Honeywell
THE POWER OF CONNECTED

Water Metering

H5000

Lower lifetime costs

Woltmann cold water meters

H5000 Woltmann cold water meter

The H5000 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.

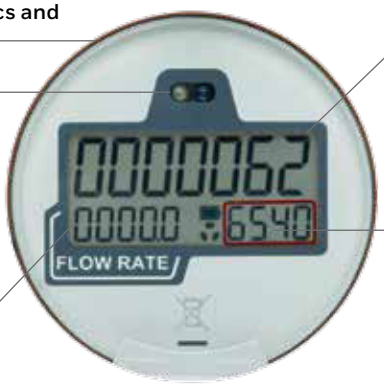
Key features

- Wide measuring range approved up to 2000:1
- Retro-fit mechanism into the H4000 body
- Uses innovative measuring technology
- Electronic register includes an integrated communications cable
- Electronic register pre-equipped for AMR/AMI with pulse, encoder, Aquabus, M - Bus, L - Bus outputs
- Value adding AMR/AMI style features such as flow rate display, data-logging, leak detection, tamper alarms and tariffing
- Approved to the latest European Directive 2014/32/EU

H5000 applications

H5000 is the next generation of Woltmann (turbine) bulk water meter. With a range of important features, H5000 represents the very highest performance in bulk flow water metering making it ideally suited to both billing and water distribution applications. Available in seven sizes from DN40 to DN150 for flow rates between 40 l/h and 200 m^3/h, the H5000 operates at temperatures up to 50°C and a maximum working pressure of 16 bar.

The H5000 meter has an advanced electronic register which includes integrated communications covering a range of industry standard outputs compatible with common AMR/AMI systems and data-logging equipment.



Hermitically sealed, mineral glass register prevents moisture and water ingress from damaging the electronics and ensures good visibility

Large, 12mm high index reading up to seven digits are clearly distinct to aid visual readings and avoid data errors

I/R interface for factory communication, in-situ upgrades and additional communication devices

Sub-units (decimals), clearly segregated by a red box. These units provide additional resolution for verification

Real-time flow rate display, avoids the need to make manual calculations based on pointers

H5000 measuring range

H5000 has the widest measuring range of any metering technology with a single measuring element. With low-flow that almost matches combination meters, H5000 provides a metrological performance that ensures nearly every drop is measured. With an unrivalled measuring range up to 2000:1 this also simplifies meter selection and reduces inventory.

Ease of installation

H5000 uses the same body as the industry leading H4000 Woltmann meter, providing simple, cost effective change-out of existing meter stocks. For new meters, the H5000 is available in both ISO (WP) and DIN (WS) lengths. The meter can also be installed in any orientation without any loss of metering accuracy.

Innovative measuring technology

H5000 features an all-new rotor design combined with long-proven sensor technology to maximise the measuring range. Just a single moving part improves sensitivity, durability and maintains longevity even at the highest flow rates.

Communications

H5000's electronic register includes an integrated communications cable (no need to purchase separate modules) with a range of industry standard outputs compatible with common AMR/AMI systems and data-logging equipment. H5000's electronic register is self powered by internal batteries with a typical lifetime of 15 years*. The large, clear display provides valuable additional information to support a range of activities.

*Actual battery life depends on ambient temperature and flow profile

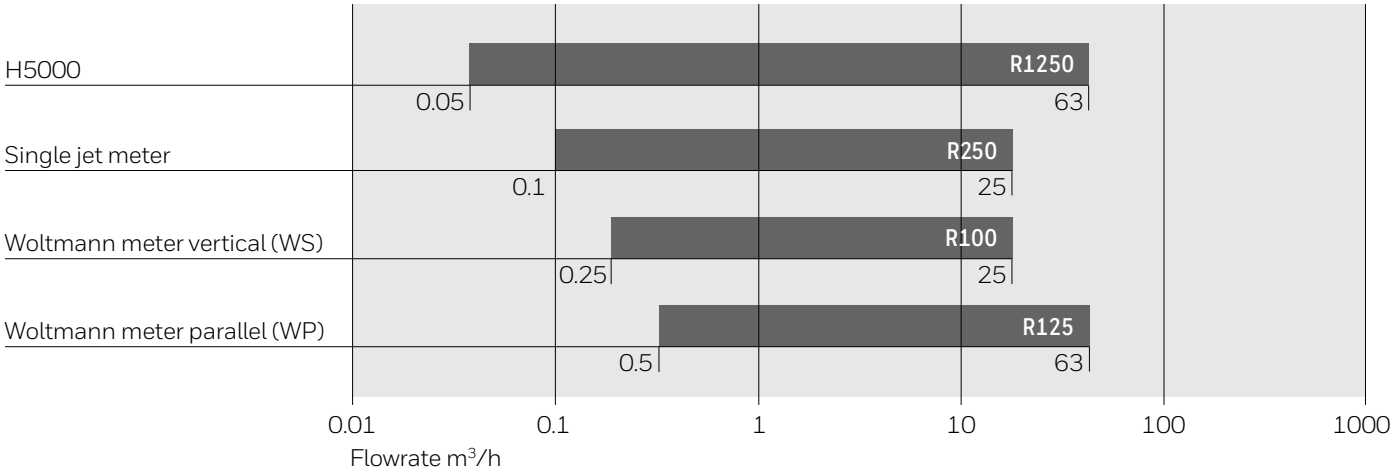
Secure, waterproof connection to electronic register

