

Water Added/Loss Machine

What is it?

Designed and manufactured to meet BS EN 805 standards for pressure testing, the Water Added/Loss Machine is the only device of its kind. It has been produced in-house by Ant Hire as part of our continued efforts to make our pressure testing services the very best available, and to provide accurate and detailed pressure testing results and certification.



The machine has been created for carrying out hour-long pressure tests for ductile iron, PVC, GRP or stainless steel pipes. For this test type, a system test pressure (STP) needs to be maintained and the volume added, measured. The machine allows the water added to be accurately measured remotely, eliminating the possibility for human error.

The BS EN 805 standard for pressure testing is required in the Civil Engineering Specification for the Water Industry, 7th Edition.

What are the Benefits?

- ⇒ **Independent** – The data is collected remotely, meaning that tests do not need to be witnessed by qualified persons to determine their authenticity.
- ⇒ **Accurate** – The possibility for human error is removed.
- ⇒ **Practical** – The measuring cylinder allows the operator to observe how much water is entering the pipe as the test progresses, even before the results are downloaded.
- ⇒ **Convenient** – Readings are available after only 10 minutes, allowing the results to be predicted in the early stages of the test, and the test aborted if a lot of pressure is being lost.
- ⇒ **Detailed** – Extensive data is collected to provide detailed test results.

Ant Hire Solutions

With 18 years of experience, we have built a solid reputation for the work we do to assist water companies, drainage contractors and civil engineers to overcome challenges, reduce workloads and increase profits.

Our dedication to first class service, research and development has resulted in some truly exceptional products and services, including our Pressure Testing division and Vertform, a unique manhole creation system.

We also provide top quality drainage equipment from manufacturers such as Electro Scan, IBAK and IMS Robotics.

Ant Hire Solutions

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How Does it Work?



Data Loggers

Ant Hire data loggers record the following:

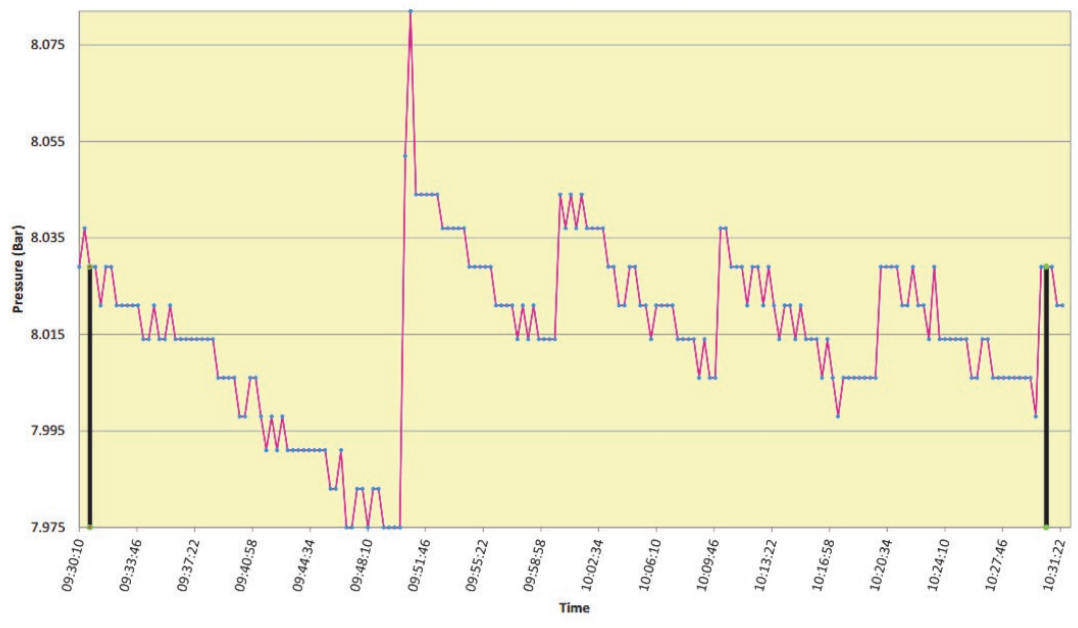
- ⇒ **Pressure**
resolution to 0.008 bar
- ⇒ **Water volume**
resolution to 5.0ml
- ⇒ **Temperature**
resolution to 0.01°C
- ⇒ **Test Location**
GPS co-ordinates to within 5m²

The standard procedure for conducting an hour long pressure test of this kind involves measuring the water lost at the end of the hour. Water is added until the starting pressure is achieved, and the added water is drawn off and measured manually to give an overall water loss volume.

Using the Ant Hire Water Added/Loss Machine, water can be added to the pipeline every 10 minutes throughout the test to bring it up to system test pressure (STP). The operating lever is speed-controlled, and water is added in 5ml units to ensure that the exact STP is achieved. The data logger records the pressure and exactly how much water has been added at each stage.

The device can also be used for the traditional test method to accurately measure the water added at the end of the hour. Details of both test types are provided in BS EN 805 11.3.3.4.2.

**Total Test Time Graph for Rain Street, Leeds, SPS CH0 to CH190
28/06/2013 09:30:Test 2**



The Results

At the end of the test, the overall water loss is compared to the allowed water loss for the pipe specifications, to determine whether the pipeline has passed or failed.

If the pipeline has been over or under-pressurised at any point, this is adjusted for in the results. The air temperature is also recorded and accounted for, as this can significantly affect the pressure in the pipeline.

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