

electro^{scan}inc.

Leak Detection Product Catalog

Pressurized & Gravity
WATER

John
Murdock

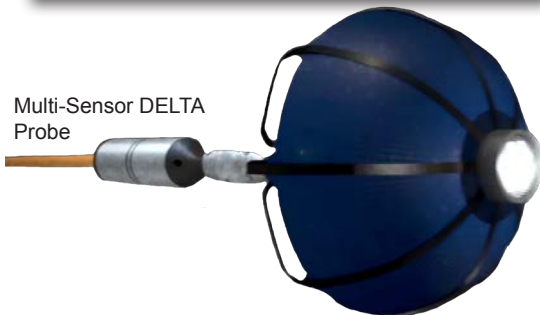


Gravity & Force Mains
SEWER

Mackenzie
App



Water & Sewer
Leak Location Services



Multi-Sensor DELTA
Probe



Dan Wise



September 1, 2020

electro^oscan inc.

WATER PRESSURE GRAVITY

electro scan inc. The Next Generation in Water Leak Detection

electro scan

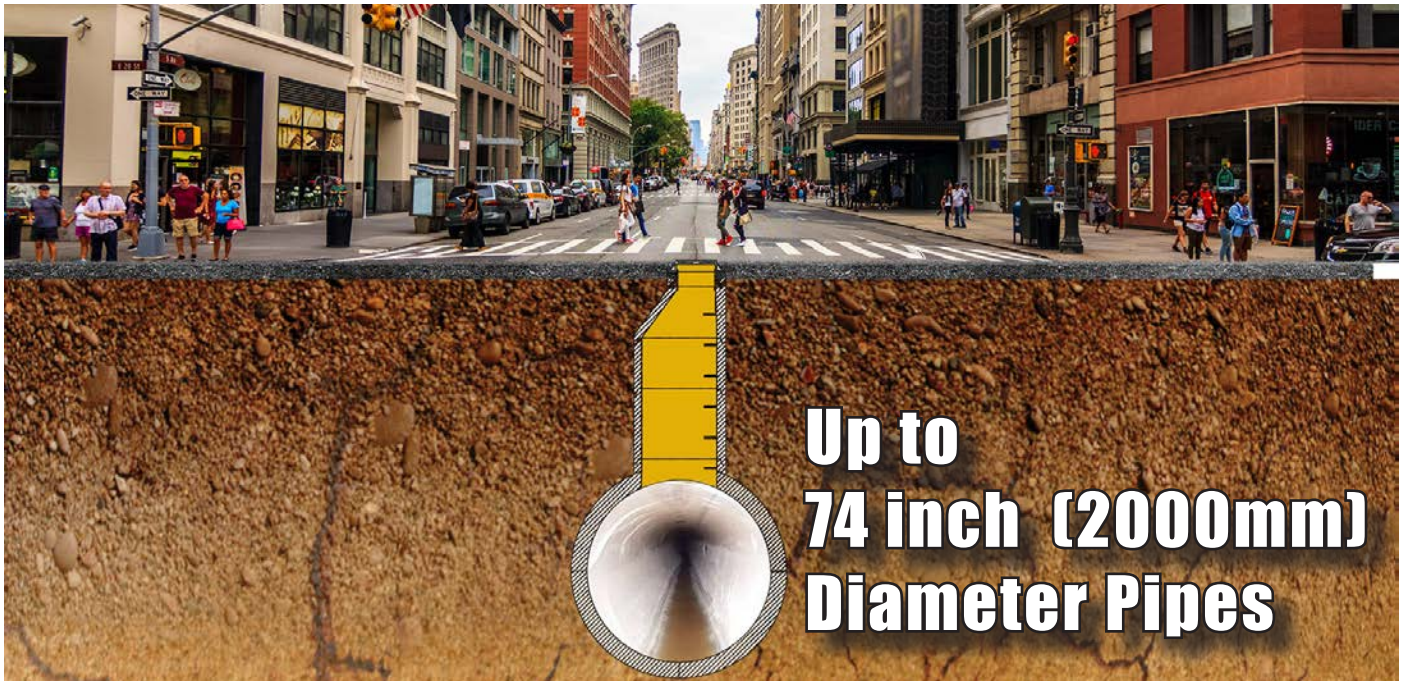
Low Voltage Conduits, Clones, Corroded

electro scan

Matt Campos

GRAVITY FORCE MAINS **SEWER**

LARGE DIAMETER PIPE ASSESSMENT – Pre- and Post-Rehabilitation Leak Location



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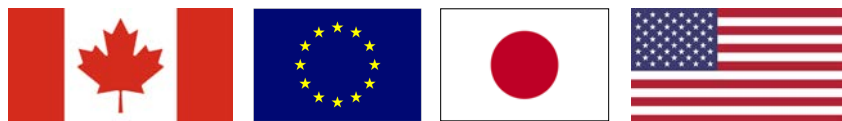
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Chuck Hansen

**Holly Tonner
Aqua Assets Pty Ltd.**

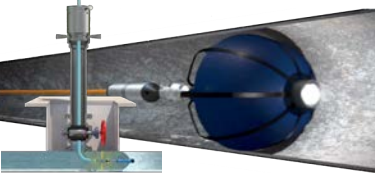








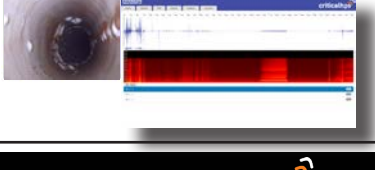



INTERNATIONAL PATENTS & PATENTS PENDING

CA 2864503, EP 2748576, JP 6062541, 6193893, US Patents 9143740, 9304055, 9933329, 10451515, 10557772

electro^{scan}inc.

