

PIGPROX<sup>X</sup>

PIGPROX<sup>X</sup>

EDDY CURRENT ILI



LIGHTWEIGHT DESIGN



CRACK INSIGHTER



LAUNCH & RECEIVE BY PIG VALVE



**PIGPROX TECHNOLOGY INC.**

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**BETTER PIGPROX, BETTER SOLUTION**

PIGPROX TECHNOLOGY INC.



# ABOUT PIGPROX

PIGPROX TECHNOLOGY INC. is a pipeline inspection technology company, headquartered in Houston, USA. With a commitment to innovation and a focus on customer needs, PIGPROX continuously develops advanced pipeline inspection solutions. Since 2019, our R&D team has dedicated to overcome the challenges in pipeline inspection by advancing technology in sensors, mechanical design, electronic hardware, and software.

Key milestones in the PIGPROX innovation journey include:

2021: Released PIGPROX Eddy Current In-Line Inspection tools.

2022: Released PIGPROX Intelligent Tracking Tools.

2023: Introduced PIGPROX Crack Insider for axial crack detection.

All PIGPROX inspection tools are designed with compact and light materials, enabling rapid customization for pipelines with unique requirements, including those traditionally considered unpiggable.

With research centers, production facilities, and sales offices across North America, China, Europe, the Middle East, and Southeast Asia, PIGPROX aims to respond to global customer needs swiftly, and offer professional & reliable pipeline inspection services.



# BETTER PIGPROX BETTER SOLUTION

## 4"-48"



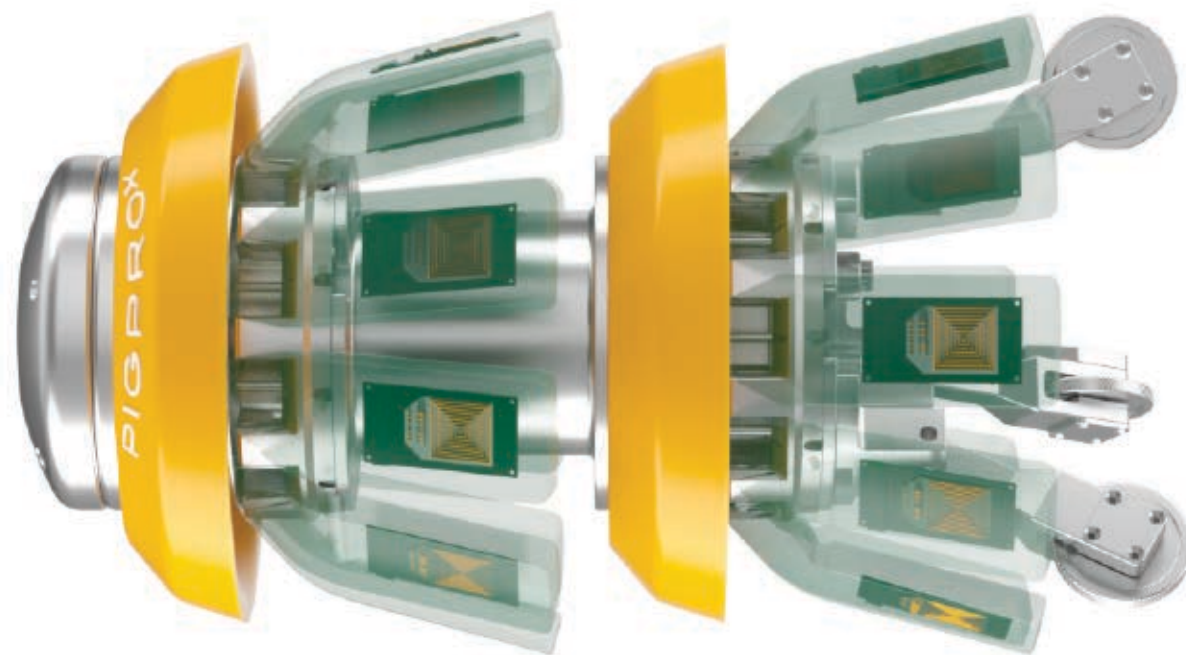
PIGPROX proudly presents a comprehensive series of in-line inspection tools, meticulously engineered to accommodate pipeline diameters ranging from 4 inches to 48 inches. The compact, lightweight designs ensure minimal impact on pipelines, and provide tailored, reliable solutions, based on customer needs for complex inspections, ensuring safety and integrity in every project.



