Etat Membre de l'OIML
Member State of OIML
FRANCE

LABORATOIRE NATIONAL DE MÉTROLOGIE ET D'ESSAIS

CERTIFICAT OIML

OIML CERTIFICATE

N° R49/2013-A-FR2-23.02 rev.0

Emis sous régime A Issued under scheme A

Autorité de délivrance **Issuing authority**	**: Laboratoire National de Métrologie et d'Essais** Personne responsable (Person responsible) : Emeric MOREL
Demandeur Applicant	: DIEHL METERING GMBH - Industriestrasse 13 GERMANY 91522 ANSBACH
Fabricant Manufacturer	: DIEHL METERING GMBH Industriestrasse 13 DEU 91522 ANSBACH
Identification du type certifié Identification of the certified	: Compteur d'eau type 173 Water meter type 173
Caractéristiques Characteristics	: voir annexe see annex

Ce certificat atteste la conformité du modèle mentionné ci-dessus (représenté par les échantillons identifiés dans les rapports d'essais associés) aux exigences de la Recommandation suivante de l'Organisation Internationale de Métrologie Légale – OIML) :

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

R49/2013 : Water meters for cold potable water and hot water

Ce certificat s'applique uniquement aux caractéristiques métrologiques et techniques du modèle d'instrument concerné, telles que couvertes par la Recommandation Internationale applicable. Ce certificat ne constitue en rien une approbation internationale à caractère légal. Note importante : à part la mention du numéro de référence du certificat avec le nom de l'Etat Membre de l'OIML dans lequel le certificat a été délivré, une reproduction partielle du certificat ou des rapports d'essais associés n'est pas autorisée, mais ils peuvent être reproduits dans leur totalité.

This certificate relates only to the metrological and technical characteristics of the pattern for the concerned instrument, 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 certificate's reference number and the name of the OIML Member State in which the certificate was issued, partial quotation of the certificate or the associated test report is not permitted, though they may be reproduced in full.

Les principales caractéristiques figurent dans l'annexe ci-jointe qui fait partie intégrante du certificat OIML de conformité et comprend 7 page(s).

The principal characteristics are set out in the appendix hereto, which forms part of the OIML certificate of conformity and consists of 7 page(s).

cofrac
CERTIFICATION DE PRODUITS ET SERVICES
Accréditation n°5-0012
Portée disponible sur www.cofrac.fr

OIML Certification System

Etabli le 15 mars 2023
Issued on March 15th, 2023

Autorité de délivrance / Pour Le Directeur Général
Issuing Authority / On behalf of the General Director

Laboratoire national de métrologie et d'essais – LNE

Signature numérique de Emeric MOREL ID

Emeric MOREL
Responsable du Département Certification Instrumentation
Head of Instrumentation Certification Department

Référence LNE - 38957 rév. n°0

CIM29_schema_A-V2-09-2022

ANNEXE
ANNEX

CERTIFICAT OIML
OIML CERTIFICATE
N° R49/2013-A-FR2-23.02 rév.0

Identification of the certified pattern : 173

OIML R 49 EVALUATION REPORT (LNE) : P229560-2

Metrology characteristics

Indicating device	Plastic							
Body	Brass / Plastic							
Nominal Diameter (mm)	15							
Connections Length	G3/4B 0,75“ BSP 110 to 170 mm							
Permanent flowrate Q_3 (m^3/h)	1,6				2,5			
Overload flowrate Q_4 (m^3/h)	2				3,125			
Temperature range of the water (°C)	0,1 to 30	0,1 to 50	0,1 to 70	0,1 to 90	0,1 to 30	0,1 to 50	0,1 to 70	0,1 to 90
Q_3/Q_1 Horizontal position	40-50-63-80-100-125-160-200-250-315-400-500		40-50-63-80-100-125-160-200-250-315-400-500		40-50-63-80-100-125-160-200-250-315-400-500-630-800		40-50-63-80-100-125-160-200-250-315-400-500-630-800	
Q_3/Q_1 Vertical, rise pipe, down pipe, angle 45°			40-50-63-80-100-125-160-200-250				40-50-63-80-100-125-160-200-250-315-400	
Q_2/Q_1	1,6							
Maximum Admissible Pressure (bar)	16							
Pressure loss class	Δp 25				Δp 63			
Indicating range (m^3)	99 999							
Verification scale interval (dm^3)	0,01							
Accuracy class	2							
Environmental class	B / O							
Climatic influence class	-25°C…55°C							
Electromagnetic influence class	E1 / E2							
Measurement of reverse flow	No (the meter can withstand accidental reverse flow without deterioration or change in its metrological properties for forward flow)							
Software identification	001.001.001 ; Checksum CRC : 0h2591 002.000.001 ; Checksum CRC : 0hD12B 002.000.002 ; Checksum CRC : 0hD12B 002.001.003 ; Checksum CRC : 0h3C6E							