Product Overview

Product	Number	Selected Application	Sales / Licensing ¹
	Multi-Sensor DELTA Probe  CONDUCTIVITY  CCTV  ACOUSTICS	Small-to-Medium Pressurised Water Mains or Sewer Rising Mains, up to 60 inches, 1500mm. Up to 1km per survey, with special upgrades to reach 2km pipe lengths.	Only available for service-related projects. Not available for sale to utility customers or contractors. Contractor licensing subject to training, qualifications, and annual support agreement.
	ES-600 CCTV Optional: ES-670, ES-660, ES-650 ES-400	Medium-to-Large Diameter sewer or stormwater pipes, or gravity water mains 6-72 inches, 150-1800mm. Rack mounted onto an existing CCTV truck or van.	Available for sale directly to municipal or investor-owned utilities. Available for licensing to contractor on a daily or per meter basis.
 <i>Generator & laptop PC sold separately.</i>	ES-600 Portable Optional: ES-670, ES-660, ES-650 ES-400	Medium-to-Large Diameter sewer or stormwater pipes, or gravity water mains 6-72 inches, 150-1800mm that are difficult to access by vehicle.	Available for sale directly to municipal or investor-owned utilities. Available for licensing to contractor on a daily or per meter basis.
	ES-400 Push Rod Optional: Plug Reel, Hand Cart ES-200, ES-50	Small-to-Medium Diameter sewer or stormwater pipes 6-24 inches, 150-600mm. Push rod system is limited to approximately 150m length.	Available for sale directly to municipal or investor-owned utilities. Available for licensing to contractor on a daily or per meter basis.
 3 inches or 76.2mm Pipe Diameter 90° Angle	ES-200 Push Rod Optional: Plug Reel, Hand Cart ES-50	Small Diameter sewer or stormwater pipes 3-8 inches, 76-150mm. Best for private laterals. Push rod system is limited to approximately 150m length.	Available for sale directly to municipal or investor-owned utilities. Available for licensing to contractor on a daily or per meter basis.
	ES-50 Push Rod Optional: Plug Reel Hand Cart	Very Small Diameter plumbing fixtures or industrial tubing 2-4 inches, 50-100mm.	Scheduled for Release in 2021.
	CriticalH₂O Cloud App	Web-based data management & storage, including SQL database containing life-to-date inspection results for Low Voltage Conductivity, Acoustic, and CCTV results.	Requires set-up fee, per seat licensing, and minimum 2-year software support agreement.
	CriticalSewers® Cloud App	Web-based data management & storage, including SQL database containing life-to-date inspection results.	Requires set-up fee, per seat licensing, and minimum 2-year software support agreement.

1. All product configurations available for international projects, requiring detail digital or paper-based maps, traffic control, permitting, access, and subject to detail project plan.

1 Multi-Sensor DELTA Probe



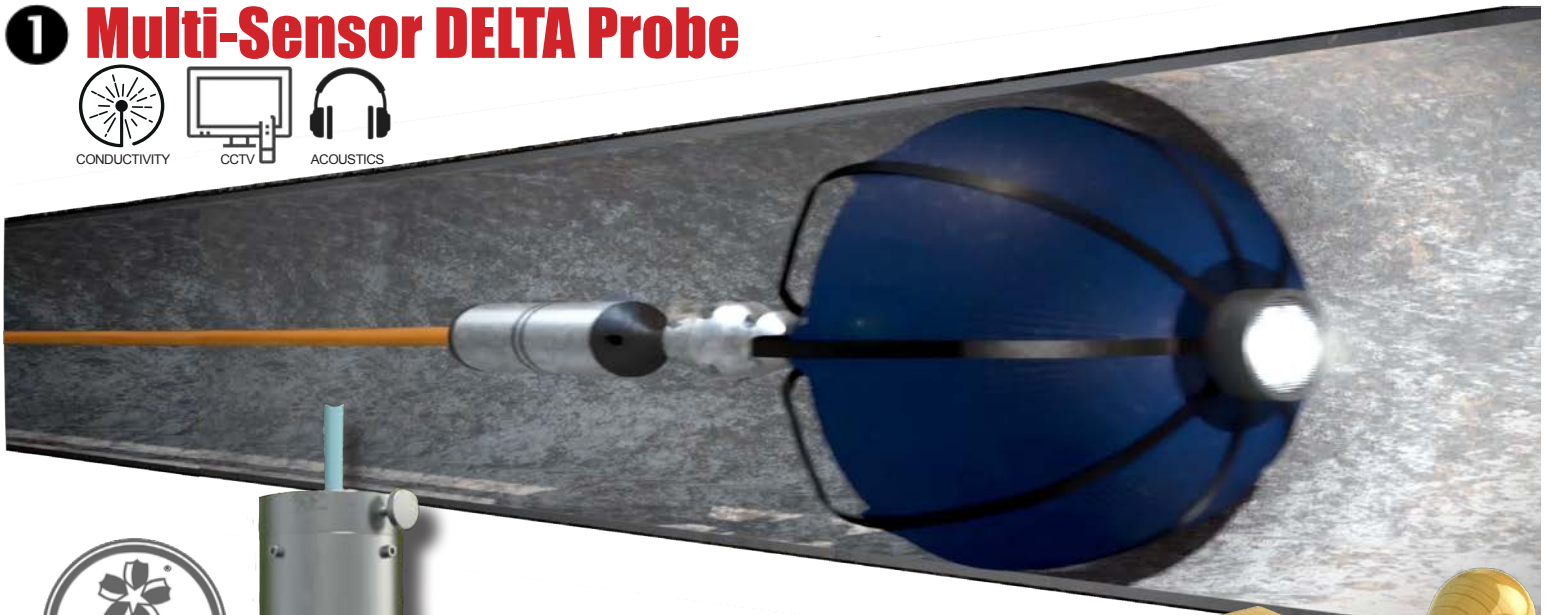
CONDUCTIVITY



CCTV



ACOUSTICS



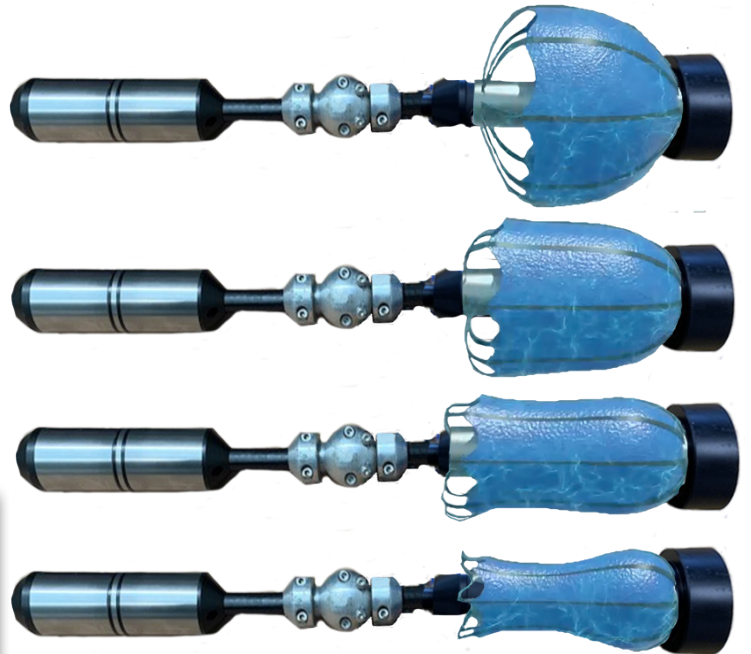
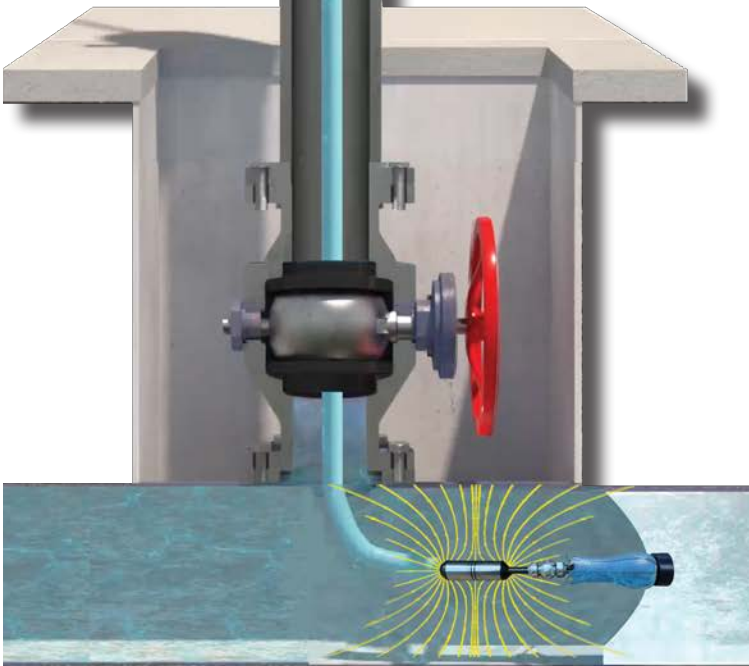
SSIP

