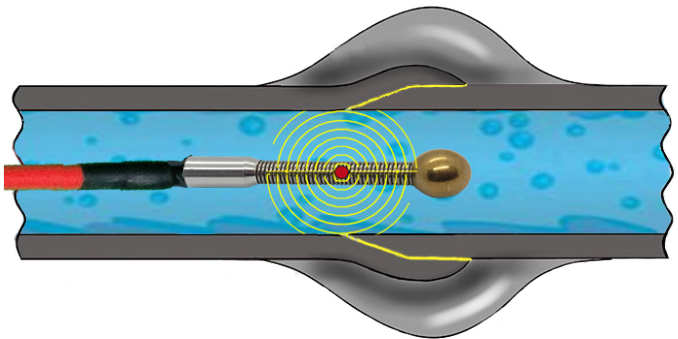
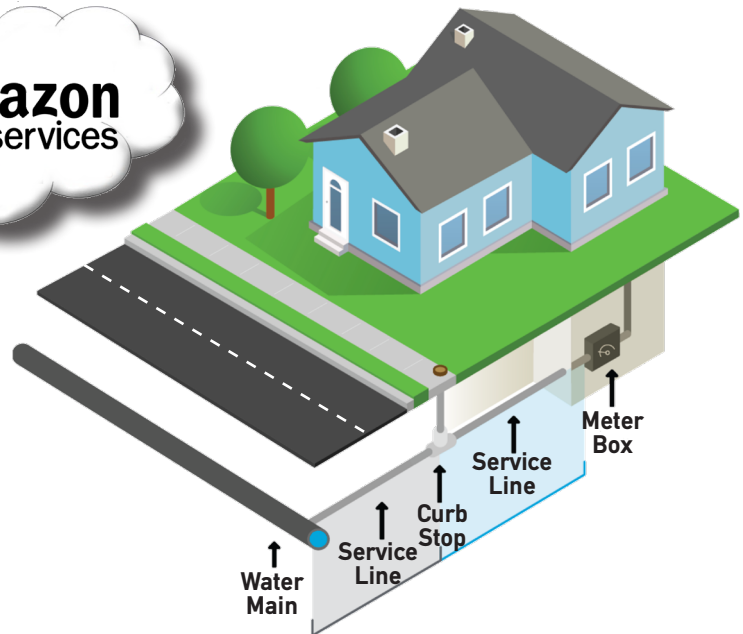