# DIFFERENCE OF PIGPROX

## 01 Sensor innovation for better inspection

The PIGPROX R&D team has over a decade of extensive experience in sensor development. They have pioneered a series of innovative sensors, including electromagnetic eddy current, axial crack, MEM, UT, and stress sensors. These sensors offer higher sensitivity and enhanced detection capabilities, enabling customers to identify anomalies such as axial cracks and internal pittings.



## 02 CRACK INSIGHTER ---Better crack inspection

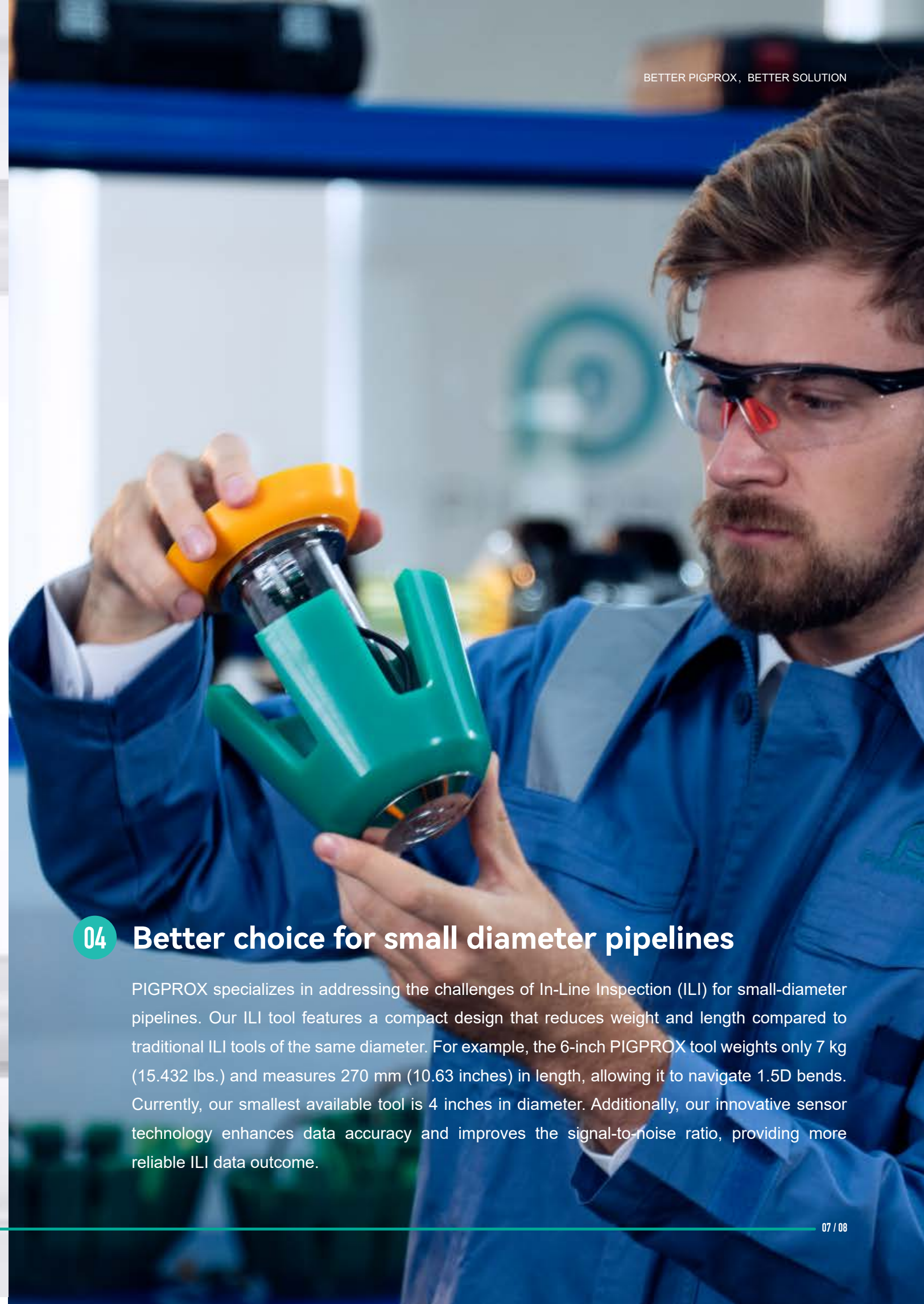
CRACK INSIGHTER is an axial crack inspection tool developed by PIGPROX. It leverages the sensitivity of electromagnetic eddy current sensors to crack defects through patented sensor technology. From the recent pull test result in Houston by ADV Integrity, it is determined that PIGPROX CRACK INSIGHTER accurately detected internal surface crack colonies. With PIGPROX CRACK INSIGHTER, customers can identify cracks as potential safety hazards promptly.





