

Liquid-flow

Accurate liquid-flow measurement save millions of Euros



Every year millions of cubic metres pass through modern large-scale systems for the production, transport and distribution of all kinds of liquids. Measurements are the basis for revenues, costs and process-yields. An incorrect measurement of just one-tenth of a percent can make a significant difference in profit. Calibration to traceable measurement standards is vital for accurate measurements.

NMI calibrations

The amount of liquid is always measured, in either volume or mass flow. NMI is an authority in the field of accurate and reliable measurement of liquid flows and has an extremely wide range of test rigs and measuring equipment. It has extensive and specialized knowledge in the field of liquid quantity measurement. With our advanced equipment we are able to carry out virtually every measurement in the field of flow under a wide range of conditions. The test facilities are exceptionally well suited for testing all types of meters under widely differing conditions, e.g. with varying density, viscosity, etc.



What NMI offers you

In the specific field of liquid-flow, NMI can offer the following services:

- Testing, certification and calibration of flow meters and equipment or measurement systems against the instrument specifications or the system specifications
- Training in the field of measurement, calibrations, measurement uncertainty and quality control
- Consultancy on quality control, the implementation of a quality system and measurement accuracy

Why NMI?

NMI can help with all aspects of liquid metering, from measurement of quantity to density, temperature, pressure, viscosity and coefficients of expansion. In all cases, NMI is able to provide the assistance needed to raise quality of measurement to the required level, whether this involves a few litres of liquid per hour or many cubic metres per minute.

We focus on calibration and validation of your measurement equipment, systems and services in the field of liquid-flow measurement. This way you are able to guarantee your customers that your flow meter is accurate and traceable to international standards.

Liquid-flow facilities

For more than 35 years, the liquid-flow facilities of NMI played a vital role in the testing, certification and calibration of industrial liquid flow meters. Three different fuels can be used as calibration fluids in the test facilities, as many meters have density and viscosity dependent behaviour. This makes our test facility extremely suitable, for example, the calibration of mass flow meters.

We can calibrate flow meters with fixed batches of liquid by means of weighing or with volumetric calibration tanks. Calibration of fuel flow meters can be executed with a flying start/stop procedure, by means of the master meter method or with a compact prover.



Calibration and Measurement Capabilities (CMC)

Name installation and test product	Maximum flow rate m ³ /h	Density and Kinematic Viscosity at 15°C		CMC (2s)	
		kg/m ³	mm ² /s	Volume	Mass
Petrol	250	710	0.7	4.10 ⁻⁴	4.10 ⁻⁴
Jet fuel	180	800	1.8	4.10 ⁻⁴	4.10 ⁻⁴
Diesel	250	845	5.0	4.10 ⁻⁴	4.10 ⁻⁴
Dimensions of meters: 1"–6"					

Fiscal metering

NMI also has a unique calibration facility for the calibration of industrial gas flowmeters: EuroLoop.



EuroLoop will be *the* research and test facility for technologies and products for the measurement of gas and oil on an industrial scale.

Activities

- Calibration, verification and type approval of industrial flow meters (oil and gas)
- Industrial research (process technology and flow)
- Educating and training at MBO and HBO level

EuroLoop consists of the following sections:

A facility for industrial flow meters (HyCal):

- Up to a flow of 5–30.000 m³/h with various pressure of 1–65 Bar
- Dimensions of meters: 4"–24" (40")

A facility for industrial gas meters (GasCal):

- Up to a flow of 5–5.000 m³/h with various viscosities of 1, 10, 100 cSt, others on request
- Dimensions of meters: 2"–30"

EuroLoop

For more information about EuroLoop, please contact our Sales Department.

NMI Certin B.V.
Hugo de Grootplein 1
P.O. Box 394
3300 AJ Dordrecht
T +31 78 633 23 08
F +31 78 633 23 09

More information?
Would you like more information about our service?

Or would you like an appointment with one of our consultants?

Please contact:
NMI Certin B.V.
Sales department
T +31 78 633 23 08
F +31 78 633 23 09
E certinsales@nmi.nl
I www.nmi.nl

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