



Pipe Inspection Products and Accessories

www.pipa-uk.com



Pressurised water pipe inspection and specialist leak detection products to the industry...

PIPA is a specialist technology company focused on live potable water pipe CCTV condition assessment surveying products and specialist leakage tools. We offer new technology to inspect and identify difficult to trace leaks within all pipe sizes and materials.



Leak Detection System for Small Diameter Service Pipes



PIPA Pipepod S™

- The unique leak detection product enters a pipeline via a metered boundary box outlet
- The 50 metre system is fully portable with battery powered supply
- Accurate leak identification and location within pressurised potable water service pipelines from 10mm diameter and above rated to 12 BAR pressure
- System inserted directly into the pipeline at standard operating pressure through a specially designed chlorination seal arrangement which sanitises the cable prior to insertion
- Pipepod S™ can be pushed up to 50 metres to detect leaks with instant results identified by a trained operative
- The system can be used in all standard water pipe materials and through different types of access fittings
- No expensive consumables required
- Direct signal generator port for mains tracing
- A true no dig technology product



System comprises:

- 50 metre 8mm flexible rod cable and micro hydrophone technology
- Ruggedized coiler cage with slip ring and mechanical encoder
- IP rated power box with direct audio output
- Seal housing with chlorination port for use in potable water
- System launching tube with vent valve
- Sponge swab set
- Headphones
- 3 metre extension lead
- Spare seal set package
- Lead and Headphone carry case
- Launch tube Bag
- Drum Bag
- 1 day on site training package

Specifications

Suitable for pipes	10mm and above
Reel length	50 metres
Rod type	8mm semi flexible pushrod





Leak Detection System for Small Diameter Water Pipes



PIPA Pipepod LS™

- The Pipepod listening stick is a unique leak detection product that enters a pipeline via a direct entry point as small as 1 inch diameter
- The 100 metre system is fully portable with battery powered supply
- Accurate leak identification and location within pressurised potable water pipelines from 50mm diameter and above rated to 12 BAR pressure
- System inserted directly into the pipeline at standard operating pressure through a specially designed chlorination seal arrangement which sanitises the cable prior to insertion
- Pipepod LS™ can be pushed up to 100 metres to detect leaks with instant results identified by a trained operative
- The system can be used in all standard water pipe materials and through different types of access fittings
- No expensive consumables required
- Attachment of signal generator for mains tracing
- A true no dig technology product



System comprises:

100 metre 12mm flexible rod cable and micro hydrophone technology
Ruggedized coiler cage with slip ring
Mechanical distance encoder
IP rated power box with direct audio output
Seal housing with chlorination port for use in potable water
Bi-directional cable protection puck with extension rods
System launching tube with vent valve
Sponge swab set
Headphones
3 metre extension lead
Spare seal set package
Lead and Headphone carry case
Launch tube Bag
Drum Bag

Specifications

Suitable for pipes 50mm and above
Reel length 100 metres
Rod type 12mm semi flexible pushrod



CCTV and Leak Detection System for Pressurised Pipes



PIPA Hydrocam™ and optional Pipepod™ Capsule

- System is fully portable with battery or mains supply
- Inspection of pressurised potable water pipelines from 3" / 75mm diameter and above rated to 12 BAR pressure
- Camera inserted directly into the pipeline at standard operating pressure through a specially designed chlorination seal arrangement which sanitises the cable prior to insertion
- Camera and Pipepod™ leak detection sensor can be used in conjunction to provide both CCTV and acoustic recorded data
- System can be pushed up to 100 metres in each direction, irrespective of water flow direction
- The system can be used in all standard water pipe materials through different types of access fittings



PIPA Hydrocam™ Water Pipe CCTV Inspection System

Fully pressure rated (12 Bar) camera system with seal arrangement and recording station for video capture and encoder text overlay.



Suitable in pipe sizes from 75mm upwards. The 100 metre flexible camera system consists of a detachable high resolution colour camera head with scratch-proof sapphire lens and a rugged military specification control box with an integrated 15" flat screen monitor and keyboard controls. The smart unit records directly onto a portable memory USB drive.

The system comes complete with on-screen meterage overlay, text generator and will operate at 110v or 240v with integrated rechargeable batteries for use where no mains power is available.



