

# H4000

## Woltmann Helix helical vane water meters

<b>Max. Flow Rate (q<sub>imax</sub>)</b>	<b>kL/h</b>	90	90	120	200	250	600	1000	1600	2000
<b>Size</b>	<b>mm</b>	40	50	65	80	100	150	200	250	300

The H4000 is a high capacity in-line Woltmann helical rotary type meter with a precision injection moulded measurement mechanism eminently suitable for high and sustained flows associated with bulk metering.

Low pressure loss characteristics are due to minimum restriction and no change in flow direction as water flows through the meter.

For maintenance purposes the complete measuring mechanism may be quickly replaced with a pre-calibrated measuring mechanism, or alternatively a blank cover may be fitted, making a by-pass unnecessary in most cases.

### Standard Features

- The Helix H4000 range exceeds Measurement Class 2 requirements of the Australian Standard AS 3565.1-1998 (Meters for cold potable water) in horizontal, vertical and inclined pipelines.
- Generous length integral flow straightening vanes to negate the effect of non-ideal upstream flow conditions.
- The counter can be rotated 359° relative to the direction of flow.
- Flanges drilled to Australian Standard AS 2129 Table D. (Other drill patterns available on request).
- Maximum working pressure 1400 kPa.
- Maximum working temperature 50°C.
- Accurate in both forward and reverse flow for network management. (To Class 2 of AS 3565.1-1998).

### Measurement Mechanism

The measurement mechanism incorporates state of the art features to give optimum long term accuracy, extended wear life and reduced maintenance.

The balanced rotor has a specific gravity of 1.0 to minimise bearing loads and reduce friction. This ensures that even the slightest movement of water will be translated to the rotor, giving improved flow sensitivity at low flows.

The measurement mechanism has been specially designed to give the rotor a "thrust relief" effect as water passes through the meter. This, together with the use of jewelled rotor bearings plus tungsten carbide thrust pads and stub shafts result in greater linear accuracy and longer wear life.



### Counter

The Helix H4000 has a hermetically sealed register with kilolitres shown in a bold straight reading drum and pointers indicating litres. The "copper can" outer barrier and mineral glass lens ensure moisture is kept out to give clear, condensation free readings over the life of the meter, even in the most severe environments. The counter is protected by a robust housing and lid.

### Remote / Electronic Reading

All Helix H4000 meters have pulse output capability as standard (at up to three different pulse rates). The pulse units can easily be retrofitted on site without breaking the calibration seal or interrupting the supply. Two types of pulse units are available; opto-electronic and reed switch units.

The opto-electronic pulse units give one pulse per litre for 40 to 100 mm meters and one pulse per ten litres for 150 to 300 mm meters.

The reed switch pulse units give one pulse per 10 and/or 1000 litres for the 40 to 100 mm meters and one pulse per 1000 litres for the 150 to 300 mm meters.

### Materials

All Helix H4000 meters are manufactured from the highest quality materials, ensuring maximum resistance to wear and corrosion. The meter body is powder coated for protection in all environments.

All materials in contact with potable water comply with Australian Standard AS 3855.