### 03 Better solutions for valve launch & receive

The patented structural design allows for a shorter pipeline inspection tool. This compact size meets the operational requirements for launching & receiving of the existing pig valves. It supports short pipe spools or other temporary traps for launching and receiving. The reduced length also improves the tool's bend negotiation capabilities, allowing PIGPROX to navigate 1.5D bends.



### 04 Better choice for small diameter pipelines

PIGPROX specializes in addressing the challenges of In-Line Inspection (ILI) for small-diameter pipelines. Our ILI tool features a compact design that reduces weight and length compared to traditional ILI tools of the same diameter. For example, the 6-inch PIGPROX tool weighs only 7 kg (15.432 lbs.) and measures 270 mm (10.63 inches) in length, allowing it to navigate 1.5D bends. Currently, our smallest available tool is 4 inches in diameter. Additionally, our innovative sensor technology enhances data accuracy and improves the signal-to-noise ratio, providing more reliable ILI data outcome.



## 05 Lighter design, better solution for low pressure & low flow rate pipelines

The PIGPROX pipeline inspection tool features a lightweight design, weighing less than one-fifth of traditional inspection tools. This reduced weight results in a driving pressure differential as low as 14.5 psi, making it suitable for inspecting low-pressure, low-flow pipelines.

## 06 Internal coating friendly

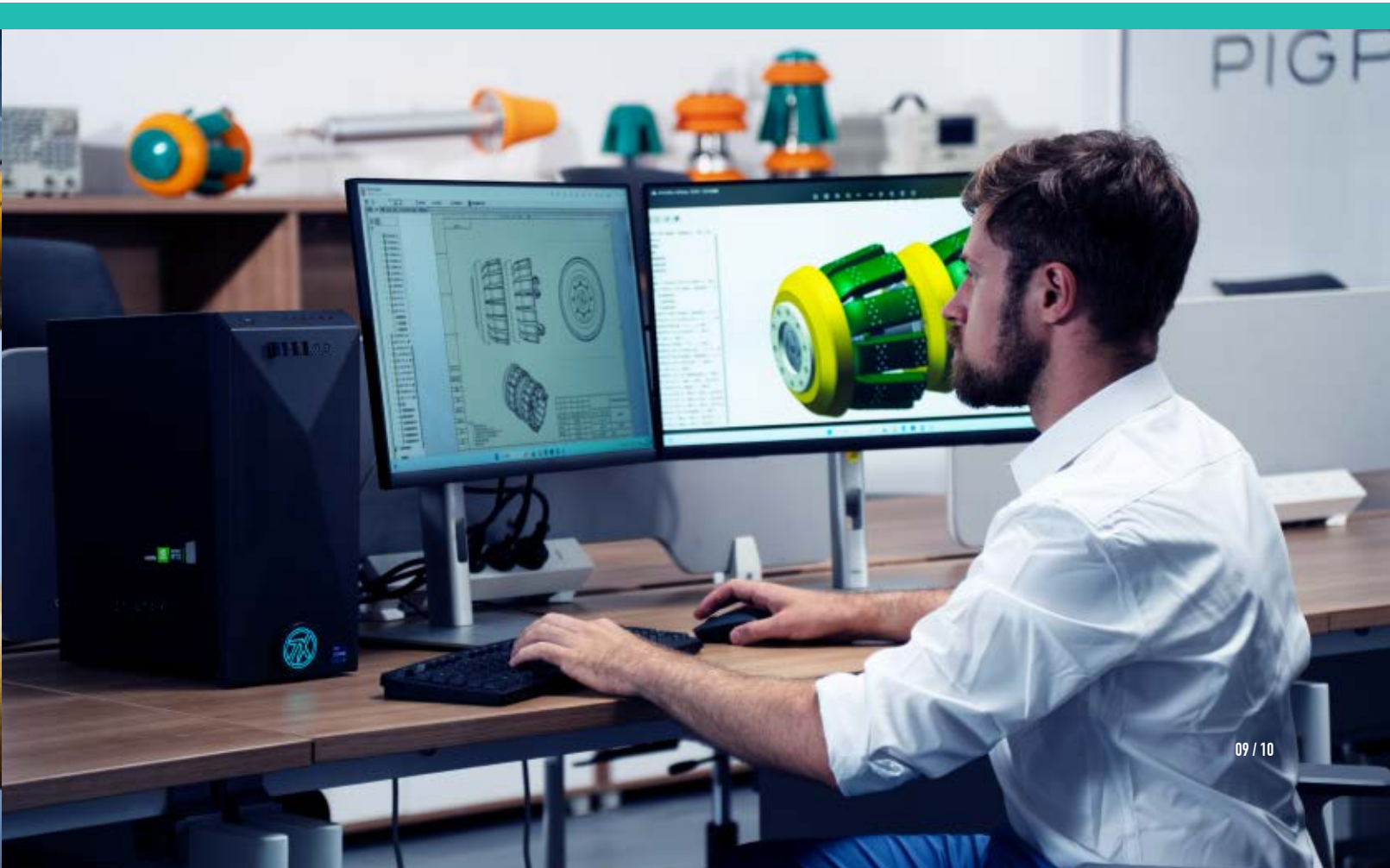
The inspection tool is equipped with non-magnetic steel brushes, and the probes are encapsulated in polyurethane. During the inspection process, only the polyurethane contacts the inner wall of the pipeline, ensuring that the pipeline's internal coating remains undamaged. The inspection tool is lightweight, so it does not affect the internal coating of the pipeline during operation.

## 07 Unpiggable pipelines

PIGPROX excels in providing better solutions for challenging ILI problems in unpiggable pipelines, such as short pig traps, pig valves, insufficient pressure, limited pig passability, and bimetallic pipelines. Our solutions enable clients to achieve a successful inspection program without the need for extensive modification.

## 08 Customized ILI tools for client needs

Time is of the essence, PIGPROX R&D team can tailor ILI tools to meet the client's specific requirement in a timely manner.





