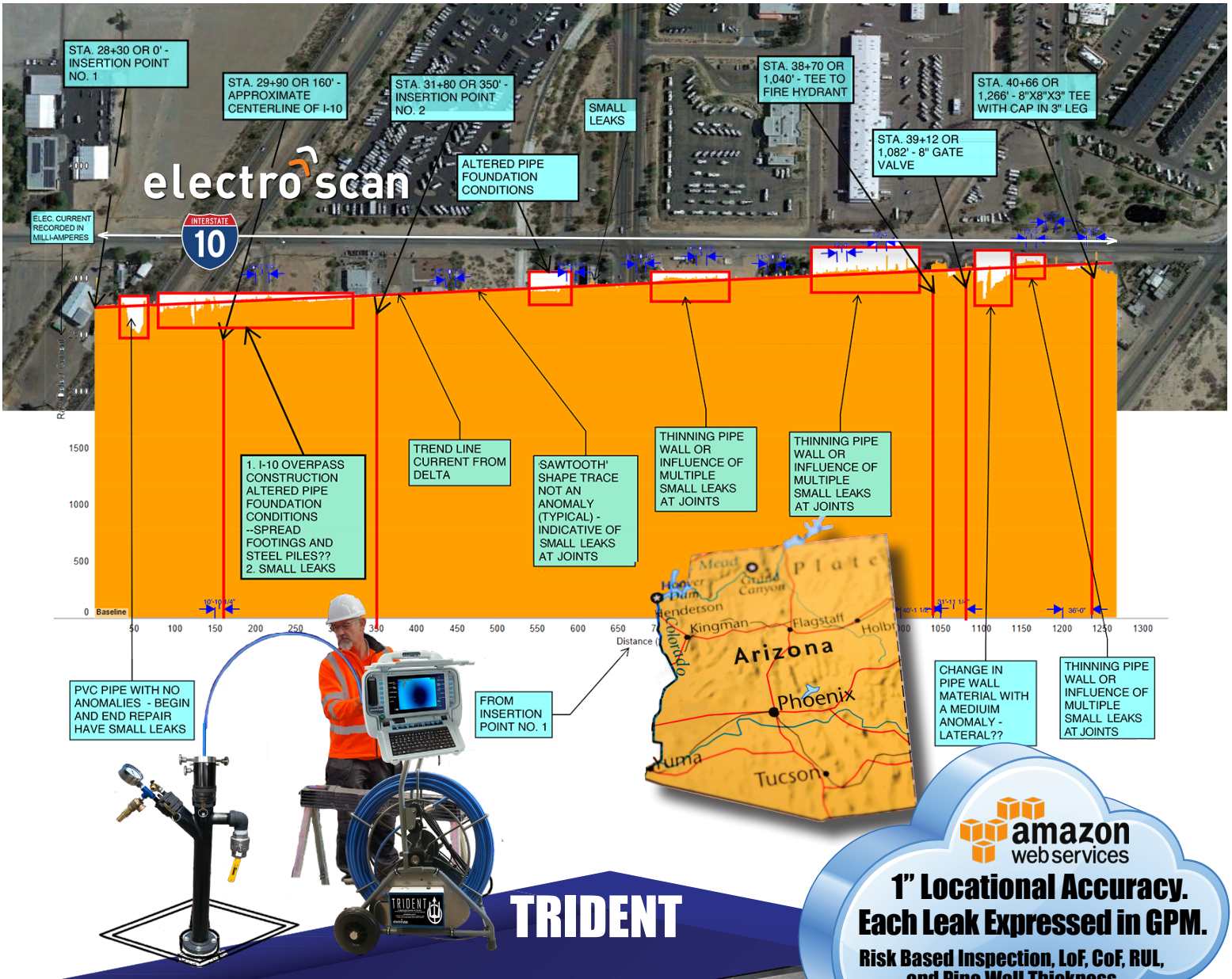
10 November 2021

Electro Scan Finds Leaks And, Pipe Wall Thickness



Arizona Project Brings New Pipe Assessment Standards to Water



Pressurized Water Main Assessment

Flow Velocity	**4 feet per second flow**
Pressure (PSI)	**80psi (Avg U.S. Water Pipelines Operate at 69 psi)**
Pipe Material	**Asbestos Cement Pipe (ACP)**
Pipe Diameter	**8 inches**
Pipe Length	**1,266 feet**

