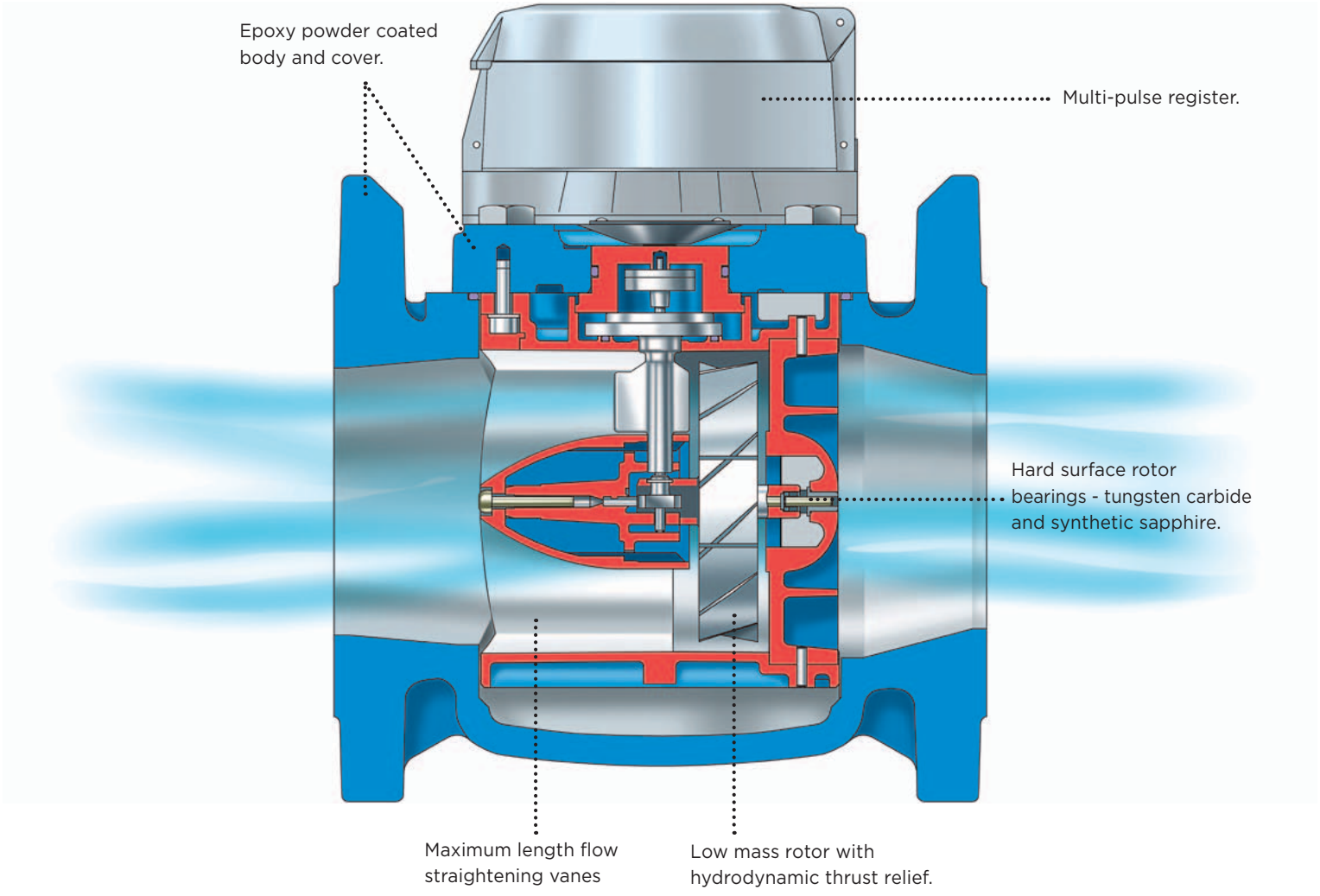
Honeywell | Bulk Water Meters

THE HELIX H4000
BULK WATER METER RANGE

THE HELIX H4000 IS A WOLTMANN-TYPE WATER METER DESIGNED FOR MEASURING BULK FLOWS OF COLD POTABLE WATER FOR REVENUE BILLING IN COMMERCIAL OR INDUSTRIAL APPLICATIONS AND DISTRIBUTION SYSTEM MONITORING.

