



**OIML Member State**  
Czech Republic

**OIML Certificate No.**  
R49/2013-A-CZ1-2021.07  
Revision 1

## OIML CERTIFICATE ISSUED UNDER SCHEME A

### OIML Issuing Authority

Name: Czech Metrology Institute  
Address: Okružní 31, 638 00 Brno, Czech Republic

Person responsible: Jan Kalandra

### Applicant

Name: George Kent (Malaysia) Berhad  
Address: Lot 1115, Jalan Puchong; Taman Meranti Jaya; 47120 Puchong, Selangor, Malaysia

### Manufacturer

Name: George Kent (Malaysia) Berhad  
Address: Lot 1115, Jalan Puchong; Taman Meranti Jaya; 47120 Puchong, Selangor, Malaysia

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

water meter – positive displacement, dry dial  
GKMV40, GKMV40P

### Designation of the module *(if applicable)*

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This OIML Certificate attests the conformity of the above identified type (represented by the sample(s) identified in the OIML type evaluation report) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

OIML R 49

Edition (year): 2013

For accuracy class (if applicable): 2



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

This OIML 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 reports:

- OIML type evaluation No. 0511-ER-V114-21 dated 22 October 2021 that includes 23 pages including annex 1
- Test report No. 6015-PT-P5009-21 that includes 67 pages including annex 1
- No 0511-ERV056-22 dated 27 September 2022 that includes 29 pages including annex 1

The technical documentation relating to the identified type is contained in documentation file:

0511-UL-V056-22

#### OIML Certificate History

Revision No.	Date	Description of the modification
Addition 0	6 December 2021	Issuing certificate
Addition 1	27 September 2022	Added sizes DN20, DN25 and GKMV40-Sensors and Sealing

#### The OIML Issuing Authority

RNDr. Pavel Klenovský  
Head of Certification Body

Date: 27 September 2022



*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 of the associated OIML type evaluation report(s) is not permitted, although either may be reproduced in full.

### Measuring system description

The water meters types GKMV40 and GKMV40P are positive displacement water meters with dry mechanical indicating device.

The water meters types GKMV40 and GKMV40P consist of a brass (type GKMV40) or composite (type GKMV40P) body with connecting screw threads, an inlet strainer, a wet volumetric chamber with oscillating piston, a magnetic coupling (wet and dry side), an O-ring, a pressure plate closing the wet part, a magnetic shields, an indicating device, a register cap and clamp on cover connecting the indicating device to the body and covering the indicating device. The mechanical indicating device is formed by numbered rollers with eight drums and one pointer.

The water meters type types GKMV40 and GKMV40P shall be installed to operate in any positions. The water meters type GKMV40 and GKMV40P are not designed to measure reverse flow.

### Marking and inscriptions

The water meters types GKMV40 and GKMV40P shall be clearly and indelibly marked with the following information:

- Unit of measurement ( $m^3$ )
- Numerical value  $Q_3$  in  $m^3/h$  ( $Q_3 \times \times$ ) and the ratio  $Q_3 / Q$
- OIML certificate of conformity number
- Name of trademark of the manufacturer
- Year of manufacture, two last digits of the year of manufacture, or the month and year of manufacture and serial number (as near as possible to the indicating device)
- Direction of flow, by means of an arrow (shown on both sides of the body or on one side only provided the direction of flow arrow is easily visible under all circumstances)
- Maximum admissible pressure (MAP  $\times \times$ )
- The temperature class (T $\times \times$ )

These markings shall comply with the requirements of OIML R 49 and shall be visible without dismantling the water meter after the instrument has been placed on the market or put into use. Examples are in Figure 2.

### Characteristics

Basic technical data of water meters types GKMV40 and GKMV40P:

Manufacturer:	George Kent (Malaysia) Berhad		
	GKMV40, GKMV40P		
Nominal diameter:	15	20	25
Type details:			
$Q_1$ [ $m^3/h$ ]:	0.0063	0.01	0.0158
$Q_2$ [ $m^3/h$ ]:	0.0100	0.016	0.0252
$Q_3$ [ $m^3/h$ ]:	2.50	4.0	6.30
$Q_4$ [ $m^3/h$ ]:	3.13	5.0	7.88
$Q_3/Q_1$ :	400		
$Q_2/Q_1$ :	1.6		
$Q_3/Q_4$ :	1.25		
Measuring principle:	positive displacement		
Accuracy class:	2		
Maximum permissible error for the lower flowrate zone ( $MPE_l$ ):	$\pm 5\%$		