Actionable Data in Minutes, Not Weeks or Months.






electro
scanning

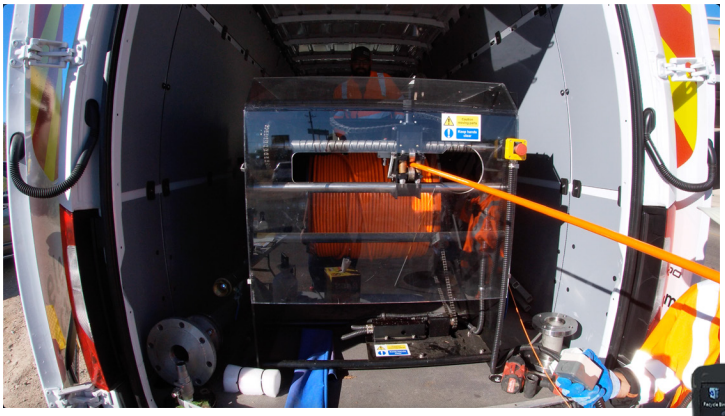

14 FT 1 IN
TRAFFICADE






electro
scan


14FT 1IN






Running Cable Scan on ES Water
PROBE SPEED
FEET PER MINUTE
100
60
30
0
TOTAL CURRENT
4000
3500
1000
500
1861
RETRACT CABLE
DISTANCE FROM START (FEET)
866.7
Retract
Stop
Camera
Meterage
MENU
EXIT
HELP

Are You Still Listening for Leaks?

Machine-Based Non-Acoustic Leak Detection

electro scan

DELTA

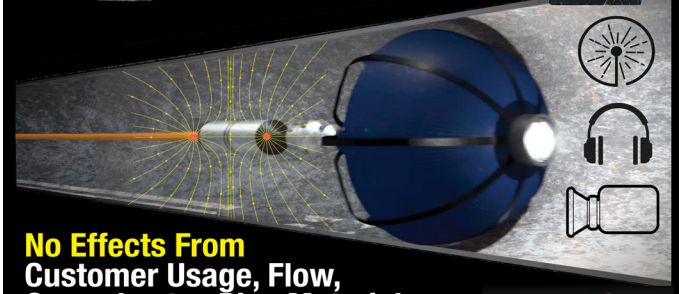
Environment + Energy LEADER
electro scan TOP PRODUCT 2021



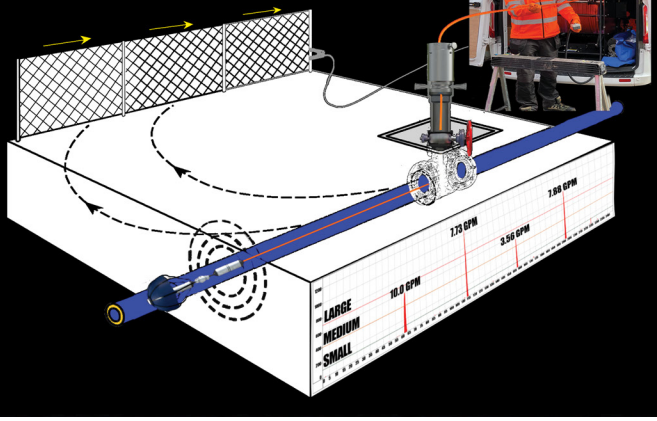
- Non-Acoustic Leak Survey
- Locational Accuracy ½”
- Leak Severities in GPM
- Tethered Cable +3,000ft
- 6” to 84” Diameter
- All Pipe Materials







No Effects From
Customer Usage, Flow, Groundwater, Pipe Material, Pressure, or Street Noise.