Features

- Multiple pulsed output for increased management information.
- Extended low and high flow performance.
- Water temperature up to 50°C.
- 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.
- Exceeds Class B specification in forward direction and for sizes up to 150mm in reverse direction.
- Inductive Pulse Outputs.
- Pressure Tapping.



Reverse flow metering

Available in sizes up to 150mm, reverse flow metering aids network management and ensures accuracy in revenue billing applications.

Available in ten sizes for flow rates between 0.35 m^3/h and 2000 m^3/h, the Helix H4000 operates at temperatures up to 50°C and a maximum working pressure of 16 Bar. Accuracy is maintained in both forward and reverse flow, and various register options are available to suit different applications. The meter complies with all relevant international quality standards, substantially exceeding ISO4064 BS5728. Class B specifications for forward flow installations in horizontal, vertical and inclined pipelines.

Robust construction

The Helix H4000 is manufactured from the highest quality materials for maximium 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 WRc approved against health risk.

In-line strainer

The use of an in-line strainer is recommended to protect the rotor and help reduce the effect of turbulence.

Bi-directional inductive pulse outputs 40mm - 100mm

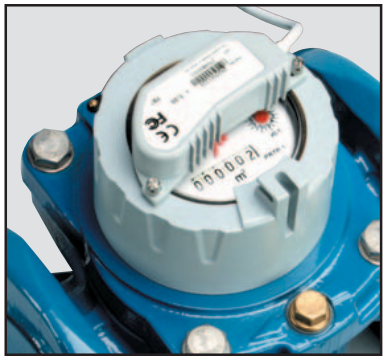
Primary 1 pulse per litre

Secondary 1 pulse per 10 litres

Bi-directional inductive pulse outputs 150mm - 300mm

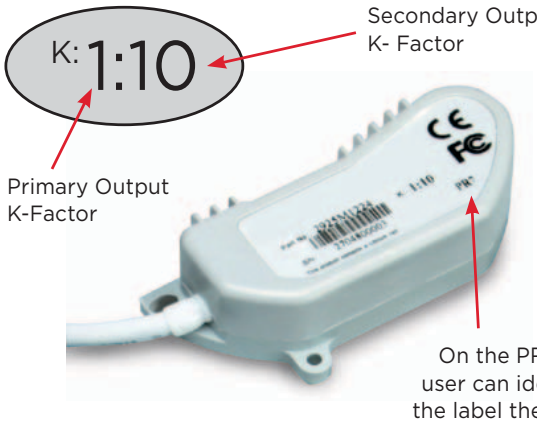
Primary 1 pulse per 10 litre

Secondary 1 pulse per 100 litres



Emeris PR7 for Automatic Meter Reading and network Monitoring.

Highly robust PR7 solid state pulsers form the bases of an ultra reliable Auomatic Meter reading (AMR) system. Combining the inductive technology of the PR7 with Honeywells Emeris system generates one of the industry's most advanced and reliable AMR installations. Suitable for both Walk-by and Fixed Networks. Emeris meets the AMR needs of today's progressive Water Utility.