System comprises:

Fully portable splash proof control box with USB recording device
1.5 metre connecting lead
105 metre semi rigid rod cable
Ruggedized coiler cage with encoder unit
Seal housing with chlorination port for use in potable water
Sponge swab set
Choice of 12mm 23mm or 30mm stainless steel camera heads
Centralising skid for camera
Centralising skid for cable
Camera stainless steel Key Set (2)
Spare seal set package
Standpipe with vent (quick release)
Camera case
Lead and seal carry case
Standpipe Bag
Drum Bag

Specifications

Camera Size	12mm 23mm or 30mm
Suitable for pipes	50mm and above (Hydrocam S)
Reel length	105 metres
Rod type	12mm semi rigid pushrod (other rods available)
Voltage	110v to 240v AC, or 24v DC rechargeable batteries
Lighting	High intensity LED
Recorder	Portable memory USB drive



12mm-23mm-30mm Camera Heads



23mm CAMERA

MODULE SPECIFICATIONS

- Sapphire Lens: 16mm
- Image Sensor: 1/4" Colour CCD
- Video System: PAL
- Pixels: 510x492
- Resolution: 360 TV Lines
- Min. Illumination: 0.2 Lux at f1.2
- Storage Temp: -30 to 60 degree C
- Working Temp: -10 to 45 degree C
- Power Supply: DC 6 -12v
- Current: 80mA max
- Waterproof Pressure tested 12 BAR
- Dimensions (LxW): 195mm x 23mm
- Weight: 470g

30mm CAMERA

MODULE SPECIFICATIONS

- Sapphire Lens: 26mm
- Image Sensor: 1/3" Colour CCD
- Video System: PAL
- Pixels: 582x500
- Resolution: 330 TV Lines
- Min. Illumination: 0.1 Lux at f2.0
- Storage Temp: -20 to 60 degree C
- Working Temp: -10 to 50 degree C
- Power Supply: DC 12v
- Current: 140mA max
- Waterproof Pressure tested 12 BAR
- Dimensions (LxW): 215mm x 30mm
- Weight: 735g

The Hydrocam™ system is a high quality product designed, developed and manufactured in the UK.



PIPA Pipepod™

The Pipepod™ is a unique pressurised sound recording capsule designed for accurate leak detection solutions in water, gas and oil pipelines.

The system incorporates the latest in hydrophone technology to accurately identify and record leakage points in pressurised pipe networks.



The capsule is simply attached to the flexible camera delivery cable, and records all pressurised sound generated within a live pipeline. The data can be downloaded and overwritten onto CCTV inspection recordings to enable the operator to accurately detect leaks within all material types.

The Pipepod™ is the latest innovation product in leak detection insertion technology, and due to the advanced hydrophone module it can detect leaks that are not evident to the human ear.

The unique microphone magnifies all acoustic patterns to detect leaks that other current market products cannot identify.



System Features

- Compact capsule size of 65x22x22mm
- Can be used on all pipe diameters dependent on launch technique
- Attachment to cable diameters 3-14mm
- The capsule can be attached to a pressurised camera system, or utilised as a standalone technology
- Pressure rated to 16 Bar
- Ultra responsive hydrophone for detailed acoustic data capture
- The capsule is self-powered with battery life/recording time of up to 10 hours
- Fast charge rate of 30 minutes
- PC-USB connection for data download and charge function

System Benefits

The capsule can detect leaks in any type of pressurised pipe, with leaks detected in water pipes in pressures as low as 0.5 Bar.

The capsule is not flow dependant, and can be utilised using pushrod or draw line insertion techniques.

The sound data can be overwritten onto the CCTV inspection footage to accurately calibrate leak locations to the recorded distance text overlay data.

The capsule identifies leaks that cannot be seen by a standard camera i.e. a leaking ferrule or misaligned joint.

The system can be retrofitted to any make or model of pipe inspection camera or crawler unit to improve client service delivery and incorporate leak detection.



PIPA Pullycam™

The Pullycam™ is the latest product in long distance pipe inspection technology. Unlike conventional ROV crawler systems, the Pullycam can navigate around numerous bends and over obstacles due to the unique design and in pipe cabling technique for pipe inspection.

Used in conjunction with the Pipeline™ in pipe cabling system, the Pullycam can be used to survey pipelines or ducts distances up to 2000 metres, and is retracted through the pipeline during a recorded survey.



Camera on Cable



Live CCTV Video Still

The new approach to pipe inspection will revolutionise the industry, reduce the risk factor during inspections, and offers a reliable and stable HD data.

Unlike other floating CCTV systems that disturb pipe sediment during a survey. The Pullycam surveys against the water flow direction and in turn offers a true condition assessment, with a clear and stable image as it remains tethered throughout the inspection.

The unique product enables the user pressurised or depressurised pipe inspections through a range of pipe diameters. The unit is self-powered and can record for up to 3 hours on a full charge.



