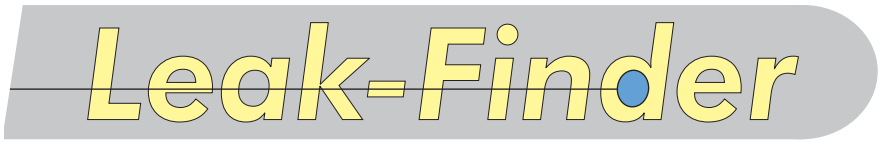
Leak-Finder Ltd



Operating Instructions

For Sales and Support please contact
Halma Water Management on
Phone: 01633 489479
Fax: 01633 877857

The Leak-Finder is designed to detect and locate leaks on service pipes. To work effectively the internal pipe bore should be smooth enough to ensure an airtight seal.

Difficulty may be experienced in other materials where an effective seal with the bladder may not be guaranteed eg. internally corroded iron services.

A length of 25mm MDPE pipe is used to connect the machine to the service to be tested. The service pipe is then pressurised in stages to detect and then locate any leak.

The Leak-Finder has a non-metallic pipeline tracing facility built into the reel. To use this facility use your tracing equipment on connection mode, as per the Manufacturer's Instruction Manual. In general, the Black Lead must be put to a suitable earth point in the ground and the Red Lead connected to the terminal on the Leak-Finder reel, just above the air connection. Often there will be no note change from the transmitter, but a connection will have been made. The line of the pipe can now be traced as normal.

It should be noted that this facility is only for pipeline tracing and not for pinpointing the tip.

SAFETY FIRST
Gloves and Goggles MUST be worn when operating the Leak-Finder.

WARNING
Do NOT inflate Bladder outside service pipe. This will cause the Bladder to burst.

Contents

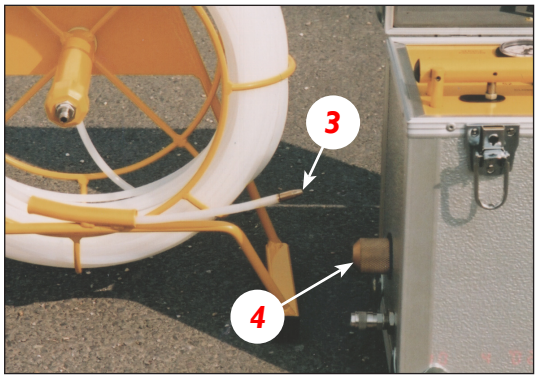
OPERATION

CONNECTING THE LEAK-FINDER

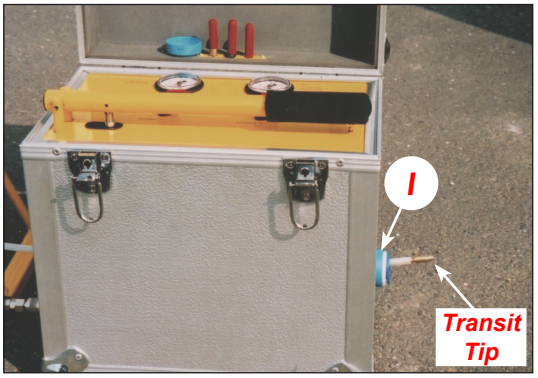
1. *The exposed service to be tested should have a clean square end to enable a connection to be made to a 25mm MDPE pipe.*

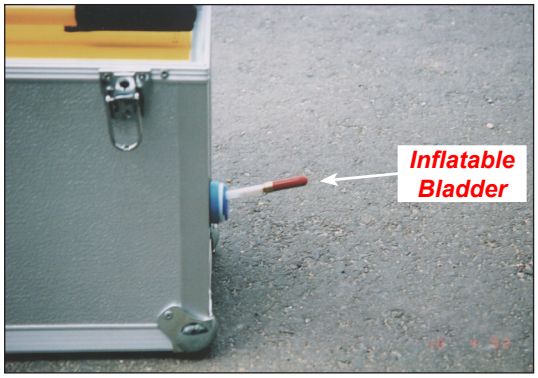
   If possible the service should be drained by opening an internal tap or end fitting as the detection process is easier with an empty pipe.