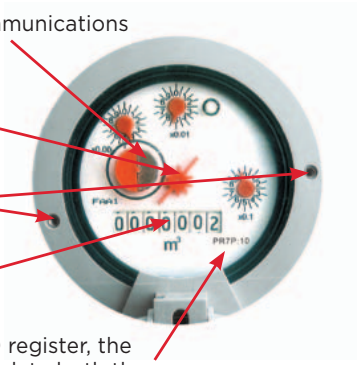


Inductive Pointer
- For bi-directional pulse communications

Star Tell-Tale
- Easy-to-see flow detection

Pulse fitting locators
- Enables correct positing of the PR7 pulse unit

6 or 7 Figure Display
- Enables correct positing of the PR7 pulse unit



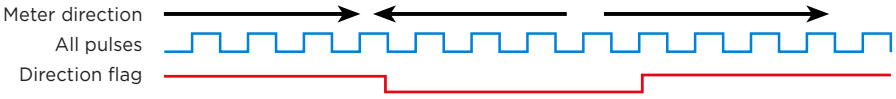
On this example 50mm H4000 register, the user can identify from the dial plate both the:
- Type of pulse to use ie PR7
- Pulse Factor ie P:1

Understanding the outputs

PR7 pulsers have outputs designed for every need. Each pulser has both primary and secondary outputs. The use of each output is highlighted below, together with diagrams showing examples of the pulse trains.

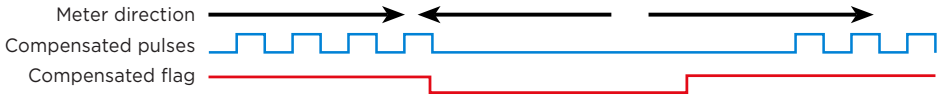
Primary output

The primary output has two wires: one carries pulses when the meter is operating in both forward and reverse directions; the other is a direction flag. This is suitable for use with bi-directional counters, Emeris AMR systems and with data loggers. Use it with a ScanCounter (in bi-directional mode) in a fully bi-directional remote display and touch read system.

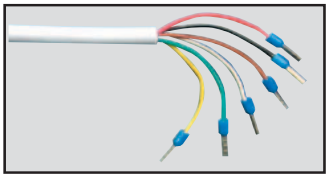


Secondary output

The secondary output also has two wires: one carries a pulse stream that compensates for any reverse flow; the other indicates compensation is in process. Use it with a ScanCounter (in uni-directional mode) and with data loggers where backflow monitoring is not required.



Self power types (2925M1221, 2925M1222 and 2925M1224) (Standard option)					
Primary output		**Secondary output**		**Others**	
Yellow	**White**	**Red**	**Green**	**Brown**	**Black**
All pulses	D.flag	Compensated pulses	C.flag	Tamper	Common



External power type (295M1223) Optional					
Primary output		**Secondary output**		**Others**	
Yellow	**White**	**Red**	**Green**	**Brown**	**Black**
All pulses	D.flag	Power input 3V dc	No connection	Tamper	Common

D.flag = Direction flag.C.flag = Compensation flag

* The PR7 pulser is used on the H4000 bulk meter, as a result the pulse per litre high speed output is very quick. It should only be used with data loggers which are capable of registering 5ms pulses.