SAFETY
SCHEMES IN
PROCUREMENT

Condition	Performance
Features	Low Voltage Conductivity FELL, CCTV, Acoustic Hydrophone, Pressure Sensor
Pipe Diameters	3-60 inches, 76-1500 mm
Pressure	Range from ZERO to 12 bar (174 psi)
Temperatures	41-86° F, 5-30° C
Common Launch Points	Air Release Valves, Blow Off Valves, Gate Valves, Hot Taps, Hydrants, and Meters
Flow Rate	Min. Flow Rate for Hydrochute Propulsion is .3m/sec. Push rods able to handle NO FLOW conditions.
Pricing	Per Day or Per Meter Based on Total Project Size, Difficult Access, Openings, Diameter, and Traffic Control.
Pipe Lengths Per Survey	1km Recommended for CCTV Up to 2km with specialised equipment.
Average Production	1-2 Pipe Sections per Day



DWI Reg 31



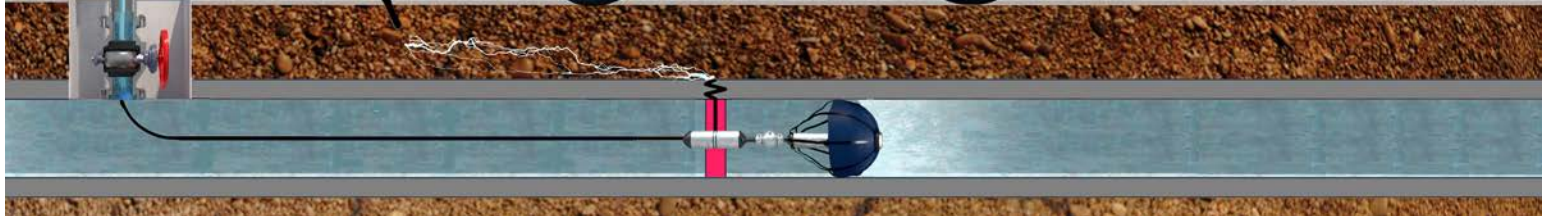
1 Multi-Sensor DELTA Probe Continued

Available as a Technology Service Only By Authorized Contractors

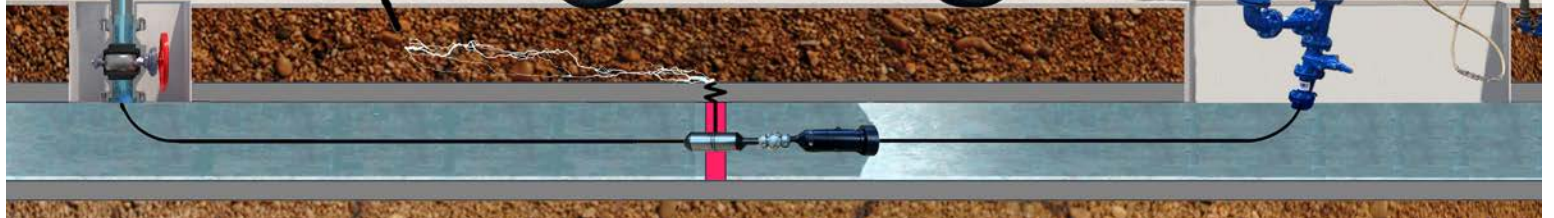
Hydochute Set-Up



Both Set-Ups
1km Distance
or 3,280 feet



Pull Through Set-Up



Over 3,000 Pressurized Pipe Insertions



2 ES-600 CCTV Truck Integration ES-670, ES-660, ES-650, ES-400

Aries

Cues

IBAK

Ipek

Rausch

Custom



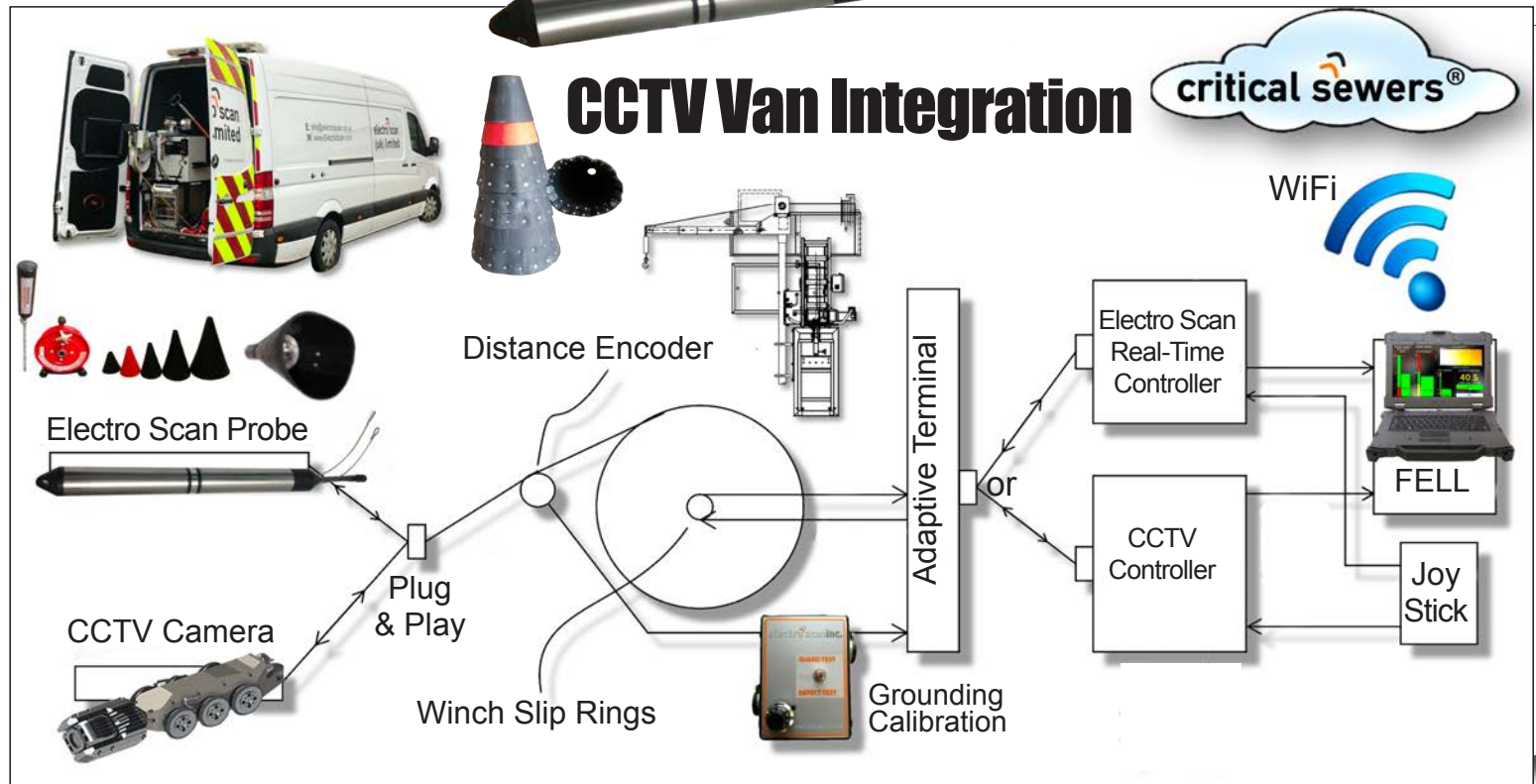
ES-670

ES-660



ES-650

ES-400 for Standard CCTV Reel

ES-400 for Push Rod Reel



ES-600 Standard Specifications and Features

 <p>Cory Peters</p>	Conveyance	Combined Sewer & Storm Systems, Separated Gravity Mains, Gravity Water Mains, Force Mains, Siphons, and Stormwater Networks.		
	Required Flow	None. Dry, Partially, or Fully-Surcharged Flow. Aided by Jet Truck.		
	Pipes	Pipe Diameters	ES-670 Up to 74 inch (2000mm) Fully Surcharged ES-660 6 to 60 inch (150 to 1500mm) Partially Surcharged ES-650 6 to 60 inch (150 to 1800mm) Partially Surcharged ES-400 4 to 16 inch (100 to 400mm) Partially Surcharged	
		Pipe Shape	Any, including Circular, Box, Egg-shaped, Oval, and Trapezoidal.	
		Pipe Materials	Any Electrically Non-Conductive Pipe Walls, including Asbestos Cement, Brick, Cement Mortar Lined and Coated Steel, Cured-In-Place Pipe, Ductile Iron with Epoxy Coatings, Fiberglass Reinforced Pipe, High-Density Polyethylene Pipe, Prestressed Concrete Cylinder Pipe, Polyethylene, Polyvinyl Chloride, Reinforced Concrete, Vitrified Clay Pipe, etc.	