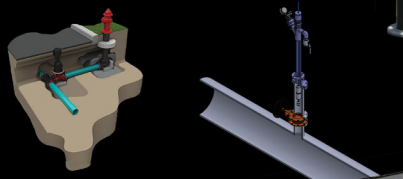


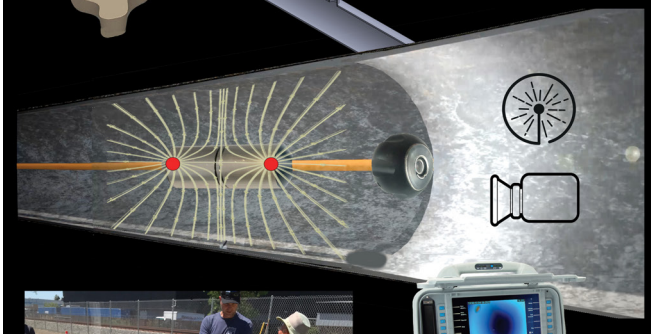
electro scan

TRIDENT

- Non-Acoustic Leak Survey
- Locational Accuracy ½”
- Leak Severities in GPM
- Tethered Cable 400ft
- 4” to 36” Diameter
- All Pipe Materials





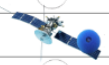






Water Leak Detection Product Comparison

MULTI-SENSOR DELTA PROBE COMPETITIVE ADVANTAGES

Company YES ✓ NO ○	electroscaninc.		Aquam	Xylem/Pure/WRc		Aganova	Ingu	Utilis
Features / Product	**Delta**	**Trident**	**JD7**	**Sahara**	**SmartBall®**	**Nautilus**	**Recon**	**Satellite**
Technology	Acoustic, CCTV, Conductivity	CCTV, Conductivity	Acoustic, CCTV	Acoustic, CCTV	Acoustic	Acoustic	Acoustic	Synthetic Aperture Radar
In-Pipe Connection	Tethered	Tethered	Tethered	Tethered	Free Flowing	Free Flowing	Free Flowing	○
Device								
Visual Inspection with Camera	✓	✓	✓	✓	○	○	○	○
Joint Spacing	✓	✓	○	○	○	○	○	○
Leak Location – Accuracy 1cm	✓	✓	○	○	○	○	○	○
Leakage Severity – Expressed in Gallons per Minute or Litres per Second	✓	✓	○	○	○	○	○	○
Finds & Measures Leaks in Plastic Pipe	✓	✓	○	○	○	○	○	○
Pressurised Water & Gravity Sewers	✓	✓	○	○	○	○	○	○
Wall Thickness for Cement Asbestos	✓	✓	○	○	○	○	○	○
Able to Find Leaks With 'NO FLOW'	✓	✓	○	○	○	○	○	○
Repeatability of Leak Location +2years	✓	✓	○	○	○	○	○	○

KEY ADVANTAGES

- No Lost Balls or Spheres. 100% Retrieval Since We're Tethered.
- No False-Positives from 'Hitting' the Pipe Wall like Acoustic. Not Possible With Ohm's Law.
- No Missed Leaks. We Find Them All.
- No Guessing 'Which Leak is Larger?' Each Has a Liters per Second or GPM.
- No High Pressure Needed. We're Pressure-Independent; Able to Scan 0-175 psi (12 bar).
- No Long Wait for Reports. Data is Available in Minutes!
- No Estimated Locations or Ranges. Pinpoint Locational Accuracy of 1cm (0.4in).
- No Late Night / Early Morning Testing. Ambient Noise & Customer Pipe Usage Is Not a Factor.
- No Effect from High Groundwater Surrounding Pipes. Electro Scan Measures Size of Hole.
- No Need to Increase Pipe Pressure to Hear Leak. Electro Scan Is Non-Acoustic.