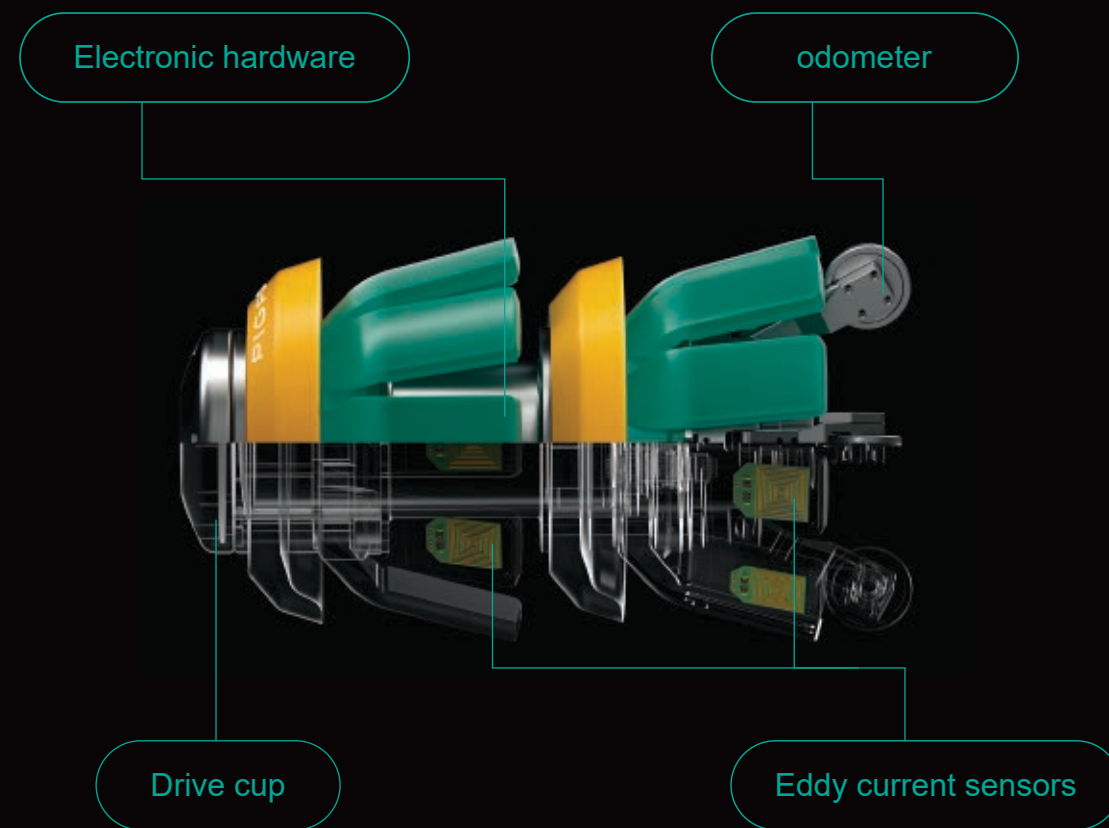


# PIGPROX GENERAL SPECIFICATION

Diameter	4’’~48’’
Medium	Gas, Liquid
Max.Temperature	Normal : -20℃~60℃(-4°F~140°F) High Temperature: 60℃~90℃(140°F~194°F)
Max.Pressure	150 bar (2,175 psi)
Min.Radius of Bend Passage	1.5D
Max.Deformation Passage	20% OD

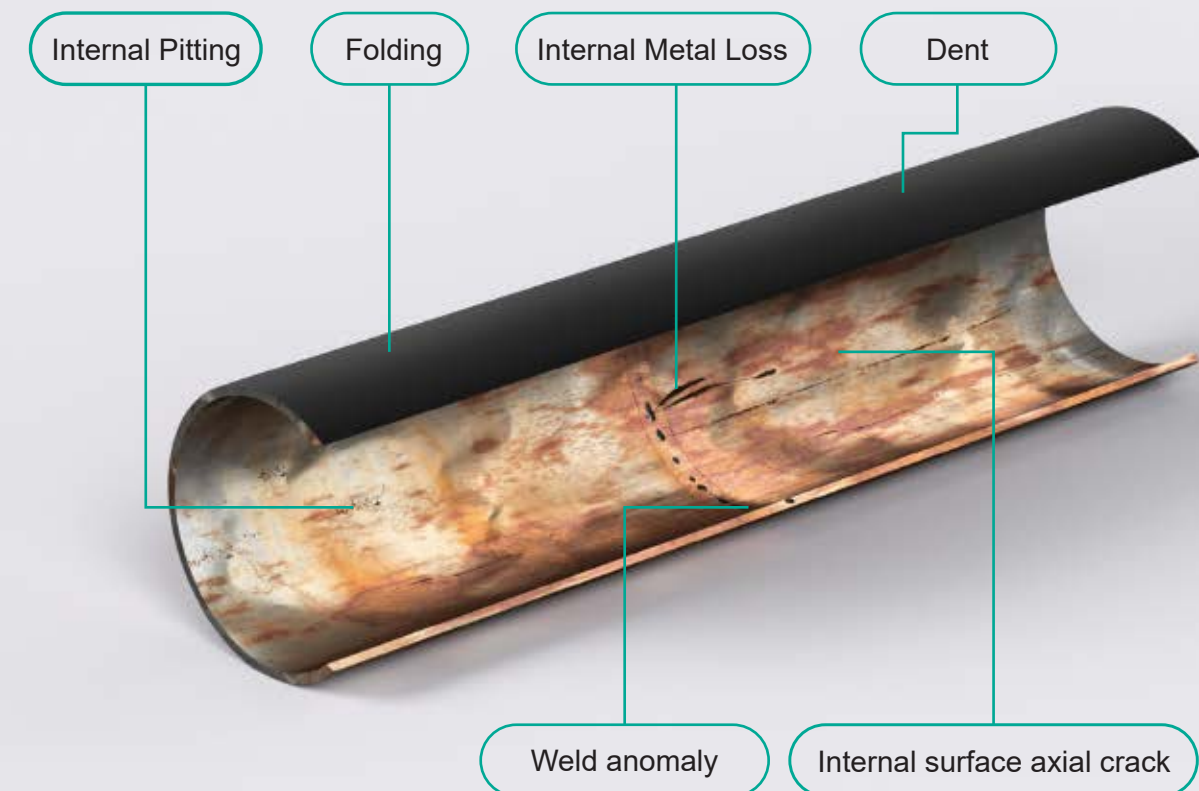
Ideal Running Speed Range	0.1m/s~8m/s (0.328ft/s~26.24ft/s)
Driving Pressure Difference	1 bar (14.5 psi)
Defect Detection Capacity	Internal Metal Loss, Internal Surface Axial Crack, Internal Pitting Dents, Weld Anomalies, Folding
Feature Detection Capacity	Grith Weld, Bend, Tap, Valve, Flange
Acceptable Launch & Receive Device	Normal Trap, Short Trap, Pig Valve, Temporary Trap