2. a) *Insert the end of the insertion pipe 3 through the sealing gland 4 (release the gland by one turn to enable the pipe to pass through) until it comes out of the machine at point 1).*

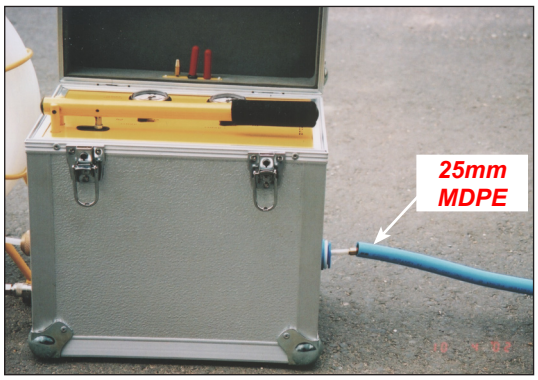


   b) *Remove the transit tip from the insertion pipe and screw on the inflatable bladder (finger tight only).*



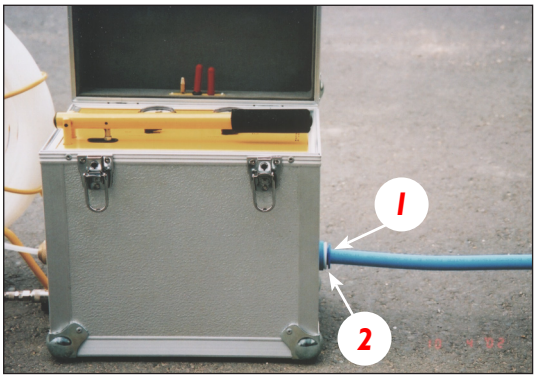


   c) *Insert the inflatable bladder and insertion pipe into the open end of the 25mm MDPE pipe.*

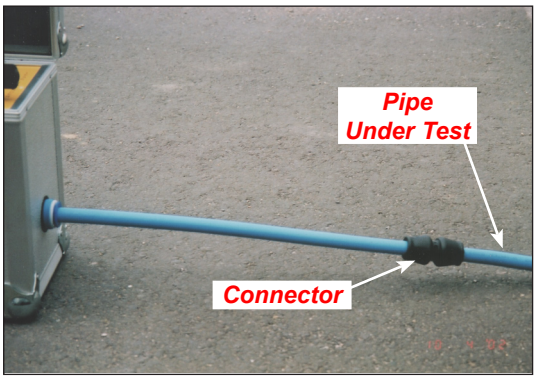


3 a) *Make a connection between the 25mm MDPE pipe and the machine at point 1 – the pipe may be pushed straight into the connector.*

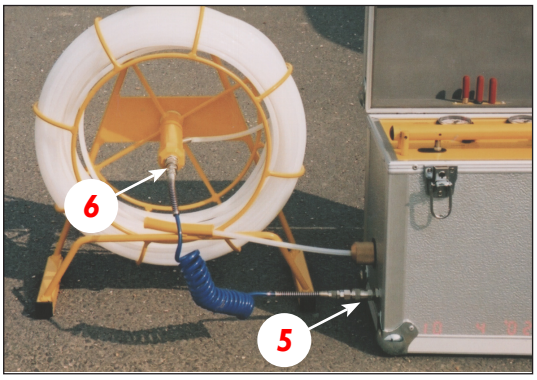
It may be released by pushing the quick release ring 2 towards the machine and withdrawing the pipe.



b) *Make a connection between the service pipe and the 25mm MDPE pipe with a proprietary connector, eg. poly to poly or poly to iron etc.*



4. *Using the blue flexible connecting pipe, make a connection between the Leak-Finder and the insertion pipe reel at point 5 and 6.*



5. *The Leak-Finder is now ready for use.*

Before operating the pressure pump, check that the pipe will pass through the fittings used to connect to the pipe under test.

At this stage a preliminary check can be made of the test fittings and connection, if required, by following the remaining operating procedures.