Trunk Main Leak Detection





DELTA



Electro Scan

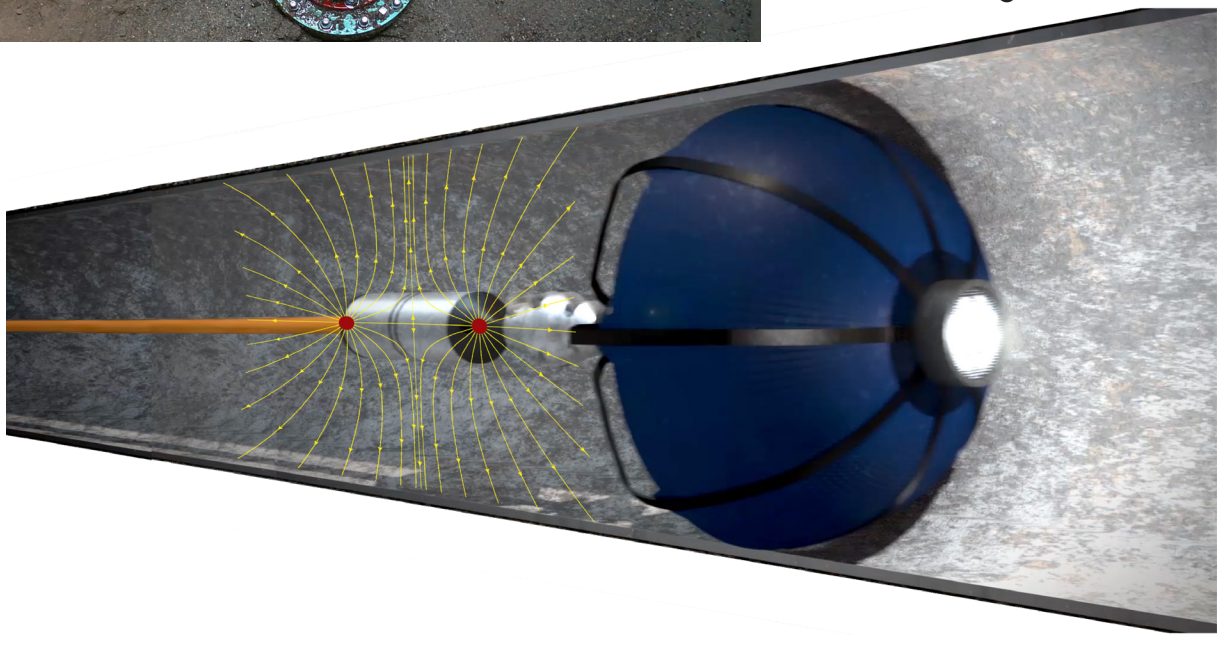
Machine-intelligent, high-frequency low-voltage electric current (i.e. not electro-magnetic).