<table>
<tr><td>Indicating device</td><td colspan="8">Plastic</td></tr>
<tr><td>Body</td><td colspan="8">Brass / Plastic</td></tr>
<tr><td>Nominal Diameter (mm)</td><td colspan="8">20</td></tr>
<tr><td>Connections

Length</td><td colspan="4">G1B

130 to 190 mm</td><td colspan="4">G1B

105 to 190 mm</td></tr>
<tr><td>Permanent flowrate Q_3 (m^3/h)</td><td colspan="4">1,6</td><td colspan="4">2,5</td></tr>
<tr><td>Overload flowrate Q_4 (m^3/h)</td><td colspan="4">2</td><td colspan="4">3,125</td></tr>
<tr><td>Temperature range of the water (°C)</td><td>0,1 to 30</td><td>0,1 to 50</td><td>0,1 to 70</td><td>0,1 to 90</td><td>0,1 to 30</td><td>0,1 to 50</td><td>0,1 to 70</td><td>0,1 to 90</td></tr>
<tr><td>Q_3/Q_1
Horizontal position</td><td colspan="2" rowspan="2">40- 50- 63- 80-100-125-160-200- 250-315-400-500</td><td colspan="2">40- 50- 63- 80-100-125-160-200- 250-315-400-500</td><td colspan="2" rowspan="2">40- 50- 63- 80-100-125-160-200-250-315-400-500-630-800</td><td colspan="2">40- 50- 63- 80-100-125-160-200- 250-315-400-500-630-800</td></tr>
<tr><td>Q_3/Q_1
Vertical, rise pipe, down pipe, angle 45°</td><td colspan="2">40- 50- 63- 80-100-125-160-200- 250</td><td colspan="2">40- 50- 63- 80-100-125-160-200- 250-315-400</td></tr>
<tr><td>Q_2/Q_1</td><td colspan="8">1,6</td></tr>
<tr><td>Maximum Admissible Pressure (bar)</td><td colspan="8">16</td></tr>
<tr><td>Pressure loss class</td><td colspan="4">Δp 25</td><td colspan="4">Δp 40</td></tr>
<tr><td>Indicating range (m^3)</td><td colspan="8">99 999</td></tr>
<tr><td>Verification scale interval (dm^3)</td><td colspan="8">0,01</td></tr>
<tr><td>Accuracy class</td><td colspan="8">2</td></tr>
<tr><td>Environmental class</td><td colspan="8">B / O</td></tr>
<tr><td>Climatic influence class</td><td colspan="8">-25°C…55°C</td></tr>
<tr><td>Electromagnetic influence class</td><td colspan="8">E1 / E2</td></tr>
<tr><td>Measurement of reverse flow</td><td colspan="8">No (the meter can withstand accidental reverse flow without deterioration or change in its metrological properties for forward flow)</td></tr>
<tr><td>Software identification</td><td colspan="8">001.001.001 ; Checksum CRC : 0h2591
002.000.001 ; Checksum CRC : 0hD12B
002.000.002 ; Checksum CRC : 0hD12B
002.001.003 ; Checksum CRC : 0h3C6E</td></tr>
</table>