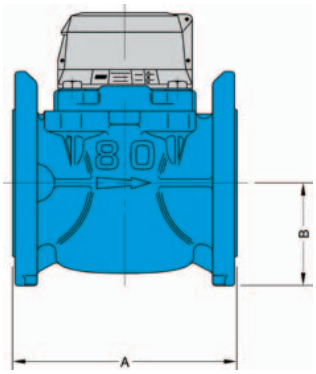
HELIX H4000

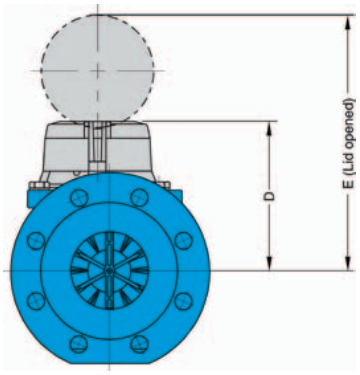
Performance to ISO4064, BS5728 Class B

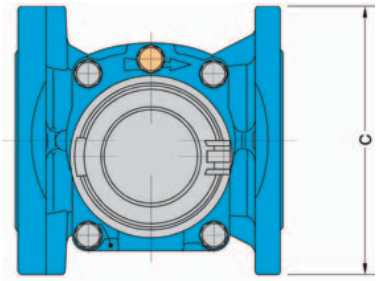
Specifications

H4000 Performance (forward flow)									
Meter size (mm)			40	50	80	100	150	200	250	300
Overload flow	qs – 2%	m^3/h	90	90	200	250	600	1000	1600	2000
Permanent flow	qp – 2%	m^3/h	50	50	120	180	450	700	1000	1500
Transitional flow	qt – 2%	m^3/h	1	1	2	2	4	6	11	15
Minimum flow (horizontal)	qmin – 5%	m^3/h	0.35	0.35	0.5	0.6	1.8	4	6	12
Minimum flow (vertical)	qmin – 5%	m^3/h	0.45	0.45	1.2	1.2	4.5	7.5	12	18
Starting flow (approx.)		m^3/h	0.15	0.16	0.22	0.25	0.90	1.2	1.8	1.8
Headloss at overload flow		Kpa	84	49	27	43	33	32	37	58
Maximum registration		millions of m^3	1	1	1	1	10	10	10	10
Maximum water temperature		°C	50	50	50	50	50	50	50	50
Maximum working pressure		Kpa	1600	1600	1600	1600	1600	1600	1600	1600

Standard ISO4064/BS5728/EEC specification Class B										
Overload flow	qs – 2%	m3/h		30	80	120	300	500	800	1200
Permanent flow	qp – 2%	m3/h		15	40	60	150	250	400	600
Transitional flow	qt – 2%	m3/h		50	120	180	450	700	1000	1500
Minimum flow	qmin – 5%	m3/h		3	8	12	30	50	80	120
Starting flow (approx.)		m3/h		0.45	1.2	1.8	4.5	7.5	12	18
Headloss at maximum flow		Kpa		5	4	10	10	10	9	21
Headloss class		Kpa		10	10	10	10	10	10	30