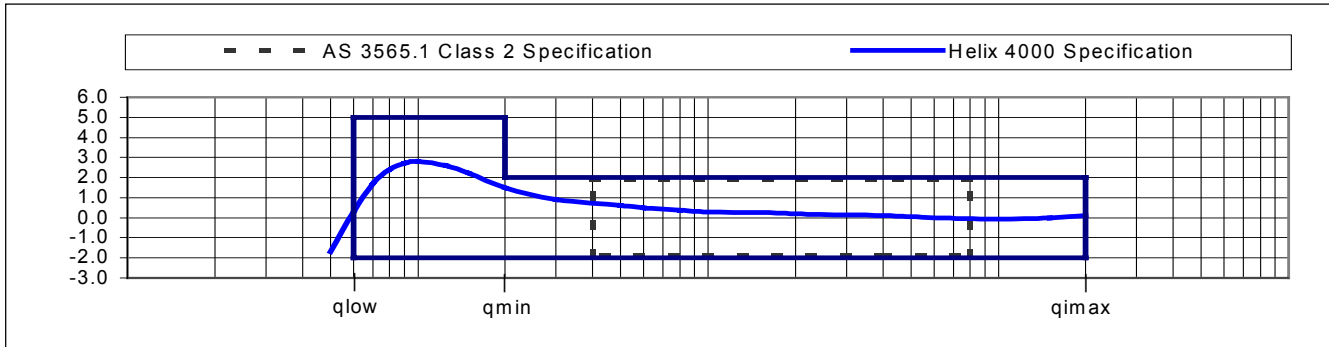
## Options

- Opto-electronic pulse units for use with data loggers, rate of flow equipment and process control equipment.
- Reed switch pulse units for use with data loggers, remote counters and process control equipment.
- Remote battery operated totalising counter with LCD display (Scancounter).
- Inline strainer.
- Alternative flange drilling provided on request.

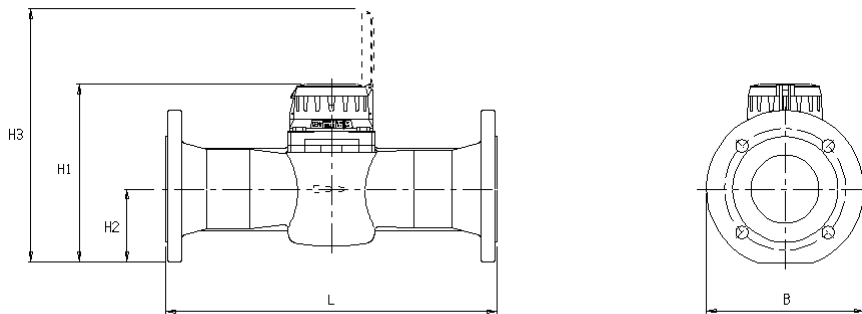
## Helix H4000 Performance and Dimensions

Meter Size		40 mm	50 mm	65 mm	80 mm	100 mm	150 mm	200 mm	250 mm	300 mm
Nominal flow rate (qn)	kL/h	15	15	40	40	60	150	250	400	600
Maximum intermittent flow rate (qimax)	kL/h	90	90	120	200	250	600	1000	1600	2000
Maximum continuous flow rate (qcmax)	kL/h	50	50	65	120	180	450	700	1000	1500
Minimum flow rate (qmin)	kL/h	1	1	1.5	2	2	3	6	11	15
Accuracy (qmin to qimax)	%	±2	±2	±2	±2	±2	±2	±2	±2	±2
Low min flow rate (qlow- see curve) (+5% -2%)	kL/h	0.4	0.4	0.5	0.6	0.7	2.5	4	6	12
Minimum registration flow rate (qreg)	kL/h	0.15	0.16	0.17	0.22	0.25	0.9	1.2	1.8	1.8
Pressure loss at qn	kPa	2.5	1.5	2	1.5	2.5	2.5	2.5	2.5	5
Maximum working pressure	kPa	1400	1400	1400	1400	1400	1400	1400	1400	1400
Maximum working temperature	°C	50	50	50	50	50	50	50	50	50
First pointer registration (per revolution)	L	100	100	100	100	100	1000	1000	1000	1000
Maximum counter registration	kL	999999	999999	999999	999999	999999	9999999	9999999	9999999	9999999
Opto-electronic pulse output	L/pulse	1	1	1	1	1	10	10	10	10
Reed switch pulse output (fast)	L/pulse	10	10	10	10	10	-	-	-	-
Reed switch pulse output (slow)	L/pulse	1000	1000	1000	1000	1000	1000	1000	1000	1000
<b>Dimensions</b>										
Overall meter length (L)	mm	311	311	200	413	483	500	520	450	500
Height from bottom to top, lid closed (H1)	mm	220	220	228	247	259	335	387	438	465
Height from bottom to centre line (H2)	mm	78	78	86	94	106	135	165	198	225
Height from bottom to top, lid open (H3)	mm	328	328	336	355	367	443	495	546	573
Flange width (B)	mm	151	166	186	201	228	286	341	409	461
Meter weight (approximate - std. packed)	kg	13	14	15.5	22	26	47	64	95	120

## Typical Helix H4000 Accuracy Curve



## Dimensions



The Company's policy is one of continuous improvement and the right is reserved to modify the specifications without notice.

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