System set up images:



Cable insertion into live water pipe



Cable extraction from live water pipe

Technical Specification

Camera with 20.0 Megapixels

- Full HD Video Resolution 1080p (1920x1080, 30 fps)
- 170° optical fisheye lens
- Pressure rated 12 Bar
- Digital Video Stabilization
- up to 180 minutes battery power
- 32 GB Micro-SD Card

System Technical features

Light modules and camera pressure rated 12 Bar

Memory Slot for Micro-SD Card up to 32 GB (Class 6)

Data format Photo: JPEG | Movie: H.264 / MPEG-4

Connectors USB 2.0

Battery Life Video up to 180 minutes with Micro-SD card 32 GB/Class 6

Power rechargeable Lithium-ion battery

Dimensions 55x95mm



PIPA Flowrider™

The Flowrider™ Long Distance Leak Detection Product for Water Pipes

The Flowrider™ is a unique leak detection system using internal acoustic technology.

The system is designed for a reliable yet affordable approach to leak detection. The unit has many benefits that are not rivalled in the industry.



1000 metre cable drum



Leak detection sensor

Benefits of using the Flowrider system:

Battery powered- The system is fully battery powered and can be used in any survey location without mains power supply

Launch set up- The unique launch set up is lightweight, simple and can be inserted through any length of riser

Hydrochutes- The Hydrochutes are designed to collapse in the case of getting a sensor stuck or in the event of excessive flow rates



Size of system- The system can be trolley mounted to make it portable; also it can be easily shipped due to the compact product design

Depth of system launch- The system can be launched at all pipeline bury depths using a unique launch device

All materials used with the Flowrider product are MIC (materials in contact) compliant. System supplied with a PIPA product passport and all associated spares.

System comprises:

- Motorised delivery cable drum
- 1000 metre umbilical cable
- Spare 1000 metre cable
- Unique launch system
- Tripod and cable wheel
- Power box
- Control box with 4G function
- Hydrochute set and accessories



Representation of system use



Actual leak detected



Technical Data

Accurate leak detection tool for pressurised water pipes

1000 metre umbilical as standard

Motorised cable delivery drum

10 hour survey time

System is silent during operation

Portable unit due to compact design

Battery powered with no external generator required

Enters pipe through a 2 inch entry point

2 lighting modes for larger diameter pipes

Neutrally buoyant reinforced cable

The Flowrider system is supplied with a 1km cable drum as standard

Alternative length systems available for order



PIPA Pipeline™

The Pipeline™ in Pipe Cabling Product

The Pipeline™ is a unique cabling system manufactured specifically for in-line cabling of newly constructed pipelines. The product can also be retrofitted into existing pipes.

The 2mm galvanised steel polypropylene coated product is designed for long term exposure to chlorinated water, and designed for potable water pipe installation.

The cable is suitable for all pressurised and depressurised pipe installations.

The cable design is uniform to allow sealing plates to be installed onto the cable at either end in the event of a pressurised pipe inspection.

The cabling allows the pull through of leak detection, monitoring, cleaning and inspection technology in the event of a failed hydrostatic test or leak, or for routine cleaning or testing. This product remains in the pipeline as long as required.



Pipeline™ Cable



Pipepod™ Leak Detection



Pullycam™



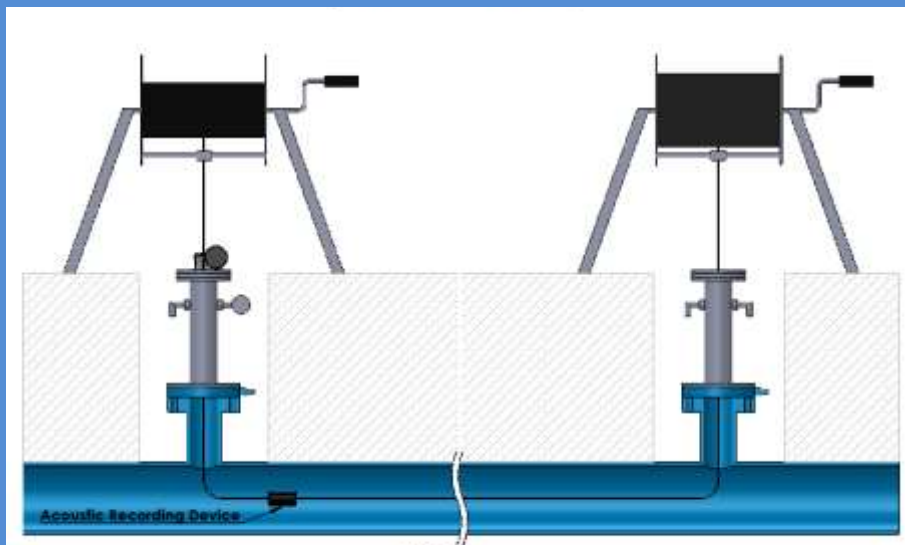
Installation

The cable is installed into the pipeline during the pipe construction process (can also be retro-fitted), with strategic isolation points on the pipe. The cable is then held in place by the compression of a gate valve or fitting either end.

