GEORGE KENT
METERING

GKM H4000

Woltmann Cold Potable Water Meters

The GKM H4000 is a Woltmann-type meter designed for measuring bulk flows of cold potable water for revenue billing in commercial or industrial applications and distribution system monitoring

FEATURES

- Inductive register for improved output performance and security
- Extended low and high flow performance
- Suitable for forward and reverse flow metering
- Robust shroud and copper can register for long-life and clear readability
- Longer wear life for optimum accuracy

Available in six sizes for flow rates between 0.504 m3/h and 787.5 m3/h, the GKM H4000 operates at temperatures up to 50°C and a maximum working pressure of 16 bar. Accuracy maintained in both forward and reverse flow, and the product offers the benefits of inductive-based pulse communications technology. The meter complies with all relevant international quality standards such as OIML R49 and ISO 4064 specifications for forward flow installations in horizontal, vertical and inclined pipelines.

Flexible installation

Installation can be in horizontal, vertical and inclined pipelines. The GKM H4000 also achieves good performance in abnormal installations.

Robust construction

Like all Elster meters, the GKM H4000 is manufactured from the highest quality materials for maximum resistance to wear and corrosion. Meter body and cover are epoxy powder coated for protection in all environments. Thrust pads and stub spindles are manufactured in tungsten carbide and jewelled rotor bearings are used for maximum wear life. All wetted materials are UK WRAS approved against health risk.

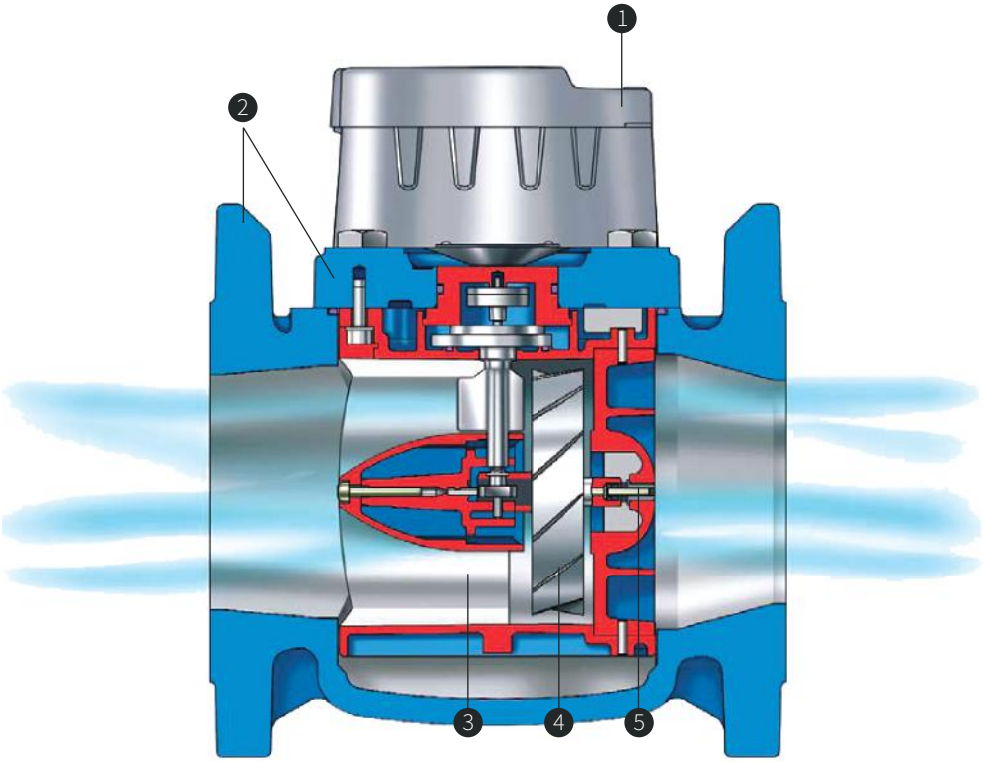
Intelligent metering

Fully compatible with Elster's Emeris range of intelligent meter reading systems, GKM H4000 can provide even more vital management information to assist with effective distribution management, reduce water losses from leakage and improve customer service. When combined with the Emeris TRC600 unit (pictured below), a range of intelligent features including leakage alarms, data logging and tariffs enables a complete metering system that addresses the efficiency objectives for water providers.