Indicating device	Plastic							
Body	Brass / Plastic							
Nominal Diameter (mm)	20							
Connections Length	G1B; G5/4B; 1,28"BSW (only 154 mm) 1,44"BSW (only 154 mm) 105 to 220 mm				G1B 105 mm			
Permanent flowrate Q_3 (m^3/h)	4							
Overload flowrate Q_4 (m^3/h)	5							
Temperature range of the water (°C)	0,1 to 30	0,1 to 50	0,1 to 70	0,1 to 90	0,1 to 30	0,1 to 50	0,1 to 70	0,1 to 90
Q_3/Q_1 Horizontal position	40-50-63-80-100-125-160-200- 250-315-400-500-630-800	40- 50- 63- 80-100-125-160-200- 250-315-400-500-630-800			40- 50-63- 80-100-125-160-200-250-315-400-500-630	40- 50- 63- 80-100-125-160-200- 250-315-400-500-630		
Q_3/Q_1 Vertical, rise pipe, down pipe, angle 45°		40- 50- 63- 80-100-125-160-200- 250-315-400				40- 50- 63- 80-100-125-160-200- 250-315-400		
Q_2/Q_1	1,6							
Maximum Admissible Pressure (bar)	16							
Pressure loss class	Δp 63				Δp 40			
Indicating range (m^3)	99 999							
Verification scale interval (dm^3)	0,01							
Accuracy class	2							
Environmental class	B / O							
Climatic influence class	-25°C…55°C							
Electromagnetic influence class	E1 / E2							
Measurement of reverse flow	No (the meter can withstand accidental reverse flow without deterioration or change in its metrological properties for forward flow)							
Software identification	001.001.001 ; Checksum CRC : 0h2591 002.000.001 ; Checksum CRC : 0hD12B 002.000.002 ; Checksum CRC : 0hD12B 002.001.003 ; Checksum CRC : 0h3C6E							

<table>
<tr><td>Indicating device</td><td colspan="8">Plastic</td></tr>
<tr><td>Body</td><td colspan="8">Brass</td></tr>
<tr><td>Nominal Diameter (mm)</td><td colspan="8">25</td></tr>
<tr><td>Connections

Length</td><td colspan="4">G5/4B
FL25
1,53”BSW (only 178 mm)
1,72”BSW (only 178 mm)

135 to 260 mm</td><td colspan="4">G5/4B
FL25

135 to 260 mm</td></tr>
<tr><td>Permanent flowrate Q_3 (m^3/h)</td><td colspan="4">6,3</td><td colspan="4">10</td></tr>
<tr><td>Overload flowrate Q_4 (m^3/h)</td><td colspan="4">7,875</td><td colspan="4">12,5</td></tr>
<tr><td>Temperature range of the water (°C)</td><td>0,1 to 30</td><td>0,1 to 50</td><td>0,1 to 70</td><td>0,1 to 90</td><td>0,1 to 30</td><td>0,1 to 50</td><td>0,1 to 70</td><td>0,1 to 90</td></tr>
<tr><td>Q_3/Q_1
Horizontal position</td><td rowspan="2">40-50-63-80-100-125-160-200- 250-315-400-500</td><td colspan="3">40- 50- 63- 80-100-125-160-200- 250-315-400-500</td><td rowspan="2">40- 50- 63- 80-100-125-160-200- 250-315-400-500-630-800</td><td colspan="3">40- 50- 63- 80-100-125-160-200- 250-315-400-500-630-800</td></tr>
<tr><td>Q_3/Q_1
Vertical, rise pipe, down pipe, angle 45°</td><td colspan="3">40- 50- 63- 80-100-125-160-200- 250</td><td colspan="3">40- 50- 63- 80-100-125-160-200- 250-315-400</td></tr>
<tr><td>Q_2/Q_1</td><td colspan="8">1,6</td></tr>
<tr><td>Maximum Admissible Pressure (bar)</td><td colspan="8">16</td></tr>
<tr><td>Pressure loss class</td><td colspan="4">Δp 25</td><td colspan="4">Δp 63</td></tr>
<tr><td>Indicating range (m^3)</td><td colspan="8">99 999</td></tr>
<tr><td>Verification scale interval (dm^3)</td><td colspan="4">0,01</td><td colspan="4">0,1</td></tr>
<tr><td>Accuracy class</td><td colspan="8">2</td></tr>
<tr><td>Environmental class</td><td colspan="8">B / O</td></tr>
<tr><td>Climatic influence class</td><td colspan="8">-25°C…55°C</td></tr>
<tr><td>Electromagnetic influence class</td><td colspan="8">E1 / E2</td></tr>
<tr><td>Measurement of reverse flow</td><td colspan="8">No (the meter can withstand accidental reverse flow without deterioration or change in its metrological properties for forward flow)</td></tr>
<tr><td>Software identification</td><td colspan="8">001.001.001 ; Checksum CRC : 0h2591
002.000.001 ; Checksum CRC : 0hD12B
002.000.002 ; Checksum CRC : 0hD12B
002.001.003 ; Checksum CRC : 0h3C6E</td></tr>
</table>