	 <p>Sean Blottie</p>	System Specification	Dimensions	ES-660 & ES-670 Length: 32 in (812mm); Diameter: 2.875 in (73mm)
			Scan Recording	Critical Sewers® Field Laptop PC, Wifi Connection to Critical Sewers® Cloud Application.
			Speed	45-60 ft/minute (15-20 meters/minute)
			Operating Temperature	20°F to 120°F (-7°C to 50°C)
			Power Supply	120VAC / 60Hz - or - 220VAC / 50Hz
Range			1,500 ft (460m) range from single point of access. Dependent on jet truck hose length.	
Current (max)			40 mA	
Electrical Array			Focused tri-electrode array	
Defect Flow Calculation			± 30% Accuracy measured in Gallons Per Minute (GPM) or Liters Per Second (LPS).	
Defect Location			ES-650 & ES-660 ±3/8 inches (1cm) ES-670 ±1 inch (2.5cm)	
Advantages	<ol style="list-style-type: none"> No manual coding required. Finds 90-100% defects missed by CCTV inspection Finds & measures leaks in GPM (LPS). No bypass pumping required for inspection. Use in field, rain or shine. Recommended for all Pre- and Post-Rehabilitation. Finds defects inside joints not seen by CCTV. Differentiates superficial cracks from cracks through pipe. 	<ol style="list-style-type: none"> Repeatable test results, verified by US, UK, German, Japanese, and Australian testing. Find & measure defects hidden by grease, silt, & encrustation. Automatically evaluates 360° of pipe wall. Determines water tightness of sewers & lateral connections. Robust design with no moving parts. Recommended by WRC, developers of NASSCO CCTV Codes. Reports available in minutes, not hours, days, or weeks. 		
Limitations	<ol style="list-style-type: none"> Does not provide a clock position of defect location inside the pipe, but location is accurate to within 0.4 inches (1cm). Does not scan metallic pipes, unless there is a coating or liner (minimum of 1-2mm). 			

3 ES-600 Portable ES-670, ES-660, ES-650, & ES-400

Portable Systems utilize CUES K2 Portable Reel or equivalent.



Matt Campos



Generator and laptop PC sold separately.



