



# Water Tubes Complex Test

Single and Dual Line Tubes



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## Objective

The system was developed to test the water tubes with samples supplied by the customer allowing to detect tube leaks and obstructions.

## Leak test

The test is based on the operating principle of the complex leak test with parameters adapted case by case. In other words, air is injected, the pressure and flow are controlled in the tube being verified until reaching the predetermined pressure. Once reached, the circuit is sealed and one of the pressure switches, monitors for a certain amount of time (configurable time). If this pressure remains within the pre-set parameters the test will be considered OK, otherwise NOK. This allows checking the conformity of the tube to be verified (tube without leaks).

## Obstruction Test

The obstruction test consists of injecting air at a pre-set pressure of + - 120mbar at a continuous flow rate and, for a predefined time, monitoring a possible overload at the injection chamber inlet. In case the tube has two outlets this test will have to be carried out in two phases in order to identify whether or not there is an obstruction in any of the lines.

For this purpose, a high precision pressure switch is used, which allows the verification of pressures of around 0.1 KPa.

During tube testing, if the pre-set pressure value is exceeded, there is some obstruction in the tube. In this case the tube is not ok, resulting "NOK".

**NOTE:** Due to the complexity and precision of the test, this equipment should be tested and programed with real samples with the defects to be detected.



## TWO VERSIONS AVAILABLE!

- . V1 Single Line Tube - 1 input / 1 outputs
- . V2 Dual Line Tube - 1 input / 2 outputs



## Test Management System

The whole test is controlled by a central electro pneumatic system equipped with an automaton that allows to do all the pneumatic and electric management. This management is based on the verification of a set of parameters that were selected and validated based on the samples, OK, provided by the Client and some NOK simulated Internally.