

# ACQUARIUS

## IN-LINE INSPECTION TOOL

The Acquarius is a smart inline untethered inspection tool with numerous ultrasonic sensors that send and collect sound waves to accurately measure the geometry and to detect any anomalies in the wall or joints of a pressure pipeline. It can assess the full condition of pressurized water mains in a single run and delivers an accurate XYZ-mapping. The tool is suited for both drinking water and pressurized wastewater pipelines, starting from an inner diameter of DN200. The intelligent PIG is applicable in (high-risk) pipelines of any material, such as concrete, asbestos cement, cast iron, steel and HDPE/PVC/GRP. Through an interactive and dynamic dashboard, all data and information about the inspected pipeline are presented.



## Pipeline Inspection Services - Equipment Info Sheet Acquarius

Measurement (accuracy)	Metals* (Steel/DI/Ci)	Prestressed Concrete	Asbestos Cement	PCCP	Plastics (PE/ PVC/GRP)
XYZ Mapping (0,5 m)	✓	✓	✓	✓	✓
Wall Thickness (0,49 mm)	✓ (corrosion)	✓	✓ (leaching)	✓	✓ (delamination)
Joint Angular Displacement (0,25°)	✓	✓	✓	✓	✓
Joint Gap Width (4,0 mm)	✓ (or condition welds)	✓	✓	✓	✓
Ovality (0,5%-point)	✓	✓	✓	✓	✓
Axial Deformation (0,2 m)	✓	✓	✓	✓	✓
Leaks (>13.0 dB)	✓	✓	✓	✓	✓
Air pockets	✓	✓	✓	✓	✓
Debris	✓	✓	✓	✓	✓
Wire breaks		✓		Under development	

\*Ultrasound also measures the thickness of internal liners, such as cement mortar liners

## Technical Information

### Technical specifications

Max. inspection speed	Varies from 0.2 - 1m/s
Max. inspection length	16 hours / 20km (@0.4 m/s)
Max. operating pressure	30-40bars
Min. radius bends	1D
Max. bore reduction	250mm
Pressure needed for propelling	0.1 - 0.3bar
Launching and receiving	Possible via 45° or 90° T- or Y-piece
Inner diameter	≥DN200
Bends	Can handle bends of up to 90°
Reductions	Can handle diameter reductions of up to 30%
Other obstacles	Cannot pass butterfly valves
Hydrophone	For leak detection and large obstructions
Magnetic Field Wave (MFW)	Detects wire breaks in Prestressed Concrete Pipes

### Pipeline requirements

### Add-on's