Rotor spindle with inductive sensing pads and no wet gearing

All new rotor design with enhanced, patented hydrodynamic and sensing features

Inductive sensors in a sealed and potted housing

COMPARISON AT MEASURING RANGES (DN50)



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H5000

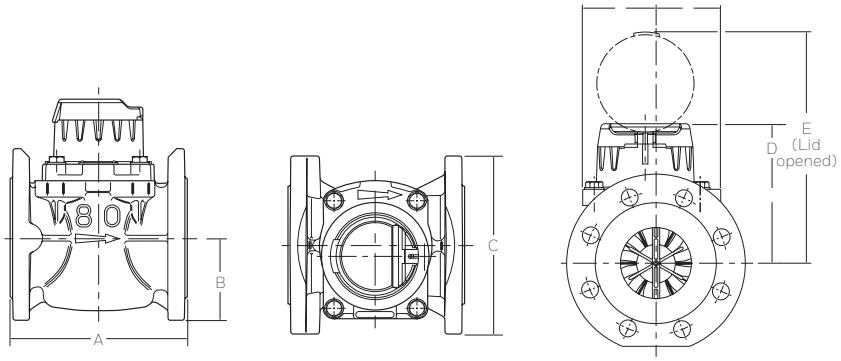
Product Specification

H5000 PERFORMANCE (FORWARD FLOW) - STANDARD MARKING

METER SIZE (mm)	FLOW	UNITS	40	50	65	80 (low flow)	80 (standard)	100	125	150
OVERLOAD FLOW RATE	Q4	m^3/h	50	79	79	79	200	200	200	200
PERMANENT FLOW RATE	Q3	m^3/h	40	63	63	63	160	160	160	160
TRANSITIONAL FLOW RATE	Q2	m^3/h	0.13	0.13	0.13	0.13	0.32	0.32	0.32	0.32
MINIMUM FLOW RATE	Q1	m^3/h	0.08	0.08	0.08	0.08	0.2	0.2	0.2	0.2
TURNDOWN RATIO R	Q_3/Q_1	R value	500	800	800	800	800	800	800	800
STARTING FLOW	Qs	m^3/h	0.02	0.02	0.02	0.02	0.05	0.05	0.05	0.05
HEADLOSS AT Q3	ΔP	bar	0.3	0.37	0.31	0.33	0.3	0.35	0.4	0.4

H5000 PERFORMANCE (FORWARD FLOW) - EXTENDED VERSION

OVERLOAD FLOW RATE	Q_4	m^3/h	50	79	79	79	200	200	200	200
PERMANENT FLOW RATE	Q_3	m^3/h	40	63	63	63	160	160	160	160
TRANSITIONAL FLOW RATE	Q_2	m^3/h	0.08	0.08	0.08	0.08	0.2	0.2	0.2	0.2
MINIMUM FLOW RATE	Q_1	m^3/h	0.05	0.05	0.05	0.05	0.13	0.13	0.13	0.13
TURNDOWN RATIO R	Q_3/Q_1	R value	800	1250	1250	1250	1250	1250	1250	1250

