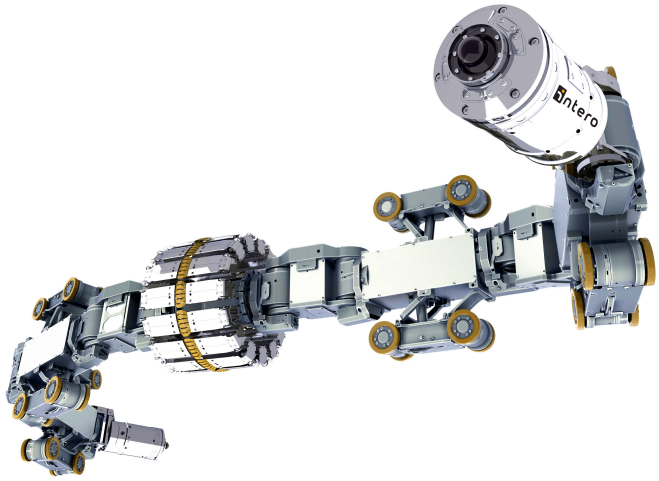
INSPECTION SERVICES

Pipe Explorer 16/18
Robotic Inline Inspection System

Robotic Inline Inspection of Unpiggable Pipelines With No Strings Attached

Pipeline integrity leaders and professionals with challenging and unpiggable pipe assets who are seeking to reduce risk, exposure to incidents, and seeking a level of safety beyond mandated standards typically experience reduced probability of incidents upon implementation of Pipe Explorer.

We lead the industry via the ability to navigate unpiggable pipes and provide best visibility to imminent threats with the highest quality, accuracy, and quantity of data, just as we have done for numerous industry-leading clients.



Specifications

Pipe Diameter:	16", 18”	**Data Collection in 1.5D Bends:**	TBD
Maximum WT:	0.500"	**Robot Length:**	13’ | 4 m
Rated Pressure:	0 to 750psi	**Robot Carrier Length:**	17' | 5.2 m
Self-Propelled Insp. Speed:	20ft/min	**Robot Weight:**	600 lbs | 279 kg
Bypass:	50%	**Robot Carrier Weight:**	1,200 lbs | 545 kg
Minimum Bore:	80% of OD		

Key Features

- Bi-Directional
- Tetherless
- Inline
- Charging
- Video
- MFL Metal Loss Sensor
- LDS Deformation Sensor
- Vertical Segment
- Back-to-Back Elbows
- 45° / 90° Mitered Bend
- XYZ Mapping
- Valve (full port)
- Tee (barred or unbarred)

Inspection Range

Inspection Distance Point to Point: 2,600’ | 800 m

Inspection Distance Out and Back: 2,000’ | 600 m

Inspection Range with Inline Charging: Unlimited

XYZ mapping Specifications

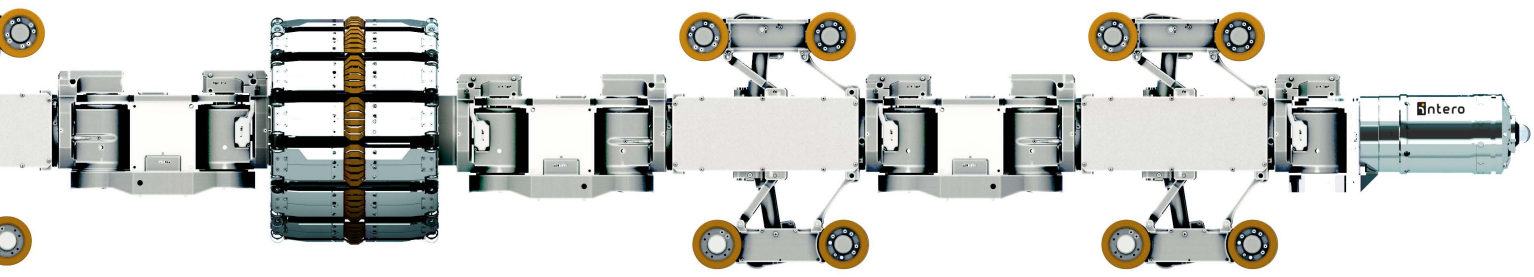
Reference	Distance
Horizontal and vertical position accuracy from reference marker (90% certainty)	± 3 ft (1 m)

- This is based on a maximum above ground marker (AGM) spacing of 1,500 ft (500 m) and a minimum of 3 AGMs per inspection

MFL Metal Loss Sensors Specifications

General Metal Loss Sizing Specification	Nominal Pipe	Cased Pipe
Depth at POD = 90%	0.10t	0.20t
Depth accuracy (80% confidence)	± 0.10t	± 0.20t
Width accuracy (80% confidence)	± 0.75 inches ± 20 mm	± 1 inches ± 25 mm
Length accuracy (80% confidence)	± 0.5 inch ± 12 mm	± 0.75 inch ± 20 mm

- t = wall thickness
- Detection threshold and sizing accuracy in bends are unspecified
- Detection threshold increases to 0.15t and depth sizing accuracy degrades to ± 0.15t in seamless pipe
- Depth sizing accuracy degrades to ± 0.20t near girth welds or in heat affected zones

Laser Deformation Sensors Specifications

Sizing Specification	Dent
Depth at POD = 90%	1% of pipe nominal OD
Depth accuracy (80% confidence)	± 1% of pipe nominal OD
Width accuracy (80% confidence)	± 2 inches ± 50 mm
Length accuracy (80% confidence)	± 1 inch ± 25 mm