<table>
<tr><td>Indicating device</td><td colspan="8">Plastic</td></tr>
<tr><td>Body</td><td colspan="8">Brass</td></tr>
<tr><td>Nominal Diameter (mm)</td><td colspan="8">32</td></tr>
<tr><td>Connections

Length</td><td colspan="4">G3/2B
FL32

135 to 260 mm</td><td colspan="4">G3/2B
FL32
FL32 oval (only 190 mm)

135 to 260 mm</td></tr>
<tr><td>Permanent flowrate Q_3 (m^3/h)</td><td colspan="4">6,3</td><td colspan="4">10</td></tr>
<tr><td>Overload flowrate Q_4 (m^3/h)</td><td colspan="4">7,875</td><td colspan="4">12,5</td></tr>
<tr><td>Temperature range of the water (°C)</td><td>0,1 to 30</td><td>0,1 to 50</td><td>0,1 to 70</td><td>0,1 to 90</td><td>0,1 to 30</td><td>0,1 to 50</td><td>0,1 to 70</td><td>0,1 to 90</td></tr>
<tr><td>Q_3/Q_1
Horizontal position</td><td rowspan="2">40-50-63-80-100-125-160-200- 250-315-400-500</td><td colspan="3">40- 50- 63- 80-100-125-160-200- 250-315-400-500</td><td rowspan="2">40- 50- 63- 80-100-125-160-200- 250-315-400-500-630-800</td><td colspan="3">40- 50- 63- 80-100-125-160-200- 250-315-400-500-630-800</td></tr>
<tr><td>Q_3/Q_1
Vertical, rise pipe, down pipe, angle 45°</td><td colspan="3">40- 50- 63- 80-100-125-160-200- 250</td><td colspan="3">40- 50- 63- 80-100-125-160-200- 250-315-400</td></tr>
<tr><td>Q_2/Q_1</td><td colspan="8">1,6</td></tr>
<tr><td>Maximum Admissible Pressure (bar)</td><td colspan="8">16</td></tr>
<tr><td>Pressure loss class</td><td colspan="4">Δp 25</td><td colspan="4">Δp 63</td></tr>
<tr><td>Indicating range (m^3)</td><td colspan="8">99 999</td></tr>
<tr><td>Verification scale interval (dm^3)</td><td colspan="4">0,01</td><td colspan="4">0,1</td></tr>
<tr><td>Accuracy class</td><td colspan="8">2</td></tr>
<tr><td>Environmental class</td><td colspan="8">B / O</td></tr>
<tr><td>Climatic influence class</td><td colspan="8">-25°C…55°C</td></tr>
<tr><td>Electromagnetic influence class</td><td colspan="8">E1 / E2</td></tr>
<tr><td>Measurement of reverse flow</td><td colspan="8">No (the meter can withstand accidental reverse flow without deterioration or change in its metrological properties for forward flow)</td></tr>
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</table>

<table>
<tr><td>Indicating device</td><td colspan="8">Plastic</td></tr>
<tr><td>Body</td><td colspan="8">Brass</td></tr>
<tr><td>Nominal Diameter (mm)</td><td colspan="8">40</td></tr>
<tr><td>Connections