Mackenzie App



ES-670



ES-660



ES-650



ES-400 for Mechanical Reel



ES-400 for Push Rod Reel

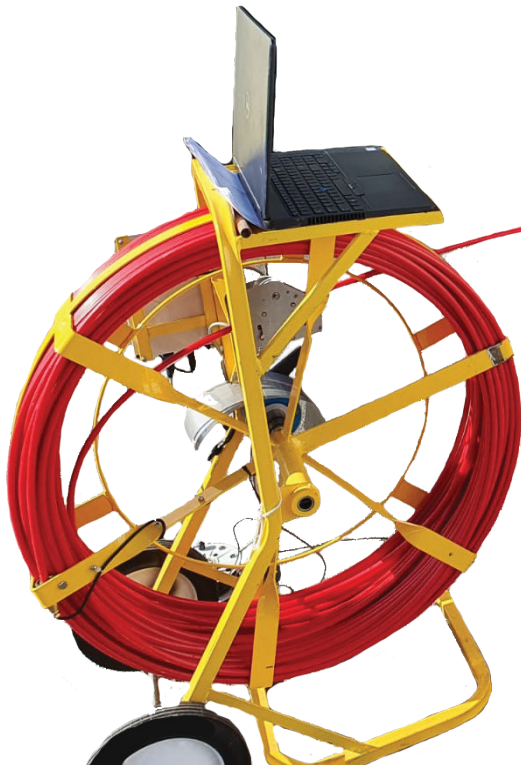


ES-600 Series Portable* <i>Continued from Prior Page</i>	Pipes	Pipe Diameters	ES-650 6 to 60 inch (150 to 1500mm) Partially Surcharged
		Pipe Shape	Any, including Circular, Box, Egg-shaped, Oval, and Trapezoidal.
		Pipe Materials	Electrically Non-Conductive Pipe Walls, including Asbestos Cement, Brick, Cement Mortar Lined and Coated Steel, Cured-In-Place Pipe, Ductile Iron with Epoxy Coatings, Fiberglass Reinforced Pipe, High-Density Polyethylene Pipe, Prestressed Concrete Cylinder Pipe, Polyethylene, Polyvinyl Chloride, Reinforced Concrete, Vitrified Clay Pipe, etc.

*For difficult to access locations and equipment portability.



4 ES-400 Push Rod

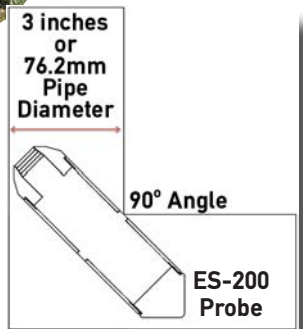


Mike App



ES-400	Pipes	Pipe Diameters	4 to 16 inch (100 to 400mm)
		Pipe Shape	Any, including Circular, Box, Egg-shaped, Oval, and Trapezoidal.
		Pipe Materials	Electrically Non-Conductive Pipe Walls, including Asbestos Cement, Brick, Cement Mortar Lined and Coated Steel, Cured-In-Place Pipe, Ductile Iron with Epoxy Coatings, Fiberglass Reinforced Pipe, High-Density Polyethylene Pipe, Prestressed Concrete Cylinder Pipe, Polyethylene, Polyvinyl Chloride, Reinforced Concrete, Vitrified Clay Pipe, etc.
	System Specification	Dimensions	Length: 8 in (203.2mm); Diameter: 2.2 in (55.8mm)
		Scan Recording	Critical Sewers® Field Laptop PC, Wifi Connection to Critical Sewers® Cloud Application.
		Speed	30 ft/minute (10m/minute)
		Environmental	IP 67. Able to withstand rain and low pressure wash down. 20°F to 120°F (-7°C to 50°C)
		Power Supply	12V Rechargeable External Battery Pack -or- 12V DC External Power Supply.
		Reel	Spool Diameter 39 inches, L32 inches, W20 inches, H38 inches L81cm, W51cm, H96cm
		Current (max)	40 mA
		Electrical Array	Focused tri-electrode array
		Defect Flow Calculation	±30% Accuracy measured in Gallons Per Minute (GPM) or Liters Per Second (LPS)
Defect Location	±3/8 or 0.4 inches (1cm)		
Weight	2.95 lb (1.34kg)		

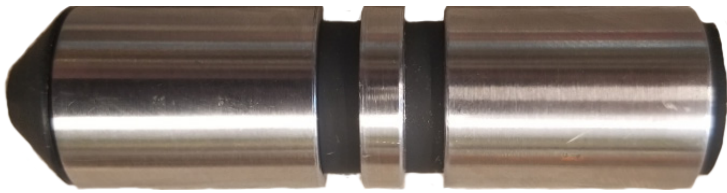
5 ES-200 Push Rod



ES-200	Pipes	Pipe Diameters	3 to 8 inch (76 to 200mm)
		Pipe Shape	Any, including Circular, Box, Egg-shaped, Oval, and Trapezoidal.
		Pipe Materials	Electrically Non-Conductive Pipe Walls, including Asbestos Cement, Brick, Cement Mortar Lined and Coated Steel, Cured-In-Place Pipe, Ductile Iron with Epoxy Coatings, Fiberglass Reinforced Pipe, High-Density Polyethylene Pipe, Prestressed Concrete Cylinder Pipe, Polyethylene, Polyvinyl Chloride, Reinforced Concrete, Vitriified Clay Pipe, etc.
	System Specification	Dimensions	Length: 6.5 inches (165mm); Diameter: 1.57 inches (39.88mm)
		Scan Recording	Critical Sewers® Field Laptop PC, Wifi Connection to Critical Sewers® Cloud Application.
		Speed	30 ft/minute (10m/minute)
		Environmental	IP 67. Able to withstand rain and low pressure wash down. 20°F to 120°F (-7°C to 50°C)
		Power Supply	12V Rechargeable External Battery Pack -or- 12V DC External Power Supply.
		Reel	Spool Diameter 26 inches, L26 inches, W12 inches, H32 inches L66cm, W30cm, H81cm
		Current (max)	40 mA
		Electrical Array	Focused tri-electrode array
Defect Flow Calculation	±30% Accuracy measured in Gallons Per Minute (GPM) or Liters Per Second (LPS)		
Defect Location	±3/8 or 0.4 inches (1cm)		
Probe Weight	1.1 lb (.50kg)		

6 ES-50 Push Rod

SCHEDULED FOR RELEASE 2021



ES-50 Probe

Pipe Diameter

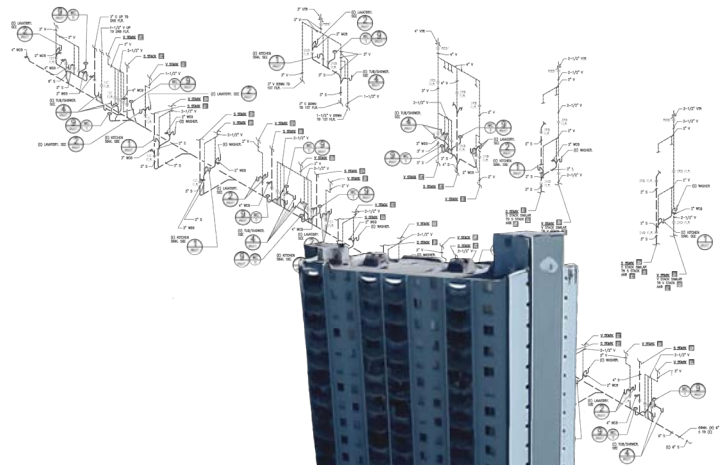
2 inch (51mm) to 4 inch (102mm)

Application

Leak Detection for Residential & Commercial Plumbing, and Industrial Plant, Hydrant Entry, Highly Tuberculated Water Mains to minimize disruption, Assessment of Vertical Pipes, including CIPP watertightness testing.

