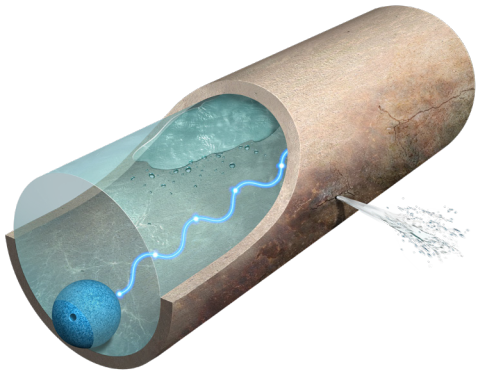
SmartBall® platform

Free-swimming inspection platform for water and wastewater pipelines



Features and benefits

- Determine the condition of transmission mains and force mains of any material
- Pinpoint leaks and gas pockets
- Confirm pipeline location with precision XYZ mapping
- Measure the pipeline's pressure profile
- Locate sediment restrictions and reductions in pipe diameter
- Deploy in live pipelines through existing features
- Cover long distances with active tracking during inspections
- NSF-certified to protect water quality

SmartBall delivers precise pipeline condition data, helping utilities address water loss, prevent failures, and make informed rehabilitation and management decisions.

SmartBall is an inline inspection tool engineered to assess water transmission mains and sewer force mains of any material. It simplifies inspection by providing reliable, high-confidence insight into asset condition and location without disrupting operations.

Actionable information

In a single run, SmartBall collects data on leaks and gas pockets as well as pipeline alignment and pressure. Its sensitive acoustic sensor detects even pinhole-sized leaks, helping utilities address issues early and avoid costly failures. SmartBall also identifies gas pockets, which can lead to flow disruptions and internal hydrogen sulfide corrosion in force mains.

SmartBall's next-generation capabilities include complete pressure profiling and XYZ mapping. The tool delivers unmatched spatial precision with a tactical-grade inertial measurement unit and patented rolling motion. Pressure data also enables analysts to identify significant flow restrictions and assess depth of cover.

Data analysis and accessibility

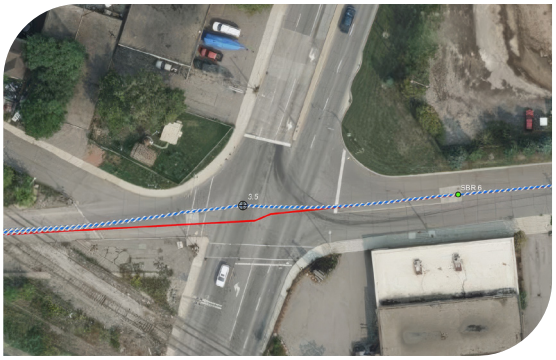
Utilities receive decision-ready results in the PipeView web portal, making it easier to visualize, prioritize, and respond to pipeline threats. Dig sheets enable crews to precisely locate and address immediate maintenance concerns. Using automated analysis, preliminary inspection results are available within one day, so crews can investigate high-risk leaks while still in the field. Utilities also receive accurate 3D pipeline maps that identify conflicts with existing record drawings. Accurate records help communities plan underground utility work, maintain regulatory compliance, and avoid accidental utility strikes.

Operational and service excellence

SmartBall is designed for efficient deployment in live pipelines, collecting data without disrupting operations or water service. The tool can be

Rely on highly trained Xylem AQUA pro Service Professionals for expert inspection delivery

Collect data on leak location, magnitude, and type (joint, barrel, or feature leaks)



Identify mapping conflicts with existing utility records

launched and extracted through existing access points, travel long distances in a single run, and navigate pipeline features with ease. Active tracking throughout the inspection helps prevent lost or stuck tools and supports precise location reporting.

Operating conditions

Product	Potable water, raw water, wastewater
Pipeline material	All pipe materials
Pipe diameter	6 in (150 mm) and greater
Deployment time	24 hrs of data capture; 100 hrs of tracking
Flow velocity	0.5 to 6 ft/s (0.15 to 1.8 m/s)
Min. pressure	15 psi (1 bar) recommended differential for leak detection
Max. pressure	500 psi (34.5 bar) for live insertion and extraction; 1600 psi (110.3 bar) maximum pressure
Max. fluid temperature	Under 104 °F (40 °C) for standard insertion and extraction
Butterfly valve passage	Minimum internal diameter of 12 in (300 mm)

System specifications

Deployment methods	Air release valves, gate valves, check valves and open ports 4 in (100 mm) and greater as well as swab launchers, reservoirs and hydrants
Sensors	Temperature, pressure, and acoustic sensors, magnetometer, inertial measurement unit, and tracking pinger
Tool tracking	Tool position monitored throughout the inspection with pre-installed tracking units
Data layers	Leaks, gas pockets, and sediment/flow restrictions located to ±3 ft (1 m) accuracy Pipeline pressure and temperature profile Pipeline alignment (XY) and elevation (Z) mapped to ±3 ft (1 m) accuracy with tracking points spaced up to 3,200 ft (1,000 m) apart
Leak sensitivity	Between 0.03 gal/min at 100 psi and 0.35 gal/min at 15 psi (between 0.11 l/m at 6.9 bar and 1.32 l/min at 1 bar)
Certification	NSF / ANSI 61 - Drinking Water System Components
Applicable US patents	US8098063B2

Xylem's operating and system specifications represent standard conditions, but we understand that every pipeline has unique challenges. We're committed to working with you to find tailored solutions. Contact us to discuss your specific needs.

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Let's Solve Water