Length</td><td colspan="4">G2B
FL40

200 to 300 mm</td><td colspan="4">G2B
FL40
FL40 oval (only 232 mm)

200 to 300 mm</td></tr>
<tr><td>Permanent flowrate Q_3 (m^3/h)</td><td colspan="4">10</td><td colspan="4">16</td></tr>
<tr><td>Overload flowrate Q_4 (m^3/h)</td><td colspan="4">12,5</td><td colspan="4">20</td></tr>
<tr><td>Temperature range of the water (°C)</td><td>0,1 to 30</td><td>0,1 to 50</td><td>0,1 to 70</td><td>0,1 to 90</td><td>0,1 to 30</td><td>0,1 to 50</td><td>0,1 to 70</td><td>0,1 to 90</td></tr>
<tr><td>Q_3/Q_1
Horizontal position</td><td rowspan="2">40-50-63-80-100-125-160-200- 250-315-400-500</td><td colspan="3">40- 50- 63- 80-100-125-160-200- 250-315-400-500</td><td rowspan="2">40- 50- 63- 80-100-125-160-200-250-315-400-500-630-800</td><td colspan="3">40- 50- 63- 80-100-125-160-200- 250-315-400-500-630-800</td></tr>
<tr><td>Q_3/Q_1
Vertical, rise pipe, down pipe, angle 45°</td><td colspan="3">40- 50- 63- 80-100-125-160-200- 250</td><td colspan="3">40- 50- 63- 80-100-125-160-200- 250-315-400</td></tr>
<tr><td>Q_2/Q_1</td><td colspan="8">1,6</td></tr>
<tr><td>Maximum Admissible Pressure (bar)</td><td colspan="8">16</td></tr>
<tr><td>Pressure loss class</td><td colspan="4">Δp 16</td><td colspan="4">Δp 25</td></tr>
<tr><td>Indicating range (m^3)</td><td colspan="8">99 999</td></tr>
<tr><td>Verification scale interval (dm^3)</td><td colspan="8">0,1</td></tr>
<tr><td>Accuracy class</td><td colspan="8">2</td></tr>
<tr><td>Environmental class</td><td colspan="8">B / O</td></tr>
<tr><td>Climatic influence class</td><td colspan="8">-25°C…55°C</td></tr>
<tr><td>Electromagnetic influence class</td><td colspan="8">E1 / E2</td></tr>
<tr><td>Measurement of reverse flow</td><td colspan="8">No (the meter can withstand accidental reverse flow without deterioration or change in its metrological properties for forward flow)</td></tr>
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002.000.002 ; Checksum CRC : 0hD12B
002.001.003 ; Checksum CRC : 0h3C6E</td></tr>
</table>

Indicating device	Plastic							
Body	Brass							
Nominal Diameter (mm)	50							
Connections Length	G5/2B 270 to 300 mm							
Permanent flowrate Q_3 (m^3/h)	16				25			
Overload flowrate Q_4 (m^3/h)	20				31,25			
Temperature range of the water (°C)	0,1 to 30	0,1 to 50	0,1 to 70	0,1 to 90	0,1 to 30	0,1 to 50	0,1 to 70	0,1 to 90
Q_3/Q_1 Horizontal position	40- 50- 63- 80-100-125-160-200				40- 50- 63- 80-100-125-160-200-250-315-400			
Q_3/Q_1 Vertical, rise pipe, down pipe, angle 45°								
Q_2/Q_1	1,6							
Maximum Admissible Pressure (bar)	16							
Pressure loss class	Δp 16				Δp 40			
Indicating range (m^3)	99 999							
Verification scale interval (dm^3)	0,1							
Accuracy class	2							
Environmental class	B / O							
Climatic influence class	-25°C…55°C							
Electromagnetic influence class	E1 / E2							
Measurement of reverse flow	No (the meter can withstand accidental reverse flow without deterioration or change in its metrological properties for forward flow)							
Software identification	001.001.001 ; Checksum CRC : 0h2591 002.000.001 ; Checksum CRC : 0hD12B 002.000.002 ; Checksum CRC : 0hD12B 002.001.003 ; Checksum CRC : 0h3C6E							