



National
Measurement &
Regulation Office



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

OIML Certificate No
R49/2006-GB1-15.01

OIML CERTIFICATE OF CONFORMITY

Issuing authority: **National Measurement and Regulation Office**

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

Applicant: **Contadores de Agua de Zaragoza S.A.
(Contazara S.A.)
Carretera Castellón km.5,5
50720 Zaragoza
Spain**

Manufacturer: **The applicant**

Identification of the certified pattern: a family of cold-water meters, designated CZUS, 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.

Issue Date: **20 May 2015**
Reference No: **T1132/0026**

G Stones
Technical Manager - Certification Services
For and on behalf of the Chief Executive



0135

National Measurement and Regulation Office | Stanton Avenue | Teddington | TW11 0JZ | United Kingdom
Tel +44 (0) 20 8943 7272 | Fax +44 (0) 20 8943 7270 | Web www.gov.uk/nmro

The NMRO is an Executive Agency of the Department for Business Innovation and Skills

This certificate does not bestow any form of legal international approval. Important note: Apart from the mention of the certificate's 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.

The initial conformity was established by tests described in the associated Evaluation Report – P01664

Characteristics; Table 1:

| 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 (-25 ° to 55 °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 |
|--------------|----------------------------------|

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 1, 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-GB1-15.01 | 20 May 2015 | Type approval first issued |