Probe Length

3.5 inches (89mm); Diameter: 0.75 inches (19mm)

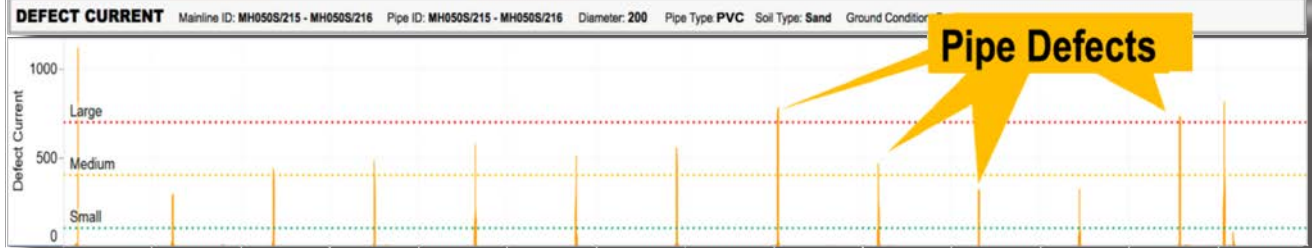


7 Critical H₂O Cloud Application

Defect Count

**Total Defect Flow
LPS, LPD, LPD/IDM**

DEFECTS		% OF DEFECT LENGTHS		LPS SUMMARY		DIAMETER & DISTANCE		OPERATOR INFO	
S	3	Small Defects	0.001600	Minor LPS	0.41	300mm	66	criticalh2o	
M	6	Medium Defects	0.004700	Moderate LPS	0.36				
L	4	Large Defects	0.003100	Severe LPS	0.00	0 20 40 60 Distance (m)		Atmospheric Test	Scan Start
		All Defects	0.009400	Total LPS	0.77			17/05/2019 9:41:53 PM	17/05/2019 10:32:11 PM
				LPD	66.339				
				LPD IDM	8.088				
				Minor LPS %	53.00%				
				Moderate LPS %	47.00%				
				Severe LPS %	0.00%				



**Graphical Display
By Footage**

FIELD

**Field Data
5-Minutes
or Less.**

**amazon
web services**

+ a b l e a u

Innovyze®

OFFICE



8 Critical Sewers® Cloud Application



Matt Campos

Home
My Electro Scan
Edit Scans
Export
Support
Log Out

Scans	Distance	Pinhole	Small	Medium	Large	Total Defects	GPM	GPD	GPD/IDM
13,679	2,461,227	19,542	227,599	44,108	54,727	345,976	412,822.75	594,464,769	6,756,695.936

Date	Mainline ID	Pipe ID	Pipe Type	Diameter	Defects	GPM	GPD	GPD/IDM	
8/5/2020	805-046 - 805-074	805-046 - 805-074	VCP	6	645	0	78	1,416,182	1,932,303
1/4/2019	805-046 - 805-074	805-046 - 805-074	VCP	6	652	49	339	1,208,300	1,631,561
9/16/2019	C04-294 - C04-145	C04-294 - C04-145	VCP	6	545	0	59	872,611	1,236,558
6/22/2016	85-002-11 - 85-002-10	85-002-11 - 85-002-10	VCP	8	535	16	233	901,171	1,297,685
1/7/2019	C04-092 - C04-093	C04-092 - C04-093	VCP	6	445	33	199	769,333	1,093,435
8/4/2020	C04-092 - C04-093	C04-092 - C04-093	VCP	6	509	0	59	1,532,900	2,207,376
8/23/2019	C04-094 - C04-093	C04-094 - C04-093	VCP	6	445	0	59	1,030,821	1,484,381
11/1/2016	HH0637 - HH0636	HH0637 - HH0636	VCP	12	113	0	229	1,943,355	2,708,424
12/13/2018	C05-261 - C05-229	C05-261 - C05-229	VCP	6	439	0	59	1,122,048	1,549,346
12/5/2018	C04-294 - C04-145	C04-294 - C04-145	VCP	6	545	0	59	1,050,221	1,496,566
1/7/2019	C04-094 - C04-093	C04-094 - C04-093	VCP	6	445	0	59	1,030,821	1,484,381
5/20/2017	Entry Pit A - Exit Pit A	HDPE	PE	8	0	0	0	0	0
8/23/2019	C04-092 - C04-093	C04-092 - C04-093	VCP	6	445	0	59	1,030,821	1,484,381
8/21/2019	C04-084 - C04-083	C04-084 - C04-083	VCP	6	449	0	59	969,544	1,359,309
9/10/2019	C04-329 - C04-180	C04-329 - C04-180	VCP	6	388	0	59	839,835	1,163,738
6/22/2016	85-002-10 - 85-201-09	85-002-10 - 85-201-09	VCP	8	534	0	239	755,684	1,047,500

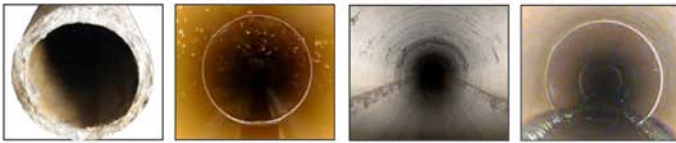
Mackenzie App

Electro Scan Inc. – By Pipe Material

ABS	Acrylonitrile-butadiene-styrene	PCCP	Prestressed Concrete Cylinder Pipe
ACP	Asbestos Cement Pipe	PE	Polyethylene
BRK	Brick	PFP	Pitch Fiber Pipe
CMLSP	Cement Mortar Lined Steel	PP	Plastic Pipe
CON	Concrete	PVC	Polyvinyl Chloride
CIPP	Cured-In-Place Pipe	RCP	Reinforced Concrete Pipe
DIP	Ductile Iron (w/Protector 401)	RPM	Reinforced Plastic Mortar
FRP	Fiberglass Reinforced Pipe	RTR	Reinforced Thermosetting Resin
FRPM	Fiberglass Reinforced Polymer	SIPP	Spray-in-Place Pipe
GRP	Glass Reinforced Pipe	SPR	Spiral Wound Pipe
HDPE	High Density Polyethylene	TC	Terracotta or Clay Pipe
ORP	Orangeburg Pipe	VCP	Vitrified Clay Pipe
PB	Polybutylene		



PRE-REHABILITATION



Asbestos Cement Pipe

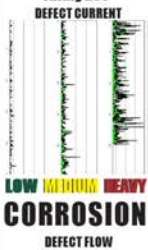
High Density Polyethylene Pipe

Prestressed Concrete Cylinder Pipe

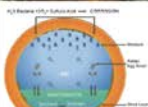
Vitrified Clay Pipe

Electro Scan FELL is unique in its ability to geometrically map the remaining wall, i.e. corrosion of ACP.