Maximum permissible error for the upper flowrate zone ( $MPE_u$ ):	$\pm 2\%$ for water having a temperature $\leq 30\text{ }^\circ\text{C}$ $\pm 3\%$ for water having a temperature $> 30\text{ }^\circ\text{C}$		
Temperature class:	T30 or T50		
Water pressure class:	MAP 16		
Pressure loss class:	$\Delta P$ 63		
Environmental class: <sup>1</sup>	B, O		
Electromagnetic environment: <sup>1</sup>	E1		
Mechanical class: <sup>1</sup>	M1		
Maximum admissible temperature [ $^\circ\text{C}$ ]:	50		
Maximum admissible pressure [MPa]:	1.6		
Orientation limitation:	any		
Indicating range [ $\text{m}^3$ ]:	9999 or 99 999	99 999	99 999
Resolution of the indicating device [ $\text{m}^3$ ]:	0.000002 or 0.00002	0.00002	0.00002
Resolution of the device for rapid testing [ $\text{dm}^3$ ]:	156.6	89.7	47.49
EUT testing requirements (OIML R 49-2:2013, 8.1.8):			
Category:	Positive displacement water meters		
Case:	A		
Installation details:			
Connection type (screw thread):	G $\frac{3}{4}$ "B	G1" B	G1 $\frac{1}{4}$ "B
Minimum straight length of inlet pipe [mm]:	0		
Minimum straight length of outlet pipe [mm]:	0		
Flow conditioner (details if required):	No		
Mounting:	in line meter		
Orientation:	any		
Other relevant information:	brass (GKMV40) or composite (GKMV40P)		
Length [mm]:	115	165	199
Reed sensor power supply ( $U_{\max} / I_{\max}$ ): <sup>2</sup>	max. 48 V DC/AC/ 50 mA		
Inductive sensor power supply ( $U_{\max} / I_{\max}$ ): <sup>2</sup>	max. 24 V DC/ 20 mA		

<sup>1</sup> Valid for water meter with an electronic device; if it is equipped, these classes are set in combination with parameters of ancillary device. Information specified by the manufacturer.

<sup>2</sup> Ancillary devices – reed sensor and inductive sensor – have not been tested.

### Securing components and verification marks

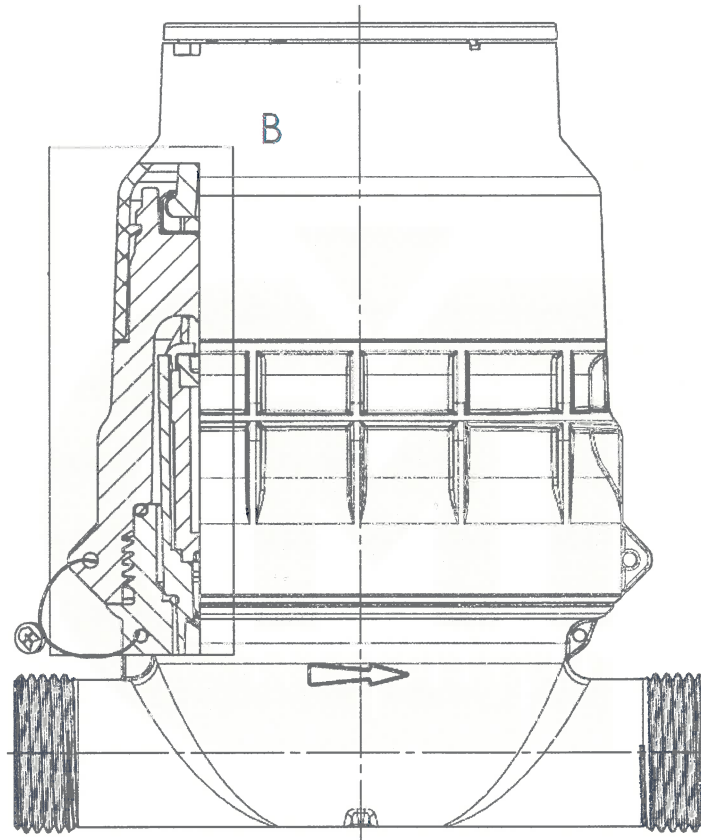
The type GKMV40 DN 15, DN 20 and DN 25 meters have to be sealed by embedding of the clamp on cover of the meter to the pressure plate. The cover can be removed only destroying this part. The cover has to be equipped with save guarding marks. The type GKMV40 DN 15, DN 20 and DN 25 meters also have to be sealed by connecting the pressure plate to the body using a wire with a seal such that the pressure plate cannot be turned without damaging the seal or the sealing wire. The location of seal is described in Figure 1a. The type GKMV40P DN 15, DN 20 and DN 25 meters have to be sealed by embedding of the clamp on cover of the meter to the pressure plate and clamp on cover is also fitted with sealing ring that assures the protection



against the external manipulation of the pressure plate. The cover can be removed only destroying this part. The cover has to be equipped with save guarding marks. The location of seal is described in Figure 1b.

The cover can be removed only destroying this part. The cover has to be equipped with save guarding marks. If the meter is equipped by the reed impulse transmitter or the inductive transmitter, the screws fixing the transmitter to the meter have to be sealed (Figure 3).