To retrofit into pipelines the cable is floated through a live water pipe and extracted through a secondary seal arrangement.

In the event of a pressurised technology pull through, the cable is passed through a seal arrangement and attached to a cabling device for the pull through of required technology. During this procedure a secondary cable is attached and in turn is pulled into the pipeline replacing the existing cable.

System Set up



-2km range survey range-

Image of cabling in pressurised pipeline pulling through a technology device



The isolation valves or fittings are opened either end, and the pull through technique is then undertaken. Once the pull through is complete, the isolation of valves or fittings is undertaken.

Utilising the Pipeline product is a way of future proofing and monitoring all high risk pipes or conduits.

Strategic installation is advised on pipes close to river crossings and train lines.

Technical Data

- 2mm OD Cable product
- 1mm Galvanised steel wire (for potable water use and chlorine resistant)
- 0.5 mm Polypropylene coating
- 2000 metre drum
- Isofil HK40 BK (black coloured)
- For use with water up to 45°C
- DWI approved for potable water applications



PIPA Pipepod Hydrostatic™ Leak Locator System

Internal acoustic technology is fast becoming the most reliable technique of accurately tracing leaks on large diameter pipelines.

The PIPA Pipepod Hydrostatic system is a failsafe for all new pipe installation projects by incorporating the non-degradable Pipeline™ cable into the pipeline installation process. This in turn allows the contractor to have the capability of pulling technology through the pipeline not only in the event of a failed hydrostatic test, but also for future use over the preceding years.

The system is designed for pulling through a hydrophone capsule and recording acoustic patterns within a fully pressurised pipe at 16 bar test pressure. The system also records accurate distance data for leak identification to be located along the buried pipe.

System Set up

The delivery and receiver chambers are installed onto 2 DN80 valves spaced up to a distance of 2000 metres; these may be strategic risers, or a future hydrant or air release valve point. A hydrophone capsule (Pipepod™) is fitted to the Pipeline™ cable, the capsule is powered up and the acoustic recording begins.

The 2 isolation valves are opened in sequence and the Pipepod™ capsule is drawn through the pipeline utilising the manual winch system until it reaches the exit valve.

The receiving chamber is then depressurised and the capsule removed for data download.

The recorded data is then analysed in a controlled environment to determine any acoustic interest detected. The distance can then be calculated from the entry to exit point to determine accurate leak location.

This unique system offers the contractor a full leakage sweep service after pipelines have been installed, backfilled and reinstated.



System Contents

- 2 x 2000 metres of Pipeline™ cable (PU coated 2 mm draw wire)
- 2 cable delivery/receiver drums and stands
- Distance encoder unit
- 1 Ruggedized display unit and capture recording device
- 2 stainless steel delivery/receiver chambers with pressure gauges
- 2 80mm stainless steel seal plates and glands
- Complete connection kit, crimping tool and crimps (50)
- 4 Pipepod™ acoustic recording capsules and floatation brace
- 2 Day training package



During a leak survey several leaks can accurately be identified on a pipeline, and with one single leakage sweep of the technology. Once the pipeline has been repaired and the testing is successful, the Pipeline™ cable can be removed and reutilised on other projects, or alternatively a secondary wire is pulled through during a survey, and remains in the pipeline as an ongoing technology insertion system.

The Pipeline™ is highly recommended in high risk areas for example under rivers or train crossings.



Hydrantclear™ Flushing System

The Hydrantclear™ is a hydrant cup cleaning system for all styles of fire hydrants

The Hydrantclear™ is a unique cleaning device that ensures that a fire hydrant bowl is cleared and sanitised prior to opening of the main valve.

The system is designed for a reliable approach for utility companies to guarantee hydrant sanitisation prior to operation.



