EASY-SIGHT

G70 Water Supply Pipe Inspection Robot

Advanced Detection with CCTV Video and Acoustic Imaging

Why Choose G70-U2?

The **G70-U2 is an advanced system that inspects water supply pipelines using acoustic and video imaging**. It is inserted without stopping water flow and moves with the current. Equipped with hydrophones, a camera, and sensors, it detects issues like leaks, damage, blockages, and air pockets. Operators control it wirelessly and receive real-time data to pinpoint problems. The robot features easy retrieval and generates detailed inspection reports for maintenance planning.

Performance

- **High-sensitivity acoustic analysis, efficient noise reduction algorithms, and intelligent leak detection.**
- **High-precision locator that meets both plane positioning and depth detection requirements.**
- **A single effective detection distance of up to 2000m, with customizable extensions available.**

Intelligence

- **High-definition video imaging enables detailed inspection of internal pipeline conditions.**
- **Combines audio and visual inspection to detect multiple defects in one operation.**
- **Real-time interpretation during detection, with one-click generation of inspection evaluation reports.**

Safety

- **The equipment materials meet food-grade standards and do not affect water quality.**
- **Inspection can be conducted without stopping pipeline operation, ensuring uninterrupted water supply.**

Reliability

- **Compared to traditional leak detection methods, it is less affected by construction environments.**
- **One-click umbrella detachment for easy retrieval.**

Key Features & Components

Integrated Control & Software System

- **Hardware Platform**: Tablet-based console with customizable CPU/RAM/storage. Runs integrated control and analysis software.
- **Core Functions**: Controls all field hardware (cable guide, reel, locator beacon, sensor lights). Manages cable speed/payout and device settings.
- **Data Acquisition**: Real-time HD video/audio recording and playback. Live IMU data displayed via 3D attitude visualization.
- **Signal Analysis**: Real-time audio processing with waveform, spectrum, and spectrogram visualization.
- **Leak Locating**: Wireless integration with above-ground locator. Displays signal strength charts and estimates pipe depth for precise pinpointing.
- **Mapping & Reporting**: Tracks operator position on maps with defect marking function. Automatically generates standardized reports and exports data to Excel.