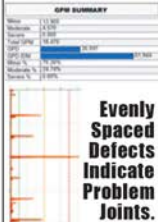
Finding & Measuring Pipe Corrosion Using Electro Scan's Patented Data Analytics



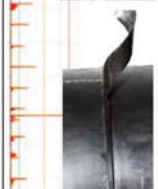
As demonstrated by independent benchmarks, since acoustic and transient pressure sensors are unable to provide detail geometric assessments of pipe walls, and therefore unable to estimate remaining pipe walls, Electro Scan represents a game changing solution to assess & prioritize ACP.



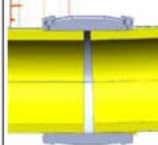
Poor mechanical or fused joints are the Achilles heel of HDPE, and not seen by CCTV cameras or heard by acoustic data loggers or sensors. But, found & quantified by FELL in accordance with ASTM F2550.



Evenly Spaced Defects Indicate Problem Joints.

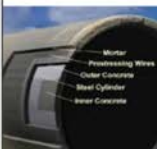


What Electro Scan Finds Most?
Inadequate Clamping or Restraint during Fusion (Below)



Electro Scan represents the only technology able to reliably & consistently find & measure leaks in GPM.

While other devices may attempt to locate corroded wire mesh that may or may not indicate a weakness in the pipe wall, Low Voltage Conductivity represents a game-changing solution to provide unbiased leak locations & severity for each defect.



Superior to acoustic and electromagnetic sensors, Electro Scan's Low Voltage Conductivity detects leaks other technologies miss.

How PCCP Fails?

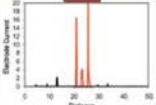


It doesn't matter whether you evaluate VCP from the outside or inside of a pipe, CCTV, Laser, LIDAR, Sonar, GPR, or Acoustic, are not able to detect or measure defect flows.



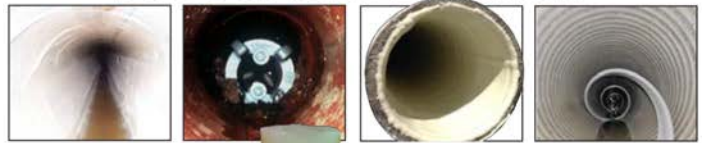
ELECTRO SCAN ASSESSES 100% OF JOINTS

Electro Scan's FELL is the only technology, representing a Non-Destructive Test (NDT) able to follow a 90° pipe bend to locate a pathway for water to enter or exit a pipe.



Open trench evaluation of FELL located defects, missed by CCTV, exactly showed three matching leaks due to fittings that were never tightened. Just one of over a dozen tests proving FELL superiority.

POST-REHABILITATION



Cured-In-Place Pipe

Grout

Spray-In-Place Pipe

Spiral Wrap Pipe

CIPP liners may not be watertight and defects not seen by certified operators using CCTV cameras. As a result, ASTM F2550 should be added to CIPP specifications to ensure pipe quality & integrity.

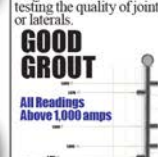


RECOMMENDED USE:
To Find & Quantify Leakage From
• Accelerant Burns
• Accidental Cuts
• Bad Service Reconnect
• Bad Lateral Liners
• Blisters
• Delamination
• Defective Epoxy
• Equipment Damage
• Foreign Objects
• Pinholes
• Poor Curing
• Overcooking
• Stretching
• Top-Hat Defects
• Wet-Out Failures
• Wrinkles, Including: Buckling, Fins, Folds, Lifts, and Ridges

FELL is now preferred over using traditional packers to test joints for water tightness, due to FELL's Non-Destructive Testing (NDT) of joints, laterals, and cracks.



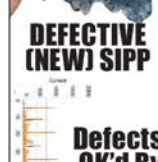
Unlike air testing, FELL does not force any added pressure on joints or laterals. Since air testing can open joints, shift pipes, and even temporarily correct out-of-round conditions in plastic pipes as areas around joints are inflated, packers are no longer recommended for testing the quality of joints or laterals.



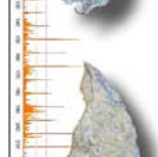
GOOD GROUT
All Readings Above 1,000 amps

SIX MONTH OLD DEGRADED GROUT
All Readings Below 1,000 amps
STILL OK.

Locking individual wraps is key to any successful Spiral Wrap Pipe project, with problems not identified by CCTV.



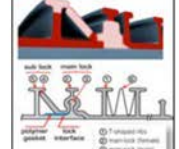
DEFECTIVE (NEW) SIPP



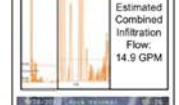
Defects OK'd By CCTV Found By FELL

RECOMMENDED USE:
1. Pre-SIPP.
2. Post-SIPP All Liners.
3. Prior to Warranty Acceptance.

In contrast, Electro Scan FELL inspection can find defects to individual couplings.

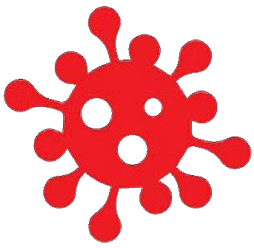


Estimated Combined Infiltration Flow: 14.9 GPM



Estimated Combined Infiltration Flow: 14.9 GPM

RECOMMENDED USE:
1. Pre-Spiral Wrap.
2. Post-Spiral Wrap.
3. Prior to Warranty Acceptance.



COVID-19 Coronavirus

Electro Scan Inc. Global Health & Safety Measures

FIELD OPERATIONS: COVID-19 SAFETY UPDATES

All field operations are performed independently by Certified Electro Scan Technicians with no direct interaction with third-party personnel or customers required. The Electro Scan Operator efficiently and effectively manages all equipment, including insertion, navigation, and retrieval. The highest priority of Electro Scan staff – during all aspects of the sewer or water survey – is to safeguard and protect the environment, deliver value-for-money to utility customers, avoid vehicle hazards, and protect pedestrians.

Electro Scan technology represents a machine-intelligent, non-destructive, leak detection solution. All data is collected without delay and instantly filtered through multiple security firewalls utilizing multiple redundant data storage backups with all data transport messaged using strict data protection algorithms, standards, and stored procedures. Once a sewer or water scan is completed, data is uploaded via onboard WiFi communication via data encrypted pathways delivered to either the Company's CriticalSewers® or CriticalH₂O cloud application where data can be instantly processed and available for review or decision support.



