

Member State of OIML
United Kingdom of Great Britain
and Northern Ireland

OIML Certificate No
R49/2006-GB1-10.05
Revision 1

OIML CERTIFICATE OF CONFORMITY

Issuing authority: National Measurement Office

Person responsible: **Paul Dixon – Certification Services Director**

Applicant: **Arad Ltd.
Dalia - Ramot Menashe
POB19239
Dalia
Israel**

Manufacturer: **The applicant**

Identification of the certified pattern: a family of cold-water meters, designated Octave, utilising a Ultrasonic measuring element and having a rated permanent flowrate Q_3 between 40 m³/h and 1000 m³/h.

This certificate attests the conformity of the above-mentioned pattern (represented by the samples identified in the associated test report) with the requirements of the following Recommendation of the International Organisation of Legal Metrology (OIML):

OIML R49- Edition 2006(E) for accuracy class: 2

This certificate relates only to the metrological and technical characteristics of the pattern of the instrument concerned, as covered by the relevant OIML International Recommendation.

This certificate does not bestow any form of legal international approval.

This Revision replaces previous versions of the certificate

Issue Date: 01 August 2014
Reference No: T1132/0026



**Signatory: P R Dixon
for Chief Executive**

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The initial conformity was established by tests described in the associated test report M075505-R49 having 50 pages, test report M083605-R49 having 22 pages, test report TR0575 having 12 pages and the associated pattern evaluation checklist P00436 having 21 pages.

The test reports that support Revision 1 are listed below in Table 1.

Table 1:

Description of Meter and Tests	Test Report
2" (50 mm) Flow Reversal Test	IEE070
4" (100 mm) Flow Reversal Test	IEE071
8" (200 mm) Determination of Intrinsic Errors of Indication and the Effects of Meter Orientation	IEE154 & IEE156
8" (200 mm) Flow Reversal Test	IEE155 & IEE157
10" (250 mm) Determination of Intrinsic Errors of Indication and the Effects of Meter Orientation	IEI201 & IEI201
10" (250 mm) Flow Reversal Test	IEI202 & IEI 204

Characteristics:

Table 2:

Meter Size (mm)	50	65	80	100	150	200
Q₃/Q₁ (R)	500	500	500	500	500	500
Q ₂ /Q ₁	1.6	1.6	1.6	1.6	1.6	1.6
Q ₁ Minimum flowrate (m ³ /hr)	0.08	0.08	0.125	0.20	0.5	0.8
Q ₂ Transitional flowrate (m ³ /hr)	0.128	0.128	0.2	0.32	0.8	1.28
Q ₃ Permanent flowrate (m ³ /hr)	40	40	63	100	250	400
Q ₄ Overload flowrate (m ³ /hr)	50	50	80	125	313	500

Measuring principle:	Ultrasonic
Accuracy Class:	2
Q ₂ /Q ₁	1.6
Q ₃ /Q ₁	500
Environmental class:	T50 (0.1C to 50C)
Environmental class:	C
Electromagnetic environment:	E1
Maximum admissible temperature:	50 °C
Maximum admissible pressure:	1.6 Mpa (16 bar)
Pressure Loss Class	0.16 bar

Installation details

Connection type	Flange
Minimum straight length of inlet pipe:	U0
Minimum straight length of outlet pipe:	D0
Flow conditioner (details if required):	None

Mounting

Orientation:	Can be installed in any position
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Functionality

Checking Facilities :	Measurement transducer, Calculator & Indicator
Checking Facilities Type:	P
Flow Measurement Direction:	The meter may or may not measure reverse flow depending on factory set-up - this should be marked on the Data Label

Authorised Alternatives

50 mm Threaded Body Meter

Having a 50mm meter with the same technical specifications as described in table 2, but with a threaded connection replacing the flanges.

40 and 50 mm Plastic Body

As described in the certificate but having a plastic body meter with the following specifications.

Meter Size	Q ₃ /Q ₁ (R)	Q ₃ m ³ /h	PRESSURE LOSS	U/D
40mm	250	40	Δp 16	U0,D0
50mm	500	40	Δp 16	U0,D0

Meter Size	40 mm	50 mm
Q ₃ /Q ₁ (R)	250	500
Q ₂ /Q ₁	1.6	1.6
Q ₁ Minimum flowrate (m ³ /hr)	0.16	0.08
Q ₂ Transitional flowrate (m ³ /hr)	0.256	0.128
Q ₃ Permanent flowrate (m ³ /hr)	40	40
Q ₄ Overload flowrate (m ³ /hr)	50	50

250 mm Meter

Having the flanged design meter with 250 mm diameter having either a Q₃/Q₁ turndown ratio of 500 (R500) or 315 (R315), with the following related flowrates:

R	315	500
Q ₂ /Q ₁	1.6	1.6
Q ₁	2	2
Q ₂	3.2	3.2
Q ₃	630	1000
Q ₄	787.5	1250

300 mm Meter

As described for the 250 mm above but with flanges of 300 mm, all the related flowrates are identical.

Certificate History

ISSUE NO.	DATE	DESCRIPTION
R49/2006-GB1-10.05	16 December 2010	Type approval first issued
R49/2006-GB1-10.05 Revision 1	01 August 2014	Revision 1 Issued Front page Maximum Q3 changed to 1000 m ³ /h In the entire Certificate all meter sizes converted to metric Reference to test reports supporting this revision listed in new table 1 Characteristics table 65mm, 150mm and 200mm added Pressure loss corrected to 0.16 bar Installation details: corrected to U0 and D0 Functionality: Reverse flow allowed Authorised Alternatives added.

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