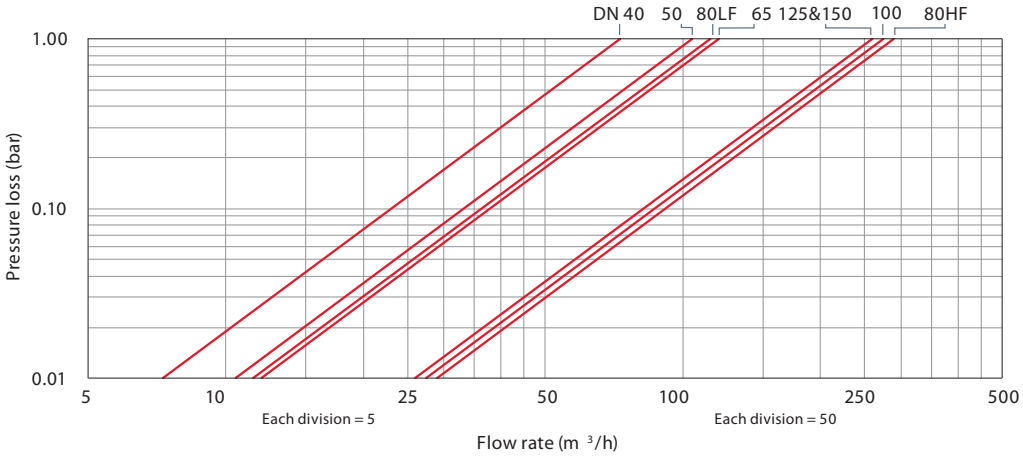


DIMENSIONS

METER SIZE (mm)	Units	40	50	65	80 (low flow)	80 (standard)	100	125	150
OVERALL LENGTH WS (DIN/ISO)	mm	-/300	270/300	300	300	300/350	360/350	-	500
OVERALL LENGTH WP (DIN/ISO)	mm	-	200	200	-	225/200	250	250	300
OVERALL LENGTH (KENT)	mm	311	311	368	-	413	483	483	-
HEIGHT (B)	mm	78	78	86	94	94	106	118	135
HEIGHT (D)	mm	148	148	148	149	149	160	160	160
FLANGE DIAMETER (C)	mm	151	166	186	201	201	228	251	286
HEIGHT (E)	mm	248	248	248	248	258	258	258	258
HEIGHT TO FIT MEASURING INSERT	mm	274	274	274	274	285	285	285	285
WEIGHT (ISO)	kg	11.8	12.2/13.1	13/14.4	14.4	14.1/16.6	19.4/21	20.5	37.5/43.5
WEIGHT (KENT)	kg	12	13.3	14.9	16.3	17.6	23.6	25.8	-
WEIGHT OF MEASURING INSERT	kg	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2

H5000 Product Specification

TYPICAL HEADLOSS CURVE



TECHNICAL SPECIFICATIONS

Maximum working pressure	16 bar (MAP 16)
Maximum water temperature	50°C (T50)
Ambiant temperature	-25°C to +55°C
Mechanical environment	M1
Electromagnetic environment	E1
Connection flanges	EN 1092-2 PN16*
Battery life	15 years
Ingress protection	IP68 fully submersible
Installation positions	All - unlimited
Straight pipe requirement	None (U0/D0)
Pressure port (optional)	¼" on top cover

*Others available on request

ELECTRONIC REGISTER

Volume indication range	9,999,999.9999 m^3
Flow rate indication range	9,999.9 m^3/h
Other indication	Flow direction, Battery level, Multiple warnings
Outputs	Dual digital pulse output
Additional serial interface (option)	Alternatively Encoded (K-Frame) or M-Bus/Local Bus
Cable length	3m

PULSE OUTPUT			
CHANNEL 1/2: VOLUME PULSES		Forward & Reverse Flow (F+R) or compensated (F-R)	
CHANNEL 3: SIGNAL OUTPUT		Tamper & Flow direction (F+R mode)	
PULSE WEIGHT		1/10/100/1,000/10,000 Litre	
		DN 50 / 65	DN 80 - 150
PULSE WIDTH	≥1 L/IMP.	20 ms	5 ms
	≥10 L/IMP.	100 ms	60 ms
	≥100 L/IMP.	100 ms	100 ms
DEFAULT SETTING		DN 50 -100	DN 150
	CHANNEL 1	10 L/Imp. F-R	10 L/Imp. F-R
	CHANNEL 2	100 L/Imp. F-R	1000 L/Imp. F-R
	CHANNEL 3	Alarm-Flag	Alarm-Flag
CONTACT LOAD		max. 30 VDC, max. 30 mA	

Pressure Equipment Directive 97/23/EC.

This product is applicable in the supply, distribution and discharge of water and associated equipment and is therefore exempt.

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