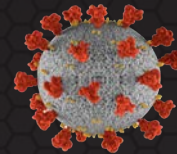
MACHINE-INTELLIGENT LEAK IDENTIFICATION & QUANTIFICATION

**ELECTRO SCAN INC'S
PATENTED & PATENT PENDING
MACHINE-INTELLIGENT 4-IN-1
DELTA PROBE, HYDROCHUTE,
CCTV, AND ACOUSTIC SENSOR**



OUR ROUTINE SAFETY STANDARDS ALREADY PROTECT OPERATORS FROM COVID-19

- Due to job specialization, only one (1) employee touches or uses any equipment as per their job function for that day. At the end of each day, all equipment is cleaned and disinfected.
- Required Personal Protective Equipment (PPE): steel-toed boots, hi vis and reflective apparel, gloves (chemical resistant, 9 mil thick), & hard hat.
- Additional PPE includes eye protection, disposable masks (N95), extra clothing, etc., as recommended by CDC, NIH, & OSHA.
- All PPE kits are personally assigned to an Operator, and kits have dedicated place to keep personal PPE from others. Extra PPE kits and equipment are available on all vehicles.
- Hand sanitizer is in the front door wells and also on rear of every truck.
- Hand washing stations are on every truck.
- All Trucks are fully stocked with spray and wipe disinfectants for use after each day's work.
- Each day all trash and used equipment (gloves, wipes, rags, etc.) is bagged and removed from the trucks to insure each day begins clean.



ADDITIONAL PRECAUTIONS IN RESPONSE TO COVID-19

- Each Field Operator has vehicle assigned for each day, and its disinfected at the end of each day.
- Before each day begins a tail gate safety meeting takes place, with appropriate social distancing of at least 6-feet, to go over the job and reiterate the safety protocols in place and to be followed.
- Each employee has reviewed and signed off on the current guidance from the CDC, NIH on appropriate disinfection requirements, techniques, and PPE requirements for working in sewers and to protect themselves from COVID-19.

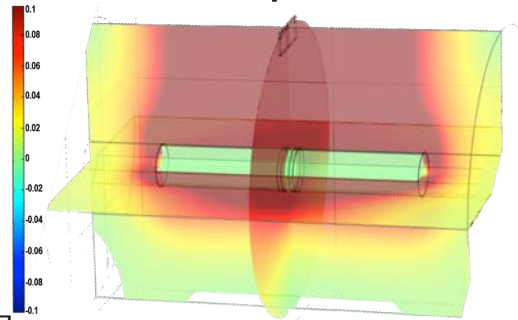
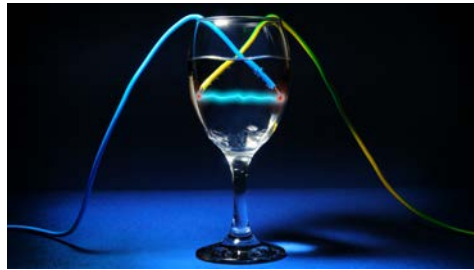
Technology

“Electro Scan’s Focused Electrode Leak Location, is a Game Changing Technology”

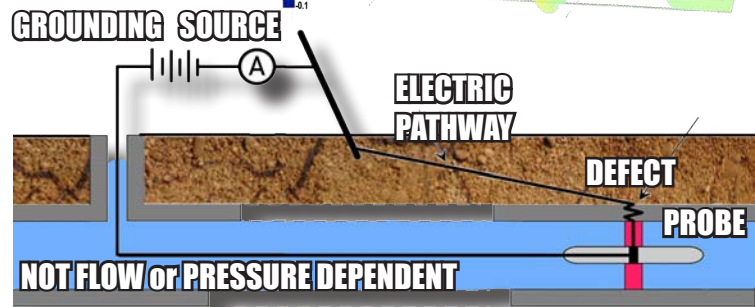


HOW DO WE FIND EVERY LEAK?

If a pipe leaks electricity, it leaks water. And can be measured in gallons per minute or litres per second.



Completing The Circuit Finds Every Leak!



Results independently calibrated using COMSOL Multiphysics®.



FELL FINDS LEAKS MISSED BY OTHERS



CCTV



Helium or Smoke Testing



Acoustic Sensors



Dye Flood Testing



Conductivity



Sonar

“Electro Scan’s Machine-Intelligent Data Replaces Time Consuming, Often Inaccurate Acoustic & Visual Guesswork.”

Services

Contract Services

Direct Services By Electro Scan's International Field Teams

Technology Licensing

Licensing to 3rd Party Authorized Contractors Utilizing Electro Scan Certified Equipment

Utility Sales & Software Cloud Licensing

Specific Pricing Available Upon Request



Chris Chesworth



Team



Chuck Hansen, Founder & CEO.

International pioneer in water & wastewater asset management & condition assessment. Multi-patent holder in pipe leak detection, with nearly 40 years of experience in water & sewer industry. Founded Enterprise Asset Management (EAM) company in 1983 and sold for \$100 million in 2007. Founded Electro Scan in 2011 and Electro Scan (UK) Limited in 2014. Former Chair, ASTM F36.20, Inspection & Renewal Water & Wastewater Infrastructure.



Carissa Boudwin, VP, Chief Revenue Officer.

In charge of corporate wide Technology as a Service (TaaS) and Software as a Service (SaaS) licensing. B.S. George Mason University. Over 5 years with the Company managing data reporting, sales quotes & proposals, technology licensing, and revenue recognition.



Michael Condran, PE, VP, Chief Engineering Officer.

Responsible for engineered quality assurance, quality control, decision support, and reporting, with 25-years of experience with major global engineering firms. Licenses PE in Colorado, Florida, North Carolina, and Washington.



Mike App, VP, Chief Implementation Officer.

Responsible for all Project Implementations & Deliverables, worldwide, with over 10-years of experience in Cured-In-Place Pipe (CIPP) and trenchless rehabilitation industry.



Brad Weston, Director, Electro Scan (UK) Limited

Responsible for UK and EU Water & Sewer Leak Detection Projects, with Master Certificate in Advanced Low Voltage Conductivity. Prior to working with Electro Scan, Weston worked for WRc doing over 1,000 water insertions.

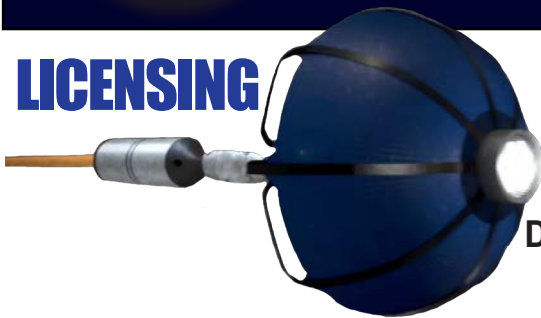
Accurate, Fast, Repeatable



**Field Data
5-Minutes
or Less.**



LICENSING



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