



EW171

Woltman Bulk Water Meters

DN50 - DN300 for cold and warm Potable Water Applications

APPLICATION

Honeywell Home EW171 Series Woltman water meters are used for volume measurement of cold or warm water in potable water networks. They are available for cold water up to 30°C (EW1710) or for warm water up to 130°C (EW1711). They have a mechanical counter with rollers and dials and can be equipped with clip-on modules for remote readout applications. Clip-on modules are available for wired M-Bus, and pulse out. The clip-on modules are retrofittable.

APPROVALS

EW171 Series bulk water meters have MID approval under approval number SK08NI001_SMU002 (for cold water) and SK10-MI001_SMU013 (for warm water).

SPECIAL FEATURES

- Suitable for horizontal and vertical installation
- Low pressure loss
- Rugged design for longterm accuracy
- Retrofittable clip-on modules for remote readout

TECHNICAL DATA

Media	
Medium:	Drinking water
Connections	
Sizes:	DN50...300 Q3 40...1.600 (EW1710) Q3 25...1.000 (EW1711)
Operating temperatures	
Medium temperature:	EW1710: 0.1...30°C EW1711: 0.1...130°C
Temperature class:	EW1710: T30, T50 EW1711: T130
Ambient temperature:	5 - 55 °C
Specifications	
Water pressure class:	MAP16 (max. 16 bar)
Operating pressure range:	0.3...16bar
Pressure loss class:	ΔP16 (max. 16kPa)
Protection class:	IP66
Environmental class:	B
Mechanical class:	M1
Electromagnetic class:	E1
Measuring process:	Mechanical counter with Woltman WP type flow measurement



Specifications	
Display:	Six-digit roller counter with three dials for decimal places
Display unit:	m ³
Display range:	DN50...125: 106 m ³ DN150...300: 107 m ³
Increments:	DN50...125: 0.0005 m ³ DN150...250: 0.005 m ³ DN300: 0.05 m ³
Acceptable error:	±5% (Q ₁ ≤ Q ≤ Q ₂) ±2% (Q ₂ ≤ Q ≤ Q ₄ for 0.1 ≤ T ≤ 30°C) ±3% (Q ₂ ≤ Q ≤ Q ₄ for T > 30°C)
Installation position:	H, V (horizontal, vertical)

FLOW DATA

EW1710, for cold water applications

Nominal size diameter:		DN	50	65	80	100	125	150	200	250	300
Flow rates											
Minimum (Q ₁):	m ³ /h		0.4	0.5	0.63	0.8	1.6	2	5	10	16
Transition (Q ₂):	m ³ /h		0.64	0.8	1	1.3	2.5	3.2	8	16	26
Permanent (Q₃):	m³/h		40	63	100	160	250	400	630	1000	1600
Overload (Q ₄):	m ³ /h		50	78.8	125	200	313	500	788	1250	2000
Dynamic range (Q ₃ /Q ₁):			R100	R125	R160	R200	R160	R200	R125	R100	R100
Additional flow data											
Starting flow:	m ³ /h		0.15	0.2	0.25	0.25	0.5	1.0	1.5	3	8

EW1711, for warm water applications

Nominal size diameter:		DN	50	65	80	100	125	150	200	250	300
Flow rates											
Minimum (Q ₁):	m ³ /h		0.63	1	1.58	2.5	4	6.3	10	25	40
Transition (Q ₂):	m ³ /h		1	1.6	2.5	4	6.4	10	16	40	64
Permanent (Q₃):	m³/h		25	40	63	100	160	250	400	630	1000
Overload (Q ₄):	m ³ /h		31.25	50	78.8	125	200	313	500	788	1250
Dynamic range (Q ₃ /Q ₁):			R40	R40	R40	R40	R40	R40	R40	R25	R25
Additional flow data											
Starting flow:	m ³ /h		0.25	0.3	0.35	0.6	1.1	2	4	8	15

CONSTRUCTION



Number	Component
1	Counter lid
2	Roller counter
3	Decimal place dials
4	Counter housing
5	Inlet
6	Flow sensor housing
7	Outlet

METHOD OF OPERATION

Counter

The counter contains a five-digit roller counter for values of whole m³ and dials for tenth, hundredth and thousandth parts of m³. It is flanged to the flow sensor housing. Displayed value is cumulative (total) flow through the meter.

- Six-digit roller counter with three dials for decimal places
- Marked with Honeywell Home logo, Honeywell Home OS-Number, approval number and key technical data according to requirements of MID
- Set into black plastic collar with lid

Flow Sensor

The Woltman technology of the flow sensor combines high measuring accuracy with long term stability and the capability of measuring high volumes at low pressure drop. The Woltman wheel is connected to the counter by a shaft and a magnetic coupling.

- Flanged flow sensor housing painted blue (EW1710) or red (EW1711) with DN size and flow arrow embossed on side

COMMUNICATION AND READOUT

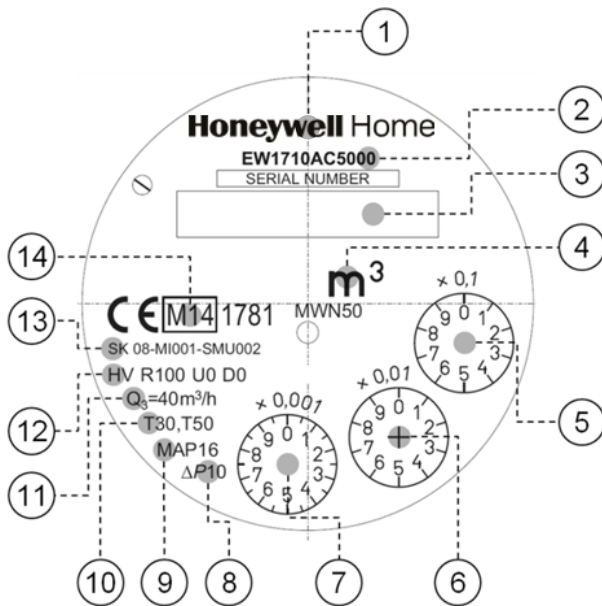
EW171 Series water meters can be fitted with clip-on modules for remote readout applications.

The clip-on modules are retrofittable and are attached by means of a standardised design which is identical for all sizes DN50...300. Mounting of the modules does not affect approval of the meter.

The following modules are available:

- Wired M-Bus, according to EN13757-3
- Pulse output, open collector

Front Panel Contents



Number	Element
1	Honeywell Home logomark
2	OS-Number
3	Roller counter
4	Unit
5	0.1 x unit dial
6	0.01 x unit dial
7	0.001 x unit dial
8	Differential pressure at nominal flow
9	Maximum static pressure
10	Temperature class
11	Permanent flow Q3
12	Dynamic range / flow profile resistance class
13	Approval number
14	CE mark

INSTALLATION GUIDELINES

Setup requirements

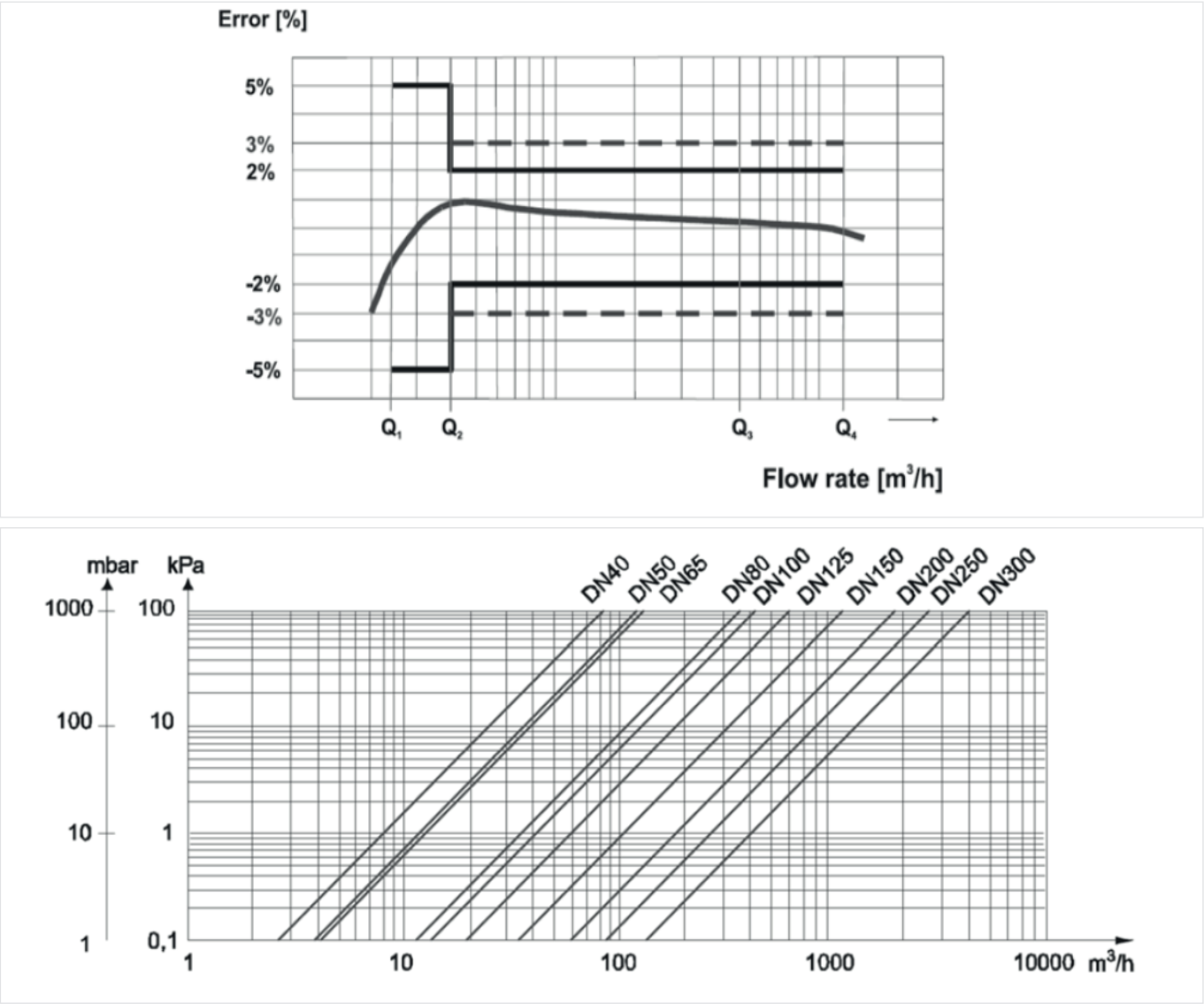
- Calming legs are not required unless bends, pumps or self-acting valves are placed before or after the meter. In such cases calming legs of straight pipe with a minimum length of 6 x DN before and 2 x DN after the meter are required
- All sizes may be installed in either horizontal or vertical position
- The meter must be installed with the counter facing up or sideways. It must not be installed with the counter facing downwards
- Avoid installation at highest point of system as air may be trapped in the meter
- During measurement meter must be completely filled with water