# PIGPROX STRUCTURE



PIGPROX<sup>®</sup> eddy current ILI tool consists of eddy current sensors, drive cup, electronic hardware and odometers. The high integration design leads PIGPROX<sup>®</sup> to have the characteristics of being short in length, lightweight, and compact in size.

# PIGPROX FUNCTIONS



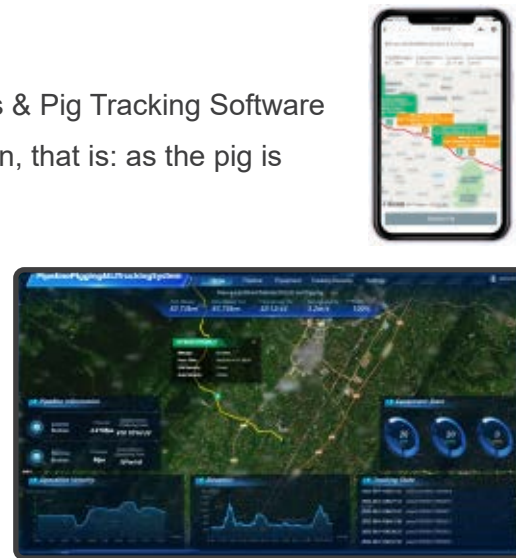
1. Internal Metal Loss, Internal Surface Axial Crack, Internal Pitting, Dents, Weld Anomalies, Folding
2. Girth Welds, Bends, Tees, Valves, Taps, Supports, Flanges, etc.
3. Pipeline Deformation Inspection
4. Illegal Tapping Inspection
5. Internal Corrosion Development Trend Evaluation



# PIGPROX TR TRACKING SYSTEM

## Principle

Intelligent Pig Tracking System consists of the Pig Tracking Tools & Pig Tracking Software which follows the principle of vibration and infrasonic transmission, that is: as the pig is moving inside along the pipeline, it will generate the sound wave by vibration, as the wave is captured by tracking tool's highly sensitive sensors. At the same time, software is able to compute the pig's state of motion information including position, velocity etc. by AI algorithm, then people can know the information by PC & mobile. Thus, this is a new kind of intelligent pig tracking system that people can gain the information of pig's operation state without installing signal transmitter.



## Technical Parameters

Size:  $\Phi 129 \times 620\text{mm}$  (0.51''\*24.41'')  
 Weight: 3Kg (6.6 lbs)  
 Duration:  $\leq 72\text{h}$   
 Signal Receiving Range: 1~3Km (0.66~1.875mi)  
 Buried Depth of Pipeline:  $\leq 3\text{m}$  (9.84 ft)  
 Working Temperature:  $-20^{\circ}\text{C} \sim 60^{\circ}\text{C}$  ( $-4^{\circ}\text{F} \sim 140^{\circ}\text{F}$ )  
 Ingress Protection: IP168  
 Communication: 4G/5G/GPS  
 Install Spacing: 1~3Km (0.66~1.875mi)