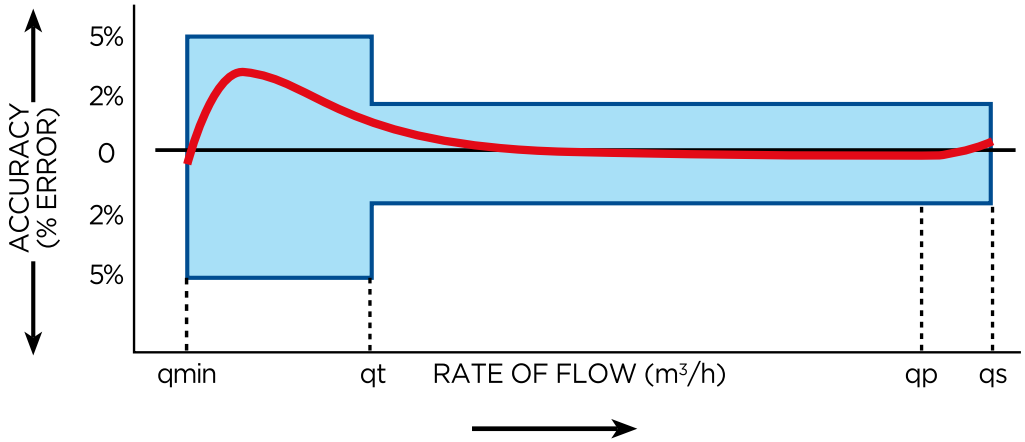




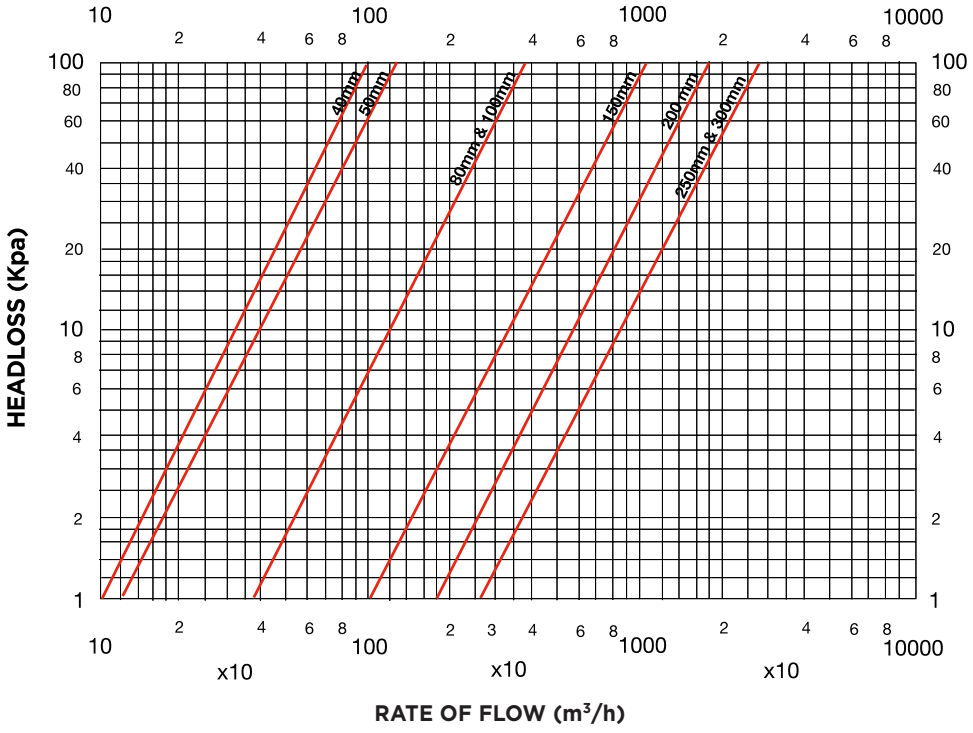
Flange Table	Flange compatable with both drillings. Specify drilling option.								
Meters size	mm	40	50	80	100	150	200	250	300
BS10 table D		"Dual"	"Dual"	"Dual"	"Dual"	"Dual"	Specify	Specify	Specify
SABS 1123 table 16							Specify	Specify	Specify

Dimensions and weights									
Meter size (mm)		40	50	80	100	150	200	250	300
Overall length (ISO) (A)	mm	300	200	200	250	300	350	450	500
Height (B)	mm	78	78	94	106	135	165	198	225
Height (D)	mm	142	142	153	153	200	222	240	240
Height (E)	mm	250	250	261	261	30	330	348	348
Weight	kg	11.8	12.2	14.1	19.4	37.5	47.5	82	104

Typical Accuracy Curve



Typical Head Loss Curve



Typical specification for Helix H4000

Woltmann WP Water Meter of the inferential type with interchangeable mechanism fitted with a magnetic coupling drive and straight-reading, registering in m3. Counter sealed to IP68 meter must have built in capability of generating inductive pulse signals. the meter must be supplied with a pressure tapping as standard. Body flanges to be dual drilled to BS10 table D and BS 4504 Table 16 specifications from sizes 40mm to 150mm or a choice of either BS10 Table D or SABS 1123 Table 16 specification from sizes 200mm to 300mm.

Warranty

All goods are tested and inspected prior to despatch. In the event of defects resulting from faulty workmanship or materials, such goods will be replaced/repaired at our discretion, free of charge at the factory, but no responsibility will be accepted for any direct or consequential damage.

This warranty covers the malfunction of a correctly installed item due to a manufacturing fault, but does not cover wear and tear considered normal at the locality of installation. Meter warranty 12 months from date of delivery, which shall be the date on the invoice.

75/5/2017

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