



## **R 49 Declaration of Mutual Confidence Rev. 2**

<b>Revision</b>	<b>Date of revision</b>	<b>Nature of the revision</b>
Rev.0	30/11/2007	Initial document
Rev.1	07/08/2009	Change in the layout of the DoMC Change in the designation of the Denmark Participant Change in the designation of the United Kingdom Participant
Rev. 2	14/11/2011	Full periodic review

## 1. Relevant OIML Recommendation:

OIML R 49-1 “Water meters intended for the metering of cold potable water and hot water, Part 1: Metrological and technical requirements” – Edition 2006

OIML R 49-2 “Water meters intended for the metering of cold potable water and hot water, Part 2: Test methods” – Edition 2006

OIML R 49-3 “Water meters intended for the metering of cold potable water and hot water, Part 3: Test Report Format” – Edition 2006

## 2. Items in Recommendation not covered

The R 49 CPR decided to delete the following tests and examinations from the scope of the R 49 DoMC:

- Checking facilities (OIML R 49-1 § 4.3);
- Marks and inscriptions (OIML R 49-1 § 5.6);
- Indicating device (OIML R 49-1 § 5.7);
- Verification marks and protection devices (OIML R 49-1 § 5.8);
- Static magnetic field test (OIML R 49-1 § 6.2.8).

## 3. OIML Issuing Authorities and their Testing Laboratories

State	Issuing Authority	Testing Laboratories
DENMARK	FORCE Certification A/S	FORCE Technology
		DELTA
UNITED KINGDOM	NMO, National Measurement Office	WRc-NSF Ltd.

## 4. Range of evaluation capability

This document defines a synthesis of the testing capabilities. Manufacturers are invited to contact the Testing Laboratories for any additional detailed information.

### 4.1. FORCE-Technology/ DELTA (Denmark)

	Class 1	Class 2
Minimum flow rate (l/h)	1	1
Maximum flow rate (m <sup>3</sup> /h)	150	150
Minimum pipe size (mm)	5	5
Maximum pipe size (mm)	300	300
Water temperature classes	<input checked="" type="checkbox"/> T30 <input type="checkbox"/> T30/70 <input checked="" type="checkbox"/> T50 <input type="checkbox"/> T30/90 <input checked="" type="checkbox"/> T70 <input type="checkbox"/> T30/130 <input type="checkbox"/> T90 <input type="checkbox"/> T30/180 <input type="checkbox"/> T130 <input type="checkbox"/> T 180	<input checked="" type="checkbox"/> T30 <input type="checkbox"/> T30/70 <input checked="" type="checkbox"/> T50 <input type="checkbox"/> T30/90 <input checked="" type="checkbox"/> T70 <input type="checkbox"/> T30/130 <input type="checkbox"/> T90 <input type="checkbox"/> T30/180 <input type="checkbox"/> T130 <input type="checkbox"/> T 180
Environmental tests (climatic, electromagnetic compatibility, magnetic field, etc.)	Ambient temperature range: –50 °C to +85 °C	

4.2. WRc-NSF Ltd. (United Kingdom)

**Fully mechanical water meters only**

	<b>Class 1</b>	<b>Class 2</b>
Minimum flow rate (l/h)	N/A	6
Maximum flow rate (m <sup>3</sup> /h)	N/A	120
Minimum pipe size (mm)	N/A	10
Maximum pipe size (mm)	N/A	100
Water temperature classes	<input type="checkbox"/> T30 <input type="checkbox"/> T30/70 <input type="checkbox"/> T50 <input type="checkbox"/> T30/90 <input type="checkbox"/> T70 <input type="checkbox"/> T30/130 <input type="checkbox"/> T90 <input type="checkbox"/> T30/180 <input type="checkbox"/> T130 <input type="checkbox"/> T 180	<input checked="" type="checkbox"/> T30 <input type="checkbox"/> T30/70 <input checked="" type="checkbox"/> T50 <input type="checkbox"/> T30/90 <input type="checkbox"/> T70 <input type="checkbox"/> T30/130 <input type="checkbox"/> T90 <input type="checkbox"/> T30/180 <input type="checkbox"/> T130 <input type="checkbox"/> T 180
Environmental tests (climatic, electromagnetic compatibility, magnetic field, etc.)	N/A	

**5. Additional requirements**

State	Name of requirement	Requirements and applicable Test procedure Reference document
Australia	Water temperature disturbance test for class T30 meters	R 49 DoMC-01
Australia	Working pressure range (OIML R 49-1 § 5.4)	0.3 bar to at least 14 bar 14 bar shall be used when performing the following tests: - Static pressure test according to OIML R 49-2 § 6.2; - Water pressure test according to OIML R 49-2 § 6.5

Conformity to these above-mentioned requirements may be evaluated by the following OIML Issuing Authorities and their Testing laboratories:

State	Issuing Authority	Testing Laboratories
DENMARK	FORCE Certification A/S	FORCE Technology
UNITED KINGDOM	NMO, National Measurement Office	WRc-NSF Ltd.

**6. Means used for establishing mutual confidence in the competence of Testing Laboratories**

State	Means of establishing mutual confidence	
	Accreditation	Peer assessment
DENMARK	x	
UNITED KINGDOM	x	

## 7. Participation

The Participants and Associates indicated below hereby have signed the DoMC to accept and utilize Test Reports and Certificates issued by Issuing Participants above-mentioned in their national type approval program for the category of instruments specified in 1. This DoMC has been established in accordance with the requirements of OIML B 10-1 *Framework for a Mutual Acceptance Arrangement on OIML Type Evaluations* dated 2004.

<b>State</b>	<b>Identity of Participants and Associates</b>	<b>Status of Participation</b>	<b>Date of Participation</b>
AUSTRALIA	NMI, National Measurement Institute of Australia	Utilizing Participant	From 2007.11.30
CANADA	Measurement Canada	Utilizing Participant	From 2007.11.30
DENMARK	FORCE Certification A/S	Issuing Participant	From 2007.11.30
NEW ZEALAND	MCA/MAPSS, Ministry of Consumer Affairs - Measurement and Product Safety Service	Utilizing Participant	From 2007.11.30
SERBIA	DMDM, Directorate of Measures and Precious Metals	Utilizing Participant	From 2007.11.30
SWITZERLAND	Federal Office of Metrology METAS	Utilizing Participant	From 2007.11.30
UNITED KINGDOM	NMO, National Measurement Office	Issuing Participant	From 2007.11.30

## 8. BIML receipt

Date recorded at BIML: November 14, 2011