Unique registered design

Benefits of using the Hydrantclear™ system:

Ease of use- the system requires no mains power and is simply attached to hydrants via a standard London thread attachment

Water supply- the unit attaches to standard UK tanker hose fittings and offers directional flushing to remove any debris and engrained surface dirt

Size of system- The cleaning system is light weight and fully portable within a hose connection length from a water tanker vehicle

Depth of system launch- The system can be used on all hydrants with varying bury depth



System comprises:

- Hygienic launch tube with London thread configuration
- Unique product rated to 12 Bar
- Unique registered design that creates a water vortex and lifts debris out of hydrant cup
- High pressure rated cleaning lance and spray nozzle
- Vent port outlet for external hose connection
- Storage bag and accessories



Image of hydrant cup pre clean



Image of hydrant cup post clean

Technical Data

- Reliable cleaning of hydrant cup above sealed valve sections
- Unique design improves the flush out of foreign and engrained debris
- Suitable for all buried style fire hydrants
- Water is vented using a hose during the cleaning process
- Removes the risk of contamination when operating hydrants on potable water networks
- The Hydrantclear removes doubt when injecting water back into depressurised water mains
- The unit should be used on every hydrant on all potable water networks prior to operation



LJK™ Hydrant Entry System

The PIPA LJK™ or loose jumper key is a unique hydrant entry system for loose jumper style fire hydrants.

The LJK™ is a unique lifting device that ensures that a loose jumper fire hydrant can be fixed in the open position after initial operation.

The system is designed for a reliable approach for utility companies to inject water back into a pipeline in the case of a temporary water feed.



LJK shown on hydrant



Back feeding water using water tanker

Benefits of using the LJK™ system:

Ease of use- the system requires no mains power and is simply attached to hydrants via a standard London thread attachment.

Water supply- the unit attaches to standard UK tanker hose fittings and offers direct water injection back into a water main.



Size of system- The LJK system is light weight and fully portable within a hose connection length from a water tanker vehicle or overland hose feed.

Depths of system launch- The system can be used on all hydrants with varying bury depth.

Safety feature locking rod lifter and safety chain.

All materials used with the LJK product are MIC (materials in contact) compliant.

System is supplied with a PIPA product passport and all associated spares.

System comprises:

- Hygienic launch tube with London thread configuration
- Unique seal arrangement
- 360 degree rotation for maximum degree of jumper lift
- High pressure rated to 12 BAR
- Universal lifting lance for numerous style of fire hydrant
- Storage bag and accessories

Technical Data

Reliable pipe entry via loose jumper style fire hydrants for water injection and CCTV camera entry.

Unique and registered design includes sanitization during product use.

Safety chain and locking mechanism enables variable style of hydrant entry.

The system enables water to be back fed into water mains without the need for an excavation or change of hydrant.

The unit should be used on every loose jumper style fire hydrant on all potable water networks prior to operation.



Polecam™ Tank CCTV Inspection System

The PIPA Polecam™ is a unique enclosed tank or vessel CCTV inspection system.

The Polecam™ is a unique lightweight survey tool that is fully portable, extendible and can be used on all enclosed structures or cavities for detailed surveying.

The system is designed for a reliable approach for harsh tank environments, and has a nylon sensor for increased durability, and less friction on metal walls or fittings.



The Polecam is fully portable and lightweight due to carbon fibre pole



The control panel is simple to use and part of the unit handle



Water tanker flushing prior to CCTV survey

Benefits of using the Polecam™ CCTV system:

Ease of use- the system requires no mains power and is simply charged off either mains or vehicle power via a charger socket outlet.

Size of system- The Polecam system is light weight, made with a carbon fibre pole, and anti-glare mini inspection screen.

Data recording facility- The unit can record video or take snapshots during an inspection, and all data is stored on a micro SD memory card.

Storage- The system is supplied in a water resistant and durable Pelican case.



Technical data:

Camera sensor

- Camera size: \varnothing 25mmX600mm(L)
- View angle:120°
- Leds adjustable
- Camera lighting:12 Highlight LEDS
- TotalPixels:PAL:720X576
- Camera glass material: Acrylic faced sapphire glass
- Camera shell material: Nylon

VDU Monitor Device

- Size: 4.3inch
- Resolution: 480X272
- Display Ratio: 16:9
- Power Supply: DC 4.2V
- Video storage: SD card (32G)
- Digital clock and digital calendar
- Battery level display
- DVR Total Pixels: 720X576
- Picture snap and movie record
- Movie format: AVI
- Microphone Audio record
- Stereo earphone output

Battery LI-ION

Charge time 4 hours

Working time 4 hours

Extendible pole

Material: Carbon fibre

Joint sections: 3

Minimum working length 1080mm to a maximum of 3600mm



Tank wall inspection stills



Image 1



Image 2

System comprises:

- High quality camera unit with carbon fibre pole, and recording device
- LI-ION batteries x 2
- Battery charger
- 32 GB Micro SD card
- Storage case

Additional camera sizes and configurations available on request

The Polecam™ system is supplied with full training on product use

All PIPA products are designed and manufactured in the UK available for sale or as a global service delivery.



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