Camera**

Most of our systems are synchronized to make sure that you do not back over your cable while retrieving, but occasionally it is helpful to have a rear-facing view when returning to the manhole. The RETRUS automatically changes your view when the system is reversed allowing you to avoid dangers on the return trip.

The tools that let you get the most out of your system!

#### Manhole Adapter

This unique piece can be used to deploy your camera into underground structures or tanks to inspect the structure integrity or incoming pipelines.



This unique piece is essential for going long distances with a T66 tractor. The carriage is easy to install and provides added weight to this compact and powerful tractor.



#### **ACCESSORIZE EFFECTIVELY**

When preparing your inspection or cutter system for work in a pipeline, it is important to use the appropriate accessories. Your RapidView IBAK system is designed to be effective and versatile in its standard configuration, but we all understand that certain pipe conditions require special tools and accessories to be effective. To do this, we offer a large selection of accessories that are designed for specific applications such as greasy, large diameter, oval shaped, and debris or water-filled lines. Speak to your RapidView representative to discuss your type of work and what accessories might be right for you!



#### **MORE WEIGHT EQUALS MORE TRACTION!**

Adding weight to your tractor can dramatically increase traction and pulling distance. Easily one of the most cost-effective and reliable ways to increase your capabilities. *Multiple weights available for all tractor systems!* 

## **Vehicle and Trailer Conversions**

## TOP OF THE LINE FEATURES THAT SET US APART

Clean, spacious offices to provide a comfortable work space for employees.

Ergonomically designed to utilize space and give owners tons of storage options.

Reinforced fiberglass is used on both interior and exterior walls to ensure the highest durability and easy cleaning, along with aluminum trim to avoid any corrosion.

Hard maple counter tops that hold up to demanding use and maintain appearance.

Snap-On tool boxes and Whelen LED lighting.

High quality door latches and industrial hinges.

High quality power generation systems, whether it be generator or inverter powered.



UTVs/ATVs

**Trailers** 

**Cargo Vans** 

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RapiView converts quality vehicles, trailers and UTVs for deploying equipment effectively and safely. With a focus on ergonomic, user-friendly interiors, our conversions are hand built with superior craftsmanship and durability. Each design is created to meet the customer's individual specifications. We convert every major vehicle brand and model. Our staff of professionals bring many years of actual pipeline inspection experience, so you can rest assured that the design you want will work for your application!











## **Product Matrix**



If you have questions concerning system configuration, please contact your RapidView representative!

# OLGATY makes the DIFFERENCE

RapidView IBAK North America

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