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

OIML Certificate No
R49/2013-GB1-17.02

OIML CERTIFICATE OF CONFORMITY

Issuing authority: **NMO**

Person responsible: **Mannie Panesar – Head of Technical Services**

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

Manufacturer: **The applicant**

Identification of the certified pattern: A family of cold-water meters, designated **Sonata**, utilising an Ultrasonic measuring element and having a rated permanent flowrate Q_3 (m^3/h) of 1.6, 2.5, 4.0, 6.3 and 10.

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 2013(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.

Important note: Apart from the mention of the certificates reference number and the name of the OIML Member State in which the certificate was issued, partial quotation of the certificate or of the associated test report is not permitted, though they may be reproduced in full.

Issue Date: **03 November 2017**

Grégory Glas
Lead Technical Manager
For and on behalf of the Head of Technical Services

UKAS PRODUCT CERTIFICATION
0135

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NMO is part of the Regulatory Delivery directorate within the Department for Business, Energy & Industrial Strategy

The conformity was established by testing and examinations described in the associated Evaluation Report P02159 which includes 12 pages.

Characteristics of the instrument:

Table 1 Related flowrates according to meter size (R500)

Meter Size (mm)	15	15	20	20	25	25	25	32
Q_3/Q_1 (R)	500	500	500	500	500	500	500	500
Q_2/Q_1	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Q_1 Minimum flowrate (m^3/hr)	0.003	0.005	0.005	0.008	0.008	0.013	0.02	0.02
Q_2 Transitional flowrate (m^3/hr)	0.005	0.008	0.008	0.013	0.013	0.020	0.032	0.032
Q_3 Permanent flowrate (m^3/hr)	1.6	2.5	2.5	4	4	6.3	10	10
Q_4 Overload flowrate (m^3/hr)	2	3.125	3.125	5	5	7.875	12.5	12.5
Head loss at Q_3 (bar) $r\Delta P$	0.16	0.16	0.16	0.16	0.16	0.16	0.4	0.4

Table 2 Related flowrates according to meter size (R800)

Meter Size (mm)	15	15	20	20	25	25	25	32
Q_3/Q_1 (R)	800	800	800	800	800	800	800	800
Q_2/Q_1	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Q_1 Minimum flowrate (m^3/hr)	0.002	0.003	0.003	0.005	0.005	0.008	0.013	0.013
Q_2 Transitional flowrate (m^3/hr)	0.003	0.005	0.005	0.008	0.008	0.013	0.02	0.02
Q_3 Permanent flowrate (m^3/hr)	1.6	2.5	2.5	4	4	6.3	10	10
Q_4 Overload flowrate (m^3/hr)	2	3.125	3.125	5	5	7.875	12.5	12.5
Head loss at Q_3 (bar) $r\Delta P$	0.16	0.16	0.16	0.16	0.16	0.16	0.4	0.4

Characteristics	
Measuring principle:	Ultrasonic
Accuracy Class:	2
Q_2/Q_1	1.6
Q_3/Q_1	500 and 800
Environmental class:	T50 (0.1 °C to 50 °C)
Environmental class:	O (-25 °C to 55 °C)
Electromagnetic environment:	E1
Maximum admissible temperature:	50 °C
Maximum admissible pressure:	1.6 Mpa (16 bar)
Pressure Loss Class	0.40 bar
Installation details	
Connection type	In-line, screw thread
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 orientation
Power Supply	
Type	Non-replaceable lithium battery, type C (3.6V).
Display	
Type	LCD display type 99604109 or 99604209
Functionality	
Checking Facilities:	Measurement transducer, Calculator & Indicating device
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
Output options:	No communication Encoder / Pulse output Pulse output (SSR) 1.5 m cable 3G radio W-Mbus/OMS/Sigfox
Software versions:	5.01

CERTIFICATE HISTORY

ISSUE NO.	DATE	DESCRIPTION
R49/2013-GB1-17.02	03 November 2017	Certificate first issued.
-	-	No revisions have been issued.