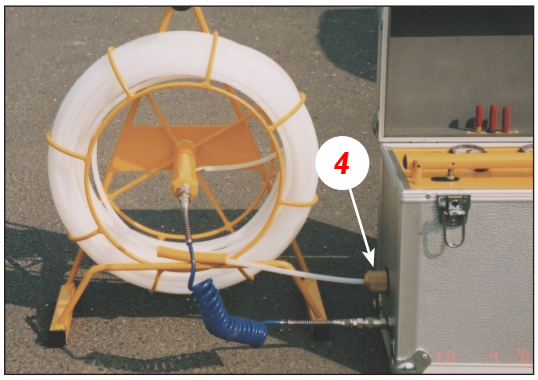
LEAK DETECTION

The quickest results can be obtained by halfing the total length of pipe under test eg. if the service is 40m in length, test the first 20m as described below.

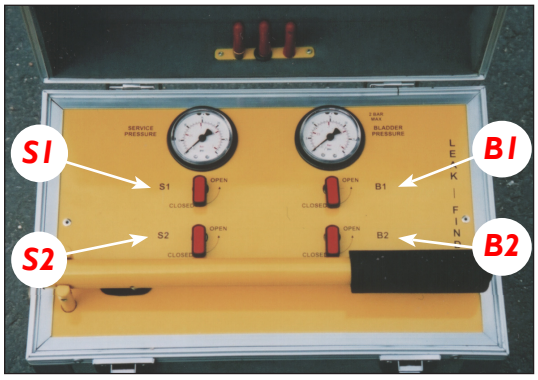
1 Insert 20m of the insertion pipe into the service through the Leak-Finder.

2 Once the pipe is inserted, seal the insertion pipe to the Leak-Finder at gland 4, by rotating the knurled gland clockwise finger tight.

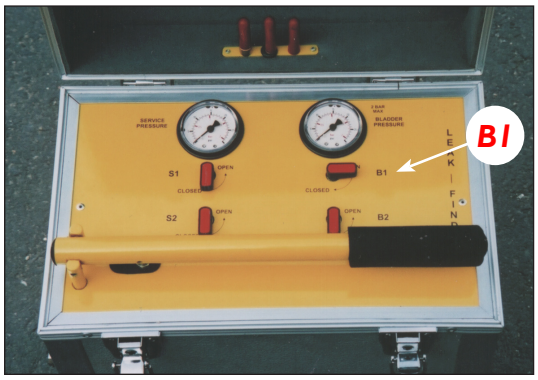
The machine is now ready for the test procedure.



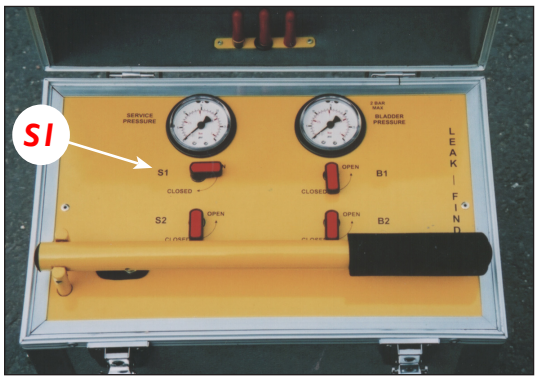
3 Ensure all valves S1, S2, B1, B2 are in closed position.



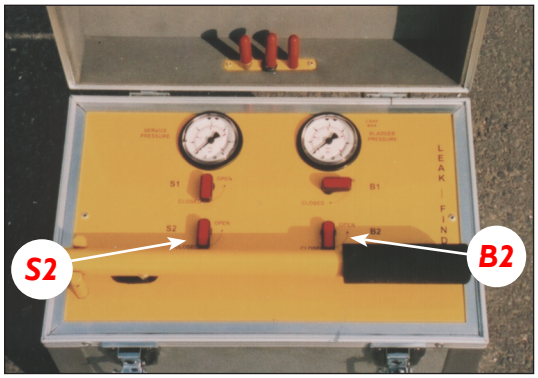
a) Open valve B1, operate pump to inflate the bladder to a pressure of 1.5 bar (do not exceed this pressure) then close B1. The Bladder gauge should remain at the 1.5 bar pressure. This seals the pipe under test.



