H4000 – TURBINE Woltmann Helix helical vane water meters Sizes - 40, 50, 65, 80 and 100mm

Introduction
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.

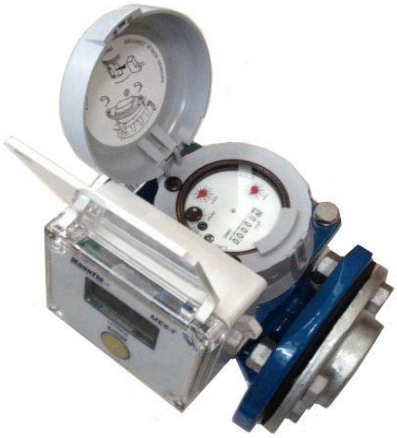
Accurate in both forward and reverse flow for network management. (To Class 2 of AS 3565.1-1998).

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.

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 reed switch pulse units give one pulse per 10 and/or 1000 litres for the 40 to 100 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 the Australian Standard AS 4020.

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.



Pictured:
H4065 65mm meter with **RSC** pulser wired to **ME5-T-B** LCD resettable counter integral mounted with **BM** bracket.
(IDEAL FOR CUSTODY WATER TRANSER APPLICATIONS)

Options

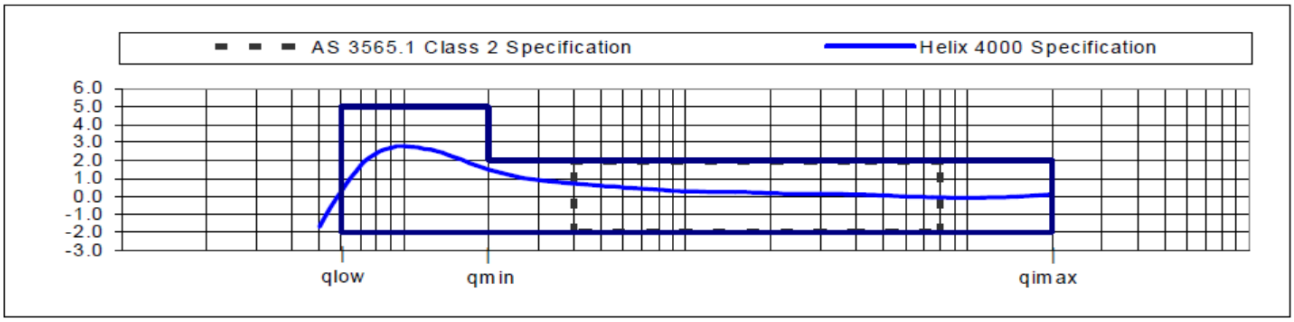
H4000

Reed switch pulse units for use with data loggers, remote counters and process control equipment.
Integral mounted or Remote battery operated totalising counters with LCD display (ManuFlo ME5-T or FRT303).
Alternative flange drilling provided on request.

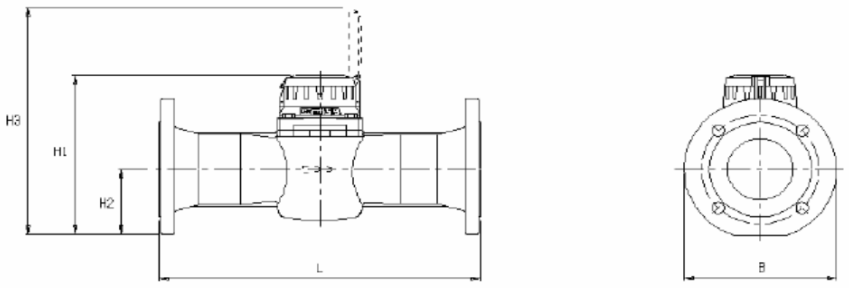
Helix H4000 Performance and Dimensions

Meter Size		40 mm	50 mm	65 mm	80 mm	100 mm
Nominal flow rate (qn)	kL/h	15	15	40	40	60
Maximum intermittent flow rate (qimax)	kL/h	90	90	120	200	250
Maximum continuous flow rate (qcmax)	kL/h	50	50	65	120	180
Minimum flow rate (qmin)	kL/h	1	1	1.5	2	2
Accuracy (qmin to qimax)	%	±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
Minimum registration flow rate (qreg)	kL/h	0.15	0.16	0.17	0.22	0.25
Pressure loss at qn	kPa	2.5	1.5	2	1.5	2.5
Maximum working pressure	kPa	1400	1400	1400	1400	1400
Maximum working temperature	°C	50	50	50	50	50
First pointer registration (per revolution)	L	100	100	100	100	100
Maximum counter registration	kL	999999	999999	999999	999999	999999
Opto-electronic pulse output	L/pulse	1	1	1	1	1
Reed switch pulse output (fast)	L/pulse	10	10	10	10	10
Reed switch pulse output (slow)	L/pulse	1000	1000	1000	1000	1000
Dimensions						
Overall meter length (L)	mm	311	311	200	413	483
Height from bottom to top, lid closed (H1)	mm	220	220	228	247	259
Height from bottom to centre line (H2)	mm	78	78	86	94	106
Height from bottom to top, lid open (H3)	mm	328	328	336	355	367
Flange width (B)	mm	151	166	186	201	228
Meter weight (approximate - std. packed)	kg	13	14	15.5	22	26

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.