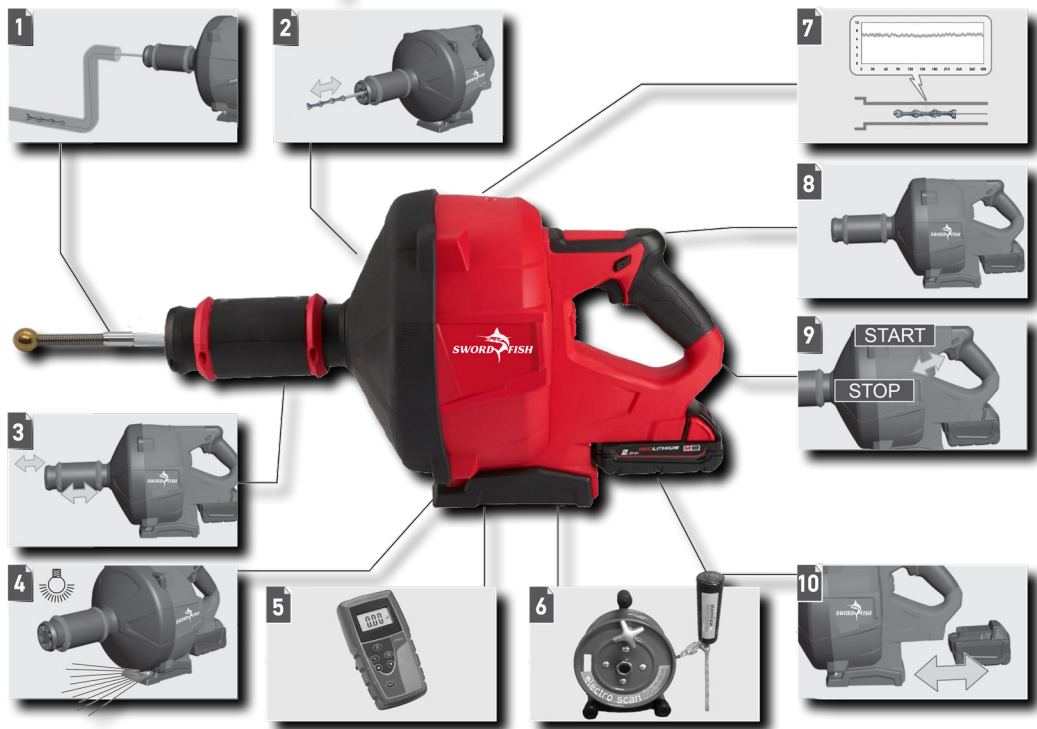
- **SWORDFISH** is the world's first hand-held buried lead pipe detection tool using an 18V battery with automatic system for cable feed in pipe diameters from ½ to 3 inches (12mm - 76mm)
- **SWORDFISH** is based on Electro Scan's patented machine-intelligent technology, developed in accordance with the American Water Works Association, Manual M77, Water Main Condition Assessment, to measure electric resistance using low-voltage conductivity to locate buried lead pipes.
- **SWORDFISH**'s design enables users to grip the device with one hand and have the other hand free to guide the Electro Scan probe and cable in and out of the companion service line pipe insertion device.
- **SWORDFISH**'s cable feed system maintains a selected feed speed with its rotating action allowing users to navigate multiple 90° pipe bends.
- **SWORDFISH**'s fully enclosed drum eliminates free spinning parts, providing users with more protection to work in and around basement meters, bends and other obstructions.
- **SWORDFISH** readings are captured in real-time with data transmitted and processed in Electro Scan's Critical H<sub>2</sub>O cloud application, with results independently verified using a commercially available lead test kit for 100% verification of lead pipe.



Field operation requires full compliance with EPA guidelines for drinking water pipe entry.

### KEY FEATURES

1. Probe entry.
2. Cable feed and retraction.
3. Gripping surface.
4. Light beam.
5. Guard test.
6. Grounding reel and stake.
7. Electro Scan readings.
8. Fully enclosed drum.
9. On-Off switches
10. Rechargeable batteries.

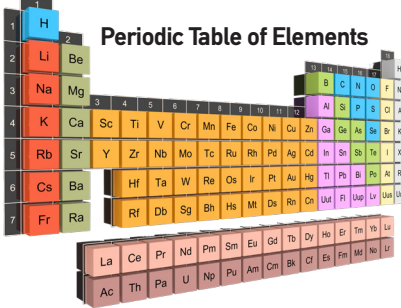


Electro Scan probes confirms lead pipe with an approved independent Lead Test Kits. Testing of probe is required after each survey.

Images shown are representation only. Electro Scan adapted M18 FDCPF8, Milwaukee Electric Tool Corporation ("Milwaukee Tool").

### A Breakthrough in Buried Lead Pipe Detection

Electro Scan's SWORDFISH is a breakthrough in accurately & consistently locating buried lead pipes. Using its patented machine-intelligent low-voltage (i.e. non-acoustic, non-electro magnetic) technology, Electro Scan first discovered its ability to locate lead pipes when it was used to assess Asbestos Cement (AC) pipes; finding lead soldered joints used to seal pipe joints. Aided by the major difference in resistivity of pipe materials, Electro Scan developed SWORDFISH to enter pressurized pipes with 1/2-inch diameters with multiple 90° bends.



TECHNOLOGIES	Locate Buried Pipes
Acoustic Monitors	NO
Fiber Optics	NO
Acoustic Sensors	NO
CCTV Inspection	NO

### EPA Guidelines

Office of Water (4606M)  
EPA 816-B-22-001  
August 2022

### "Electrical Resistance Testing"

**BASE UNIT**



**PROBES**



**GROUNDING STAKE**



**WI-FI**



**LEAD TEST**



**CRITICAL H2O CLOUD REPORTING**