Acoustic

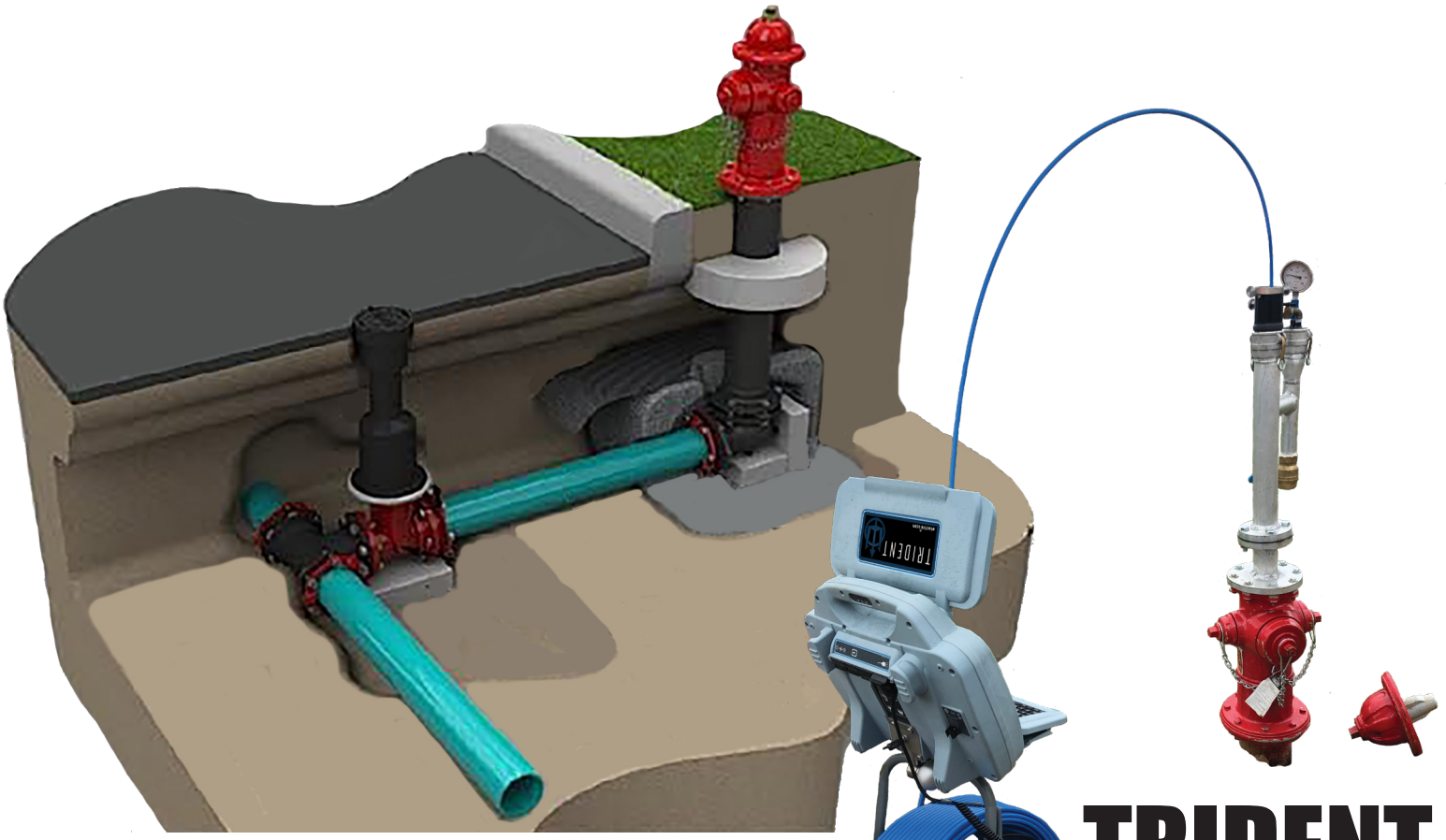
Just in case leak can be heard, but usually not.

CCTV

Navigation, debris, AI Tap Identification & Leak Tracing.



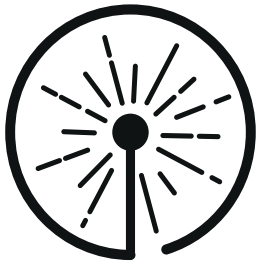
Distribution Leak Detection



TRIDENT

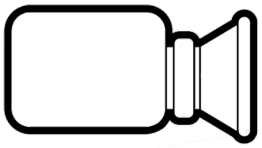
Electro Scan

Machine-intelligent, high-frequency low-voltage electric current (i.e. not electro-magnetic).



