Turbine and rotary gas meters with extended approval

MID – so new and yet so common

What do a gas volume meter, a taxi meter and a modern wine glass have in common? These products and many more are subject to the legal metrology regulations and must be appropriately tested, approved and identified in accordance with the European MID 2004/22/EC. MID stands for "Measuring Instruments Directive" and its identification is identically structured for all products and therefore seen increasingly often in everyday life.

All of Elster-Instromet's turbine and rotary gas meters are now on offer pursuant to the new MID Directive for measuring instruments. However, existing national and international EC approvals will still apply until the end of their approval period – some into 2016. The aim of this MID Directive is to harmonise the internal market of the European Union and to lift trade barriers, promoting free movement of goods among the EU states. For measuring instruments already in use, national law still applies, e.g. concerning recalibration periods.

Customers of rotary gas meters of the RVG or IRM series, in particular, can enjoy the significant advantage that, in accordance with MID, these meters can be ordered at the factory with a measuring range of up to 1:160. Up until now, manufacturers could only offer a measuring range of 1:20 under the previous EC approval. The national approvals and calibrations, which were required until now, are no longer applicable.

Elster-Instromet will not change the practical calibration procedure. As until now, we will, under the MID, also carry out all meter calibrations on at least six test points, although the harmonised standard EN 12480 for rotary gas meters only requires three test points.

One more of the turbine gas meters' special features has to get a mention. Based on a calibration in accordance with MID, the manufacturer may in the future only indicate the operating pressure on the meter's main plate that is covered by the tests carried out. The conventional low-pressure test with air allows only an operating range of 0 to 4 bar to be specified – any pressures given beyond this require an additional high-pressure test.

Here, only an operating range of 50 to 200% of the actual test value at high pressure may be certified on the index plate. If a turbine gas meter is high-pressure tested, e.g. at 10 bar, a range from 5 to 20 bar may be certified on the meter plate, provided that the design pressure of the meter housing of e.g. PN 16 is not exceeded.

As most of the turbine gas meters are used in an operating range up to 16 bar, we recommend a high-pressure test at 8 bar in addition to the low-pressure test at the factory. In this way, the low-pressure test covers the operating range of 0 to 4 bar while the subsequent range of 4 to 16 bar is covered by the high-pressure test. In order to guarantee maximum measurement accuracy, the test value of high-pressure calibration should, in principle, depend on the actual operating pressure of the respective gas station.

As end customers, we expect maximum measurement accuracy from both taxi meters and wine glasses – after all, we all only want to pay for what we have actually 'consumed' ...

Do you have any specific questions? We would be happy to answer them.

Patrick Keiffer patrick.keiffer@elster.com