Reliable connectivity

The GKM H4000 uses an inductive register to deliver enhanced communications performance and tamper-proof security, offering protection against fraud. The GKM H4000 is compatible with the Emeris PR7 inductive pulse transmitter, and offers both high and low speed bi-directional pulse capabilities as standard. The PR7 is fully compatible with other common ancillary devices including data loggers and AMR systems.

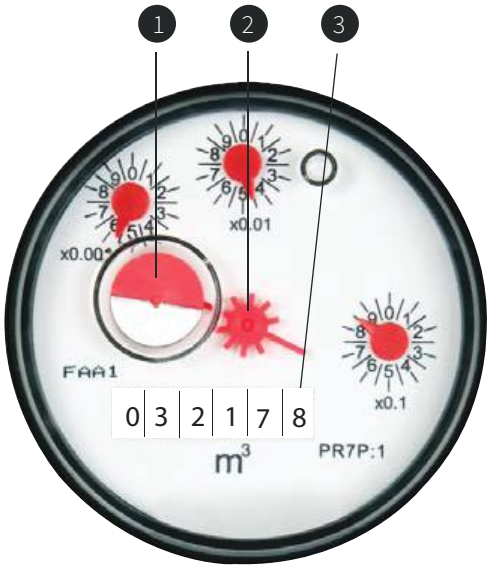
When used in conjunction with GKM H4000's optional integrated pressure port, this allows convenient logging of flow-rate and pressure simultaneously for effective water resource management.



1. Tamper-proof shroud and robust lid
2. Epoxy powder coated body and cover
3. Maximum length flow straightening vanes
4. Low mass rotor with hydrodynamic thrust relief
5. Hard surface rotor bearings
   – tungsten carbide and synthetic sapphire

C&I inductive register

1. Inductive target for bi-directional pulse communications
2. Star tell-tale for easy-to-see flow detection
3. Easy to read display



Technical Specification:

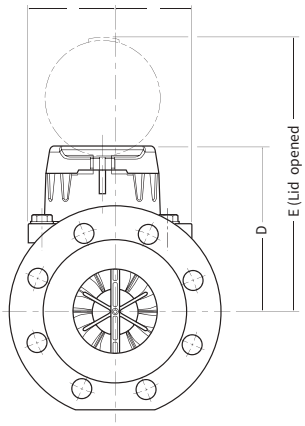
MeiStream Plus Metrological Characteristics

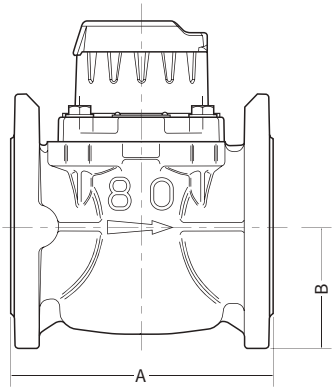
Size of meter			DN50*	DN80*	DN100*	DN125	DN150*	DN200
Minimum flowrate	Q1 ± 5%	m^3/h	0.504	1.28	1.28	1.28	3.2	5.04
Transitional flowrate	Q2 ± 2%	m^3/h	0.806	2.048	2.048	2.048	5.12	8.064
Permanent flowrate	Q3 ± 2%	m^3/h	63	160	160	160	400	630
Overload flowrate	Q4 ± 2%	m^3/h	78.75	200	200	200	500	787.5
Measuring range (R)	Q3/Q1		125	125	125	125	125	125
Starting Flow (approximately)		m^3/h	0.16	0.22	0.25	0.25	0.90	1.20
Temperature class		bar	T50	T50	T50	T50	T50	T50
Max admissiblle pressure		bar	16	16	16	16	16	16
Pressure loss Class ΔP		m^3	0.25	0.25	0.25	0.25	0.16	0.16
Verification scale interval		m^3	0.0005	0.0005	0.0005	0.0005	0.005	0.005
Indicating range		m^3	999 999	999 999	999 999	999 999	9 999 999	9 999 999
Flow profile sensitivity classes			U3/D0	U3/D0	U3/D0	U3/D0	U0/D0	U3/D0
Working pressure range		bar	From 0.3 to 16					
Orientation requirements			all positions but not head down					

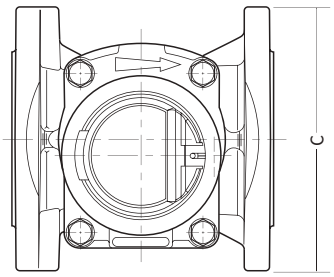
* It is highly recommended to install GKM H4000 Strainer before the bulk water meter to protect the meter. The strainer functions as a filter to prevent solid objects in the pipe from damaging the meter.