CCTV

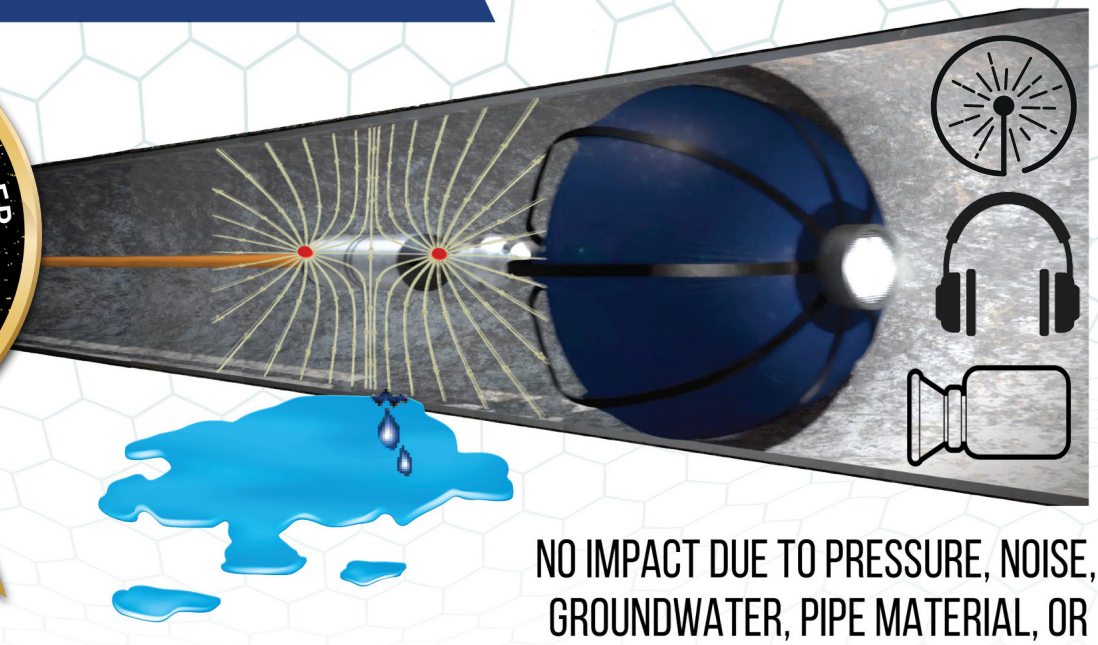
Navigation, debris, AI Tap Identification & Leak Tracing.





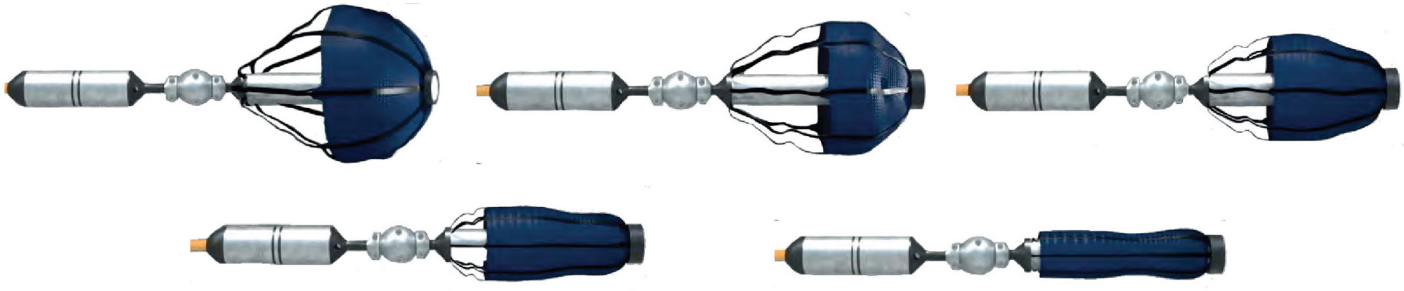
ELECTRO SCAN DELTA

Environment + Energy LEADER
electro scan
TOP
PRODUCT
2021



NO IMPACT DUE TO PRESSURE, NOISE, GROUNDWATER, PIPE MATERIAL, OR CUSTOMER USAGE.

