

# H4000 Industrial Bulk Water Meter

**Sizes:** 1 1/2", 2", 3", 4", 6", 8", 10" & 12"



	<b>Sizes:</b>	<b>1 1/2"</b>	<b>2"</b>	<b>3"</b>	<b>4"</b>
95%-105% Start Flow gpm		1.5	1.5	2.2	2.6
98%-105% Min Flow gpm		4.4	4.4	8.8	8.8
98%-102% Cont. Flow gpm		220	220	528	792
98%-102% Max Flow gpm		396	396	880	1100

	<b>Sizes:</b>	<b>6"</b>	<b>8"</b>	<b>10"</b>	<b>12"</b>
95%-105% Start Flow gpm		7.9	17.0	26.4	52.8
98%-102% Min Flow gpm		17.6	26.4	48.4	66.0
98%-102% Cont. Flow gpm		1,981	3,082	4,402	6,604
98%-102% Max Flow gpm		2,642	4,402	7,044	8,805

Max. Operating Pressure psi	230
Max. Operating Temperature °F	120

<u>Sweep Hand Registers:</u>	<b>1 1/2"-2"-3"-4"</b>	<b>6"-8"-10"-12"</b>
US Gallons	100	1000
Cubic Meters	0.1	1.0
(Litres)	100	1000

<u>Capacity of Register:</u>		
US Gallons (millions)	1,000	10,000
Cubic Meters	1 million	10 million

<u>Register Type:</u>	Copper can enclosed direct read with reed pulse capability
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<u>Materials:</u>	
Main Case	Cast Iron
Top Cover Plate	Cast Iron
O-Ring	Neoprene Rubber
Case Nuts & Bolts	Stainless Steel
Body & Cover Coating	Epoxy Powder (Magnetically Fused)
Measuring Element	Polyphenylene Oxide
Rotor	Glass-Loaded Polypropylene
Rotor Support Assembly	Glass-Loaded Noryl
Rotor Thrust Bearing	Ceramic Jewel
Spindles	Tungsten Carbide
Register	Polymer
Register Housing & Lid	Polymer

**Operation.** The H4000 (formerly WP4000) is a horizontal Woltman-type meter designed for installation where occasional low and moderate to high sustained flows are demanded. Accuracy is maintained in both forward and reverse flow directions and there are various register/ pulser options to suit the application.

**Compliance to Standards.** The H4000 complies with all performance requirements of ISO 4064 BS 5728 and EC Specifications Class B for forward flow.

**Installation.** The meter must be installed in a clean pipeline, free from any foreign materials. Install the meter with direction of flow as indicated by the arrow cast in the meter case. The meter may be installed in horizontal, inclined or vertical lines.

**Application.** The meter is for use only with POTABLE COLD WATER up to 120°F (50°C) and working pressures up to 230 psi (16 Bar). The meter will perform with accuracy registration of 100% ± 2% within normal flow. Both pressure loss and accuracy tests are made before shipment. No adjustments need to be made before installation.

**Construction.** The meter consists of a main case, measuring element, a case cover and a magnetically driven register/pulse assembly. The main case is cast iron with raised characters showing size and direction of flow. The case has a throated inlet. The measuring element assembly consists of the rotor, straightening vanes, accuracy regulator, spindles and gears. The measuring element is attached to the underside of the cover with three stainless steel screws and washers. The main



case and cover are assembled with an o-ring gasket and stainless steel nuts, bolts and washers. The register/pulsar assembly is secured to the cover with a lock wire and lead seal.

**Register.** The standard register features a counter with large easy-read odometer, test sweep hand and leak detector. The unit is enclosed in a copper can with glass lens. A polymer counter is available by request.

**Magnetic Drive.** The simple magnetic drive coupling eliminates inaccuracies from right angle type drives.

**Connections.** Flanges are drilled to ANSI B1 class 125/150. Bolt hole patterns are as follows:

1 1/2" - 3"	four bolt round raised face
4" - 8"	eight bolt round raised face
10" - 12"	twelve bolt round raised face

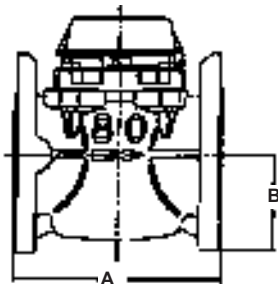
**Pulsers.** PG100-REED SWITCH, 10 WATT, 100 OHM RESISTANCE, VMAX: 24 VDC, IMAX: 100 mA. This device is magnetically actuated. The unit is uni-directional. Protection rating NEMA 4. For use with both poly and copper can register.

**Pulsar. (High Speed)** (opto-electronic -- PV14) For use with polymer register only. This infrared optical sensor is powered by 12 to 24 VDC, 15/25 mA max. power from an external source, 15 ohm line resistance core. The pulse is provided at a 50/50 open/closed ratio. This is a three-wire system, red wire +12/24 VDC Power, white wire-signal, black wire-ground. The following are the outputs per size:

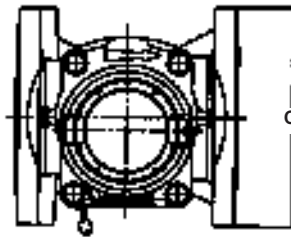
1 1/2" - 4"	1 pulse = 1 US Gallon/1Litres
6" - 12"	1 pulse = 10 US Gallon/10 Litres

**Dimensions & Net Weights**

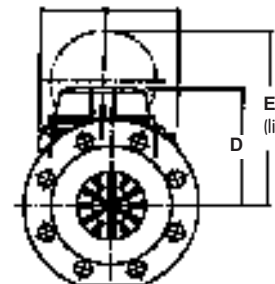
Meter Size	Dimensions (Inches)					Weight
	A	B	C	D	E	(lbs.)
1 1/2"	12.25	3.06	3.31	8.13	5.9	26.5
2"	12.25	3.06	3.38	8.13	6.88	28.8
3"	16.25	3.69	4.13	9.19	7.81	38.6
4"	19.00	4.19	4.81	9.69	9.06	52.0
6"	19.01	5.31	1.25	7.87	12.12	52
8"	20.47	6.47	13.42	8.74	12.99	119
10"	20.47	7.79	16.10	9.44	13.70	119
12"	20.47	8.85	18.14	9.44	13.70	119



Side View



Top View

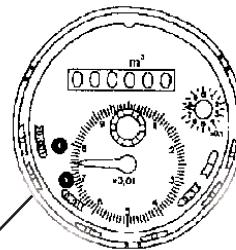


End View

1 1/2" - 4" US Gallon Register  
6" - 10" USG x 10,000



1 1/2" - 4" 1 pulse/1 USG/litre  
Optical sensor  
6" - 10" 1 pulse/10 USG/litres



1 1/2" - 4" M3 Register  
6" - 10" M3 x 10

1 pulse/1000 USG/litres  
Reed switch sensor

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