

 **WaterTech**



**PORTABLE CASE FOR ON SITE WATER
METER TESTING**

PERSEUS

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DESCRIPTION

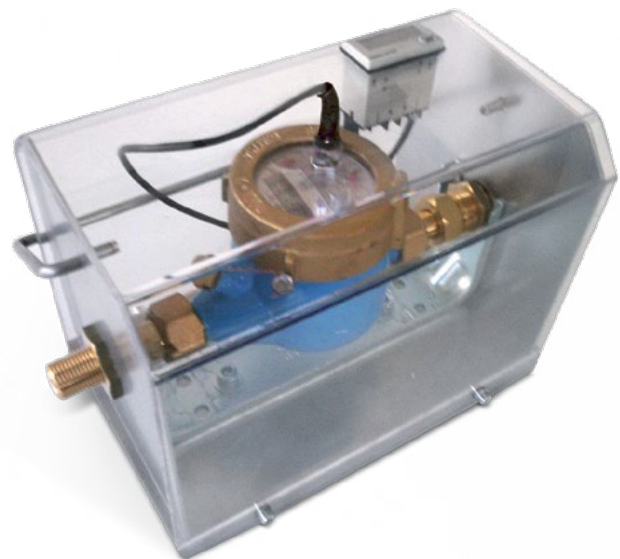
The case is composed by a stainless steel frame and a bracket on which a master water meter is installed. This water meter with very high precision, sensitivity and repeatability, has been calibrated with selected accuracy, equipped with a pulse emitter for remote reading. The pulse frequency is 1 pulse/1 liter. (This water meter is not to be used for fiscal purposes).

The pulse cable is connected to a totalizer with display (including a reset button) for reading of the total amount of water (liters) passing through the water meter.



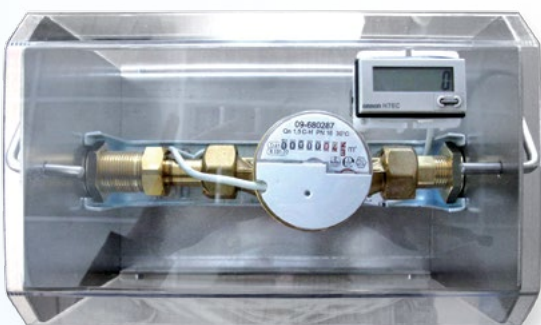
The case is equipped with external joints to allow an easy connection to the user's water meter (flexible hoses are preferred).

The case cover is made of plexiglass and a stainless steel handle is provided to allow easy transportation



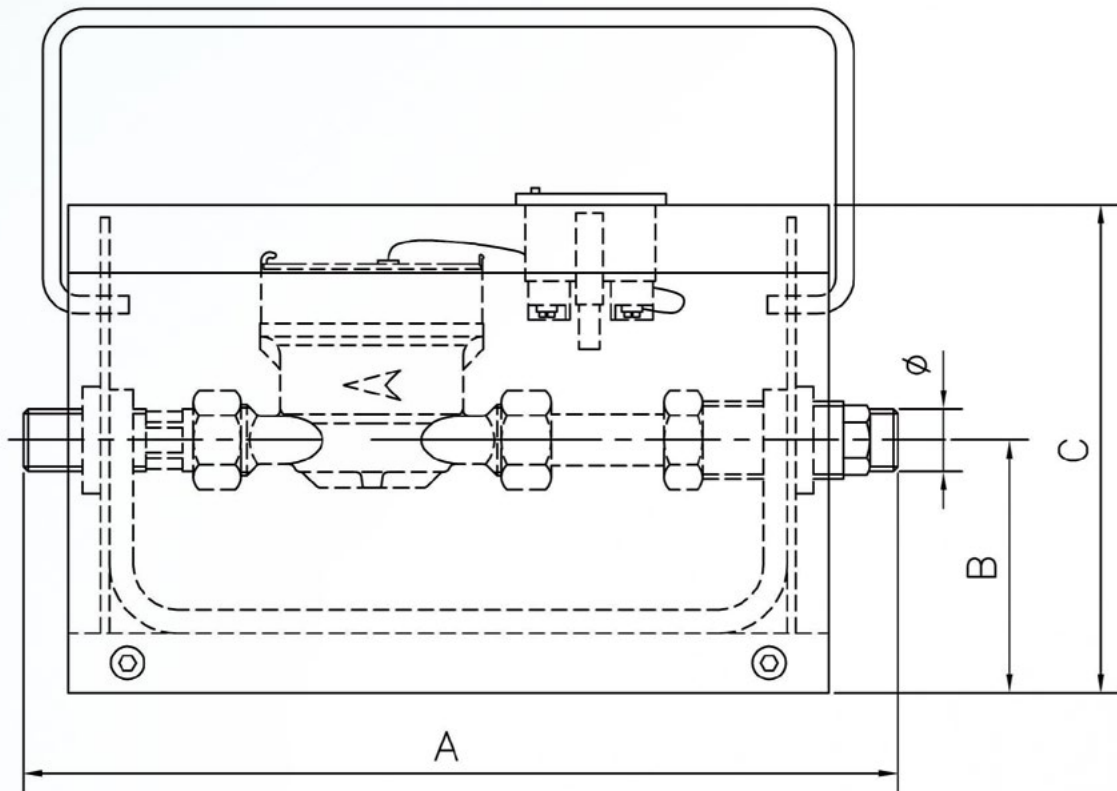
The master water meter that is installed inside the case can be either multi-jet or single jet with protected rollers, or single jet dry dial, or volumetric dry dial.