Figure 1: The water meter types GKMV40 and GKMV40P – view and sealing:  
a) type GKMV40:





b) type GKMV40P:

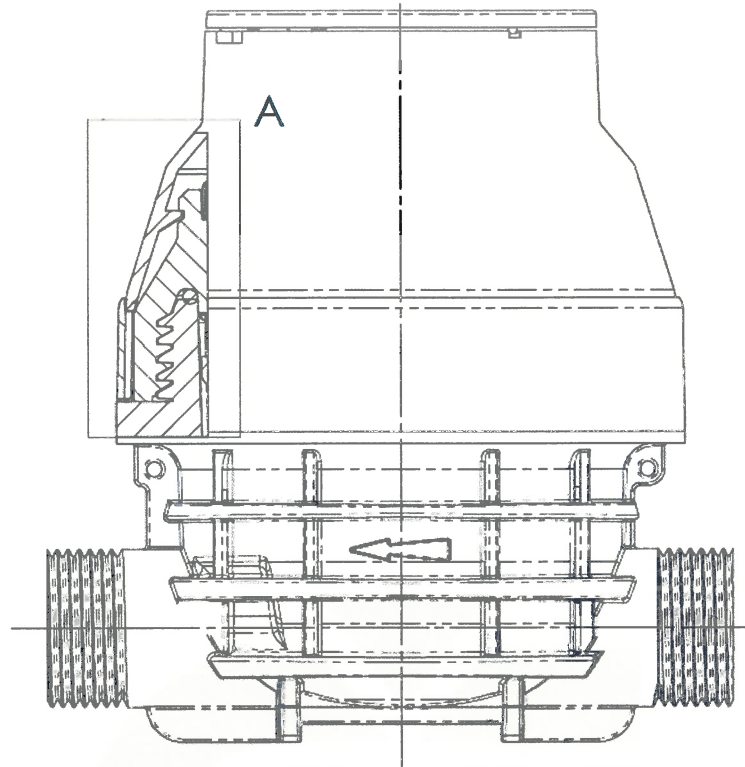
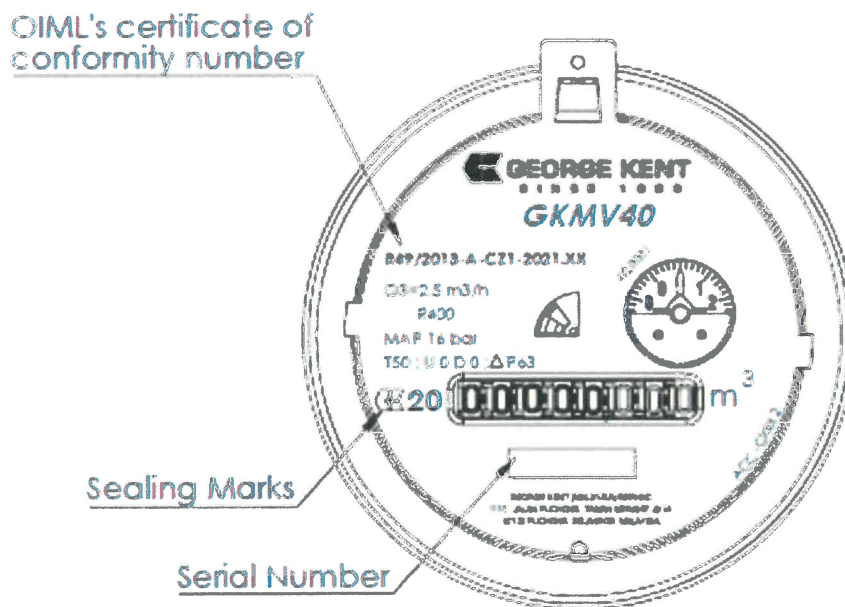


Figure 2: The water meter types GKMV40 – example of register:

a) type GKMV40:



b) type GKMV40P:

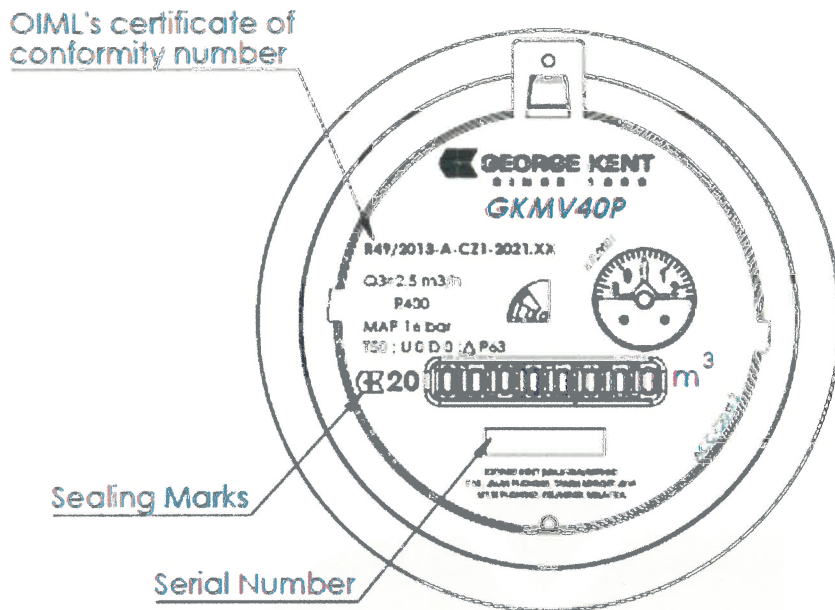


Figure 3: The water meter types GKMV40 and GKMV40P – sensor and register:

