

## EW370 Series Woltman Flow Meters

DN50...300 FOR HEATING AND CHILLED WATER APPLICATIONS

### PRODUCT DATA



### Design

EW370 Series flow meters consist of:

- Mechanical counter
- Woltman WP type mechanical flow sensor
- Housing with flanges to PN16
- Pulse output with cable

### Materials

- Counter cover made of metal
- Flow sensor housing made of cast iron, painted red

### Approvals

EW370 Series flow meters have MID approval under approval number SK11-MI004-SMU001

### Application

Honeywell EW370 Series Woltman flow meters are used for volume measurement of heating or chilled water in hydronic heating and cooling systems.

They have a mechanical roller counter with fixed pulse output for connection to an energy integrator, e.g. Honeywell EW500 Series, or remote readout applications.

### Features

- Suitable for horizontal and vertical installation
- Low pressure loss
- Rugged design for longterm accuracy
- Pulse out as standard

### Specifications

<b>Medium</b>	Water, quality according to VDI2035
<b>Medium temperature</b>	0.1...130°C
<b>Ambient temperature</b>	5...55°C
<b>Operating pressure</b>	PN16
<b>Op. pressure range</b>	0.3...16bar
<b>Max. pressure drop</b>	ΔP10
<b>Protection class</b>	IP66
<b>Environmental class</b>	C
<b>Measuring process</b>	Mechanical counter with Woltman WP type flow measurement
<b>Display</b>	Six-digit roller counter
<b>Display range / unit</b>	DN50...125: 10 <sup>6</sup> m <sup>3</sup> DN150...300: 10 <sup>7</sup> m <sup>3</sup>
<b>Increments</b>	DN50...125: 0.0005m <sup>3</sup> DN150...250: 0.005m <sup>3</sup> DN300: 0.05m <sup>3</sup>
<b>Acceptable error %</b>	±(3+0.05qp/q), no more than 5
<b>Installation position</b>	H, V (horizontal, vertical)

## Flow Rates

**Table 1. Flow rates EW370 Series**

DN size		50	65	80	100	125	150	200	250	300
<i>Flow rates according to MID</i>										
<b>Minimum (qi)</b>	m <sup>3</sup> /h	0.6	1	1.6	2.4	4	6	10	40	60
<b>Nominal (qp)</b>	m <sup>3</sup> /h	<b>15</b>	<b>25</b>	<b>40</b>	<b>60</b>	<b>100</b>	<b>150</b>	<b>250</b>	<b>400</b>	<b>600</b>
<b>Maximum (qs)</b>	m <sup>3</sup> /h	30	50	80	120	200	300	500	800	1,200
<b>Dynamic range</b>	qp/qi	25	25	25	25	25	25	25	10	10
<i>Additional data</i>										
<b>Starting flow</b>	m <sup>3</sup> /h	0.25	0.3	0.35	0.6	1.1	2	4	8	15
<b>Pulse value</b>	l/pulse	100	100	100	100	100	1,000	1,000	1,000	1,000

## Sizing

- EW370 Series flow meters must be selected in such a way that typical system flow rates are between minimum (qi) and nominal flow rate (qp)
- The flow rate may not drop below minimum (qi) or exceed overload flow rate (qs) at any time

## Function

### Counter

The counter contains a six-digit roller counter for values of whole m<sup>3</sup>. It is flanged to the flow sensor housing.

Displayed value is cumulative (total) flow through the meter.

### 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.

## Installation

- 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 in such a way that the counter faces up or sideways. It must not be installed in such a way that the counter faces downwards
- Avoid installation at highest point of system or system part as air may be trapped in meter
- During measurement meter must be completely filled with water

## Remote Readout

EW370 Series flow meters are fitted with a pulse out for connection to energy integrators or remote readout applications. The pulse out cable has a length of 1.5 metres.

<b>Type</b>	Reed switch
<b>Connecting power</b>	max. 10W
<b>Resistance in closed state</b>	max. 10Ω
<b>Resistance in open state</b>	min. 150MΩ
<b>Maximum current in closed state</b>	500mA
<b>Admissable voltage in open state</b>	max. 200V

## Identification

### Counter

- Six-digit roller counter with metal cover
- Typeplate, marked with Honeywell logo, Honeywell OS-Number, approval number and key technical data according to requirements of MID

### Flow Sensor

- Flanged flow sensor housing painted red with DN size and flow arrow embossed on side

## Dimensions

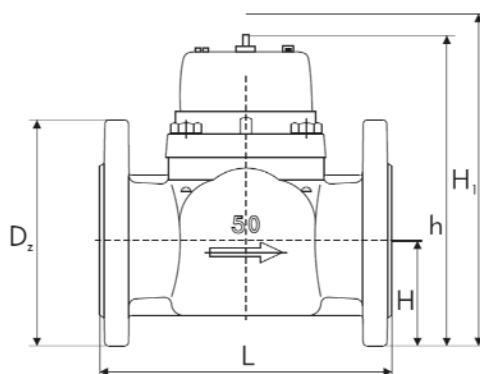


Fig. 1. Dimensions

Table 2. Dimensions EW370 Series

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

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

## Ordering Information

Table 3. OS-Nos. (OS=Order Specification)

Item	DN size	Permanent flow $Q_3$	Length	OS-Number
<b>EW3701A</b> Bulk flow meters for heating and chilled water	50	15m <sup>3</sup> /h	200mm	EW3701AP5000
	65	25m <sup>3</sup> /h	200mm	EW3701AP5600
	80	40m <sup>3</sup> /h	225mm	EW3701AP6500
	100	60m <sup>3</sup> /h	250mm	EW3701AP7300
	125	100m <sup>3</sup> /h	250mm	EW3701AP8100
	150	150m <sup>3</sup> /h	300mm	EW3701AP8500
	200	250m <sup>3</sup> /h	350mm	EW3701AP8900
	250	400m <sup>3</sup> /h	450mm	EW3701AP9100
	300	600m <sup>3</sup> /h	500mm	EW3701AP9200

## Scope of Delivery

- EW370 Series flow meter
- Installation and setup instructions

## Flow Diagram

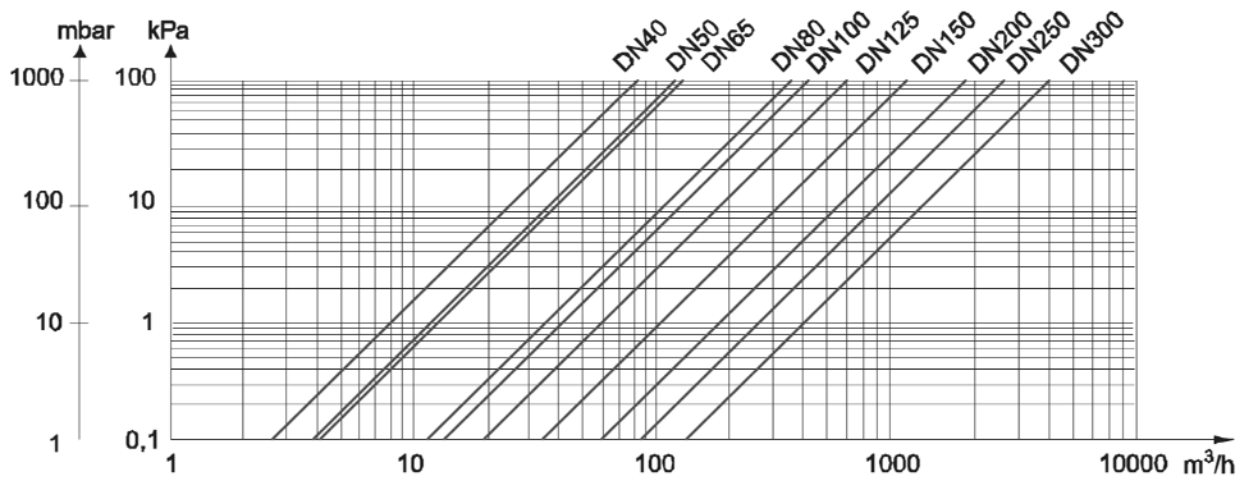


Fig. 2. Pressure drop diagram EW370 Series