The choice of the model to be installed can be agreed with the customer, on demand.

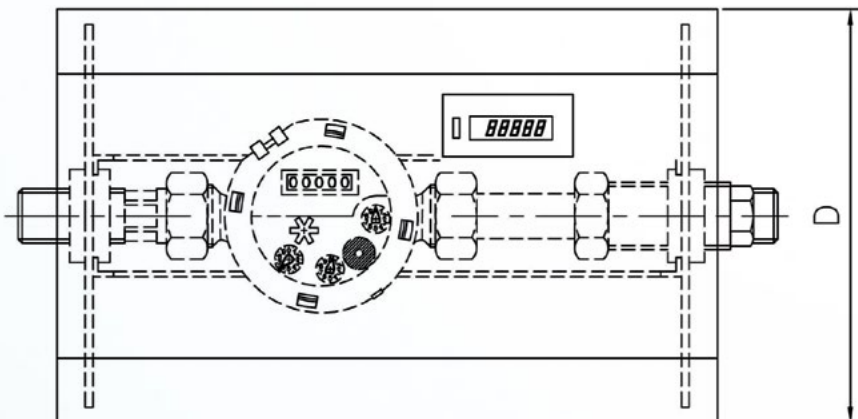


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PORTABLE CASE FOR ON SITE WATER METER TESTING



Manual zero setting



Ø	1/2"	3/4"	1"
A	315	360	470
B	85	85	95
C	240	240	240
D	160	160	230

Other lengths are available on demand

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NOTES

These water meter cases are **NOT** designed and should not be used for legal/metrological verification of user's water meters.

If verifications having legal value are required, it is an **ABSOLUTE MUST** to rely on suitable test benches.

The test benches (and their laboratories) must be specifically certified to this purpose.

Furthermore, to avoid possible conflicts of interest, the test bench and the laboratory should be a "third party" one (meaning that they should not be owned either by the manufacturer or by the Utility).

The results of the tests carried out by using this case connected in line to the user's water meters depend on several factors, generating a high level of measuring uncertainty (with limited repeatability).

These factors may cause problems in results' reading or interpretation.

Many factors may influence the testing, for example:

- The master water meter has its own typical error curve, the error in % is directly dependent on effluent flow, as a consequence its reaction (the results) depend on the testing flow (at 500 liters flow the result is different from the one reached at a 1000 liters). In addition, the error curve is changing over time as the water meter gets older, and consequently it becomes incrustated and/or worn.

- The master water meter has a typical repeatability. In case of several tests on the same test bench, the error curve is different for each testing. The curves are similar but never exactly the same.

- The quality of the master water meter measurement depends on the position of the water meter case installation (if the case is placed so that the water meter and the dial are horizontal, the results will be different compared to the results reached when the case is placed in inclined position).

- The quality of the master water meter measurement depends on the position and the shape of the flexible pipes used to connect the case to the user's installation.

- The master water meter results may be influenced by the case discharging pressure, for example when it is too low.

- The pulse emitting system has a very low resolution even if the pulse frequency is 1 pulse per liter. In case tests are done by using a very low quantity of water (i.e. 1 liter as extreme example) the water meter could measure a quantity of water slightly higher than 1 liter (1 pulse), very near to 2 liters, but it could not reach the second pulse. In this case, the error is « absurd » being around 50%! It is therefore important to carry out these tests on the basis of minimum 10 or more liters.

- There are also different types of risk related to how the water meter case is connected in-line to the user's water meter (for example: if the water meter was cleaned or not, presence of air in the "new circuit" or not, if the opening and closing of valves/taps was properly done or not, etc).

To sum up: if the case is used to check whether the user's water meters is measuring, for example, double or more the quantity that is passing through the water meter, the case is the most suitable equipment. If, on the contrary, the purpose is to check and determine errors in terms of small percentages, the risk not to reach correct/satisfying results is very high.

For additional information and options, do not hesitate to contact us

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