Condition	Performance
Features	Low Voltage Conductivity FELL, CCTV, Acoustic Hydrophone, Pressure Sensor
Pipe Diameters	3-60 inches (76-1500mm)
Pressure	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 0.3m/sec. Pull-Through able to handle NO FLOW conditions.
Pricing	Per Day or Per Meter Based on Project Size, Access Difficulty, Insertion Points, Diameters, 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



* Integrated Acoustic lets utilities compare results with Conductivity, revealing what they are 'not' hearing

MULTI-SENSOR TRIDENT PROBE



Pressurized Water Main Leak Detection.
Finding & Measuring Leaks in GPM or LPS.

ELECTRO SCAN

CCTV

NEW PRODUCT

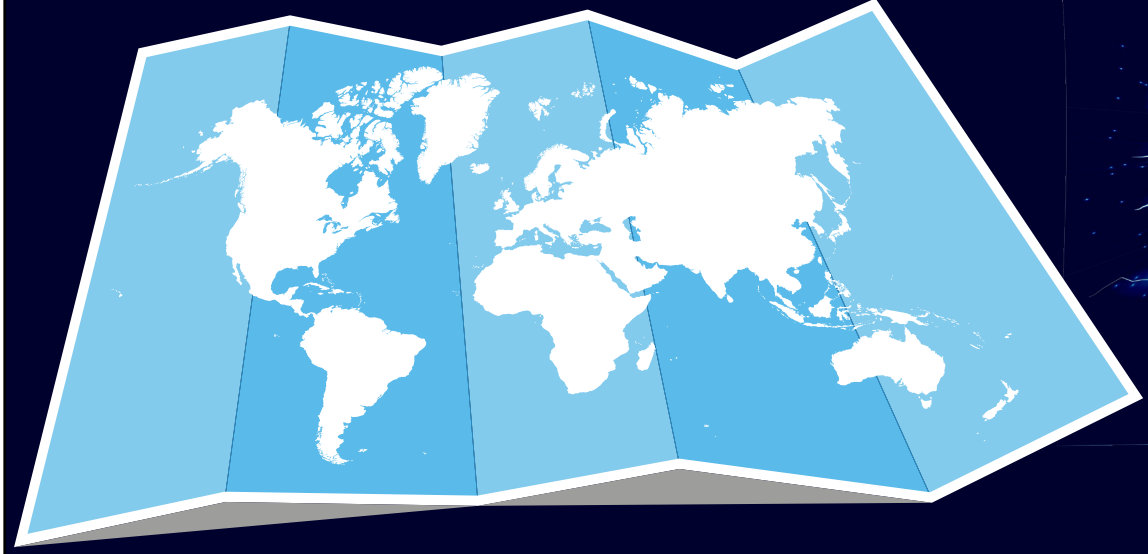




CHLORINATION CHAMBER

Condition	Performance
Probe Sensors	Low Voltage Conductivity FELL and CCTV
Pipe Diameters	4-10 inches (100-255mm)
Pressure	0 to 160 psi (11 bar)
Temperatures	5-30°C, 41-86°F
Flow Rate	Push Cable able to handle flow or no-flow conditions
Pricing	Per Day or Per Meter Based on Total Project Size
Launch Points	Hydrants, Air Release Valves, Blow Off Valves, Gate Valves, Hot Taps, Meters
Pipe Length Per Survey	Up to 400ft (120m) in either direction from access
Construction	High impact ABS & powder-coated, zinc-plated mild stee
Dimensions (Length x Width)	5 inches x 1.6 inches
Camera Features	Display: 10.1", 1280 x 800 HD color TFT Storage: Internal 128Gb, USB flash storage supported Power Options: Mains Input (100-240 VAC), DC Output (16 VDC) or Built-In Battery (4S2P) Focal Range: 10mm to ∞ Active Pixels: 768 x 492 (NTSC) / 765 x 582 (PAL) LED Luminance: ≥ 208 Lumens Resolution: ≥ 460 TVL

Accurate, Fast, Repeatable







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