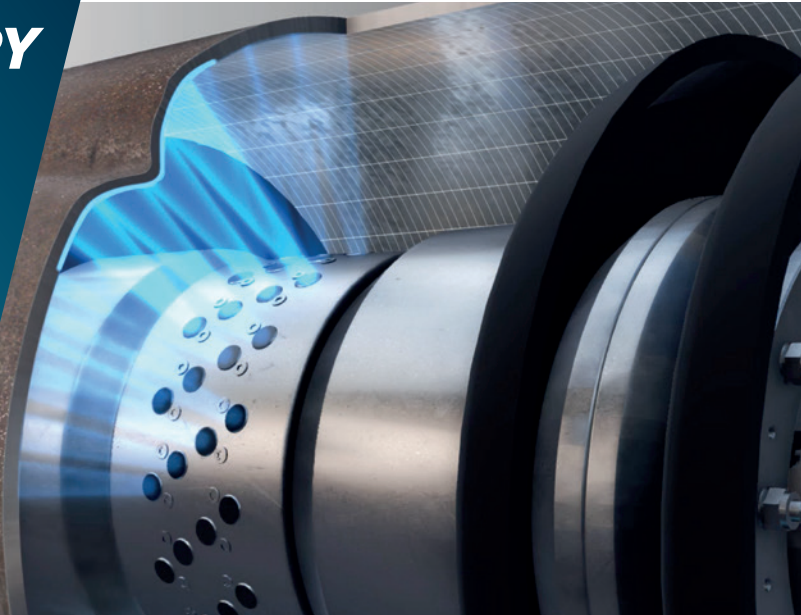


## ULTRASONIC GEOMETRY INSPECTION

EVO SERIES 1.0 ATLAS UG



### ULTRASONIC GEOMETRY AND METAL LOSS/CRACK INSPECTION

The leading edge Evo Series 1.0 delivers the most accurate and reliable ultrasonic inline inspection (ILI) available today. Combining a metal loss or crack assessment with ultrasonic-based geometry measurement enables a comprehensive inspection in a single run.

Accurate pipe geometry measurement and detection of dents is essential for pipeline integrity management. Using ultrasonic technology ensures precise, direct measurement of dents with depth resolution down to 0.1 mm (0.004 in). Evo Series is available in a variety of configurations for different types of threats, be it cracking (axial or circumferential) or metal loss. An Atlas ultrasonic geometry (UG) sensor module is added to an Evo Series robot, delivering a complete metal loss/crack and geometry measurement solution.

Multiple datasets are gathered in a single inspection without time consuming calibration. Combined inspections enhance identification of combined defects as the data is fully aligned. Data analysis now utilizes this amalgamated data with improved identification of metal loss associated with dents.

### PRECISE MEASUREMENT WITH IMPROVED EFFICIENCY

As a market leader, NDT Global leverages its expertise in ultrasonic pipeline inspections to set new benchmarks for deformation inspection. The accuracy of a deformation characterization and measurement is directly related with the precision of the results and further assessments performed on such deformations.

The use of high-resolution ultrasonic geometry ensures complete coverage of the pipe wall. This coverage is maintained in bends with no loss of data. The absence of any mechanical calipers ensures that there is no risk of damage to the robot and allows the flexibility to perform bi-di rectional inspections.

#### Evo Series 1.0 Atlas UG Your benefits

Combined geometry and metal loss/ crack inspection	Multiple datasets obtained from a single inspection run which lowers costs
Fully aligned inspection data	Enhanced identification and classification of defects, especially associated with dents
Highest performance specification	Enhanced assessment and less unnecessary digs

# EVO SERIES 1.0 ATLAS UG

## ENHANCED ACCURACY WITH AN ULTRASONIC COMBINATION

### SPECIFICATIONS

#### Key robot specifications: Evo Series 1.0 Atlas UG

Robot sizes	6" to 38"	6" to 38"
Pipeline medium	Liquid	Liquid
Max. operation speed	4 m/s	9 mph
Temperature range	-10 to +50 °C	14 to 122 °F
Max. pressure	120 bar	1740 psi
Min. bend radius	1.5 D 90°	1.5 D 90°
Min. axial sampling distance	0.75 mm	0.03 in
Typical UG circumferential sensor spacing	15 mm	0.59 in
Defect location accuracy		
Axial from nearest girth weld	±0.1 m	±3.94 in
Circumferential		
▪ for $\phi < 20"$	±10°	±10°
▪ for $\phi \geq 20"$	±5°	±5°

Max. operating speed and min. axial sampling distance depend on specific ILI robot set-up. Special configurations for high-temperature, high-pressure, multi-diameter and bi-directional inspections available upon request.

#### Key performance specifications (referring to API 1163)

POD for dents and ovalities  $\geq 90\%$

▪ Min. dent depth	2 mm	0.08 in
▪ Min. ovality	2 mm	0.08 in
Dent depth sizing accuracy	±1 mm	±0.04 in
Dent length sizing accuracy	±10 mm	±0.39 in

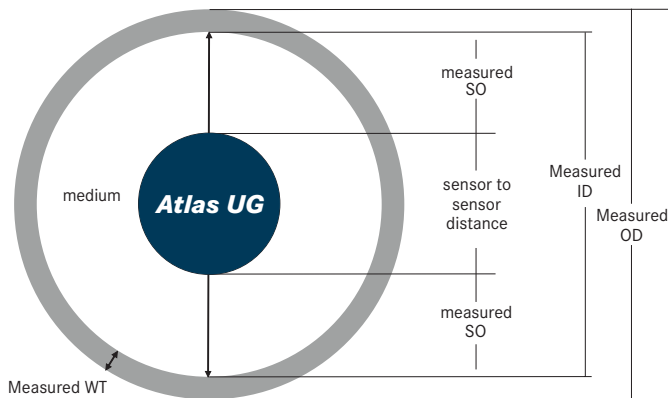
Depth in percent can be calculated dividing the depth (mm/in) by OD (mm/in), absolute value is provided as direct measurement UT method.

**Please note:** Robot and performance specifications depend on inspection and pipeline conditions. Please contact your local NDT Global representative for further information.

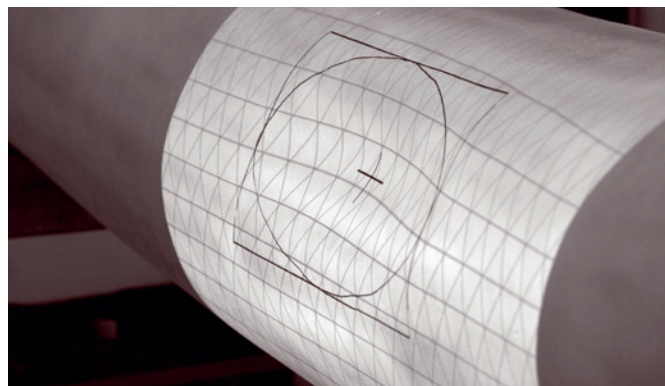
NDT Global reserves the right to introduce modifications and changes without prior notice.

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Australia | Canada | Germany | Ireland | Mexico | Spain | UAE | UK | USA



**Ultrasonic Geometry; direct measurement principle allows to scan the inner diameter of the pipeline without sensor calibration**



Sample dent observed in a pipeline

#### Detection, identification and sizing capabilities of Atlas UG

- Dent
- Ovality
- Wrinkle/Ripple
- Buckle
- Bulges
- Blisters
- Pipeline expansion
- Out of roundness