INNOVATIVE TEST & MEASUREMENT SYSTEMS

DOCUMENTATION / FAQ

City water or demineralized water for IP tests?

Rev. 00

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1. Question

What water quality do I need for IP testing?

2. A nswer

For IP tests according to DIN EN 60529 and ISO 20653, fresh water should be used in accordance with the standards. Laboratories often have water networks with demineralized water. The question therefore often arises as to whether city water or demineralized water should be used for IP tests. We recommend the use of normal city water with a water hardness of less than 6° dH (German hardness). In regions with high water hardness, this can be reduced using a water softening system. However, water softening systems only reduce limescale and leave other substances in the water. This maintains the conductivity of the water.

The following advantages result from the use of city water:

- Conductance of the test medium remains unchanged
- Insulation tests after an IP test Sensible
- Use of magnetic inductive flow meters possible
- Softened water is cheaper than demineralized water

3. Note on ITS products

We use magnetic inductive flow meters in iTS water test chambers, as this measuring principle provides very stable measured values over a long period of time. A minimum conductivity of 35µs/cm is required for these flow meters. Softened city water easily meets this requirement. With demineralized water, the conductivity is usually well below 10µs/cm. We therefore recommend the use of city water for standard iTS chambers.

- **Conductance of the water > 35µs/cm**