b) Open valve S1 and operate pump to pump up service pipe to 0.75 bar, then close S1. If pressure holds steady there is no leak on the section of pipe under test.



c) *Turn valve S2 to open position, this will release the pressure in the service. Turn valve B2 open position, this will release the pressure in the bladder, release gland 4 (one turn anti-clockwise to release insertion pipe).*



4 *The insertion pipe may now be moved to a new position and steps 2 and 3 repeated. When a pressure in the service pipe cannot be maintained this indicates a possible leak which can then be pinpointed by repeated pressure tests of the service pipe. Once a leak is detected and located, mark the insertion pipe to obtain the distance from the machine before withdrawing the pipe.*

5 *Ensure all valves are open. Release gland 4 by one turn, withdraw insertion pipe until it stops. Disconnect the 25mm MDPE by pushing the quick release ring 2 towards the machine and withdrawing the 20mm pipe. At this stage remove the inflatable bladder and refit transit tip to remove the insertion pipe from the machine.*

Warning

Do not inflate bladder outside the service pipe. This will cause the bladder to burst.

Gloves and goggles MUST be worn when operating the Leak-Finder.

***Note**: When testing pipes above 25mm the bladder pressure should be lowered to 1 bar.*

INSTRUCTIONS

LARGE BLADDER ASSEMBLY

Push the insertion pipe through the Leak-Finder as normal.

When the insertion pipe comes through the blue quick release fitting, connect the 25mm MDPE pipe you are using to connect the Leak-Finder to the service pipe under test.

Push the insertion pipe through the 25mm MDPE pipe until it comes out the end, at this point remove the brass transit tip and screw on the large bladder assembly.

Insert the bladder assembly into the service pipe under test and make a connection between the 25mm MDPE pipe and the service pipe being tested.

IMPORTANT

When using the Leak-Finder it is important not to over-pressurise the bladders. In most situations a pressure of 1-1.25 bar or 15psi to 18 psi is enough.

Over-pressurising the bladder will cause the bladder to be unnecessarily stressed and reduce the life of the bladder.

Small bladder pipe sizes

⅜" to ¾"

15mm to 25mm

Large bladder pipe sizes

¾" to 1½"

25mm to 50mm

Small bladder internal pipe diameters

11mm - 20mm

Large bladder internal pipe diameters

20mm - 40mm

CHANGING THE BLADDER

Remove bladder assembly from the insertion pipe.
Remove the brass ferrule ring by simply pulling it off the bladder.
Peel the rubber bladder off the brass bullet shaped insert.
Push the new bladder over the brass bullet shaped insert.
Pull the neck of the bladder over brass bullet.
Refit the brass ferrule ring by pushing it fully over the bladder then assembly is complete.

NOTE: IT IS VERY IMPORTANT THE BLADDER IS FITTED CORRECTLY.

FAULT FINDING

PROBLEM	***SOLUTION***
Difficulty in maintaining pressure on gauge B1 bladder gauge	*1. Check valves are in the correct positions.* *2. Check the flexi hose between the Leak-Finder and the reel for correct fitment.* *3. Check the bladder assembly has been fitted correctly.* *4. Check tightness of bladder assembly on insertion pipe.* *The bladder assembly must be tight but only finger tight.* *5. Change bladder as possibly a puncture has occurred.*
Difficulty in maintaining pressure on gauge S1 service pressure gauge	*1. Check valves are in the correct position.* *2. Ensure sealing gland 4 has been turned clockwise so it is just tight.* *Do not over tighten.* *3. Check all fittings to ensure air-tightness between the Leak-Finder and the service pipe being tested.* *4. Undo sealing gland 4 and check rubber O-ring for cleanliness and clean if required.* *If necessary renew rubber O-ring.*

MAINTENANCE

AFTER USE

Clean and lubricate rubber O-rings in the blue quick release coupling and gland. Clean and lubricate all air connections. Use a suitable lubricant, silicon spray or grease.