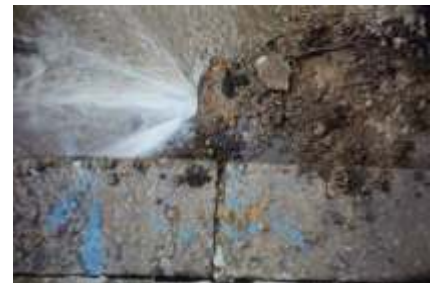


# The Sahara® Leak Location System

The Sahara Leak Location system allows pipeline operators to pinpoint leaks in large diameter pipes of any material with a diameter over 200 mm (8"). Surveys in pipes as small as 100mm (4") are possible using a swept tee, or Y branch fitting. The Sahara® Leak Location system can be used in live potable water mains without disruption to customer supplies. The Sahara system can be used for the effective management of new and existing pipelines.

- Identify leaks and resulting unaccounted for water
- Pinpoint the precise position of leaks
- Monitor general pipe condition through leakage
- Locate leaks in newly-laid mains during pre-commissioning
- Aid risk assessment of mains near dams and embankments
- Prove pipe integrity at critical network crossings (e.g. road and rail)
- Locate the line and depth of water mains



A leak on a 24" main

The Sahara System uses an acoustic sensor to detect the noise generated by water escaping from the pipe. The sensor is introduced into the pipe through a tapping of 2" (50 mm) or larger. The sensor travels along with the flow; as it passes any leak it detects the sound generated and gives an indication to the operator.

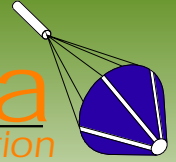
Passing close to each leak means the system will work in pipes of any material and of any diameter. Every leak can be individually identified and its relative size assessed. Leaks as small as 10 litres/hour can be detected.



The sensor is mounted on an umbilical cable which allows its position along the pipe to be controlled precisely. This, coupled with a built in tracing device - Pipespy 2000™, allows the sensor position to be tracked accurately from above ground. When a leak is identified, the system operator can establish the exact location quickly and indicate the position for any excavation required for repair.

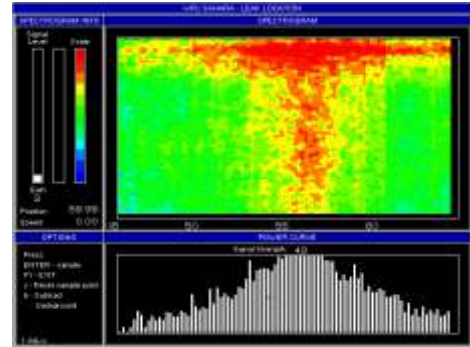
Using a GPS receiver, the position of any leak and the exact line of the pipe can be recorded.

Survey lengths of up to 2000 metres can be achieved - detection and location of leaks 2 km from the insertion point is as accurate and reliable as at 20 m.



### Key capabilities

- Detects leaks as small as 10 litres/hour
- Detects multiple leaks in a pipeline
- Entry and use in live potable water mains
- Pinpoints position to less than 0.5 metres at depths up to 5 metres
- Reliable in all pipe materials
  - iron, steel, uPVC, MDPE, GRP, concrete
- Works in all pipe diameters
  - successfully used in 100 to 2700 mm mains
- Provides estimate of leak size
- Precise position recorded using GPS receiver



Operator's display of a leak

### Operating Parameters:

Sahara is flexible and can be adapted for use under a variety of conditions. Contact us to discuss your application.

### Instant Results

The real time technology used in Sahara means results are instant. The precise location of any leaks is given during the survey allowing immediate repair.

### Feedback from our clients:

***“Sahara has enabled Thames Water to reduce trunk-mains losses by 65Ml/d. Conventional methods would not have detected leaks with such confidence, nor located them with such accuracy.”***

Tony Owen, Trunk Mains Leakage Manager, Thames Water Engineering.

***“Using Sahara we have been able to reduce our entire water importation by 3.5%. The savings afforded paid for the survey works in just eight months.”***

Elhassane Benahmed, Water Resources Manager, Lydec (Morocco).

### Clients

Sahara customers include UK and international service providers and industrial users.