Inspection Unit

- **Compatible Pipe Diameter**: ≥ DN200mm.
- **Operating Pressure Range**: 0.1 MPa ~ 1.6 MPa.
- **Forward Lighting**: 3.5W LED, adjustable intensity.
- **Camera**: 2MP (1920x1080) digital HD.
- **Inspection Speed**: ≤ 1.0 m/s (typically 0.1-0.2 m/s).
- **Positioning Signal Penetration**: ≥ 10m depth (≥ 8m for metallic pipes).
- **Inspection Unit**: Multiple sizes available for flow rates from 0.2-3 m/s.
- **Connectivity**: Modular design with quick-disconnect aviation connector.
- **Inspection Unit Release**: Remote one-click release capability from the control console.
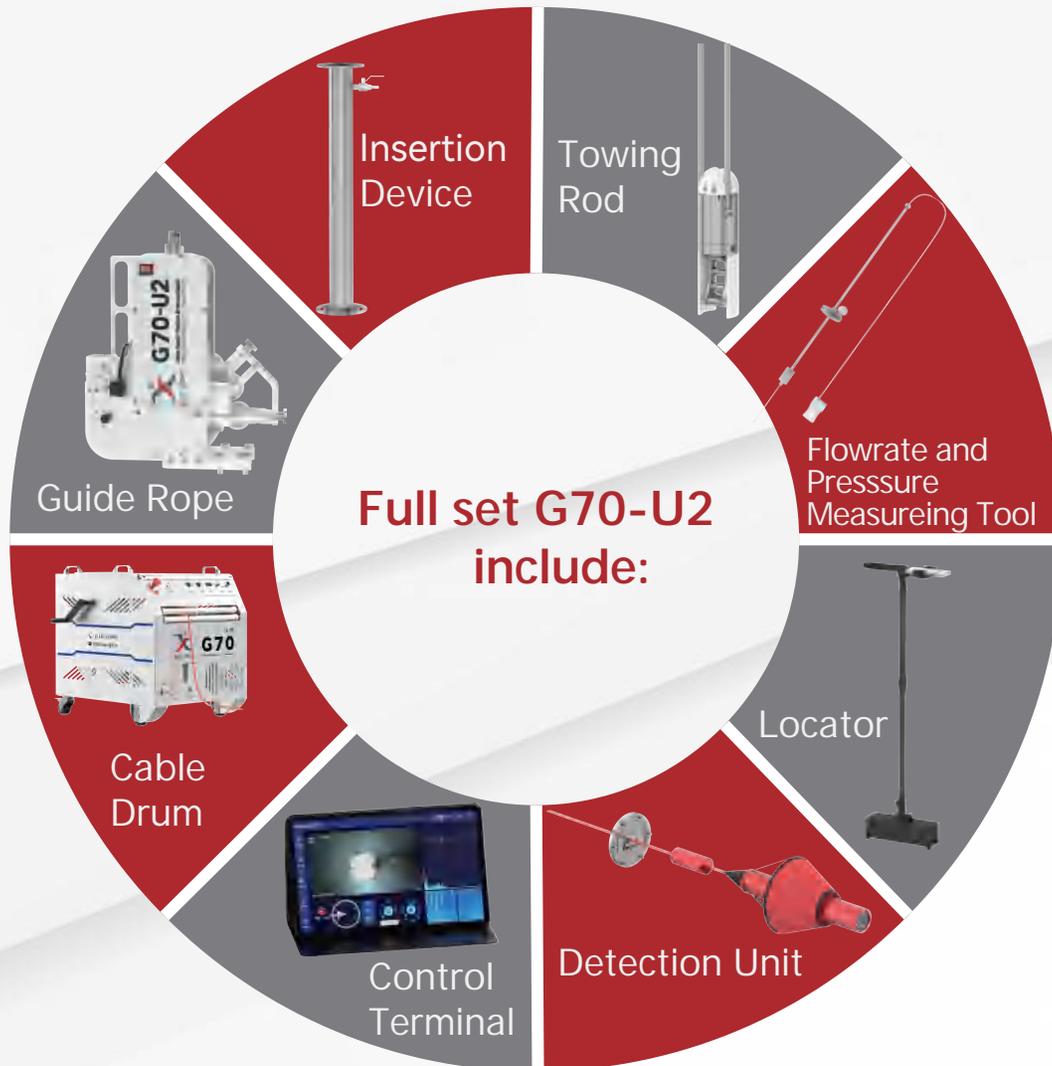
Cable Reel

- **Cable Length**: Standard 1000m reel; 2000m available (custom order).
- **Cable Spec**: Neutrally buoyant cable with food-grade polyurethane jacket, compliant with potable water standards. Tensile strength: 300 kg; resistant to stretching, bending, abrasion, water, acids, alkalis, and corrosion.
- **Retrieval**: Electric retrieval with manual (reel buttons) and remote (console software) control modes.
- **Automatic Layering**: Ensures even cable spooling during pay-in/out.
- **Enclosure Rating**: IP63 (dust and water splash resistant).

Integrated Hardware & Accessories

- **Guide Rope**: Motorized pay-in/out with emergency stop. Features high-precision encoder (≤1mm resolution), integrated dust removal & disinfection, and IP67 waterproof rating.
- **Launch Device**: For pipelines with ≥DN80mm access points and pressure ≤1.6MPa. Standard 2m launch ram (extendable). Dimensions: φ220mm x 1100mm.
- **Flow/Pressure Probe**: Measures velocity (0.01-4.00 m/s) and pressure (≤1.6MPa). 2.4m probe (customizable). Includes a mechanical pressure gauge.
- **Above-Ground Locator**: Pinpoints leaks via wireless signal detection. Uses a smartphone for data display. Accuracy: ≤±0.5m (locates from ≥10m depth). ≥12h battery life.

SEE THE UNSEEN, HEAR THE LEAK WITH ZERO FLOW INTERRUPTION

Full set G70-U2 include:

- Insertion Device
- Towing Rod
- Flowrate and Presssure Measureing Tool
- Locator
- Detection Unit
- Control Terminal
- Cable Drum
- Guide Rope

Tool Kit Including:

- Rubber sealing gasket
- Rubber flange gasket
- O-ring
- Hex head bolt full thread
- Flat washer
- Spring washer

- Type 1 hex nut
- G70 Paramotor
- Steel tape measure
- SATA hex key set
- Adjustable wrench
- Large crank handle