



Ministero dello Sviluppo Economico

DIPARTIMENTO PER L'IMPRESA E L'INTERNAZIONALIZZAZIONE
DIREZIONE GENERALE PER IL MERCATO, LA CONCORRENZA, IL CONSUMATORE, LA VIGILANZA E LA NORMATIVA TECNICA
Divisione XV - Strumenti di misura e metalli preziosi

Member State of OIML
Italy

OIML Certificate No.
R49/2006-IT1-13.02

OIML BASIC CERTIFICATE OF CONFORMITY

Issuing Authority

Name: Ministero dello Sviluppo Economico
Dipartimento per l'Impresa e l'Internazionalizzazione
Direzione generale mercato, concorrenza, consumatori,
vigilanza e normativa tecnica
Divisione XV - Strumenti di misura e metalli preziosi
Address: Via Sallustiana, 53 - 00187 Roma (RM) (I)
Person responsible: Anna Signore, Head of Division

Applicant

Name: ISOIL INDUSTRIA S.p.A.
Address: Via F.lli Gracchi, 27 - 20092 Cinisello Balsamo (MI) (I)

Manufacturer

Name: ISOIL INDUSTRIA production Center: HEMINA S.p.A.
Address: Via Piemonte, 2 - 35044 Montagnana (PD) (I)

Identification of the certified type *(the detailed characteristics will be defined in the additional pages)*

Elettromagnetic flow meter for water metering

Designation of the module

ISOMAG FAMILY Model MS2500 DN 25 up to DN 250 with ML255 Model Converter

This Certificate attests the conformity of the above identified type (represented by the sample or samples identified in the associated Test Report) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

- R 49-1 (Edition 2006) Metrological and technical requirements
- R 49-2 (Edition 2006) Test methods
- R 49-3 (Edition 2006) Test report format

For accuracy class: 2





This Certificate relates only to metrological and technical characteristics of the type of measuring instrument covered by the relevant OIML Recommendation identified above.

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

The conformity was established by the results of tests and examinations provided in the associated Test Reports:

- No. ATLab-I12-013/0 Rev.0
Issued: ATLAB LAT N° 175 Accredited
by Accredia dated 14/12/2012 that includes 43 pages (plus
annexes)
- No. E12177101
Issued: CMC Centro Misura
Compatibilità S.r.l. LAB N° 0168
Accredited by Accredia dated 29/11/2012 that includes 18 pages (plus
annexes)
- No. R11096701_rev30
Issued: CMC Centro Misura
Compatibilità S.r.l. LAB N° 0168
Accredited by Accredia dated 13/03/2012 that includes 38 pages (plus
annexes)

Certificate history :

| Issue no. | Date | Description of the modification |
|------------------|-------------|----------------------------------------|
| 02 | 16/09/2013 | First Issuing |

**The Issuing Authority
Head of Division**

The OIML Member

Anna Signore

Paolo Francisci

Important note: Apart from the mention of the Certificate's reference number and the name of the OIML Member State in which the Certificate is issued, partial quotation of the Certificate and the associated OIML Basic Type Evaluation Report(s) is not permitted, although either may be reproduced in full



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Description of the type:

The Family of water meters ISOMAG covers the nominal diameters in the range from DN 25 up to DN 250 and consist in 11 nominal diameters.

Measuring principle:

The conductive medium flows through a magnetic field which induces a voltage signal between the electrodes that is proportional to the mean flow velocity (Faraday law). Flow rate is related to flow velocity and pipe cross sectional area. The converter (electronic unit) control magnetic field parameters, acquire the electrode signal, calculate and display the flow rate measure.

The flow meter is composed by:

Sensor (pipe in which the liquid flow through): Family MS2500 (DN25 up to DN 250)

Reference: Data sheet DS006-MS2500

Converter (electronic part for signals management): family ML255

Reference: Data sheet DS035-ML255

Technical specifications:

| DN | Q3 | Q4 | Position | Disturbance profile | T | R=Q3/Q1 | L | ΔP | Resolution < of | PN | Accuracy Class | Climatic Environment Class | Electromagnetic Environment |
|-----|------|-------|----------|---------------------|----|-----------|-----|------------|-----------------|-----|----------------|----------------------------|-----------------------------|
| mm | m3/h | m3/h | | | °C | | mm | kPa | L | MPa | OIML R 49 | | |
| 25 | 16 | 20 | H-V | U0-D0 | 50 | 100 + 400 | 200 | 63 | 0,1 | 1,6 | 2 | B-C* | E1 |
| 32 | 25 | 31,3 | H-V | U0-D0 | 50 | 100 + 400 | 200 | 63 | 0,1 | 1,6 | 2 | B-C* | E1 |
| 40 | 40 | 50 | H-V | U0-D0 | 50 | 100 + 400 | 200 | 63 | 0,5 | 1,6 | 2 | B-C* | E1 |
| 50 | 63 | 78,8 | H-V | U0-D0 | 50 | 100 + 400 | 200 | 63 | 1 | 1,6 | 2 | B-C* | E1 |
| 65 | 100 | 125,0 | H-V | U0-D0 | 50 | 100 + 400 | 200 | 63 | 1 | 1,6 | 2 | B-C* | E1 |
| 80 | 160 | 200 | H-V | U0-D0 | 50 | 100 + 400 | 200 | 63 | 2 | 1,6 | 2 | B-C* | E1 |
| 100 | 250 | 312,5 | H-V | U0-D0 | 50 | 100 + 400 | 250 | 63 | 2 | 1,6 | 2 | B-C* | E1 |
| 125 | 400 | 500 | H-V | U0-D0 | 50 | 100 + 400 | 250 | 63 | 5 | 1,6 | 2 | B-C* | E1 |
| 150 | 630 | 787,5 | H-V | U0-D0 | 50 | 100 + 400 | 300 | 63 | 5 | 1,6 | 2 | B-C* | E1 |
| 200 | 1000 | 1250 | H-V | U0-D0 | 50 | 100 + 400 | 350 | 63 | 10 | 1,6 | 2 | B-C* | E1 |
| 250 | 1600 | 2000 | H-V | U0-D0 | 50 | 100 + 400 | 500 | 63 | 10 | 1,6 | 2 | B-C* | E1 |

* The instrument works properly up to -25 °C but the digits are visible only up to -20 °C