

Push-Pull Surveyor

Ultrasonic wall thickness measurement tool (high resolution)



Benefits of Our System

- No pumping and/or fluid collecting facilities
- Minimum system downtime
- Regular, high, and ultra-high resolution options
- Online data review and immediate detection of dangerous defects
- Fast results – reporting on-site
- Full detailed analysis based on complete ultrasonic data collected

The Pipeline Surveyor Push-Pull System is an intelligent, versatile pipe inspection tool that provides accurate, detailed ultrasonic analysis. It combines the features of a tethered, inline inspection system with the advantages and agility of a standard pushrod camera inspection system. The compact, lightweight, modular design of the tool; in combination with the pushrod's ability to provide the required control, power supply and data transfer; results in a high performance, ultrasonic inspection system for short pipes.

Since no launching, pumping and/or fluid collecting facilities are required, the impact of the inspection on the operational availability of the pipeline system is minimal. Integrated electrical motors help to push and pull the tool along the pipe wall to support navigation around bends and other features.

The measuring head of the Pipeline Surveyor Push-Pull System with IRIS principle enables measurements to be taken for complete circumferential and longitudinal coverage. The wall thickness, inner radius, and distance measurements are monitored online during the inspection via the flexible pushrod. This allows the overall condition of the pipeline, including the worst defects, to be determined and reported immediately, using detailed post processing and analysis algorithms.



Pipe Geometry Specifications

6-12" diameter	
Minimum bend radius ₁	1.5D (<1.5 capable)
Reduction capability	85% of OD
Minimum ID	std. pipe OD -15%
Wall thickness range	3.0-50 mm

Operational Specifications

6-12" diameter	
Bi-directional capability	yes
Inspection medium	homogeneous liquid
Inspection speed (max.) ₂	< 100 m/h
Max operating pressure	30 bar
Temperature range	0-40°C
Maximum distance (real-time) ₃	60 m

Performance Specifications

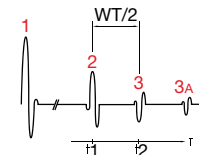
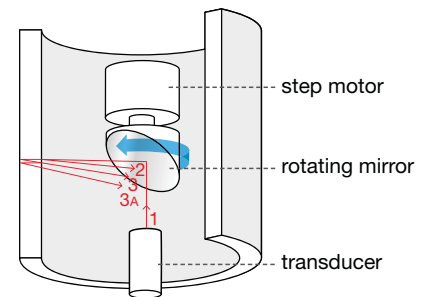
6-12" diameter	
Data recording	Full A-scan
Reporting threshold	Selectable
Ultrasonic frequency	3.5 MHz
ID/OD discrimination	Yes
Geometry measurement	Yes
Mid wall features	Yes
Wall thickness accuracy	0.25 mm
Radius accuracy	0.5 mm
Measurement grid circ. ₄	5 mm
Measurement grid axial	5 mm
Full detection	ø 10 mm
Sizing accuracy	±10 mm
Distance accuracy	≥99%
Clock position accuracy	±1.4 -2.2 °

1) Smaller on request, limited to 180 degree bend passing

2) Max. operating speed, min. axial sampling distance, and max. distance depend on specific ILI tool setup

3) Limited to 180 degree bend passing

4) At standard speed



UT measurement principle