Dimensions

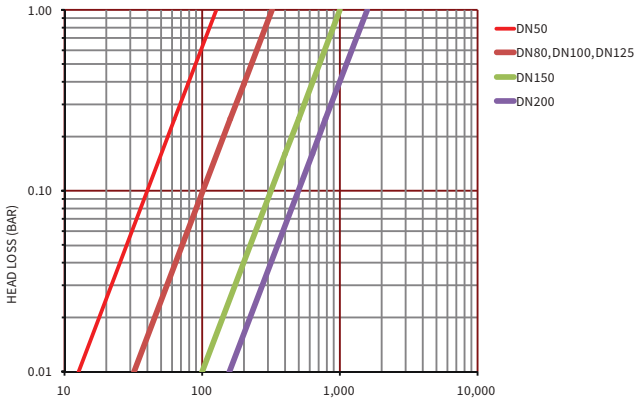
Meter size		DN50	DN80	DN100	DN125	DN150	DN200
Overall length (A)	mm	200	200	250	250	300	350
Height (B)	mm	78	94	106	118	135	165
Height (D)	mm	148	159	159	159	207	229
Height (E)	mm	236	247	247	247	305	327
Flange Diameter (C)	mm	166	201	228	251	286	341
Weight	kg	12.2	14.1	19.4	20.5	37.5	47.5





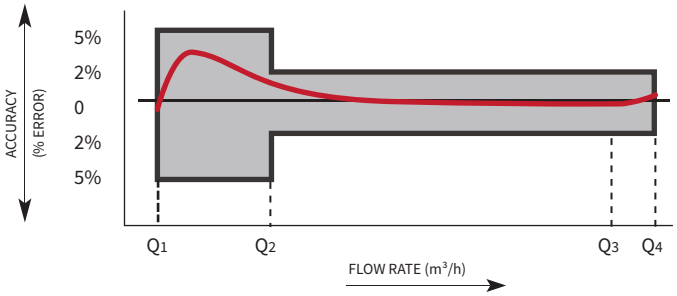


Typical Headloss



Flowrate m^3/h

Typical Error Curve



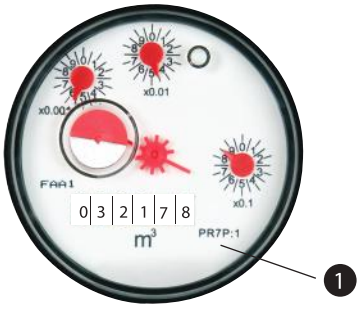
Flowrate m^3/h

Pulse Connectivity

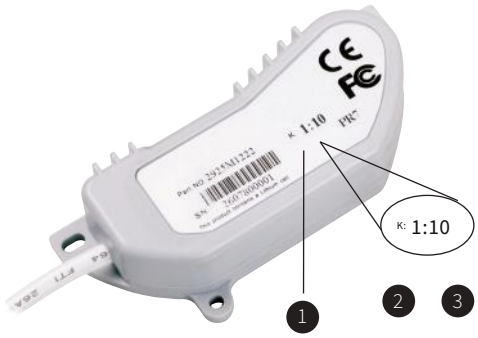
Calculating Pulse Weights when fitted with PR7 inductive pulserPulse Weight is calculated by multiplying the Register 'Pulse Factor' (P) by the PR7 'K-Factor' (K)Pulse Weight (Litres per Pulse) = P x K

Size	Pulse Factor	K1	K10	K100	K1000
50mm	P:1	1 ltr	10 ltr	100 ltr	1,000 ltr
80mm	P:1	1 ltr	10 ltr	100 ltr	1,000 ltr
100mm	P:1	1 ltr	10 ltr	100 ltr	1,000 ltr
125mm	P:1	1 ltr	10 ltr	100 ltr	1,000 ltr
150mm	P:10	10 ltr	100 ltr	1,000 ltr	10,000 ltr
200mm	P:10	10 ltr	100 ltr	1,000 ltr	10,000 ltr

PR7 is an open collector pulse transmitter suitable for data logging, AMR and telemetry equipment. Check with your equipment supplier for full details of compatibilty.



On this example 50mm GKM H4000 register, the user can indentify from the dial plate both the:
- Type of pulser to use ie PR7
- Pulse Factor ie P:1



1. On the PR7 unit the user can indentify from the label the K-Factors for each output channel
2. Primary Output K-Factor
3. Secondary Output K-Factor

Water Meter Accessories

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