TECHNICAL CHARACTERISTICS

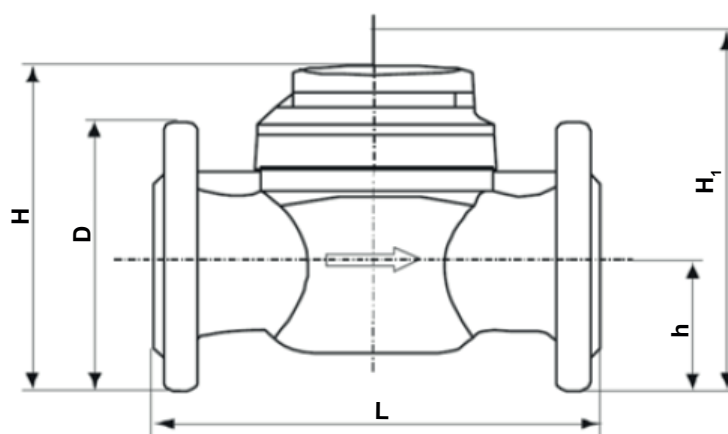
Sizing

- EW171 Series water meters must be selected in such a way that typical system flow rates are between transition (Q_2) and permanent flow rate (Q_3)
- The flow rate may not drop below minimum (Q_1) or exceed overload flow rate (Q_4) at any time

Pressure drop characteristics



DIMENSIONS



Parameter		Values								
Nominal size diameter:	DN	50	65	80	100	125	150	200	250	300
Dimensions:	L	200	200	225	250	250	300	350	450	500
	H	187	197	219	229	257	357	382	427	497
	H1	287	297	239	349	377	582	607	652	722
	h	72	83	95	105	120	135	160	193	230
	D	165	185	200	220	250	285	340	400	460
Weight:	kg	10	11	14	16	18	40	51	75	103

Note: All dimensions in mm unless stated otherwise.
Height H1 = space required for removal of measuring insert

ORDERING INFORMATION

The following tables contain all the information you need to make an order of an item of your choice. When ordering, please always state the type, the ordering or the part number.


Options

Item:	DN size:	Permanent flow Q ₃ :	Length:	OS.-No.:
EW1710A Bulk water meters for cold water	50	40 m ³ /h	200 mm	EW1710AC5000
	65	63 m ³ /h	200 mm	EW1710AC5600
	80	100 m ³ /h	225 mm	EW1710AC6500
	100	160 m ³ /h	250 mm	EW1710AC7300
	125	250 m ³ /h	250 mm	EW1710AC8100
	150	400 m ³ /h	300 mm	EW1710AC8500
	200	630 m ³ /h	350 mm	EW1710AC8900
	250	1000 m ³ /h	450 mm	EW1710AC9100
	300	1600 m ³ /h	500 mm	EW1710AC9200
EW1711A Bulk water meters for warm water	50	25 m ³ /h	200 mm	EW1711AC5000
	65	40 m ³ /h	200 mm	EW1711AC5600
	80	63 m ³ /h	225 mm	EW1711AC6500
	100	100 m ³ /h	250 mm	EW1711AC7300
	125	160 m ³ /h	250 mm	EW1711AC8100
	150	250 m ³ /h	300 mm	EW1711AC8500
	200	400 m ³ /h	350 mm	EW1711AC8900
	250	630 m ³ /h	450 mm	EW1710AC9100
	300	1000 m ³ /h	500 mm	EW1710AC9200

Scope of Delivery

- EW170 Series water meter
- Installation and setup instructions

Accessories

	Description	Dimension	Part No.
	EWA171 Clip-on modules, suitable for all EW171 Note: Programming of M-Bus module EWA171C-MBUS is required when used for sizes DN150 or larger. Programming is done via the M-Bus master using software tool EWASET-MBUS which can be downloaded from homecomfort.resideo.com		
	Wired M-Bus		EWA171C-MBUS
	Pulse output		EWA171C-PO
	Software Software is available free of charge for download from homecomfort.resideo.com		
	For Programming of M-Bus modules		EWASET-MBUS
	For Programming of pulse out modules		EWASET-PO

For more information
homecomfort.resideo.com/europe


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